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**Healthcare  
Improvement**

# Toward a Primary Care Strategy for Canada

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Monica Aggarwal  
Brian Hutchison

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Canadian Foundation for Healthcare Improvement  
1565 Carling Avenue, Suite 700  
Ottawa, Ontario K1Z 8R1

Email: [info@cfhi-fcass.ca](mailto:info@cfhi-fcass.ca)  
Telephone: 613-728-2238  
Fax: 613-728-3527

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Figure 1 was adapted from Charles Kilo's "Primary Care Oriented Health System" model by the Primary Care Quality Improvement Team at Health Quality Ontario and is used with their permission.

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## 1.0 KEY MESSAGES

### Why a Strategy? Why Now?

- ▼ High-performing primary care is widely recognized as the foundation of an effective and efficient healthcare system.
- ▼ Countries with a strong primary care sector achieve superior health outcomes at lower cost.
- ▼ Over the past decade, Canadian provinces and territories have introduced primary care reform initiatives that focus on strengthening the infrastructure for primary care and establishing funding and payment models that promote performance improvement.
- ▼ Despite significant progress since 2000, the performance of Canadian primary care trails that of many other high-income countries in timely access to care, organization and co-ordination of care, patient-centredness, team-based care, use of electronic medical records and quality improvement, pointing to opportunities for substantial improvement.
- ▼ The aims, functions, features and impacts of high-functioning primary care have become increasingly clear through accumulated research evidence and experience.
- ▼ We are now in a better position than ever before to strive for a broad consensus among major stakeholders on a strategy for primary care that builds on the advances made during the last decade.
- ▼ That strategy could serve as a touchstone for health policy makers and health system leaders at the federal, provincial/territorial, regional, local and organizational levels.
- ▼ Canadian and international evidence and experience paint a clear picture of the features of high-performing primary care.

### What Needs to Be Done?

- ▼ Primary care transformation at the provincial/territorial, regional and local levels should target the features of high-performing primary care and be guided by a set of agreed-upon principles.
- ▼ Minimum requirements for continued progress include: targeted investments in primary care transformation; healthcare governance mechanisms at the community, regional and provincial/territorial levels; engagement of healthcare providers in a collaborative approach to policy development and implementation; and comprehensive performance measurement to support quality improvement and accountability.
- ▼ Through concerted effort, guided by an evidence-informed vision and sound principles of transformation, Canada's provinces and territories can build primary care systems over the next decade that provide the foundation for integrated healthcare systems that deliver health outcomes, patient experience and value for money at the world's best levels.

## 2.0 EXECUTIVE SUMMARY

### Why a Strategy? Why Now?

Countries with a strong primary care sector have demonstrably better health outcomes, better equity, lower mortality rates, and lower overall costs of healthcare. Over the past decade, Canadian provinces and territories have implemented reforms focused on strengthening the infrastructure for primary care<sup>i</sup> and establishing funding and payment models designed to promote performance improvement. Despite significant progress since 2000, the performance of Canada's primary care sector trails that of many other high-income countries. Canada's lacklustre primary care performance, together with continuing fiscal turbulence, call for a thoughtful and determined approach to system transformation. The aims, functions, features and impacts of high-functioning primary care have become increasingly clear through accumulated research evidence and experience over the last 20 years. We are now in a better position—and have a greater need—than ever before to strive for a broad consensus among major stakeholders on an achievable vision of Canadian primary care as the foundation of a high-performing health system and on the approaches needed to achieve that vision—in short a transformational strategy for primary care. Such a strategy could serve as a touchstone for health policy makers and health system leaders at the federal, provincial, regional, local and organizational levels.

### Progress to Date

Primary care groups, networks and inter-professional teams have been implemented to varying degrees in all provinces and territories, patient enrolment has been widely adopted in two provinces, an increasing proportion of primary care physicians are participating in blended payment models, and most provinces and territories have invested in information technology. British Columbia, Alberta, Ontario and Quebec appear to have made the greatest progress toward primary care transformation in Canada.

### Aims of Primary Care

There is broad consensus both within Canada and internationally that primary care and the entire healthcare system should aim to be: patient and family centred, accessible, effective, efficient, safe, coordinated and population-health oriented.

### Measuring Progress

The Triple Aim framework introduced by the Institute for Healthcare Improvement offers a simple yet robust framework for measuring progress on primary care improvement. It encourages providers and decision makers to focus on improving health outcomes at the individual and population level, improving the healthcare experience and controlling healthcare costs.

### Opportunities for Improvement

The opportunities for improvement lie in the gaps between current and potentially achievable performance. To identify and estimate the magnitude of those gaps, we compared the performance of Canadian primary care to that of the best performers among countries at a level of economic development comparable to Canada, summarizing the findings for long and healthy lives (population health outcomes), accessibility, person-centredness, safety, effectiveness, efficiency, equity, co-ordination/integration, and enablers of quality (inter-professional primary care teams, quality

i In this paper, we use primary care as an inclusive term to cover the spectrum of community-based first contact healthcare models ranging from those whose focus is comprehensive, person-centred care, sustained over time, to those that also incorporate health promotion, community development and intersectoral action to address the social determinants of health.



improvement activities and information technology). Canada lags behind the leading countries on timely access to care, patient-centredness and engagement, communication across healthcare settings, inter-professional teamwork, use of electronic medical records, performance feedback, and addressing health and healthcare inequities.

## Features of High-Performing Primary Care

Canadian and international evidence and experience point to the following as essential features of a high-performing primary care system:

- ▼ Explicit policy direction
- ▼ Primary care governance mechanisms at the community, regional and provincial/territorial levels
- ▼ Patient enrolment
- ▼ Inter-professional teams
- ▼ Patient engagement
- ▼ Funding and provider payment arrangement aligned with health system goals
- ▼ Health information technology that effectively supports patients and providers
- ▼ Ongoing performance measurement
- ▼ Training and support for quality improvement
- ▼ Leadership development
- ▼ Coordination, integration and partnerships with other health and social services
- ▼ Systematic evaluation of innovation
- ▼ Research capacity and productivity
- ▼ Decision support for patients, clinicians, managers and policy makers

## Principles of Transformation

As primary care transformation proceeds at the provincial/territorial, regional and local levels—with appropriate federal support—the following principles should guide the change process:

- ▼ Strict adherence to the principles of universality and access to care based on need
- ▼ An unwavering focus on public benefit as opposed to professional or private interest
- ▼ Meaningful engagement of patients and citizens in primary care system design
- ▼ Application of an equity lens to health services planning and measurement
- ▼ Attention to the health and healthcare needs of communities and populations as well as individuals—in particular socially disadvantaged and high-needs communities and populations
- ▼ A multi-faceted innovation and change strategy based on a long-range perspective
- ▼ Responsiveness to local needs and context
- ▼ Engagement of a full range of key stakeholders
- ▼ Pluralism of primary care models
- ▼ Patient choice of “regular” primary care provider
- ▼ Systematic, relevant and rigorous monitoring and evaluation of the impact of transformation

## What Remains To Be Done?

Although the last decade has seen profound changes in the funding and organization of primary care in several provinces, much remains to be done. No province or territory has all the elements in place that are required to elevate primary care to the level of the best performing systems internationally.

The recent economic recession and resulting government deficits pose a threat to the ongoing process of transformation, which requires significant continuing investments targeting the features of high-performing primary care. Ironically, delaying those investments would hamstring the most promising health system strategies for reducing overall healthcare costs—improved preventive care, timely access to care for acute and chronic illness and proactive, evidence-informed management of chronic health conditions.

### Minimum requirements for continued progress include:

- ▶ Leadership and carefully targeted (and coordinated) investments by the federal and provincial/territorial governments and by regional health authorities in primary care transformation
- ▶ Creation of and support for inclusive primary care governance mechanisms at the community, regional and provincial/territorial levels
- ▶ Engagement of healthcare providers at multiple levels in a collaborative approach to policy development and implementation that places public benefit ahead of professional self-interest
- ▶ Development of comprehensive performance measurement systems for primary care to support improvement, accountability and research efforts at the practice, organization, community, regional, provincial/territorial and national levels

Through concerted effort, guided by an evidence-informed vision and sound principles of transformation, Canada's provinces and territories can build primary care systems over the next decade that provide the foundation for integrated healthcare systems that deliver health outcomes, patient experience and value for money at the world's best levels.

### 3.0 WHY A STRATEGY? WHY NOW?

High-performing primary care is widely recognized as the foundation of an effective and efficient healthcare system. Countries with a strong primary care sector achieve superior health outcomes at lower cost.<sup>1</sup>

Until the early 2000s, the funding, organization and delivery of primary care had not been a high priority for federal or provincial/territorial governments in Canada. However, over the past decade, Canadian provinces and territories have implemented primary care reforms focused on strengthening the infrastructure for primary care and establishing funding and payment models designed to promote performance improvement. These reform initiatives responded to recommendations from provincial<sup>2-4</sup> and national<sup>5,6</sup> healthcare reviews, the shared commitment to primary care renewal by the Prime Minister and the jurisdictional first ministers in the 2000, 2003 and 2004 accords, and primary care goals identified by individual provincial/territorial governments.<sup>7</sup> Primary care reform efforts were supported from 2000 to 2006 by the federal government's \$800 million Primary Health Care Transition Fund, a product of the 2000 First Ministers' agreement on health.

Despite significant progress since 2000, the performance of Canadian healthcare – and its primary care sector in particular – trails that of many other high-income countries. While other national health systems were tackling primary care transformation with a vengeance during the 1980s and 1990s, Canada stood still. Although several provinces and territories have made major strides in primary care reform during the last decade, the nature and extent of progress have been highly variable across the country. Moreover, sharing of experience, mutual learning and coordinated monitoring and evaluation of primary care reform initiatives have been noticeably absent.

As a result, Canada lags behind most of its peers on many quality indicators that are tracked by the Organisation for Economic Co-operation and Development (OECD) and in the Commonwealth Fund International Health Policy Surveys. In a recent evaluation of health system performance in seven high income countries (Canada, United States, Australia, Netherlands, New Zealand, Germany, United Kingdom), Canada ranked second lowest, ahead of only the United States in primary care performance.<sup>8</sup> This performance record is not entirely surprising, given the varying approaches each jurisdiction has taken to implementing healthcare reform, the ambiguity and variability of specific improvement goals and the long lead time required to see the outcomes of healthcare reform initiatives.

In its recent report, "Time for Transformative Change: A Review of the 2004 Health Accord", the Standing Senate Committee on Social Affairs, Science and Technology drew attention to the failure of the provinces and territories to meet the key Accord goal of ensuring that 50 per cent of Canadians had 24/7 access to multidisciplinary teams by 2011 and recommended:

"That the federal, provincial and territorial governments share best practices in order to examine solutions to common challenges associated with primary-care reform, such as: the remuneration of health professionals; the establishment of management structures to guide primary-care reform; and the use of funding agreements linked to public health goals"; and

"That the federal government work with the provinces and territories to re-establish the goal of ensuring that 50 per cent of Canadians have 24/7 access to multi-disciplinary health-care teams by 2014."<sup>9</sup>

Canada's lacklustre primary care performance, together with continuing fiscal turbulence, calls for a thoughtful and determined approach to system transformation. The aims, functions, features and impacts of high-functioning primary care have become increasingly clear through accumulated research evidence and experience over the last 20 years. We are now in a better position—and have a greater need—than ever before to strive for a broad consensus among major stakeholders on an achievable vision of Canadian primary care as the foundation of a high-performing health system and on the approaches needed to achieve that vision—in short, a strategy for primary care that builds on the advances made during the last decade. Such a strategy could serve as a touchstone for health policy makers and health system leaders at the federal, provincial, regional, local and organizational levels.

