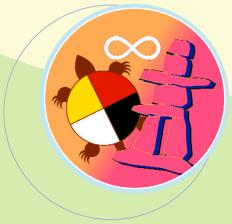

Pan-Canadian Primary Health Care Indicators

Report 1, Volume 1

Pan-Canadian Primary Health Care
Indicator Development Project

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Table of Contents

About CIHI

The Canadian Institute for Health Information (CIHI) collects and analyzes information on health and health care in Canada and makes it publicly available. Canada's federal, provincial and territorial governments created CIHI as a not-for-profit, independent organization dedicated to forging a common approach to Canadian health information. CIHI's goal: to provide timely, accurate and comparable information. CIHI's data and reports inform health policies, support the effective delivery of health services and raise awareness among Canadians of the factors that contribute to good health.

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Executive Summary

Primary health care (PHC) has been called the foundation of Canada's health system and is the most common type of health care that Canadians experience.[1] The Primary Health Care Transition Fund (PHCTF) was established in September 2000 as a shared commitment between federal and provincial/territorial governements to work together on improving PHC across the country, and to explore new ways of delivering PHC.

Currently, we know little about how the structure of our PHC system is evolving or about the way services are delivered and the results of these services. Measuring PHC renewal in Canada requires harnessing and enhancing data sources at the local, regional, provincial/ territorial and pan-Canadian levels. PHC indicators and the data required to report these indicators can contribute to the measurement and management of PHC in Canada.

The PHCTF National Evaluation Strategy (NES)—The Context of the PHC Indicator Development Project

The PHC indicators, described in this report, were developed to correspond to a series of agreed-upon NES Objectives, Supports and Evaluation Questions. This guiding framework was developed in April 2005 through a collaborative process of literature review, expert advice and stakeholder participation.[2]

Building on this process, the CIHI led pan-Canadian Primary Health Care Indicator Development Project, funded through Health Canada's PHCTF, aimed to:

- Develop a set of agreed-upon PHC indicators with which to compare and measure PHC at multiple levels within jurisdictions across Canada.
- Provide advice on a future data collection infrastructure that could supply the data to report these indicators across Canada.

This two-volume report is one of two reports produced by the Canadian Institute for Health Information (CIHI) for this project. This report reflects the outcome of a collaborative process to develop a list of agreed-upon PHC indicators. A companion report outlining options for enhancing the pan-Canadian data collection infrastructure (*Enhancing the Primary Health Care Data Collection Infrastructure in Canada*) is also available.

A Process for Establishing a List of PHC Indicators

In early 2005, CIHI launched an extensive process to develop an agreed-upon list of pan-Canadian PHC indicators, relevant to the previously agreed upon evaluation questions. A variety of strategies were used to generate input and build agreement, including:

- **Environmental Scan**—National and international documents on PHC frameworks and indicators were reviewed in order to develop a preliminary list of indicators.
- **Two Consensus Conferences**—Over 80 policy makers, providers, researchers and system managers participated in consensus conferences to review potential indicators.
- **Working Groups**—More than 60 policy makers, providers, researchers and system managers participated in refining the indicators and developing technical specifications.
- **Pan-Canadian/International Consultations**—Throughout the process, we collected additional input through consultations with provincial/territorial and regional stakeholders, professional health associations, and international researchers.
- **Delphi Process**—Over 70 individuals participated in each of the three rounds of a modified Delphi process to rate the indicators for importance.

Measuring PHC: What Is Important and How Do We Measure It?

Through a consensus building process, 105 PHC indicators were identified and agreed upon by a broad audience of stakeholders. The development of the 105 agreed-upon PHC indicators was informed by:

- the NES Objectives, Support, and Evaluation Questions;
- advice and support of Canadian PHC policy makers, providers, researchers and system managers;
- current literature and evidence;
- Canadian and international PHC evaluation and indicator initiatives; and
- Delphi process that confirmed a high level of support for the indicators from a broad range of stakeholders.

These indicators can be grouped into eight categories:

- access to PHC through a regular provider;
- comprehensive care, preventive health and chronic condition management;
- continuity through integration and coordination;
- 24/7 access to PHC;

- patient-centred PHC;
- enhancing population orientation;
- quality in PHC—primary prevention, secondary prevention for chronic conditions, patient safety, treatment goals and outcomes; and
- PHC inputs and supports—health human resources, interdisciplinary teams, information technology, provider payment method.

The development of the indicators was not limited to those for which data are currently available. Also, the definition of PHC varies at some policy levels. The indicators are intended to be useful across a range of PHC definitions and evaluation frameworks, but it is recognized that, in some circumstances, additional indicators may be required to report on current or future priorities. It is anticipated that the list of 105 indicators will be used to create subsets of indicators to serve different perspectives and purposes. An example of an abridged list of 30 PHC indicators is attached to this executive summary.

The 105 indicators cover a broad range of important elements of PHC that are relevant to stakeholders across the country. Reporting these indicators will help fill information gaps for PHC in Canada.

These indicators can also be used to inform the enhancement of the pan-Canadian PHC data infrastructure. Over time, enhancements to a pan-Canadian data collection infrastructure will help provide reliable and comparable information required for reporting a broader range of these indicators than is possible using existing data sources. The companion report, *Enhancing the Primary Health Care Data Collection Infrastructure in Canada*, provides an overview of the current availability of data to report the list of agreed-upon indicators, and options for enhancing the pan-Canadian data collection infrastructure.