This discussion paper is intended to stimulate dialogue among key primary care stakeholders – a dialogue focused on building consensus on a roadmap for strengthening primary care in the context of broader health system transformation in Canada. This paper explores the role, current state, and potential contribution to overall health system performance of primary care in Canada. It also presents a vision for primary care transformation in the context of overall system reform. The discussion paper addresses the following questions:

- What is the potential contribution of primary care and investments in primary care transformation to health outcomes and control of healthcare costs in Canada?
- What progress has been made in Canada during the past decade on primary care transformation?
- Based on Canadian and international consensus, what are the appropriate aims for primary care and primary care improvement?
- What framework could be used to measure the progress and impact of primary care transformation?
- What are the opportunities for improvement?
- Based on Canadian and international evidence and experience, what are the features of high-performing primary care?
- Based on Canadian and international experience, what are the key principles of primary care transformation?
- What remains to be done?

## 4.0 DEFINING PRIMARY CARE AND PRIMARY HEALTH CARE

The terms primary care and primary health care have been interpreted in a variety of ways.<sup>10, 11</sup> Barbara Starfield defined primary care as “that level of a health service system that provides entry into the system for all new needs and problems, provides person-focused (not disease-oriented) care over time, provides care for all but very uncommon or unusual conditions, and co-ordinates or integrates care provided elsewhere by others”.<sup>12</sup> The Institute of Medicine describes primary care along similar lines as “the provision of integrated, accessible care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practising in the context of family and community”.<sup>13</sup>

Primary health care is both an orienting philosophy and an overarching strategy for promoting and protecting people’s health. The World Health Organization’s 1978 Declaration of Alma-Ata in 1978 defines primary health care as “essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families through their full participation and at a cost that the community and country can afford... It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.”<sup>14</sup> The Declaration goes on to state that primary health care “addresses the main health problems of the community, providing promotive, preventive, curative and rehabilitative services accordingly” and “involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food industry, housing, public works, communications and other sectors; and demands coordinated efforts of those sectors”. As WHO’s characterization of primary health care implies, primary care is a key component of primary health care. Accordingly, primary care has been described as “the representation, on the clinical level, of primary health care”.<sup>11, 15</sup>

Under the influence of the Canadian Institutes for Health Research (CIHR), the term “community-based primary health care” (CBPHC) has begun to gain currency. CIHR defines community-based primary health care as “cover[ing] the “broad range of primary prevention (including public health) and primary care services within the community, including health promotion and disease prevention; the diagnosis, treatment and management of chronic and episodic illness; rehabilitation support; and end-of-life care. CBPHC involves the coordination and provision of integrated care provided by a range of health care providers, including nurses, social workers, pharmacists, dietitians, public health practitioners, physicians and others in a range of community settings including people’s homes, healthcare clinics, physicians’ offices, public health units, hospices and workplaces. It is delivered in a way that is patient and population-centred and responsive to economic, cultural and social differences”.<sup>16</sup>

Within Canada and internationally, emerging models of primary care increasingly combine a population orientation with person-centred care and partner with others to promote and protect health, strengthen health literacy and address the social determinants of health – *primary care* informed by the principles of a primary health care. To acknowledge and support this trend, and in the spirit of community-based primary health care, we use primary care in this paper as an inclusive term to cover the spectrum of first-contact healthcare models from those whose focus is comprehensive, person-centred care, sustained over time, to those that also incorporate health promotion, community development and intersectoral action to address the social determinants of health.

## 5.0 VALUE OF PRIMARY CARE AND INVESTMENTS IN PRIMARY CARE IMPROVEMENTS

Countries with a strong primary care orientation have demonstrably better health outcomes and health equity, lower mortality rates, and lower overall costs of healthcare.<sup>17-19</sup> Access to a medical home that provides first-contact care that is person-focused over time, comprehensive and coordinated is associated with better individual and population health, lower costs of care and reduced inequality.<sup>20</sup>

### Health Outcomes

Macinko and colleagues examined the contribution of primary care systems in 18 wealthy OECD countries over three decades (1970-98).<sup>17</sup> Countries with strong primary care systems had lower all-cause mortality; lower all-cause premature mortality; and lower mortality from asthma, bronchitis, emphysema, pneumonia, and cardiovascular disease. In reviewing the accumulated evidence from cross-national and within-nation studies, Starfield, Shi & Macinko concluded that primary care helps prevent illness and death and is associated with a more equitable distribution of health in populations.<sup>21</sup>

In the United States (U.S.), primary care physician supply has been associated with better health outcomes including: lower all-cause mortality;<sup>22-26</sup> lower cancer, heart disease and infant mortality; lower incidence of low birth weight; longer life expectancy;<sup>23, 25</sup> lower stroke mortality; and better self-rated health.<sup>25, 27</sup> Higher ratios of primary care physicians to population are also associated with earlier detection of breast cancer,<sup>28,29</sup> colorectal cancer,<sup>30</sup> cervical cancer<sup>31</sup> and melanoma;<sup>32, 33</sup> and with overall healthcare quality.<sup>26</sup> In the United Kingdom, a larger supply of primary care physicians has been associated with better self-reported health<sup>34</sup> and less obesity.<sup>35</sup> Canadian studies have shown that a larger supply of family physicians is associated with earlier detection of breast cancer,<sup>36</sup> more recommended newborn and preventive care visits for children,<sup>37</sup> and better population health outcomes at the provincial level.<sup>38</sup>

### Healthcare Utilization and Costs

In U.S. studies, a larger supply of primary care physicians is associated with lower costs of health services,<sup>39,40</sup> and higher quality.<sup>40</sup> Regions with higher ratios of primary care physicians per population have lower overall hospitalization rates,<sup>21,26</sup> fewer hospitalizations for conditions that are ambulatory care sensitive<sup>41</sup> and lower preventable hospitalization rates for elderly patients in fair to poor health status.<sup>42</sup> Similar associations were found in a study in the United Kingdom which showed that a lower supply of primary care physicians was associated with higher hospital utilization for both acute and chronic conditions.<sup>43</sup>

In a British Columbia study, closer attachment of patients with multiple chronic diseases to a primary care practice was associated with lower costs to the overall healthcare system.<sup>44</sup> The majority of the cost reductions were from decreases in the costs of hospital services. In an Ontario study, county-level primary care physician supply was associated with lower rates of emergency room visits and hospitalization among children.<sup>37</sup> In a U.S. study, patients receiving care from multiple specialists rather than a regular source of primary care had higher costs, more procedures, and more medications.<sup>45</sup>

Dahrouge and colleagues used a variety of approaches to examine the relationship between economic outcomes and improvements in primary health care, including: systematic reviews on the economic consequences of adding a pharmacist to a primary health care practice and of strategies to improve chronic disease management; a simulation exercise to evaluate the economic impact of enhancing influenza immunization in older adults; and a review of published work demonstrating improvements in primary health care in relation to economic costs. Their economic modelling indicated that increasing influenza immunization rates in the elderly results in reduced healthcare utilization and significant cost savings.<sup>46</sup>

They concluded that investment in patient recall and provider reminders for preventive care and chronic disease management, including a pharmacist as part of primary health care teams, and case-management strategies to enhance chronic disease management (e.g., diabetes, hypertension and cancer) are effective strategies to increase healthcare capacity and service quality. They suggested that better primary health care leads to better health outcomes which generate cost savings through reductions in hospitalizations, professional visits and emergency room use and, indirectly, by increasing employment, productivity and economic growth.

## 6.0 PROGRESS TO DATE

In the early 2000s, the primary care reform agenda gained momentum in Canada impelled by the recommendations of provincial and federal commissions, growing political and public concern about healthcare access and quality, mounting dissatisfaction among family physicians with their working conditions and their ability to provide high-quality care, medical school graduates' declining interest in family medicine, and the availability of support from the Primary Healthcare Transition Fund.<sup>7</sup> The 2003 First Ministers Health Accord committed a \$16 billion federal investment in the Health Reform Fund, which was targeted to primary health care, home care, and catastrophic drug coverage, and in 2004, the First Ministers established a goal of 50% of Canadians having 24/7 access to multidisciplinary primary health care teams by 2011, and agreed to “accelerate the development and implementation of the electronic health record.”

Numerous primary care reform initiatives have been implemented across Canada<sup>ii</sup>. Several Canadian provinces and territories are incorporating inter-professional team-based care, group practices and networks, multi-component funding and payment arrangements, patient enrolment, implementation of electronic medical records, ongoing performance measurement, primary care governance, and quality improvement training and support. Reform initiatives generally rely on voluntary participation, incremental change and pluralism of models, which provide flexible opportunities for primary care physicians to improve their effectiveness, work satisfaction and income.<sup>7, 47</sup>

The objectives of provincial and territorial primary care reform initiatives differ, but common themes include improving: access to primary care services, coordination and integration of care, and quality and appropriateness of care, with a focus on prevention and the management of chronic and complex illness. Objectives that are commonly but less consistently identified include: improving the experiences of patients and providers; increasing responsiveness to the needs of patients and communities; improving health equity; and increasing health system accountability, efficiency, and sustainability.<sup>7</sup> While these objectives are laudable, the lack of specific measures and targets often leads to uncertainty about progress and success in achieving them.

The promotion of primary care groups and networks has been a common theme in most provinces and territories and a key part of reform initiatives in Quebec, Alberta and Ontario.<sup>7</sup> Primary care groups or networks in some provinces include a range of models (e.g., Ontario), while other provinces have supported only physician-led innovations within a single organizational model (e.g., Quebec).<sup>47</sup> In all jurisdictions, participation by both providers and patients in these groups or networks is voluntary.

Based on our provincial/territorial review, the main differences in primary care reform models across provinces and territories relate to physician payment, the types of primary care providers that are incorporated into the models, governance mechanisms (e.g., community, physician, inter-professional), formal enrolment (rostering) of patients, the degree to which patients are supported in managing their own health, the extent of quality improvement support, the scope of services that are provided to the population, the nature of the population being served, and the adoption of a population-based approach to planning and delivering care.

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ii A report that describes key primary care reform initiatives in each province and territory is under development based on key informant interviews and a review of published and grey literature. When completed, the report will be made available as a separate document.



Several provinces have implemented blended payment arrangements combining fee-for service with capitation or incentive payments over the past decade.<sup>47</sup> Only Ontario and the Northwest Territories have made a fundamental move away from fee-for-service payment.<sup>47</sup> Some jurisdictions have introduced payment models intended to improve care for specific patient populations by providing a fixed annual payment for enrolling elderly or chronically ill patients or increasing fees for caring for vulnerable populations with greater healthcare needs.<sup>47</sup>

Quebec and Ontario have promoted formal enrolment of patients with primary care providers. Three-quarters of Ontarians and one-third of Quebecers are currently enrolled.<sup>7,48</sup> British Columbia, Alberta and Nova Scotia have been most active in implementing formal patient self management and patient education programs.

Development of multidisciplinary, inter-professional primary care teams is a common focus in all Canadian provinces. Over the past decade, provincial healthcare systems have expanded the number and/or types of primary care providers including family physicians, nurse practitioners, and midwives.<sup>7,47</sup> This has been achieved by increasing training and employment opportunities, changing licensing requirements and regulations for non-physician providers, and offering incentives to family physicians to integrate other providers into an inter-professional practice.<sup>47</sup> Alberta, Quebec, and Ontario have made the most substantial progress toward achieving the First Ministers' goal of giving 50% of Canadians access to multidisciplinary primary care teams by 2011.<sup>7</sup> Inclusion of nurses in primary care teams is common to all jurisdictions. In the 2008 Canadian Survey of Experiences with Primary Health Care, 27% of adults with a regular doctor or place of care reported that a nurse was regularly involved in their care, and 16% reported that other health professionals were involved in their care.<sup>49</sup> Recently, the Council of the Federation formed the Team Based Models Theme Group of the Health Care Innovation Working Group for the purpose of assessing multiple inter-professional models of care based on a series of agreed upon principles and criteria. Core attributes and key success factors were identified for implementation and spread.<sup>50</sup>

In some provinces and territories, interdisciplinary (i.e., non-physician) providers are employed by and maintain formal links with regional or public health systems, while in other provinces, individual clinics or physician-led groups hire interdisciplinary providers directly.<sup>47</sup> Alberta and Manitoba have implemented programs to facilitate linkages between specialists and primary care physicians.

Chronic disease management initiatives (e.g., quality improvement collaboratives, incentive payments, focused networks) are underway in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario and Quebec. Saskatchewan, Manitoba, Ontario, Quebec and New Brunswick have supported community health centres that address the social determinants of health in addition to providing primary care services. Alberta, Ontario, Quebec, New Brunswick, Nova Scotia and Manitoba have implemented 24/7 access to care through a telephone help line, while Alberta and Ontario have invested in expanding afterhours care through extended office hours.

Through its investment in Canada Health Infoway, the Government of Canada is providing funding to support provinces and territories in developing and implementing electronic medical and health records.<sup>51</sup> The six core databases for electronic health records (client registry, provider registry, diagnostic images, laboratory test results, drug information systems, clinical reports/immunization) are now available for use by healthcare providers for all residents of British Columbia, Alberta, and Prince Edward Island, and some residents of Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, and Newfoundland and Labrador.<sup>52</sup> Nine jurisdictions have at least four of the six core databases in place.<sup>52</sup>

British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Nova Scotia, and Northwest Territories have put programs in place and dedicated resources to encourage physicians to use electronic medical records.<sup>51</sup> Alberta, Ontario, Nova Scotia, British Columbia, Newfoundland and Labrador, Yukon, and Northwest Territories have the highest proportion of family physicians using electronic medical records.<sup>53</sup>

Alberta, British Columbia, Saskatchewan and Ontario have introduced quality improvement programs which vary in their range, intensity and improvement targets<sup>7, 47</sup> and have established Quality Councils.<sup>54</sup> Progress in systematically measuring performance and reporting back to providers, payers, and patients has been limited.<sup>47</sup>

Quebec and British Columbia have introduced primary care governance structures at the regional and/or local levels. Quebec has implemented contractual agreements between primary care practices and health institutions at the local, regional and provincial level, and established regional and local departments of family medicine whose mandate is to coordinate the supply and planning of primary care services and work collaboratively with regional health authorities and local health centres.<sup>7</sup> British Columbia has supported the development of Divisions of Family Practice that allow family physicians to work together at the community or regional level to improve clinical practice, offer comprehensive services to patients and participate in decision making in partnership with regional health authorities and the Ministry of Health Services.<sup>7</sup>

In summary, a wide variety of primary care reform initiatives are underway across the country. Primary care groups, networks and inter-professional teams have been implemented to varying degrees in all provinces and territories, patient enrolment has been widely adopted in two provinces, an increasing proportion of primary care physicians are participating in blended payment models, and most provinces and territories have invested in information technology. British Columbia, Alberta, Ontario and Quebec appear to have made the greatest progress toward primary care transformation in Canada.<sup>7</sup> However, no province or territory has implemented all the elements required to achieve the full value of a strong primary care system.

## 7.0 AIMS OF PRIMARY CARE

A broad consensus has emerged, both within Canada and internationally, about the proper aims of healthcare in general and primary care in particular. The first six of the eight aims outlined below are the “improvement aims” identified by the Institute of Medicine in their classic 2001 report “Crossing the Quality Chasm: A New Health System for the 21st Century”.<sup>55</sup>

Primary care in Canada needs to be accessible, person-centred, safe, effective, efficient, equitable, coordinated, and population health oriented.

**Accessibility:** The primary care system needs to ensure that all Canadians have access to a regular identifiable primary care provider or team<sup>4, 56-59</sup> and timely access to primary care services,<sup>5, 55, 59-70</sup> through arrangements that facilitate 24/7 access to appropriate services.<sup>2, 3, 5, 71-77</sup>

**Person-Centredness:** Primary care services should be offered in a way that is sensitive and responsive to a patient’s needs, values and preferences.<sup>4, 5, 55-57, 60-62, 67, 78-80</sup> A patient’s culture, religion, language, social context and specific needs should be respected, and patients and families should have an active role in making decisions about their own care.

**Safety:** Primary care services need to be provided to patients in a manner that avoids harm or injury.<sup>5, 6, 55, 60-62, 80</sup>

**Effectiveness:** Primary care services should be funded and delivered in a manner that avoids overuse of ineffective care or underuse of effective care. People should receive care that is informed by the best available scientific information.<sup>4, 5, 55, 60-62, 65, 76, 80</sup>

**Efficiency:** The primary care system should continually seek to reduce waste and cost of supplies, equipment, space, capital, ideas, time and opportunities.<sup>2, 4-6, 55, 56, 58, 60-62</sup>

**Equity:** The primary care system should provide care according to need, irrespective of a person’s race, ethnicity, gender, sexual orientation or income, and work to eliminate health disparities related to geography or social status.<sup>4-6, 55, 56, 60, 62, 80</sup>

**Coordination/Integration:** A strong primary care system should facilitate continuous care<sup>2, 5, 56, 59, 61, 62, 70, 78</sup> and be organized, connected and co-ordinated with other parts of the healthcare system and with community and social services to provide high quality care.<sup>2, 4, 5, 56, 58, 59, 61, 62, 64-66, 68, 70-74, 78-92</sup>

**Population Health Orientation:** The primary care system needs to adopt a population health orientation<sup>2, 58, 60, 63, 70, 73, 80</sup> that emphasizes systematic and proactive approaches to early prevention and health promotion,<sup>5, 56, 62, 64, 70-72, 74</sup> better management of chronic diseases<sup>56, 62, 71, 78, 79, 84</sup> and partners with others to address the social determinants of health.<sup>5, 56, 57, 72, 85, 86</sup>

## 8.0 MEASURING PROGRESS

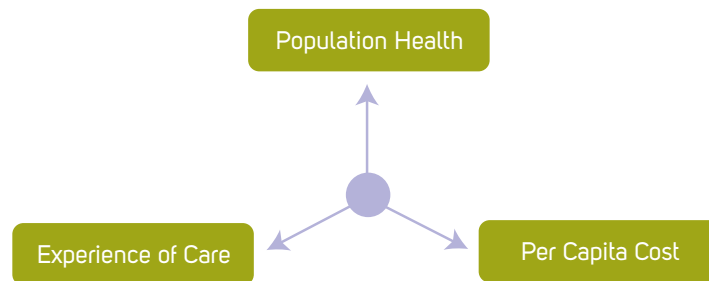
Lofty aims need to be translated into performance goals and measures to identify where improvements are needed and track progress in addressing health system weaknesses. Otherwise, how will we know whether our ongoing efforts to strengthen primary care in Canada are succeeding? How else will we know whether our aims are being met? How else can we learn from the diverse provincial/territorial policy initiatives and their comparative success?

For optimal learning and health system management, a coherent, balanced and preferably, shared, approach to tracking system performance is required. Two complementary sets of improvement aims, the Institute for Healthcare Improvement's (IHI's) Triple Aim and the Institute of Medicine's Aims for Improvement, can, in combination, provide the basic architecture for such a performance measurement system.

The health sector in Canada and internationally has increasingly embraced the Triple Aim framework for measuring and improving healthcare performance. Within Canada, British Columbia, Alberta and Saskatchewan have adopted the framework to guide and track the progress of healthcare improvement initiatives.

The Triple Aim Framework focuses on three objectives (the "Triple Aim"): 1) improving the health of the population; 2) enhancing the patient experience of care; and 3) reducing, or at least controlling, the per capita health costs. Colloquially, these aims are sometimes referred to as Better Health, Better Care, Better Value (Figure 1).<sup>93, 94</sup>

**Figure 1 - Triple Aim Framework (Institute for Healthcare Improvement)**



IHI has assembled a set of suggested measures that help to operationally define the Triple Aim and proposes that measures based on the Institute of Medicine's Aims for Improvement can form the basis for assessing patients' experience of care.

The aims we identified in the previous section, Aims for Primary Care, which include the Institute of Medicine's improvement aims, can be mapped onto the Triple Aim (Table 1). Together, they offer a performance measurement framework that can be populated with specific measures covering each domain and used for tracking the impact over time of primary care transformation efforts. Capturing a common, core set of measures across different settings allows comparison of performance and shared learning.

**Table 1: A Framework for Primary Care Performance Measurement**

	Population health	Patient experience	Per capita health cost
Accessibility		X	
Person-centeredness		X	
Safety		X	
Effectiveness		X	
Efficiency			X
Equity	X	X	
Coordination/Integration		X	X
Population Health Orientation	X	X	

It is important to note that this framework addresses organizational and health system performance measurement for purposes of planning, management, quality improvement, accountability and public reporting, and focuses on outcomes. It does not cover all that is important about primary care and does not include the full scope of measurement that would be required for research or program evaluation purposes.<sup>95</sup>

## 9.0 OPPORTUNITIES FOR IMPROVEMENT

Opportunities for improvement lie in the gaps between current and potentially achievable performance. To identify and estimate the magnitude of those gaps, we compare the performance of Canadian primary care to that of the best performers among Canadian provinces and territories and among other countries at a level of economic development comparable to Canada. Presentation of the findings is aligned with the aims for primary care described above. Findings for long and healthy lives (population health), access, person-centred care, safety, effectiveness, efficiency and coordination are summarized using the framework developed by Davis and colleagues.<sup>8</sup> Findings for equity are based on a comparison of measures from the Commonwealth Fund 2011 International Health Policy Survey of Sicker Adults for respondents with above average and below average income.<sup>96</sup> No data were available to examine the opportunities for improvement of population health orientation (as opposed to population health outcomes). A sub-section, Enablers of Quality, examines the adoption of primary care teams, quality improvement initiatives and information technology.

Data for this analysis were extracted from multiple sources including: Commonwealth Fund International Health Policy Surveys (2008-2011),<sup>96-100</sup> Organisation for Economic Co-operation and Development (OECD) (2011),<sup>101</sup> Canadian Community Health Survey (CCHS) (2007- 2008),<sup>102, 103</sup> the National Physician Survey (2010),<sup>53</sup> Statistics Canada (2012)<sup>104</sup> and the 2008 Canadian Survey of Experiences with Primary Health Care.<sup>49,105, 106</sup>

### 9.1 Long and Healthy Lives: Population Health (Appendix, Table 1)

Although the health of populations is determined mainly by factors which lie outside the domain of healthcare (e.g., income and income inequality, social support/exclusion, early life, food security, education, employment and working conditions, unemployment and employment security),<sup>107, 108</sup> primary care nonetheless makes a significant contribution to population health as reflected in indicators such as premature mortality, infant mortality, and healthy life expectancy.<sup>8</sup>

Although Canada exceeds the OECD average for life expectancy at birth (80.7 years, compared to 79.5), Canada's infant mortality rate is higher than the OECD average (5.1 deaths per 1,000 live births, compared to 4.4 per 1,000). Canada has a lower premature mortality rate for men (4,168 potential years of life lost (PYLL) per 100,000 population, compared to 4,689 per 100,000), and a higher premature mortality rate for women (2,554 PYLL per 100,000 population, compared to 2,419 per 100,000).<sup>101</sup> Japan is the world's leader for the longest life expectancy at birth (83 years) and Iceland is the leader for the lowest premature mortality (2,995 PYLL per 100,000 for men and 1,492 PYLL per 100,000 for women) and infant mortality (1.8 deaths per 1,000 live births).

Infant mortality and premature mortality vary significantly across the country. Nunavut has eight times higher infant mortality (16.1 per 1,000 live births) than Prince Edward Island (2.0 per 1,000 live births).<sup>104</sup> Nunavut has two times more premature deaths (1,017 per 100,000 live births) than British Columbia (508 per 100,000 live births).<sup>104</sup>

### 9.2 Accessibility (Appendix, Table 2)

Among 11 high-income countries, Canada has the fifth lowest percentage of adults (77%) who report having a regular doctor (compared to 94% in the Netherlands, the highest performing country)<sup>99</sup> and the third lowest percentage of sicker adults<sup>iii</sup> (88%) who have a regular doctor (Netherlands 99%).<sup>96</sup>

iii Age 18+; fair or poor self assessed health or received medical care in the past year for a serious or chronic illness, injury or disability, or hospitalized in the past two years (other than for uncomplicated childbirth) or surgery in the past two years.