SAMPLE ABRIDGED LIST OF PHC INDICATORS		
ACCESS TO PHC THROUGH A REGULAR PROVIDER	**COMPREHENSIVE CARE, PREVENTIVE HEALTH AND CHRONIC CONDITION MANAGEMENT**	**CONTINUITY THROUGH INTEGRATION AND COORDINATION**
• Population with a regular PHC provider • Difficulties accessing routine PHC*	• Scope of PHC services • Health risk screening in PHC* • PHC client/patient registries for chronic conditions* • PHC programs for chronic conditions* • Client/patient participation in PHC treatment planning	• Collaborative care with other health care organizations
24/7 ACCESS TO PHC	**PATIENT-CENTRED PHC**	**ENHANCING POPULATION ORIENTATION**
• Difficulties obtaining urgent, non-emergent PHC on evenings and weekends • PHC after hours coverage • Difficulties accessing routine PHC*	• Client/patient satisfaction with PHC providers • Language barriers when communicating with PHC providers	• PHC client/patient registries for chronic conditions* • PHC programs for chronic conditions* • Specialized PHC programs for vulnerable/special needs populations
QUALITY IN PHC		
Primary Prevention • Influenza immunization, 65+ • Cervical cancer screening • Health risk screening in PHC* **Secondary Prevention for Chronic Conditions** • Screening for modifiable risk factors in adults with coronary artery disease • Screening for modifiable risk factors in adults with hypertension • Screening for modifiable risk factors in adults with diabetes	**Patient Safety** • Use of medication alerts in PHC • Antidepressant medication monitoring **Treatment Goals and Outcomes** • Glycemic control for diabetes • Blood pressure control for hypertension • Treatment of dyslipidemia • Treatment of depression • Ambulatory care sensitive conditions	
PHC INPUTS AND SUPPORTS		
Health Human Resources • PHC organizations accepting new clients/patients **Interdisciplinary Teams** • PHC FPs/GPs/NPs working in interdisciplinary teams/networks **Provider Payment Methods** • PHC provider remuneration method	**Information Technology** • Uptake of information and communication technology in PHC organizations **Allocations for PHC** • Average per capita PHC operational expenditures	

EQUITY

*Indicator repeated because it reflects multiple dimensions.

1.0 Introduction

Primary health care (PHC) has been called the foundation of Canada's health system.[1] Despite the fact that PHC is the most widely used part of the health care system, many Canadians are not able to define what it is.[3] The definition of PHC varies at some policy levels as well.[1, 4] For example, the Health Council of Canada recently noted that: "Although every jurisdiction has embraced the importance of primary health care reform as a priority, there is no agreement on the actual meaning of the term primary health care."[1]

With such a lack of consensus on the definition of PHC, the question arises: "why is primary health care important?" There are a number of answers. First and foremost, PHC is important for health improvement and illness care, and is often the gateway to other health and human services.[5]

Secondly, PHC involves not only treatment of illness but health promotion and disease prevention activities. These activities can range from encouraging people to stop smoking to arranging mammographies. It also involves helping those with chronic conditions, such as diabetes, to manage their health, perhaps with the assistance of an interdisciplinary team. Help for those suffering from various forms of mental health issues—such as stress, anxiety and depression—are sometimes included under PHC. Again, the care can be collaborative involving a range of providers, such as psychologists and other types of mental health workers and, in some cases, non-health sector social supports. In most cases, the term "PHC" embraces a wide range of services and providers.

Thirdly, PHC can incorporate a "system coordination role"—in other words, PHC providers may help clients/patients navigate their way through a host of health services. In some cases, this includes coordination across a wider set of providers and organizations from many human service sectors.

Finally, some people working in PHC are involved in developing community-oriented approaches with other partners from sectors such as education, justice and housing. In this type of model, the emphasis is often on community capacity building, reaching out to vulnerable/special-need populations, and engaging the community in the planning, development and delivery of services and supports.

According to some international comparative research, a well-developed PHC system can help improve health outcomes but may also result in lower health expenditures.[6, 7, 8] For example, it has been suggested that the strength of the United Kingdom's PHC system, anecdotally described as the "jewel in the crown of the National Health Service,"[9] is a key factor accounting for lower UK health care expenditures compared to other health care systems.

In Canada, there is growing awareness that PHC is important to our health system. At the same time, however, our current knowledge of how the structure of our PHC system is evolving, how services are delivered, and the results of these services are incomplete. Information is often fragmented, not comparable or non-existent.

2.0 The Context of the PHC Indicator Development Project

On September 11, 2000, Canada's First Ministers announced that, "Improvements to primary health care are crucial to the renewal of health services." The federal government then launched the $800 million Primary Health Care Transition Fund (PHCTF). The PHCTF reflects a shared agreement between the federal and provincial/territorial governments to work together on improving PHC across the country, and explore new ways of delivering PHC.

Since 2000, much time, energy and the resources of many providers, communities, researchers and policy makers have been invested in developing different ways of organizing and providing PHC. Despite the work being done on many fronts, limited data are currently available to measure the types and pace of change across Canada, and whether these changes are having an effect.

To help understand and improve PHC renewal, Health Canada established the PHCTF National Evaluation Strategy (NES). As one component of the NES, a series of NES Objectives, Supports, and Evaluation Questions were developed for Health Canada. This component of the NES was implemented between late 2004 and early 2005. Through a collaborative process of literature review, expert advice and stakeholder participation, a series of over 50 agreed-upon evaluation questions were developed to map to the NES Objectives and Supports.[2] (See Table 1 for the NES Objectives and Supports, and Appendix C for the NES Evaluation Questions.)