The proportion of sicker Canadians with a regular doctor is substantially higher in the Atlantic Provinces (94%) than in Quebec (80%).<sup>96</sup>

Canada has the highest percentage of adults (32%) and sicker adults (23%) who report waiting six or more days or never getting an appointment the last time they were sick, compared to 2% of adults in Switzerland and 5% of sicker adults in New Zealand.<sup>96,99</sup> Among sicker Canadians, Quebecers were much more likely (37%) to wait six or more days or never get an appointment the last time they were sick than respondents from the western provinces and the territories (19%).

Canada has the third lowest percentage of primary care physicians reporting that their practice had an afterhours arrangement to see a doctor or nurse (43%), compared to the highest performing country, the Netherlands (97%).<sup>100</sup> Canada also has the highest percentage of adults and sicker adults who report that accessing medical care in the evenings, on weekends and on holidays was somewhat or very difficult.<sup>96,99</sup>

### 9.3 Person-Centredness (Appendix, Table 3)

Data are available from the Commonwealth Fund International Health Policy Surveys for three dimensions of patient-centred care: provider–patient communication; physician continuity and feedback; and patient engagement and preferences.

#### 9.3.1 Provider-Patient Communication

Among 11 wealthy countries, Canada ranks second last for the percentage of adults (62%) reporting that contacting their doctor by phone during regular hours is somewhat or very easy (compared to Switzerland (90%)).<sup>99</sup> Canada is at the bottom for the percentage of sicker adults who always or often received an answer the same day when calling their regular doctor's office with a medical question or concern during regular practice hours (50%), compared to the Netherlands (79%).<sup>96</sup> Canada ranks fourth on the percentage of sicker adults that reports receiving clear instructions about symptoms to watch (66%) and third on the percentage of adults with chronic conditions who report that the potential side effects of medications were explained (73%).<sup>96</sup>

#### 9.3.2 Continuity and Performance Feedback

Canada ranks in the middle among 11 developed countries on the percentage of adults (6th at 64%) and sicker Canadians (tied for 7th at 64%) who report having the same doctor for more than five years.<sup>96,99</sup>

In 2009, 17% of Canadian family physicians reported that they routinely received and reviewed data on clinical outcomes, second lowest among 11 countries included in the survey. The United Kingdom was the highest performer on this measure at 89%.<sup>98</sup>

#### 9.3.3 Patient Engagement and Preferences

Canada is the third lowest performing country on the percentage of sicker adults who report their regular doctor always or often spends enough time with them (77%) compared to Switzerland at 96%, and fourth lowest on the percentage of adults that report always or often having the opportunity to ask questions about recommended treatment (85%), compared to New Zealand at 92%.

Canada is the fourth ranking country on the percentage of sicker adults with one or more chronic conditions reporting that their healthcare professional discussed main goals in caring for their condition (67%) (top performer Switzerland at 81%) and helped them make a treatment plan (63%) (top performer United Kingdom at 80%).

## 9.4 Safety (Appendix, Table 4)

Canada ranks third on the percentage of adults with chronic conditions who report that someone from their regular place of care explained side effects of a medication (73%) and fourth on the percentage of adults with chronic conditions who report that their regular place of care reviewed all medications including those prescribed by other doctors (69%).

Canada is the third lowest performer among the 11 countries participating in the 2009 Commonwealth Survey of primary care physicians on the percentage of physicians reporting their practice had a process for identifying adverse events and taking follow-up action (10%), compared to the highest performer, the United Kingdom, at 56%.<sup>98</sup> Canada ranks fourth from the bottom on: the percentage of adults with chronic conditions who report an experience with wrong medication, a medical mistake, or incorrect lab test result outside of the hospital; the percentage of adults with chronic conditions who report that someone from their regular place of care gave them a written list of medications (47%); and the percentage of primary care physicians who report routinely giving patients a written list of medications (16%).<sup>96,98,99</sup>

## 9.5 Effectiveness (Appendix, Table 5)

### 9.5.1 Prevention

Canada is the best performer along with Switzerland and the United States with respect to the percentage of women (aged 25-64) reporting that a Pap smear was performed in the last two years (70%) and trails slightly behind Switzerland for screening in the past three years (80% vs. 85%).<sup>99</sup> Canada is the third best performer on the percentage of women aged 50-64 reporting they received a mammogram within the last two years (76%). Canada has the third highest percentage of seniors who report receiving a flu shot in the past year (68%), compared to the Netherlands at 83%. There is considerable variation in rates of influenza immunization among provinces with two times higher rates in Nunavut (83%) than in Newfoundland and Labrador (48%).<sup>104</sup> Canada ranks fifth on blood pressure checks for adults (82%), compared to the best performer, France (95%), but eighth in the use of patient reminders for preventive care at 39%, well below the leading country, the Netherlands, at 59%.

### 9.5.2 Chronic Illness Care

Canada ranks sixth on the percentage reporting that their blood pressure was measured (94%) in the last year, second highest on the percentage of adult patients with diabetes reporting that their cholesterol had been checked in the last year (88%) and fourth highest on the percentage reporting that their eyes were examined (77%) in the last year.<sup>96,99</sup> Canada ranks seventh on foot examinations within the past year for people with diabetes (50%), compared to the United Kingdom at 86%.<sup>96</sup> Within Canada, regional variation is striking, with 84% of Ontario respondents indicating that their eyes were examined and 61% reporting that their feet were examined, compared to 65% and 29% respectively among Quebec respondents.<sup>96</sup>

## 9.6 Efficiency (Appendix, Table 6)

Canadians are the highest users of emergency departments among the countries included in the Commonwealth Fund surveys.<sup>96,99</sup> Canada has the highest percentage of adults (44%) and sicker adults (58%) who used an emergency department in the preceding two years, compared to 22% of adults in Switzerland and Germany and 31% of sicker adults in Germany. Canada also has the highest percentage of sicker adults who report they could have been treated at their usual place of care, if available, for their last emergency department visit (41%), compared to 16% of United Kingdom respondents. More sick adults in the Atlantic Provinces (55%) report they could have been treated at their regular place of care compared to Ontario (37%).<sup>96</sup>



Canada has the highest percentage (19%) of adults who report that their care is poorly organized and poorly coordinated (compared to Switzerland at 6%), and the second highest percentage who report experiencing situations where medical records or test results were not available at the time of an appointment (11%, compared to Switzerland at 7%). Among sicker adults, 19% of Canadians report that test results, medical records or reasons for referral were not available at the time of their scheduled doctor's appointment, higher than respondents from any other country and almost triple the rate for Switzerland (7%).<sup>96</sup>

## 9.7 Equity (Appendix, Table 7)

We examined 2011 Commonwealth data on sicker Canadian adults by two income categories: those who reported their incomes as above the country median and those who reported their incomes as below the country median.<sup>96</sup> In presenting the findings, we focus on measures for which income-based differences are substantial and statistically significant.

Lower income respondents were much more likely than higher income respondents to report that their health keeps them from working full time or limits their ability to do housework or other daily activities (43% vs. 20%), suggesting that their health problems may be contributing to their lack of income.<sup>96</sup>

Sicker adults reporting below average incomes are more likely than those with above average income to: describe their health as fair or poor (45% vs. 24%); have two or more chronic conditions (52% vs. 27%); and have more hypertension, heart disease, diabetes, joint pain and arthritis, asthma, chronic obstructive pulmonary disease and other chronic lung problems, depression, anxiety and other mental health problems, and chronic back pain. Sicker adults with below-average incomes are more likely to report problems with activities of daily living and moderate or severe pain or discomfort.<sup>96</sup>

Sicker Canadians whose income is below average are more likely than those with above average income to report waiting six or more days for an appointment when sick, not taking medication because of cost, and having serious problems paying medical bills. They are less likely to report that their regular doctor or someone in the doctor's practice spends enough time with them or explains things in a way that they can understand, or that a health professional has discussed the main goals in caring for their condition.

Among sicker Canadians taking prescription medications, fewer people with lower than average income (68%) than people with above average income (76%) report that a pharmacist or doctor reviewed and discussed all their medications within the last year.<sup>96</sup> On the other hand, they were more likely than those with higher income to have a written list of their medications (74% vs. 65%).<sup>96</sup> Among sicker Canadians with hypertension, heart disease or diabetes, those with below average income were less likely to report having their cholesterol checked in the past year (81% vs. 91%). Sicker Canadians with below average income are more likely than sicker adults with higher incomes to rate the overall quality of care they received in the past year as fair or poor (17% vs. 9%).<sup>96</sup>

Among respondents to the 2008 Canadian Survey of Experiences with Primary Health Care who had ambulatory care sensitive conditions (asthma, chronic obstructive pulmonary disease, diabetes, high blood pressure, heart disease), Canadians in the lowest income quintile were less likely than those in the highest income quintile to report having access to afterhours care or that their primary care physician involved them in clinical decisions or helped them make a treatment plan.<sup>106</sup>

## 9.8 Coordination/Integration (Appendix, Table 8)

Canada ranks third among 11 developed countries on the percentage of adults reporting that their doctor always or often coordinates or arranges their care (68%), compared to New Zealand and United States, the highest performers at 69%.<sup>99</sup> Canada ranks fourth on this measure for sicker adults (62%), compared to the United Kingdom at 66%.<sup>96</sup> Domestically, among sicker adults, a higher percentage of respondents from the western provinces and territories and Ontario (65%) than from Quebec (46%) report that their doctor always or often coordinates their care.<sup>96</sup>

Canada ranks sixth on the percentage of sicker Canadians reporting that their specialist had information about their medical history (76%), compared to United Kingdom (91%), and is fourth from the bottom on the percentage reporting that their regular doctor seemed informed about the care they received from their specialist (72%), compared to the United Kingdom (88%).<sup>97</sup> Within Canada, more respondents from the Atlantic Provinces (88%) report that their specialist had information about their medical history than respondents from Quebec (61%).

## 9.9 Enablers of Quality (Appendix, Table 9)

Inter-professional primary care teams, performance monitoring, capacity for quality improvement, and information technology are widely accepted as effective enablers of quality improvement.

Among 11 wealthy countries, Canada has the second lowest percentage of primary care physicians who report working with non-physician staff (such as nurses) to provide primary care (52%, compared to Sweden at 98%).<sup>98</sup> In the 2008 CCHS survey, only one-third (27%) of adults with a regular doctor or place of care reported there was a nurse regularly involved in their care, while 16% reported that other health professionals, such as dietitians and nutritionists, participated in their care.<sup>49</sup>

Canada has the second lowest percentage of primary care physicians who report that their clinical performance is routinely compared with other practices (11%) compared to 92% of general practitioners in the United Kingdom. Canada also trails other countries in the use of clinical guidelines and financial incentives to enable quality improvement.<sup>98, 100</sup>

In 2009, Canada ranked at the bottom of the countries participating in the Commonwealth Fund International Survey on the percentage of physicians (37%) using an electronic medical record, compared to a high of 99% in the Netherlands.<sup>98, 100</sup> In 2010, electronic medical record adoption rates varied substantially across the country, with over twice as many family physicians reporting use in Alberta (68%) compared to Quebec (28%).<sup>53</sup>

## 9.10 Summary

Canada sits in the middle of the pack among OECD countries for life expectancy and premature mortality for men, but near the bottom for infant mortality and premature mortality for women. Among high income countries that participate in the Commonwealth Fund International Health Policy Surveys, Canada's primary care performance is middling or better for most aspects of prevention, chronic disease management and coordination of care. Opportunities for major advances are most obvious in the domains of timely access to care (both in-person and by telephone and during both regular office hours and afterhours), patient-centredness and engagement, communication across healthcare settings, care processes, development of inter-professional teams, use and functionality of electronic medical/health records, systematic feedback on performance, and addressing health and healthcare inequities. Domestic comparisons (where data are available) show substantial inter-provincial/territorial variation, suggesting opportunities for policy learning through the sharing of experience and evaluation findings.