The NES Evaluation Questions served as a foundation for the next step—the development of an agreed-upon list of PHC indicators that map to the evaluation questions. CIHI led this project, which had the following two objectives:

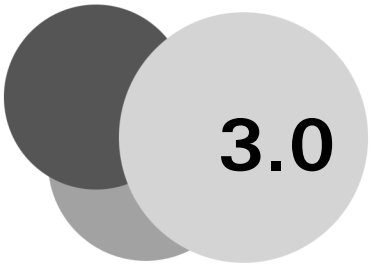
- Develop a set of agreed-upon PHC indicators with which to compare and measure PHC at multiple levels within jurisdictions across Canada.
- Provide advice on a future data collection infrastructure that could supply the data to report these indicators across Canada.

Rather than prescribing a set of services, health personnel or organizational elements,[10] the purpose of the evaluation questions is to provide a flexible approach for understanding progress, measuring change, and identifying variations. This approach meant that indicators were developed independently of an agreed-upon definition or evaluation framework for PHC.

The NES is not intended to supplant other initiatives under way to measure and assess PHC.[11, 12, 13] As well, the CIHI/Statistics Canada Health Indicators Project and activities of the Canadian Population Health Initiative can provide important information on health status and community and health system characteristics. Using other sources and approaches can improve the breadth and depth of information available about PHC in Canada.

TABLE 1

NATIONAL EVALUATION STRATEGY (NES) OBJECTIVES AND SUPPORTS
NES OBJECTIVES
1. To increase the proportion of the population that receives ongoing care from a primary health care provider who assumes principal responsibility for their care and who knows their personal and health characteristics.
2. To increase the number of primary health care organizations who are responsible for providing planned services to a defined population.
3. To enhance the provision of whole-person, comprehensive primary health services, including acute episodic and ongoing care with increased emphasis on health promotion, disease and injury prevention, management of common mental health conditions and chronic diseases.
4. To enhance 24/7 access for patient-initiated urgent care which is effectively linked with the patient's usual primary health care provider.
5. To deliver high quality and safe primary health services and promote a culture of quality improvement in primary health care organizations.
6. To ensure that primary health care is acceptable to patients and that it meets their reasonable expectations of how they should be treated (responsiveness).
7. To facilitate integration and coordination between and among healthcare institutions and healthcare providers to achieve informational and management continuity of patient care.
NES SUPPORTS
1. Adequate supply of health human resources to meet primary health care needs.
2. Interdisciplinary primary health care teams.
3. Information technology that is adapted to primary health care and links primary health care organizations with the rest of the health care system.
4. Needs-based resource allocations for primary health care.
5. Provider payment methods that align with primary health care goals.
6. Ongoing support from policy-makers for primary health care.



3.0 A Process for Establishing a List of Agreed-Upon Primary Health Care Indicators[i]

The objectives of the PHC Indicator Development Project were to identify a list of agreed-upon PHC indicators with which to measure and compare important elements of the structure, process and outcomes of PHC across Canada, and to provide advice on the data collection infrastructure required to report these indicators in the future. Health indicators are standardized measures that can be used to measure health status and health system performance and characteristics across different populations and between jurisdictions, or over time.[14] Primarily, health indicators are a tool to help provinces/territories, regions and organizations track progress in the improvement and maintenance of a population's health and health system.[14] For example, indicators can be used for measuring performance, strategic planning and priority setting, supporting quality improvement, and for conveying important health information to the public.[14] In some circumstances, indicators should also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.[14]

To identify a list of indicators, CIHI implemented an extensive process using various strategies of participation, consultation and solicitation of expert opinion (see Appendices A and B).

An **Advisory Committee** was comprised of policy makers, PHC providers, pan-Canadian provider associations, system managers and PHC researchers. The Committee's role was to provide advice to the CIHI project team throughout the duration of the project, and to help ensure that the principles for indicator development were driving the overall process.

The **Consensus Building** component of the project involved identifying potential PHC indicators and seeking broad input on the importance and acceptability of the indicators. This process was also critically important for establishing agreement on indicators in areas where research evidence was limited.[15]

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i. See the report, Canadian Institute for Health Information, *The Process of Developing Pan-Canadian Primary Health Care Indicators*, (Ottawa: Canadian Institute for Health Information, 2006)





The **Indicator Development** component involved the technical methods and activities to specify and develop valid, understandable, and comparable indicators. During the process, PHC indicators were developed on the basis of what needed to be measured rather than on the availability of existing sources for information.

Five Principles for Indicator Development

1. **Future Oriented:** not limited to what is currently measurable
2. **Coverage:** there is coverage and balance across the National Evaluation Strategy Objectives and Supports
3. **Comparable:** can be used to compare primary health care across the country and over time
4. **Broadly Applicable:** can be used and applied at multiple levels
5. **Flexible**: does not restrict what other indicators are developed by jurisdictions to measure additional aspects of PHC

Stages of Indicator Development

Environmental Scan—Draft 1 PHC Indicators

The scan identified a preliminary list of 258 indicators based on practice and evidence from international, national and sub-national sources.

Consensus Conference—Draft 2 PHC Indicators

At a consensus conference in May 2005, the Draft 1 list of indicators were reviewed and revised as to their validity and importance by a group of approximately 60 policy makers, researchers, care providers, and administrators/managers (see Appendix A). The resulting Draft 2 list included 187 indicators.

Web-Based Consultation

Additional input from stakeholders and organizations that had not participated in the conference was gathered via a web-based consultation to identify potential gaps in Draft 2.

Working Groups/Expert Panels—Draft 3 PHC Indicators

Participants in four working groups/expert panels (see Appendix A) further developed the Draft 2 list of indicators, focusing primarily on:

i. Face validity

ii. Measurability

iii. Reliability and comparability

iv. Rationale and importance

v. Evidence/policy base

- Clinical indicators—Grade A and B
- System indicators—Grade A and B evidence; systematic literature reviews; NES Objectives; and expert consensus

Round One Modified Delphi Process[ii]—Draft 4 PHC Indicators

Using a systematic process for identifying common agreement among a large group of stakeholders, Delphi participants were asked to review and validate the Draft 3 indicators in relation to their importance. This included rating each indicator and providing suggestions on re-wording the indicators.

Cross-Country and International Expert Consultations

For the review of Draft 4 indicators, provincial/territorial ministries/departments, national health-provider associations and international PHC and measurement experts were consulted. Their input led to further changes on the selection of the best possible measures and wording of the indicators.

Round Two Modified Delphi Process and Consensus Conference—Draft 5 PHC Indicators

At a second consensus conference in November 2005, 75 participants discussed and then re-rated the indicators in the round two of the modified Delphi process, taking into account the input gathered since round one.

Technical Adjustments—Draft 6 PHC Indicators

After further consultation and input from PHC and measurement experts, the results from the second round Delphi were reviewed and the indicator list was revised.

Round Three Modified Delphi Process—A List of PHC Indicators

Using the Delphi 3 results, two lists of PHC indicators were identified. A list of 105 indicators was created using 100 indicators rated as important in Delphi 3 (see Appendix C) plus 5 additional indicators for balance. Importance was defined as an indicator with 70% of participants rating the indicator in the top tertile (i.e. 7–9) on a 9-point scale.

Given the challenges of developing and reporting information for each indicator, an abridged list of 30 indicators was also identified by the CIHI project team. This abridged list is intended as one example of a subset that can be selected from the full list of 105 indicators.

The full list of 105 indicators is intended to meet the needs of multiple stakeholders and, as such, it is expected that it will be used to create subsets of indicators for a variety of needs.

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ii A modified Delphi process is an empirically validated expert consultation process that is used to identify agreement among a group of experts who are often geographically separated. Organizations and/or researchers conduct a series of written surveys using a group of experts. There are variations on the technique, but it usually involves asking experts to rate items on a Likert scale (1–9). Typically there is a series of 2–3 rounds that build on previous results. Responses are collated and respondents are sent their response and the response of the group as a whole.

The criteria and method of selecting this particular abridged list of 30 indicators was as follows:

1. To ensure a balance of indicators across various aspects of PHC, the NES Objectives, Supports and Evaluation Questions served as the foundation. In general, two indicators were selected for each Objective, and one indicator per Support.

2. Selection of indicators for each NES Objective and Support, as described above, was based primarily on indicator ratings from the third round of the modified Delphi process.

3. A larger selection of indicators were identified for Objective 5, Clinical Quality due to the large number of indicators in this area overall. Within Objective 5, sub-lists of indicators were developed across the areas of Preventive Health Services, Secondary Prevention and Outcomes for a small number of chronic conditions.

4.0 The Agreed-Upon PHC Indicators

A total of 105 PHC indicators have been developed for the National Evaluation Strategy Objectives, Supports and Evaluation Questions. Each of the following sections (Sections 4.1 through 4.8) provides an introductory context in relation to the NES Objectives or Supports, and presents the relevant indicators.

4.1 Access to PHC Through a Regular PHC Provider

Leading PHC researchers emphasize two critical aspects of PHC: first, that people have **access** to primary health care; and secondly, that PHC services are usually obtained from a **regular provider** of PHC.[16]

Overall, research showing a relationship between access to PHC and improved health outcomes is generally accepted. For example, researchers in the United Kingdom and the United States have found that an adequate supply of primary health care can reduce:

- causes of mortality and mortality from heart disease, cancer and stroke;[17, 18]
- infant mortality and low birth weight;[17] and
- acute hospital admissions.[16]

In the research literature, the health benefits of having a regular PHC provider have also received increasing attention. This aspect of PHC looks at the person-to-person relationship between client/patient and provider over time (i.e. interpersonal continuity and longitudinally).[i] For example, in a recent comprehensive review of the literature, Saultz and Lochner[19] conclude that interpersonal continuity of care is associated with significant improvements in some care outcomes, such as lower hospitalization rates. They also found improvement in preventive services. The same authors found that fewer studies adequately address the association between PHC continuity and health care expenditures, although some studies have found positive outcomes on a limited number of measures.[19] Other researchers have suggested interpersonal continuity can lower emergency department use,[20] and result in better coordination of care,[21, 22] improved adherence to medication, and better quality of life for individuals with Type II diabetes.[23]

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i. Reid, Haggerty and McKendry define 3 concepts of continuity. Relational continuity is the ongoing therapeutic relationship between one or more providers. Informational continuity is the use of information on past events and personal circumstances to make current care appropriate for each individual. Management continuity is a consistent and coherent approach to the management of a health condition that is responsive to a patient's changing needs. *Defusing the Confusion: Concepts and Measures of Continuity of Healthcare*, Canadian Health Services Research Foundation, March 2002.