## 10.0 FEATURES OF HIGH-PERFORMING PRIMARY CARE

This section addresses the question: What do primary care organizations, providers and the people they serve need to achieve breakthroughs in health outcomes, the experience of care and control of healthcare costs? Based on Canadian and international evidence and experience, we consider the following features to be the fundamental elements of a high-performing primary care system. These features underpin the primary care functions of first contact, person-focused care over time, comprehensiveness and coordination, and support the achievement of the aims identified above. None is sufficient by itself; the full array is necessary to generate major improvements.

### 10.1 Explicit Policy Direction Anchored in Public Values, Needs and Preferences

Although primary care reform has been initiated in each province, most provinces have no clearly articulated vision for the future of primary care or a transformation strategy for moving toward that vision. In our federal system, responsibility for health policy rests primarily with the provinces and territories. However, progress in primary care reform is most likely to advance rapidly and effectively if provincial/territorial efforts are informed and supported by a shared sense of direction among the federal and provincial/territorial governments. This has been recognized by the Council of the Federation through their creation of the Health Care Innovation Working Group. Addressing areas of common interest to the provinces and territories, such as the pan-Canadian deployment of team-based models of care and clinical practice guidelines, may contribute to driving innovation, system transformation and quality improvement in primary care and other sectors of the healthcare system.

To transform the system, achieve better alignment of care and deliver the care the population needs, a clear vision and a coherent set of strategies are required.<sup>80, 82</sup> Policy roadmaps that articulate specific improvement goals for the primary care system and its role in the overall health system, together with a menu of strategies for achieving these ambitions, need to be developed.

A clearly articulated policy direction helps public servants, healthcare managers and professional leaders to maintain a focus on key health system objectives and reduce ambiguity. It also sends a clear message to the public about what it can or should expect from a high performing primary care system. A policy roadmap is most likely to command support if it is anchored in the values, needs and preferences of those who use primary care, informed by relevant evidence and experience and based on a high degree of consensus (or at least an accommodation) among key stakeholders.

### 10.2 Primary Care Governance Mechanisms at the Community, Regional and Provincial/Territorial Levels

Given the predominance of independent, solo or small group physician-managed family practices, the primary care sector has often been likened to a cottage industry. Inclusive primary care organizations are mostly absent at the regional and local levels. As a result, primary care providers in most Canadian communities and health regions lack a collective voice and the capacity to assume shared responsibility and accountability for addressing their patients' and populations' needs.<sup>7</sup> Effective governance, administration, and managerial structures at the local/regional level are needed to improve system integration and to support the adoption of best practices.<sup>109</sup> Having an appropriate management structure between health ministries and primary care at the regional/community level ensures that an organizational body has both the accountability and the authority to drive and support change.<sup>110</sup>

Australia, New Zealand and the United Kingdom have established primary care governance mechanisms to integrate primary care delivery with other health services “that seek to increase the influence of primary care organizations, and in particular general practitioners, in health planning and

resource allocation”.<sup>111</sup> Although the objectives of these organizations vary, their fundamental purpose is to establish links “between activities at the micro level of care delivery (clinical care delivered by individual practitioners) and the macro level of care delivery (systems responsible for policy, funding, and infrastructure)”.<sup>111</sup>

New Zealand established Primary Health Organizations (PHOs) to coordinate and deliver primary care services to a local population. These organizations are administered as part of the activities of District Health Boards and have an explicit requirement to include a broad range of providers in the decision-making process and to focus on access, population health and care of disadvantaged groups.<sup>111-113</sup> These organizations have been successful in facilitating provider engagement.<sup>113</sup> Australia has implemented Medical Locals (formerly Divisions of General Practice (DGP)) to provide professional support for general practitioners (GPs), promote the involvement of GPs in local health planning, and encourage integration between general practice and other health services.<sup>59, 114, 115</sup> These organizations have been essential to quality improvement initiatives, expansion of multidisciplinary teams, regional integration, information technology adoption and improved access to care.<sup>114</sup> The United Kingdom implemented Primary Care Trusts (PCTs) which are responsible for: assessing local needs; developing a local health system strategy; commissioning a range of preventive, primary, secondary and tertiary services; integrating health and social services; monitoring service delivery; and delivering services to their local population.<sup>111, 116</sup> Currently, England is planning to implement consortia of general practices (Clinical Commissioning Consortia) which will give GPs control over two-thirds of the National Health Service budget for specialists and hospital care. According to Russell and colleagues, these organizations have been shown to improve access to afterhours care, increase the use of electronic medical records and facilitate quality assurance activities associated with prevention and management of chronic disease.<sup>111</sup> In Canada, British Columbia and Quebec have addressed regional primary care governance, albeit through distinctly different approaches (see section on ‘Progress to Date’).

Local primary care provider organizations can respond collectively to community needs, participate with others in healthcare planning, negotiate with other sectors (e.g., hospitals and specialists) on behalf of primary care, support performance measurement and reporting, sponsor and coordinate quality improvement initiatives, and facilitate the pooling and sharing of expertise and resources among primary care practices and organizations. Ideally, primary care governance arrangements, whether at the local, regional or provincial/territorial level, need to include a broad range of primary care providers and stakeholders to promote collaboration and to provide a forum in which competing interests can be identified, explored and resolved.

### 10.3 Patient Enrolment

Patient enrolment is a process in which patients are formally registered with a primary care organization, team or provider. Patient enrolment facilitates accountability by defining the population for which the primary care organization or provider is responsible<sup>117</sup> and facilitates a longitudinal relationship between the patient and provider. Patient enrolment has been adopted in the United Kingdom, Netherlands,<sup>59</sup> Denmark and New Zealand.<sup>118</sup>

Formal patient enrolment with a primary care provider lays the foundation for a pro-active, population-based approach to preventive care and chronic disease management and for systematic practice-level performance measurement and quality improvement.<sup>94</sup> It clarifies accountabilities and clearly establishes primary care providers as health stewards for a defined population rather than providers of services to those who present themselves for care.

## 10.4 Inter-professional Teams

There is growing evidence that collaborative primary care teams can improve patient health and quality of life, especially for those with chronic conditions.<sup>119, 120</sup> Team-based care has resulted in: improvements in blood chemistry, physical and social functioning, energy, and bodily pain in patients with diabetes;<sup>121</sup> fewer days per year of symptoms in children with asthma;<sup>122</sup> fewer psychological and behavioural symptoms in patients with Alzheimer disease and improvements in distress and depression in their caregivers;<sup>123</sup> improvements in emotional role function, social function, bodily pain, mental health, vitality, and general health in terminally ill patients;<sup>124</sup> and weight reduction by obese patients.<sup>125</sup> Primary care teams can reduce emergency department use,<sup>126</sup> improve access to care and enhance patient satisfaction.<sup>127</sup> An examination of systematic reviews and meta-analyses by Dahrouge and colleagues found that multidisciplinary teams are associated with improvements in mental health and preventive care.<sup>46</sup>

Primary care teams can achieve efficiencies by allowing each team member to function at the top of their skill set. Inter-professional teams can facilitate the provision of comprehensive, continuous and person-centred care, mobilization of healthcare resources and patient navigation of the healthcare system.<sup>80</sup> Improvements in quality, patient satisfaction, access and equity, appropriately valued, should offset the additional resources required to implement inter-professional teams.<sup>128</sup>

## 10.5 Patient Engagement

A patient-centred approach is fundamental to high-performing primary care. Patients need to be supported to participate actively in their own healthcare, and patients and citizens need the means to participate in the design and planning of health services.

At the clinical level, patients are more likely to feel engaged when they have easy access to their providers, understand the information that is provided, receive guidance and support that assists them in understanding the choices available for their treatment, have their medications reviewed for risks and benefits, and receive care that is coordinated, and when relevant information is communicated among various providers, institutions and with them.<sup>129</sup>

Patients who are engaged in their primary care are more likely to recall information, have knowledge and confidence to manage their conditions, report the chosen treatment path was appropriate for them, report satisfaction with their care, participate in monitoring and prevention, and show improvements in health outcomes for diabetes, depression, eating disorders, asthma, hypertension and behavioural change.<sup>130, 131</sup> Patients who share in decision-making about treatment choose less interventionist (and less costly) treatments than their clinicians might have done.<sup>132</sup>

“A truly patient-centred healthcare system must be designed to incorporate features that matter to patients—including “whole person” care, comprehensiveness, communication and coordination, patient support and empowerment, and ready access. Without these features, and without consumer input into the design, ongoing practice, and evaluation of new models, patients may reject new approaches.”<sup>133</sup>

## 10.6 Funding and Provider Payment Arrangements Aligned with Health System Goals

Over the past decade, there has been a growth of blended payment models for primary care physicians that include capitation, fee-for-service, salary, infrastructure funding and targeted payments for particular services or performance levels. This broad range of payment models has allowed the alignment of targeted payment with specific healthcare objectives and the balancing of the desirable and perverse incentives inherent in different payment methods.

A vast amount of research related to reimbursement mechanisms has been published, all with similar conclusions—no single reimbursement mechanism provides all the necessary incentives to achieve health policy goals.<sup>81, 134, 135</sup> There is ambiguity about the benefits of pay-for-performance (P4P) and its potential for perverse effects in primary care.<sup>136</sup> To date, there are only a few rigorous studies of P4P models, and the evidence of a significant effect is weak.<sup>137</sup> Financial incentives targeting individual healthcare professionals appear to be effective in the short run for simple, distinct, well-defined behavioural goals. There is less evidence that financial incentives can sustain long-term changes.

Current evidence supports the thoughtful design of blended payment and funding models which mitigate the perverse incentives associated with fee-for-service, salary, capitation and pay for performance.<sup>128,135,138,139</sup> Ongoing evaluation and adjustment are needed to ensure that incentive structures are achieving their objectives.

## 10.7 Health Information Technology that Effectively Supports Patients and Providers

Sophisticated information technology to support clinical practice is essential to the provision of high quality, efficient primary care. Well-designed information management systems support evidence-informed clinical care and decision-making, identification of patients' care needs, performance measurement, quality improvement, patient engagement and care planning, and coordination and integration across the continuum of care.

The use of information technology for clinical decision-support and for generating patient reminders supports both operational efficiency and quality of patient care. Potential benefits include: improved preventive care and disease management;<sup>140-143</sup> increased prescribing of generic drugs;<sup>140</sup> improved management of medication;<sup>144-148</sup> reduced medical errors;<sup>147</sup> reduced unnecessary tests; and cost reductions.<sup>140</sup> A recent literature review found a potential for substantial savings to the healthcare system through the implementation of electronic medical records.<sup>137</sup> However, none of the studies included in that review focused on primary care.

Electronic health records and electronic medical records are valuable tools for generating performance measures for monitoring patient care, healthcare planning, evaluating innovations, and determining resource allocation. Investment in and implementation of information technology are critical to improving outcomes, achieving greater efficiencies, and improving the integration of care.<sup>54</sup>

## 10.8 Ongoing Performance Measurement

Systematic, ongoing performance measurement is required at multiple levels (practice, organization, community, regional, provincial/territorial and national) to inform and assess the impact of health services planning, management and improvement activities and as a basis for accountability processes. Performance measurement is fundamental to continuous quality improvement since it allows for the identification of opportunities for improvement, tracking progress against organizational goals, and comparison of performance against both internal and external standards.

## 10.9 Training and Support for Quality Improvement

Continuous quality improvement initiatives linked to ongoing performance measurement are crucial to primary care transformation<sup>7, 59, 81</sup> and improvements in quality of care, health outcomes and efficiency.<sup>149-151</sup>

Quality improvement training and ongoing support of primary care providers are needed to ensure the success of quality improvement efforts. A review of three successful system-redesign initiatives using quality improvement methods in primary care found that a common theme in all three initiatives was investment in building knowledge and skills of the team to support quality improvement. Each organization set clear expectations that staff would work on improving patient care to provide the organizational capacity for continued improvement.<sup>54</sup>

A recent systematic review by O’Beirne and colleagues that examined the impact of quality improvement (defined as “sustained effort to improve healthcare quality that incorporates repeated performance measurements and feedback to healthcare providers”) in primary care, found “strong” to “high or moderate” evidence that quality improvement increases colorectal cancer screening and foot examination for diabetes.<sup>155</sup> The evidence was “weak to moderate” for a positive impact on increasing tobacco cessation activities, improving HbA1c, LDL and HDL levels and blood pressure in patients with diabetes and cardiovascular disease, increasing treatment for depression, decreasing prescribing by providers for patients with a variety of conditions and associated drugs, and the adoption of clinical guidelines.