However, one recent study found a stronger association between improved outcomes and information continuity within a multi-provider practice setting than with continuity with a single provider.[24] Nevertheless, both findings suggest a connection between improved health status and a regular source of comprehensive, whole person PHC. Some researchers have also stressed that the dynamics of the patient-provider relationship (e.g. trust, responsiveness) are just as important to understanding better outcomes as provider continuity and longitudinal use.[25, 26]

Recent studies of access to a regular PHC provider suggest that:

- In the 2003 Canadian Community Health Survey, 86.3% of adolescents and adults said that they had a regular family physician.[27]
- In the same year, 15.8% of Canadians reported they experienced difficulties accessing routine or on-going care when they were in need of it at some point within the previous 12 months.[27]
- A recent international survey suggests that Canadians are more likely than people in Australia, New Zealand and the United Kingdom to say that they went to an emergency department when their regular doctor could have treated them.[28]
- A recent report published by CIHI indicates the number of family physicians increased from 94 per 100,000 in 2000 to 98 per 100,000 in 2004.[29, 30]
- The 2004 National Physician Survey indicates that the proportion of physicians accepting new patients is falling in some jurisdictions and geographic areas (i.e. urban) while increasing in others.[29]

These and other findings indicate that there are multiple factors that influence access and consistent utilization of a regular source of PHC. For example, to better understand why access to a regular PHC provider varies we need to take into account factors such as the supply of health human resources, the use of other PHC providers, scope of practice, and hours of operation.[29] Likewise, the range of PHC services (e.g. balancing disease prevention, chronic care management, coordinated services and acute episodic care) may differ. Finally, access to a regular PHC provider can vary according to geography, socio-economic status, gender, ethno-cultural background, disability or other socio-demographic factors.[29]

The following table lists the indicators that were developed for Objective 1. It includes the type of data sources likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 1: To increase the proportion of the population that receives ongoing care from a primary health care provider who assumes principal responsibility for their care and who knows their personal and health characteristics

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE[ii]	CURRENT AVAILABILITY OF DATA SOURCE[iii]
1	Population with a regular PHC provider	Client/Patient Survey	Yes, partial
2	Difficulties accessing routine PHC	Client/Patient Survey	No
3	Difficulties accessing PHC health information or advice	Client/Patient Survey	No
4	Difficulties accessing urgent, non-emergent PHC	Client/Patient Survey	No

4.2 Enhancing the Population Orientation of PHC

The concept of planned services for a defined population has a long history in the development of primary health care. For example, the roots of "community-oriented primary care" (COPC) reach back to South Africa in 1940.[31, 32] Over time, the underlying principles of COPC, planning and organizing service delivery with a population orientation, has influenced the development of the community health center movement in the U.S. and Canada alike, as well as the general practice movement in the United Kingdom.[31] Essentially, a population orientation to service delivery takes a proactive approach to health needs assessment, planning, allocation, and service development. When it is enhanced by a community orientation, PHC incorporates elements of public health at the local level.[33] Implementing this approach entails the planning and initiating of care for groups as opposed to individual patients.[34]

There is no set definition of what constitutes population-oriented PHC.[31, 35] A wide variety of approaches and models have been used to plan and deliver services to geographically defined communities and special populations.[31 35] However, two primary approaches or platforms can be identified within the literature. The first platform is "community capacity building," a health promotion/health equity-based approach. This platform is commonly understood to involve engaging and mobilizing the community to be involved in their health and health care services.[35] This involvement can range from self-help groups to community advocacy and participation in the governance and planning of the PHC organization.[36] The critical aspect is the interaction between the organization and citizens in finding ways of mobilizing social capital and strengthening community efficacy.

ii. Likely Data Source: Clinical Administrative, Other Administrative or Survey.
iii. Current Availability of Data Source: Yes, Yes, partial, No.

The second platform, captured by the phrase "defined population," can include geographic boundaries or simply a mixed population approach of rostering. This approach formed the basis in the past development of PHC in countries such as England and the Netherlands. Of late, some Health Maintenance Organizations (HMOs) in the United States are adopting elements of the population-based approach to PHC.[31]

Despite the differences between "community capacity building" and "defined population" approaches to PHC, there is basic agreement in the literature on the essential steps of developing and implementing a population orientation. The distinguishing point between each is the level of community consultation and participation in the following steps:[35]

- **Community Diagnosis:** Define the population's demographic characteristics, environment and health status;
- **Prioritization:** Identify critical health issues or vulnerable/special needs populations;
- **Detailed Assessment:** Plan to identify appropriate strategies and interventions to address the issue or population;
- **Intervention Program:** Develop a program or approach to address the issue or population;
- **Implementation:** Implement the program; and
- **Reassessment:** Review the above steps in a regular cycle.[35, 37]

One limitation in implementing such an approach with its related structures and processes is organization size and resources.[38] For example, small PHC organizations may find it difficult to adopt either population-orientation program because of issues such as critical mass and economies of scale.[38] In addition, implementing these programs requires organizational design changes. These can include the introduction and training of interdisciplinary teams, and the development of collaborative networks and monitoring processes.[34] Lastly, implementing a population orientation to PHC may involve the introduction of new activities not recognized in traditional individualized approaches to care.[32, 34]

The evidence on health outcomes related to a population orientation approach is limited. Researchers suggest that, the small size of practice populations for even larger PHC organizations hinders the detection of statistically significant changes in most outcome measures with the exception of the most common conditions.[38] Despite these limitations however, various studies have pointed towards improvement in quality of care and health behaviour change in:

- risk factor reduction (e.g. smoking cessation);[39]
- increased preventive screening coverage;[39]

- increased use of counseling and special services;[39]
- improved management of cardiovascular risk factors;[40]
- hypertension control and reductions in smoking; and[37, 41]
- increased colon and breast cancer screening.[34]

In establishing the Primary Health Care Transition Fund, one of the five objectives was:

"To increase the proportion of the population with access to primary health care organizations which are accountable for the planned provision of comprehensive services to a defined population."

Pursuit of this objective varies across the country in terms of policy and service model development. Some elements related to an increase in population orientation to PHC are evident in each jurisdiction, but the scope, approaches and capacity vary.

The following table lists the indicators that were identified for Objective 2. It includes the type of data source likely necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 2: To increase the number of primary health care organizations who are responsible for providing planned services to a defined population

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
5	PHC needs-based planning	Organization Survey	No
6	PHC client/patient registries for chronic conditions	Organization Survey	No
7	PHC programs for chronic conditions	Organization Survey	No
8	Community input for PHC planning	Organization Survey	No
9	PHC outreach services for vulnerable/special needs populations	Organization Survey	No
10	Specialized programs for PHC vulnerable/special needs populations	Organization Survey	No
11	Support for PHC vulnerable/special needs populations	Organization Survey	No

4.3 Fostering Comprehensive Whole Person Care

If PHC is the "foundation of Canada's health care system," whole-person care and comprehensive services can be described as the "bedrock" of PHC. "Whole-person care is defined as the extent to which providers address the physical, emotional and social aspects of a patient's health and take into account the community context when providing care."[42] Extending from this, comprehensive care is linked directly or indirectly to the provision of a full range of services to meet patients' healthcare needs.[43] Included in this are "health promotion, prevention, diagnosis and treatment of common conditions, referral to other providers, management of chronic conditions, rehabilitation, palliative care and, in some models, provision of social services."[42]

Essentially, whole-person comprehensive care considers a range of personal health needs, challenges and life circumstances as opposed to only symptoms or disease-specific categories.[16, 43, 44] Starfield suggests that PHC is the best setting for the management of the most common health issues. For less frequent or more complex diseases or disorders, the involvement of other providers, through collaborative care arrangements or referrals, is increasingly important and beneficial.[16]

The overall system implication is that PHC should influence the course of care with a whole-person focus and strong collaborative comprehensive services. Therefore, whole-person care may be one of the most challenging concepts in the definition and measurement of primary health care because it captures elements of continuity, patient-centredness, scope of services provided, and coordination.

The concept of whole-person care is perhaps most interestingly reflected in research considering PHC performance in chronic disease management. Some studies such as those that use quality indicators like the use of tests to monitor disease status or indicators on medication prescription, suggest that PHC systems do not perform well.[45] However, studies that use *overall* health status as the measure suggests that PHC systems perform as well as, if not better than those based on specialty care.[16, 46] As some researchers have noted, clinical practice guidelines (CPGs)[iv] are typically based on a single disease that may ignore the complexity of multiple co-morbid

iv. CPGs are guidelines for care based on accepted clinical practice interventions for a given disease condition. Typically, CPGs are developed using a blend of evidence-based and consensus methods to establish common agreement on appropriate interventions. CPGs can vary substantially between health jurisdictions. One recent study found that less than 60% of CPGs in the U.S. and U.K. were consistent. (M.N. Marshall, P.G. Shekelle, E.A. McGlynn et el, "Can health care quality indicators be transferred between countries?", *Quality and Safety in Health Care*, 12, 1 (February 2003): pp. 8–12.)

conditions.[44, 46] In contrast, a whole-person approach incorporates factors such as co-morbidities, insufficient resources to purchase medications, and other circumstances that may require equal or greater attention.[43, 44, 46]

For further discussion of this issue regarding PHC, whole-person care and quality indicators, see Section 4.5.

Two recent federal examinations of the Canadian health system—the Romanow and Kirby reports—differed in some of their conclusions, but agreed on three points of interest in relation to comprehensive, whole person PHC.[47, 48] One is the focus on enhancing preventive health services to reduce the incidence of poor health and increase early detection. The second focuses on system challenges involved in strengthening the management of chronic conditions. Finally, both reports emphasize PHC as a key agent in strengthening the "upstream" and "downstream" aspects of the heath system.

The aim of preventive health services and health promotion activities is to influence individual health risk behaviours and other determinants of health. The impact of improving preventive health services could be a reduction in the prevalence of chronic diseases—most of which are preventable and affected by factors such as poor diet, lack of exercise, smoking, stress and excessive alcohol intake. The Canadian Task Force on Preventive Health Services has recommended a number of areas in which the PHC system should or should not appropriately screen and provide advice on common health risks.[49]

The aim of chronic disease management is to strengthen the management and self-management of diseases such as diabetes and heart disease after a diagnosis has been made. There is also a growing body of research that place chronic condition management at the forefront of PHC.[50, 51] Some have suggested that whole-person principles of PHC—such as continuity, comprehensiveness and coordination—reflect the needs of those with a chronic condition.[52, 53]

As more evidence and policies emphasize the critical importance of comprehensive whole-person care, some have questioned whether the comprehensiveness of PHC service delivery is decreasing. Qualitative work has suggested that PHC providers are limiting the type of services they provide.[54] Empirical research by Chan and Tepper, in two different reports, has pointed to indications of changes in the comprehensive delivery and make-up of PHC services.[55, 56] Chan looked at changes in the service delivery settings (i.e. office-based, hospital, long-term care), while Tepper examined broad practice areas such as changes in surgical services, advanced procedural tasks and obstetrics.

While both researchers concluded that the comprehensiveness of PHC service delivery might be decreasing, other service delivery alternatives might help explain the decrease. For example, are other evolving models or approaches to PHC including enhanced interdisciplinary services filling the observed gaps? However, there is insufficient data or information to consider this question.