Two widely applied approaches for providing quality improvement training and support are quality improvement collaboratives and practice facilitation (coaching), which are often used in combination. Learning collaboratives focused on chronic diseases have been shown to: improve health outcomes for patients, improve patient education, increase preventive procedures, reduce hospitalization, improve quality of life indicators and improve access to primary care.<sup>81</sup> The Institute for Healthcare Improvement’s Breakthrough Series model is designed to enable participants to share experiences, accelerate learning and spread best practices. Learning collaboratives based on this model have resulted in: reduced wait times for appointments; reduced wait times while at the physician’s office; improved continuity of care; and increased patient and provider satisfaction.<sup>81</sup>

Practice facilitation has a positive effect on the application of evidence-based practice guidelines<sup>156</sup> and helps staff apply quality improvement techniques.<sup>157, 158</sup> Quality improvement coaches have been shown to increase office efficiency and improve care for patients with diabetes or asthma;<sup>159</sup> improve communication, trust, sense of team, leadership and create a culture of self-directed change<sup>160</sup> and result in cost-savings.<sup>161</sup>

Providing hands-on training and support to healthcare practitioners and the inclusion of improvement science in curricula for health professional students can facilitate the adoption and use of quality improvement methods and tools.

## 10.10 Leadership Development

High-performing primary care requires effective leadership. Leadership at all levels (government, executive and clinical) has been shown to be instrumental in the implementation of quality improvement initiatives<sup>162-167</sup> and electronic medical records.<sup>168</sup>

In complex healthcare systems that face a variety of internal and external pressures, a distributed leadership approach—in which responsibility for leadership is dispersed and shared among a variety of actors throughout an organization or system—is gaining support.<sup>166,167, 169-172</sup> A common theme in a cross-comparative case study of five international high performing healthcare systems (as identified by international experts in quality improvement and health system monitoring) was that the leadership approach was distributive, embraced common goals and aligned activities throughout organizations.<sup>172-173</sup> A Canadian study showed that the implementation of integrated multidisciplinary primary care teams was successful when internal and external leaders pooled their resources to bring about change.<sup>166</sup>

Successful leadership requires: a compelling vision for quality; performance targets and timelines that incorporate a vision; a strategy that includes evidence-based practices and establishes clear accountabilities and expectations at the organizational and individual level; a culture of quality improvement that emphasizes learning, innovation and quality measurement; engagement of frontline staff and champions; celebration of successes; and sharing of best practices.<sup>60</sup>

A systemic approach to leadership development that is focused on both providers and managers, is required for system transformation and quality improvement<sup>173</sup> Leadership development interventions should focus on organizations as a whole and teach trainees the unique attributes of leadership which stimulate transformative change, with a focus on collaborative approaches and continuous assessment.<sup>174</sup>

## 10.11 Coordination, Integration and Partnerships with Other Health and Social Services

Primary care providers assume responsibility for facilitating their patients' trajectory through the healthcare system and for the appropriate use of health and social services. To ensure access to a comprehensive range of appropriate services for the population they serve, primary care providers need to assist patients with healthcare decision-making and serve as mediators between patients and the other levels of the healthcare system, community resources and social services.<sup>80</sup> Coordination and integration strategies include informal relationships, formal agreements and partnerships, and integrated governance.<sup>81</sup> All such arrangements require clear articulation of the roles and responsibilities of each participant.

Integrated delivery of primary care services improves service delivery and results in: more efficient use of physicians, hospital and laboratory services; healthier lifestyles; lower health service utilization; and improved patient satisfaction.<sup>81</sup> Systems designed to improve coordination between primary care physicians and specialists have been shown to lower hospitalization rates and resource use. Integrated models focused on chronic disease have demonstrated improvements in prescribing.<sup>81</sup> Integrated models for mental healthcare have shown greater patient retention rates in treatment programs, patient satisfaction, more rational use of resources and diagnostic tests, improved clinical skills, more frequent use of appropriate treatment strategies, and more frequent clinical behaviours designed to detect disease complications.<sup>81</sup>



## 10.12 Systematic Evaluation of Innovation

In addition to ongoing performance measurement and monitoring, effective primary care system planning and management require focused evaluations of the implementation and impact of key policy and system management innovations. Such evaluations allow shortcomings to be identified and addressed and successes to be reinforced and spread. The effective dissemination of learning from these innovations is critical to system transformation.

## 10.13 Research Capacity and Productivity

Canada lags behind on investment in primary care research and the translation of knowledge into practice and policy.<sup>175</sup> According to Starfield, Canada has invested poorly in primary care research and evaluation and is at least 10 years behind other countries.<sup>176</sup> A recent study of six countries that examined the productivity of primary care research based on the volume of publications (2001-2007) found that researchers from the United Kingdom (followed by the Dutch and Americans) were the most productive while Canada and Australia showed slow signs of growth.<sup>177</sup> Significant progress is being made on this front through the Community-Based Primary Health Care “signature initiative” of the Canadian Institutes of Health Research.<sup>16</sup>

A constant flow of research evidence to inform primary care policy and practice is an essential underpinning of a high-performing and continually evolving primary care system. Adequate funding of both research and research training are needed to create and sustain a vibrant and productive primary care research enterprise.

## 10.14 Decision Support

Evidence-informed decision-making by patients, healthcare providers, organizational and health system decision-makers, policy makers and legislators requires that relevant evidence be available in a useful form at the point of decision-making – an enormous challenge, but one that needs to be creatively and doggedly addressed. All health decision-makers need access to user-friendly evidence summaries tailored to their needs. To meet this challenge, substantial investment in the development, testing and implementation of alternative approaches is needed.

## 11.0 PRINCIPLES OF PRIMARY CARE TRANSFORMATION

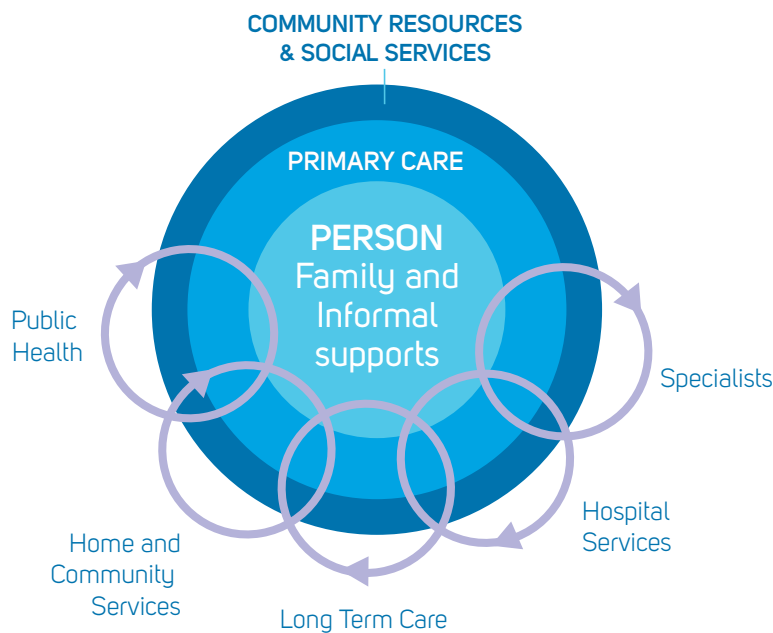
Aims and vision, however clear and compelling, are not sufficient by themselves to bring about system transformation. A thoughtful approach to the change process is also crucial. As primary care transformation proceeds at the provincial, regional and local levels – with appropriate federal support – what principles should guide the change process? We suggest the following:

- Strict adherence to the principles of universality and access to care based on need.<sup>5, 6, 59, 61, 80, 178, 179</sup>
- An unwavering focus on public benefit,<sup>5 179-182</sup> as opposed to professional or private interest
- Meaningful engagement of patients and citizens in system design (person-centred system design).<sup>5, 56, 57, 62, 76, 79, 80, 178, 179</sup>
- Application of an equity lens to health services planning and measurement.<sup>5, 55, 56, 60-62, 70, 76, 80, 179, 180</sup>
- Attention to the health and healthcare needs of communities and populations as well as individuals — in particular socially disadvantaged and high-needs communities and populations.<sup>2, 58, 60, 63, 70, 73, 76, 80, 82, 83, 179, 180</sup>
- A multi-faceted change strategy based on a long-term perspective.<sup>5,6,57, 61, 70, 76, 80</sup>
- Responsiveness to local needs and context.<sup>2, 4, 57, 61, 70, 76</sup>
- Engagement of a full range of key stakeholders.<sup>62, 76, 80</sup>
- Pluralism of primary care models.<sup>53, 57, 182, 183</sup>
- Patient choice of “regular” primary care provider.<sup>76, 180</sup>
- Fostering a culture of innovation<sup>176, 182</sup>
- Systematic, relevant and rigorous monitoring and evaluation of the impact of transformation.<sup>66, 70, 79, 80, 175, 176, 184</sup>

## 12.0 WHAT REMAINS TO BE DONE?

Primary care, along with public health and community care, has long been the poor cousin of hospital and specialist care in Canada's health systems. Overcoming our mediocre—or worse—performance relative to most other high income countries will require redirecting investment toward those sectors—not by denying access to needed specialist and hospital care, but by reducing the need for it. This demands a transformed system that is: centred on patients, their families and informal caregivers; responsive to community needs; and built on a foundation of high-performing primary care supported by and integrated with specialist and hospital care, community care, public health services, long-term care, and community support and social services. Such a system is depicted in Figure 2. In this transformed system, patients, their families and informal caregivers are partners in care; the primary care team provides the majority of healthcare, serves as integrator/coordinator with other system providers and services and works in partnership with others to address the social determinants of health; all other sectors interact with each other and with the primary care team to form an integrated system; all participants are committed to continuous improvement of health outcomes (better health) and patient experience (better care) while controlling health costs (better value); and all stakeholders take responsibility for ensuring the system is effective and accountable. This vision of a healthcare system centred on patients supported by a primary care team is consonant with the concept of the patient-centred medical home that has galvanized primary care reform in the U.S. and has been adapted to the Canadian context by the College of Family Physicians of Canada<sup>56</sup> and with primary care models that feature a leading role for nurses in chronic disease management.<sup>185-187</sup>

Figure 2 – Integrated Healthcare



*Adapted from Charles Kilo's "Primary Care Oriented Health System" model by the Health Quality Ontario Primary Care Quality Improvement Team*

The last decade has seen profound changes in the funding and organization of primary care in most provinces and territories. However, much remains to be done. The recent economic recession and resulting government deficits pose a threat to the ongoing process of transformation in some parts of the country, which requires significant continuing investments targeting the features of high-performing primary care. Table 2 shows the variability among Canada's provincial and territorial healthcare systems in the implementation of those features. No province or territory has all the elements in place that are required to elevate primary care to the level of the best performing systems internationally.