The following table lists the indicators that were developed for Objective 3. It includes the type of data source likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 3: To enhance the provision of whole-person comprehensive primary health services, including acute episodic and ongoing care with increased emphasis on health promotion, disease and injury prevention and management of common mental health conditions and chronic diseases

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
12	Scope of PHC services	Organization Survey	No
13	Health risk screening in PHC	Client/Patient Survey	No
14	Smoking cessation advice in PHC	Client/Patient Survey	Yes, partial
15	Alcohol consumption advice in PHC	Client/Patient Survey	No
16	Dietary advice in PHC	Client/Patient Survey	No
17	Advice on physical activity in PHC	Client/Patient Survey	No
18	PHC initiatives for reducing health risks	Organization Survey	No
19	Health region programs for reducing health risks	Organization Survey	No
20	Smoking rate	Client/Patient Survey	Yes
21	Fruit and vegetable consumption rate	Client/Patient Survey	Yes
22	Overweight rate	Client/Patient Survey	Yes
23	Physical activity rate	Client/Patient Survey	Yes
24	Heavy drinking rate	Client/Patient Survey	Yes
25	PHC resources for self-management of chronic conditions	Client/Patient Survey	No
26	PHC support for informal caregivers	Client/Patient Survey	No
27	Time with PHC provider	Client/Patient Survey	No
28	Client/patient participation in PHC treatment planning	Client/Patient Survey	No

4.4 Enhancing an Integrated Approach to 24/7 Access

Eighty-six percent of Canadians report having a regular PHC physician who they consult when they have a problem with their health.[27] Yet, we also know that many Canadians are seeking and receiving PHC services from sources that may not be connected with their usual source of care, such as a walk-in clinic. Accordingly, an Accord objective is to ensure that 50% of Canadians have access to the appropriate PHC provider 24 hours a day, seven days a week, by 2011.[57] It is also important to assess how many of the 24/7 PHC access points are connected to regular PHC providers to maintain information and care continuity.

So where do Canadians go when they need primary health care? In general, survey results point to the same conclusion: a regular PHC provider is only one source.

- For immediate care for minor health problems, almost 50% of respondents said they had gone to their regular PHC provider during normal working hours, but this figure drops to 8% on weekends.[58]
- Walk-in clinics and emergency departments tend to be the source of choice for both routine/on-going care and immediate care during evenings and weekends.[58]
- A Quebec study reported that 34% of people who went to walk-in clinics had no regular PHC provider; 66% using this service did have one.[59]
- In 2004, an international comparative survey of five countries found that a greater number of Canadians reported using emergency departments for a condition they felt could be treated by a regular doctor than respondents in Australia, New Zealand, the United Kingdom and the United States.[28]
- When asked in a Statistics Canada survey where they received care for their most recent injury, just over half of Canadians (55%) reported having gone to an emergency department, 21% to a PHC organization, and 12% to a walk-in clinic.[58]

Canadians may have many reasons for seeking care from a source other than their regular PHC provider. These include convenience of location[60] and perception of accessibility.[61] For example, only 20% of respondents in a Quebec survey thought they could see their regular provider quickly if they suddenly became ill.[59] Indeed, when asked for the next available appointment for routine care, PHC organizations in the study reported a median wait of 24 days, ranging from 0 to 167 days.[59] Haggerty and colleagues also found that each additional hour of service above 55 hours per week translated into higher perceived accessibility, especially when offered as evening hours for both scheduled and walk-in care.[59]

There is currently no definitive evidence that indicates the best way to organize after-hours care. Because the organization of each health system between international jurisdictions is so varied, interpreting outcomes can vary substantially between jurisdictions.[61] Moreover, there is little research comparing one after-hours model with another. While there is evidence that after-hour arrangements can reduce the number of visits to PHC providers and improve satisfaction, these results are varied, with some researchers suggesting that while visits to other PHC service providers appear to decline, those to emergency departments do not.[62] Additionally, there are still unanswered questions about the effect of telephone consultations on clinical outcomes, cost and satisfaction.[62]

The following table lists the indicators that were developed for Objective 4. It includes the type of data source likely necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 4: To enhance 24/7 access for patient-initiated urgent care which is effectively linked with the patient's usual primary health care provider

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
29	Difficulties obtaining urgent, non-emergent PHC on evenings and weekends	Client/Patient Survey	No
30	PHC after hours coverage	Organization Survey	No
31	Average number of PHC extended hours	Organization Survey	No
32	Wait times for PHC urgent, non-emergent PHC	Organization Survey/ Administrative	No
33	Satisfaction with wait times for urgent, non-emergent PHC	Client/Patient Survey	No
34	Satisfaction with wait times for routine PHC	Client/Patient Survey	No

4.5 Strengthening the Quality of PHC

Quality of care has come to the forefront in the planning and delivery of services in Canada and internationally.[63] For example, in the U.S., the development and implementation of the Health Plan Employer Data and Information Set (HEDIS®) of performance measures foreshadowed an emerging interest in applying quality indicators to PHC. More recently, the Quality and Outcomes Framework (QOF) was implemented by the National Health Service in England to assess PHC practices.