**Table 2: Comparison of Provinces and Territories on Features of a High Performing Primary Care System\***

Feature	BRITISH COLUMBIA	ALBERTA	SASKATCHEWAN	MANITOBA	ONTARIO	QUEBEC	NEW BRUNSWICK	PEI	NOVA SCOTIA	NEWFOUNDLAND/LABRADOR	YUKON	NUNAVUT	NORTHWEST TERRITORIES
Explicit policy direction anchored in public values, needs and preferences	X		X	X		X	O	O	X		O		O
Primary care governance mechanisms at the provincial/territorial and regional and/or local levels	X	O	O	O		X	O	O	O		O	O	O
Patient enrolment	O			O	X	X	O	O					
Inter-professional teams	O	X	O	O	X	X	O	O	O	O	O	X	O
Patient engagement	O	O	O	O	O	O	O	O	O	O	O		O
Funding and provider payment arrangements aligned with health system goals	X	X	O	O	X	O		O			O	X	X
Health information technology that effectively supports patients and providers													
Electronic Medical Record (EMR) Implementation													
% of GPs/FPs that report using only EMR or a combination of EMR and paper charts <sup>53</sup>	54%	68%	44%	41%	58%	28%	35%	45%	54%	47%	86%+	20%+	55%+
EMR only <sup>53</sup>	19%	28%	18%	18%	20%	4%	8%	2%	18%	13%	ND	ND	ND
EMR Funding Support	O	X	X	X	X	O		O	X				X
Ongoing performance measurement	O	O	O	O	O	O	O				O		O
Training and support for quality improvement	X	X	X	O	X	O	O				O		O
Leadership development	X		O	O	O		O	O	O		O	O	O
Coordination, integration and partnerships with other health and social services	O	O	O	O	O	X	O		O		X	X	O
Systematic evaluation of innovation	X	X	O	O	X	O			O				
Research capacity and productivity	O		O	O	O	O	O	O	O				O

Data presented in this table are from Hutchison et al (2011),<sup>7</sup> Strumpf et al (2012)<sup>47</sup>, College of Family Physicians of Canada (2010),<sup>53</sup> Marchildon and Chatwood (2012),<sup>188</sup> key informants and our review of published and grey literature.

+ Data for EMR implementation was provided by key informants.

Note: X indicates widespread or system-level implementation; O indicates limited implementation (e.g., local initiatives, pilot/demonstration projects or implementation as part of a research project); an empty cell indicates no implementation; ND indicates no data are available.

Canada is blessed with a large cohort of well-trained family physicians and a growing pool of interdisciplinary primary care providers. Primary care reforms and innovations since 2000 have laid the foundation for the development of a high-performing primary care system. However, the required transformation is incomplete. Key requirements for continued progress include:

- ▼ Leadership and carefully targeted (and coordinated) investments by the federal and provincial/territorial governments and by regional health authorities in primary care transformation. Unavoidably, this will require reallocation of funding and resources within and across healthcare sectors and programs. We propose two specific federal initiatives: a primary care innovation fund targeting the implementation of the features of high-performing primary care; and the creation of an Institute of Primary Healthcare within the Canadian Institutes of Health Research (CIHR) to accelerate the creation, dissemination and application of evidence to guide primary care transformation at the practice and system levels
- ▼ Creation of and support for inclusive primary care governance mechanisms at the community, regional and provincial/territorial levels
- ▼ Engagement of healthcare providers at multiple levels (local, regional and provincial/territorial) in a collaborative approach to policy development and implementation that places public benefit ahead of professional self-interest
- ▼ Development of comprehensive performance measurement systems for primary care that can support decision making, quality improvement and accountability at the practice, organization, community, regional, provincial/territorial and national levels
- ▼ Systematic monitoring, evaluation and reporting of the implementation and impact of primary care innovations

Through concerted effort, guided by an evidence-informed vision and sound principles of transformation, Canada's provinces and territories can build primary care systems over the next decade that provide the foundation for integrated healthcare systems that deliver health outcomes, patient experience and value for money at the world's best levels.

To advance this agenda, we propose, as a next step, a process designed to forge a broad consensus among key primary care stakeholders, including professional associations, patient, citizen and health advocacy groups, health charities and others, on an attainable vision and strategy for strengthening primary care in Canada. Reaching that consensus will require commitment and dedicated resources. However, once achieved, it will speak far more powerfully to health funders and policy makers at all levels than the isolated voices of individual stakeholders.

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## APPENDIX 1: CANADA'S PRIMARY CARE PERFORMANCE

Table 1: Long and Healthy Lives: Population Health

Indicator	Canadian Results	OECD Average	Best Performing Country	Best Performing Country Results	Canada's Ranking among 34 Countries	Data Source
Life expectancy at birth (2009)	80.7 years	79.5 years	Japan	83 years	12.5 (tied with Luxembourg)	OECD, 2011; Statistics Canada, 2011
Infant mortality (2009)	5.1 deaths per 1,000 live births	4.4 deaths per 1,000 live births	Iceland	1.8 deaths per 1,000 live births	27.5 (tied with Hungary)	OECD, 2011; Statistics Canada, 2011
Premature mortality rate for men (2009)	4,168 potential years of life lost per 100,000	4,689 potential years of life lost per 100,000	Iceland	2,995 potential years of life lost per 100,000	14	OECD, 2011; Statistics Canada, 2011
Premature mortality rate for women (2009)	2,554 potential years of life lost per 100,000	2,419 potential years of life lost per 100,000	Iceland	1,492 potential years of life lost per 100,000	25	OECD, 2011; Statistics Canada, 2011

Table 2: Accessibility

Indicator	Canadian Results	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries <sup>iv</sup>	Data Source
Report having a regular doctor	Adults	77%	Netherlands	94%	7.5 (tied with Germany)	Commonwealth Fund, 2010
Report having a regular doctor or place of care	Adults	86%	Netherlands	99%	8	Commonwealth Fund, 2010
Report having a regular doctor	Sicker Adults	88%	Netherlands	99%	9	Commonwealth Fund, 2011
Report having a regular doctor or place of care	Sicker Adults	96%	Netherlands	100%	9	Commonwealth Fund, 2011
Report waiting 6 or more days, or were never able to get an appointment when sick	Adults	32%	Switzerland	2%	11	Commonwealth Fund, 2010
	Sicker Adults	23%	New Zealand	5%	11	Commonwealth Fund, 2011
Report that their practice had an after-hours arrangement to see a doctor or nurse	Primary Care Physicians	43%	Netherlands	97%	9	Schoen et al, 2009
Report accessing medical care in the evenings, on weekends and on holidays was somewhat or very difficult	Adults	57%	Netherlands	20%	11	Commonwealth Fund, 2010
	Sicker Adults	51%	Switzerland and United States	18%	11	Commonwealth Fund, 2011

iv Rankings have been calculated using the method used by Davis et al (2010).

**Table 3: Person-Centredness**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
<b>Provider-Patient Communication</b>						
Report somewhat/very easy to contact doctor by phone during regular hours	Adults	62%	Switzerland	90%	10	Commonwealth Fund, 2010
Report that when they call their regular doctor's office with a medical question or concern during regular practice hours, they always or often get an answer the same day	Sicker Adults	50%	Netherlands	79%	11	Commonwealth Fund, 2011
Report receiving clear instructions about symptoms to watch	Sicker Adults	66%	Switzerland	84%	4.5 (tied with Australia)	Commonwealth Fund, 2011
Report that someone from regular place of care explained the potential side effects of a medication	Adults with chronic conditions	73%	Australia	78%	3	Commonwealth Fund, 2010
<b>Continuity and Performance Feedback</b>						
With same doctor for 5 years or more	Adults	64%	Netherlands	78%	6	Commonwealth Fund, 2010
With same doctor for 5 years or more	Sicker Adults	64%	France and Netherlands	80%	7.5 (tied Australia)	Commonwealth Fund, 2011
Report that their practice routinely received and reviewed data on clinical outcomes of patient care	Primary care Physicians	17%	United Kingdom	89%	10	Schoen et al, 2009
Report routinely received and reviewed data on patient satisfaction/ experience	Primary care Physicians	15%	United Kingdom	96%	8	Schoen et al, 2009
<b>Patient Engagement and Preferences</b>						
Report that their regular doctor always or often spends enough time with them	Adults	80%	Germany, Netherlands, New Zealand, Switzerland	90%	8	Commonwealth Fund, 2010
	Sicker Adults	77%	Switzerland	96%	9	Commonwealth Fund, 2011
Report always or often having the opportunity to ask questions about recommended treatment	Adults	85%	New Zealand	92%	8	Commonwealth Fund, 2010
Report they were always or often involved in decisions about their care	Adults	86%	New Zealand and Switzerland	92%	7.5 (tied with U.S.)	Commonwealth Fund, 2010

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
Report that in the last year, a healthcare professional discussed main goals in caring for their condition	Sicker Adults with at least one chronic condition	67%	Switzerland	81%	4.5 (tied with Netherlands)	Commonwealth Fund, 2011
Report their healthcare professional helped them make a treatment plan	Sicker Adults with one or more chronic conditions	63%	United Kingdom	80%	4	Commonwealth Fund, 2011
Report that their practices routinely gave chronically ill patients written instructions on managing care at home	Primary Care Physicians	16%	Italy	63%	7	Schoen et al, 2009

**Table 4: Safety**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
Report that someone from regular place of care explained the potential side effects of a medication	Adults with chronic conditions	73%	Australia	78%	3	Commonwealth Fund, 2010
Report that someone from regular place of care reviewed all medications including those prescribed by other doctors	Adults with chronic conditions taking at least one prescription medication	69%	Australia	78%	4	Commonwealth Fund, 2010
Report that their practice has a process for identifying adverse events and taking follow-up action	Primary Care Physicians	10%	United Kingdom	56%	9	Schoen et al, 2009
Report an experience with wrong medication, medical mistake or incorrect lab test result outside of the hospital	Adults with chronic conditions that experienced wrong medication, medical mistake or incorrect lab test	86%	Switzerland	68%	8.5 (tied with New Zealand and United States)	Commonwealth Fund, 2010
	Sicker Adults that experienced wrong medication, medical mistake or incorrect lab test	79%	Germany	46%	6.5 (tied with Netherlands, Sweden and United States)	Commonwealth Fund, 2011
Report that someone from regular place of care gave them a written list of all prescribed medications	Adults with chronic conditions	47%	United States	53%	8	Commonwealth Fund, 2010
Report that practices routinely give patients a written list of medications	Primary Care Physicians	16%	United Kingdom	83%	8	Schoen et al, 2009

**Table 5: Effectiveness**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
<b>Prevention</b>						
Women (aged 20-64) reporting that a Pap smear was performed in the last two years	Adults	70%	Canada, Switzerland and United States	70%	1.5 (tied with Switzerland and United States)	Commonwealth Fund, 2010
Women (aged 25-64) reporting that a Pap smear was performed in the last three years	Adults	80%	Switzerland	85%	2	Commonwealth Fund, 2010
Women (aged 50-64) reporting that they received a mammogram within the past 2 years	Adults	76%	New Zealand	80%	3	Commonwealth Fund, 2010
Women (aged 50-64) reporting that they received a mammogram within the past 3 years	Adults	84%	Netherlands	93%	6	Commonwealth Fund, 2010
Report receiving a flu shot in the past year	Adult Seniors (>= age 65)	68%	Netherlands	83%	3.5 (tied with U.S.)	Commonwealth Fund, 2010
Report having blood pressure checked by a doctor or nurse in past year	Adults	82%	France	95%	5	Commonwealth Fund, 2010
Report receiving reminders for preventive care	Adults	39%	Netherlands	59%	8	Commonwealth Fund, 2010
<b>Chronic Illness Care</b>						
Report their blood pressure had been checked in the past year	Sicker Adults with hypertension, heart disease or diabetes	97%	Australia and New Zealand	100%	5.5 (tied with UK and US)	Commonwealth Fund, 2011
Report having their blood pressure measured in the last year	Adults with diabetes	94%	New Zealand and France	99%	6	Commonwealth Fund, 2010
Report having their cholesterol tested in the last year	Adults with diabetes	88%	Australia	89%	2.5 (tied with U.S.)	Commonwealth Fund, 2010
Report their eyes were examined within the past year	Sicker Adults with diabetes	77%	United Kingdom	81%	4.5 (tied with Netherlands)	Commonwealth Fund, 2011
Report their feet were checked for sores or irritations	Sicker Adults with diabetes	50%	United Kingdom	86%	7	Commonwealth Fund, 2011

**Table 6: Efficiency**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
Report using the emergency department in the past two years	Adults	44%	Switzerland and Germany	22%	11	Commonwealth Fund, 2010; Health Council of Canada, November 2010
	Sicker Adults	58%	Germany	31%	11	Commonwealth Fund, 2011
Report they could have been treated at their usual place of care if it had been available	Adults that used an emergency room in the last two years and have a regular place of care	45%	France	22%	10	Commonwealth Fund, 2010; Health Council of Canada, November 2010
	Sicker Adults that used an emergency room in the last two years and have a regular place of care	41%	United Kingdom	16%	11	Commonwealth Fund, 2011
Report their time was wasted due to poorly organized and poorly coordinated care	Adults	19%	Switzerland	6%	11	Commonwealth Fund, 2010
Report medical records or test results were not available at the time of an appointment	Adults	11%	Switzerland	7%	9.5 (tied with Australia)	Commonwealth Fund, 2010
Report experiencing situations where test results or medical records were not available or reasons for referral were not available at the time of their scheduled doctor's appointment	Sicker Adults	19%	Switzerland	7%	10.5 (tied with Norway)	Commonwealth Fund, 2011



**Table 7: Equity**

Indicator	Sample	% of Below Average Income Canadian Respondents	% of Above Average Income Canadian Respondents	Data Source
<b>Population Health</b>				
Report their health as fair or poor	Sicker Adults	45%	24%	Commonwealth Fund, 2011
Report having two or more chronic conditions	Sicker Adults	52%	27%	Commonwealth Fund, 2011
Report hypertension	Sicker Adults	33%	19%	Commonwealth Fund, 2011
Report heart disease including angina or heart attack	Sicker Adults	14%	6%	Commonwealth Fund, 2011
Report diabetes	Sicker Adults	16%	9%	Commonwealth Fund 2011
Report joint pain and arthritis	Sicker Adults	50%	31%	Commonwealth Fund 2011
Report asthma, COPD and other chronic lung problems	Sicker Adults	21%	11%	Commonwealth Fund 2011
Report depression, anxiety and other mental health problems	Sicker Adults	24%	16%	Commonwealth Fund 2011
Report chronic back pain	Sicker Adults	35%	19%	Commonwealth Fund 2011
Report problems walking	Sicker Adults	37%	15%	Commonwealth Fund 2011
Report problems walking or dressing	Sicker Adults	8%	4%	Commonwealth Fund 2011
Report problems performing daily activities	Sicker Adults	37%	20%	Commonwealth Fund 2011
Report moderate or extreme pain or discomfort	Sicker Adults	67%	50%	Commonwealth Fund 2011
Report being moderately or extremely anxious or depressed	Sicker Adults	31%	20%	Commonwealth Fund 2011

Indicator	Sample	% of Below Average Income Canadian Respondents	% of Above Average Income Canadian Respondents	Data Source
<b>Accessibility</b>				
Report waiting 6 or more days, or were never able to get an appointment when sick	Sicker Adults	28%	21%	Commonwealth Fund 2011
Report having private health insurance	Sicker Adults	46%	82%	Commonwealth Fund 2011
Report not filling a prescription or skipping doses in the past year because of cost	Sicker Adults	22%	8%	Commonwealth Fund 2011
Report serious problems paying medical bills in past 12 months	Sicker Adults	12%	3%	Commonwealth Fund 2011
<b>Person-Centredness</b>				
Report regular doctor or someone in doctor's practice spends enough time always or often	Sicker Adults with regular doctor or place of care	73%	79%	Commonwealth Fund 2011
Report regular doctor or someone in doctor's practice explains things in a way that is easy to understand	Sicker Adults	82%	89%	Commonwealth Fund 2011
Report health professional has discussed main goals in caring for condition during the past year	Sicker Adults with at least one chronic condition	63%	74%	Commonwealth Fund 2011
<b>Safety</b>				
Report pharmacist or doctor reviewed and discussed all medicines in past year	Sicker Adults taking prescription medications	68%	76%	Commonwealth Fund 2011
Report having a written list of medications	Sicker Adults taking prescription medications	74%	65%	Commonwealth Fund 2011
<b>Effectiveness</b>				
Report having cholesterol checked in past year	Sicker Adults with hypertension, heart disease or diabetes	81%	91%	Commonwealth Fund 2011
Fair or poor rating of quality of medical care received in the past 12 months	Sicker Adults	17%	9%	Commonwealth Fund 2011

**Table 8: Coordination/Integration**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
Report doctor always/often coordinates or arranges care	Adults	68%	New Zealand and United States	69%	3.5 (tied with United Kingdom)	Commonwealth Fund, 2010
Report someone in doctor's/ GP's practice always/often helps coordinate or arrange the care received from other doctors or places, such as appointments	Sicker Adults with regular doctor	62%	United Kingdom	66%	4	Commonwealth Fund, 2011
Report that their specialist had information about their medical history	Sicker Adults with regular doctor and needed to see a specialist in the past two years	76%	United Kingdom	91%	6	Commonwealth Fund, 2011
Report their regular GP seemed informed about the care they received from specialist	Sicker Adults	72%	United Kingdom	88%	8	Commonwealth Fund, 2011
Report information from a patient discharged from hospital was available between 5-14 days of discharge	Primary Care Physicians	40%	Norway	60%	7	Commonwealth Fund, 2009

**Table 9: Enablers of Quality**

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
<b>Inter-professional primary care healthcare teams</b>						
Report working with non-physician staff (such as nurses) to provide primary care	Primary Care Physicians	52%	Sweden	98%	10	Schoen et al, 2009
Report receiving financial support or incentives for adding non-physician clinicians to the practice	Primary Care Physicians	21%	Netherlands	60%	5	Schoen et al, 2009
<b>Performance management, clinical guidelines and incentives</b>						
Report that their clinical performance was routinely compared with other practices	Primary Care Physicians	11%	United Kingdom	92%	10	Schoen et al, 2009
Report the routine use of written guidelines to treat asthma or chronic obstructive lung disease	Primary Care Physicians	76%	United Kingdom	97%	9	Schoen et al, 2009
Report the routine use of written guidelines to treat diabetes	Primary Care Physicians	82%	Netherlands	98%	8.5 (tied with United States)	Schoen et al, 2009
Report the routine use of written guidelines to treat depression	Primary Care Physicians	45%	United Kingdom	80%	7	Schoen et al, 2009

Indicator	Sample	% of Respondents (Canada)	Best Performing Country	% of Respondents from Best Performing Country	Canada's Ranking among 11 Countries	Data Source
Report the routine use of written guidelines to treat hypertension	Primary Care Physicians	81%	United Kingdom	96%	6.5 (tied with Norway)	Schoen et al, 2009
Report being offered financial support or incentives	Primary Care Physicians	62%	Netherlands	81%	6	Schoen et al, 2009
Report being offered financial incentives based on high patient satisfaction ratings	Primary Care Physicians	1%	United Kingdom	41%	11 (tied with Norway)	Schoen et al, 2009
Report being offered financial incentives based on non-face-to-face interactions with patients	Primary Care Physicians	16%	Netherlands	35%	4	Schoen et al, 2009
Report being offered financial incentives based on clinical care targets	Primary Care Physicians	21%	Netherlands	60%	7	Schoen et al, 2009
Report being offered financial incentives to add non-physician providers to their practice team	Primary Care Physicians	21%	United Kingdom	84%	5	Schoen et al, 2009
Report being offered financial incentives to manage patients with chronic disease or complex needs	Primary Care Physicians	54%	United Kingdom	82%	5	Schoen et al, 2009
Report being offered financial incentives for preventive care	Primary Care Physicians	26%	New Zealand	38%	5	Schoen et al, 2009
<b>Information Technology</b>						
Report using electronic medical records	Primary Care Physicians	37%	Netherlands	99%	11	Schoen et al, 2009
Report using electronic test ordering	Primary Care Physicians	18%	Italy	91%	10	Schoen et al, 2009
Report using electronic prescribing	Primary Care Physicians	27%	Netherlands	98%	11	Schoen et al, 2009
Report using computerized drug alerts	Primary Care Physicians	20%	Netherlands	95%	10	Schoen et al, 2009
Report using computerized patient reminders	Primary Care Physicians	10%	New Zealand	92%	9	Schoen et al, 2009
Report using computerized physician reminders	Primary Care Physicians	9%	Australia	67%	8.5 (tied with Netherlands)	Schoen et al, 2009
Report using computerized list of patients by diagnosis	Primary Care Physicians	37%	New Zealand	97%	10	Schoen et al, 2009
Report using computerized list of patients by lab result	Primary Care Physicians	23%	Australia	88%	10	Schoen et al, 2009

## APPENDIX 2: CANADIAN WORKING GROUP FOR PRIMARY HEALTHCARE IMPROVEMENT / GROUPE DE TRAVAIL CANADIEN SUR L'AMÉLIORATION DES SERVICES DE SANTÉ DE PREMIÈRE LIGNE

*“To promote evidence-informed primary healthcare policy and practice for the benefit of Canadians”*

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Centre for Studies in Family Medicine  
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Chaire docteur Sadok Besrouer en  
médecine familiale  
Centre de recherche du CHUM  
Hôpital Notre-Dame

**Bachir Belhadji**

A/Manager  
Chronic and Continuing Care Division  
Strategic Policy Branch, Health Canada

**Beverley Clarke**

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Eastern Health  
Community, Children & Women,  
Primary and Mental Health Services

**Krista Connell**

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Nova Scotia Health Research Foundation

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Dean  
School of Nursing  
University of PEI

**Bronwyn Davies**

Director/Directrice  
Primary Healthcare/Soins de santé primaires  
Department of Health/Ministère de la Santé  
New Brunswick

**Alba DiCenso**

Professor  
School of Nursing and Department of Clinical  
Epidemiology & Biostatistics  
McMaster University

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Director  
Analysis and Reporting  
Health Council of Canada

**Lisa Dolovich**

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Dept of Family Medicine McMaster University  
Scientist and Associate Director  
Centre for Evaluation of Medicines  
St. Joseph's Healthcare

**Jeanette Edwards**

Special Advisor to the Deputy Minister  
on Primary Care  
Manitoba Health

**Martin Fortin**

Professeur et chercheur  
Faculté de médecine et des sciences de la santé  
Département de médecine de famille  
Université de Sherbrooke

**Richard Glazier**

Senior Scientist  
Institute for Clinical Evaluative  
Sciences Professor  
Departments of Family and community Medicine  
and Public Health Sciences  
University of Toronto

**Marshall Godwin**

Director  
Primary Healthcare Research Unit  
Professor of Family Medicine  
Memorial University of Newfoundland

**Jeannie Haggerty**

McGill Research Chair in Family and Community  
Medicine at St. Mary's Hospital Centre  
Associate Professor  
Department of Family Medicine  
McGill University

**Brendan E. Hanley**

Chief Medical Officer of Health  
Yukon

**Alan Katz**

Associate Professor  
Departments of Family Medicine and  
Community Health Sciences  
Research Director, Department of  
Family Medicine  
Associate Director for Research, Manitoba Centre  
for Health Policy  
University of Manitoba

**Erik Landriault**

Assistant Director  
Institute for Health Services and Policy Research  
Canadian Institutes for Health Research

**W. Alexander (Sandy) MacDonald**  
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Department of Health and Social Services  
Nunavut

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Office of Nursing Policy  
Health Canada

**Cathy MacLean**  
Professor and Head  
Department of Family Medicine  
University of Calgary

**John Maxted**  
Assistant Professor  
Department of Family and Community Medicine  
Markham Family Medicine Teaching Unit  
University of Toronto

**Dale McMurchy**  
Dale McMurchy Healthcare Consulting  
Louise Nasmith  
Principal  
College of Health Disciplines  
University of British Columbia

**Louise Nasmith**  
Principal  
College of Health Disciplines  
University of British Columbia

**Glen Roberts**  
Executive Director  
Canadian Policy Network

**Jean Rodrigue**  
Sous-ministre adjoint – Direction générale des  
services de santé et de médecine universitaire au  
Ministère de la Santé et des Services sociaux

**Sam Shortt**  
Director, Quality Initiative  
Canadian Medical Association

**Moira Stewart**  
Director  
Department of Family Medicine  
Centre for Studies in Family Medicine  
University of Western Ontario

**Valerie Tregillus**  
Lead  
Inter-Divisional Strategy Council  
Interior Health  
British Columbia

**Greg Webster**  
Director  
Primary Healthcare Information  
Canadian Institute for Health Information

**Sabrina Wong**  
Associate Professor  
School of Nursing  
University of British Columbia