For some, HEDIS® and QOF over-represent indicators based on Clinical Practice Guidelines (CPGs) as the standard of quality. As some researchers note, CPGs are only partially reflective of primary health care services. One of the challenges of using specialty care derived CPGs is the guidelines might not properly address illness severity between study populations and the general populations when establishing the screening and intervention guidelines.[64] As was discussed earlier, some researchers point out PHC is about a range of personal health care needs and providing services in the context of individual circumstance, family and community that CPGs do not reflect [16, 44] (see Section 4.3 for earlier whole person care discussion). Accordingly, in order to capture the quality of PHC, both disease-specific indicators and other measures such as those promoting integrative, prioritizing, relationship-centred functions are needed.[44]

Quality of care frameworks such as HEDIS and QOF incorporate a mixture of process and outcome measures, with the majority tied to process-based activities. Process measures track the provision or "process" of care. Outcome measures, on the other hand, try to capture the *results* of the care process.[65] The advantages of process measures are that they are relatively easy to implement, and easier to interpret if based on clear scientific evidence and directly related to interventions.[65, 66]

Interpreting outcome measures can be more complex. Health outcomes are affected by a range of determinants, including socio-economic characteristics and individual health status that can make it impossible to link or attribute process with outcomes of care.[66] On the other hand, they can provide important high-level comparative summary measures that can inform overall planning and service improvements. Yet, as Giuffrida and colleagues point out, if indicators are used to gauge organizational performance, they should be closely related to those factors under the control of the provider and organization.[66] For example, when using potentially preventable hospital admissions rates as a performance measure, it is important to remember that other factors—such as admission policies—can influence an increase or decrease in the direction of findings.[66]

When considering quality in PHC, a further distinction is needed between the application of CPGs and quality improvement. "Quality improvement" is a term that embraces all procedures explicitly designed to monitor, assess and improve multiple dimensions of the care process.[67] Methods can include a wide range of tools, such as peer review, medication monitoring, introduction of technology, as well as the use of evidence-based practice.

The impact of quality improvement can be wide reaching involving delivery system redesign, decision support, information support, community linkages and health system support.[68] During one study of health care organizations implementing quality improvement for chronic disease management, the organizations made on average more than 30 different structural and care process changes, only some of which included the application of CPGs.[68]

Quality improvement is also about establishing ongoing processes. The effort needed to move an organization and its providers forward depends on the skills and expertise of its staff,[65] which continue to change as new approaches and guidelines emerge. Professional development and continuous learning are essential.

In this section, the emphasis has been on clinical indicators (including primary and secondary prevention) and quality improvement. Additional dimensions of quality of care (e.g. client/patient satisfaction with their care experience) and practice management (e.g. use of electronic communication and clinical registries) are discussed in other sections of this report.

The development of the clinical indicators was based primarily on "Grade A" recommendations. A "Grade A" recommendation refers to strong findings as well as the strength of the study designs (typically reflecting the results of randomized controlled trials). Indicator sources also include guidelines developed by experts on the Canadian Task Force on Preventive Health Care, most of which are also based on "Level 1" evidence.

The following table lists the indicators that were developed for Objective 5. It includes the type of data source likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 5: To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
35	Ambulatory care sensitive conditions	Clinical Administrative	Yes
36	Complications of diabetes	Clinical Administrative	No
37	Emergency department visits for asthma	Clinical Administrative	No
38	Emergency department visits for congestive heart failure	Clinical Administrative	No
39	Glycemic control for diabetes	Clinical Administrative	No
40	Blood pressure control for hypertension	Clinical Administrative	No
41	Influenza immunization, 65 +	Clinical Administrative or Client/Patient Survey	No
42	Pneumococcal immunization, 65 +	Clinical Administrative	No
43	Well baby screening	Clinical Administrative	No
44	Child immunization	Clinical Administrative	No
45	Breast-feeding education	Clinical Administrative	No
46	Depression screening for pregnant and post-partum women	Clinical Administrative	No
47	Counselling on home risk factors for children	Clinical Administrative	No
48	Colon cancer screening	Clinical Administrative	No
49	Breast cancer screening	Clinical Administrative	No
50	Cervical cancer screening	Clinical Administrative	No
51	Bone density screening	Clinical Administrative	No
52	Dyslipidemia screening for women	Clinical Administrative	No
53	Dyslipidemia screening for men	Clinical Administrative	No
54	Blood pressure testing	Clinical Administrative	No
55	Screening for modifiable risk factors in adults with coronary artery disease	Clinical Administrative	No
56	Screening for modifiable risk factors in adults with hypertension	Clinical Administrative	No
57	Screening for modifiable risk factors in adults with diabetes	Clinical Administrative	No
58	Screening for visual impairment in adults with diabetes	Clinical Administrative	No
59	Asthma control	Clinical Administrative	No

OBJECTIVE 5: To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations *(cont'd)*

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
60	Treatment of congestive heart failure	Clinical Administrative	No
61	Treatment of dyslipidemia	Clinical Administrative	No
62	Treatment of acute myocardial infarction	Clinical Administrative	No
63	Antidepressant medication monitoring	Clinical Administrative	No
64	Treatment of depression	Clinical Administrative	No
65	Treatment of anxiety	Clinical Administrative	No
66	Treatment for illicit or prescription drug use problems	Clinical Administrative	No
67	PHC support for medication incident reduction	Provider Survey	No
68	Use of medication alerts in PHC	Organization Survey	No
69	Implementation of PHC clinical quality improvement initiatives	Organization Survey	No
70	Maintaining medication and problem lists in PHC	Organization Survey	No
71	Information about prescribed medication by PHC providers	Client/Patient Survey	No
72	Professional development for PHC providers and support staff	Provider Survey	No

4.6 Building PHC Through Patient-Centred Care

Patient-centered care is widely accepted as an important part of the PHC experience for clients/patients. Such acceptance extends beyond simply improving a client/patient's satisfaction with services, and includes the potential benefits of improved health behaviours and outcomes.[69, 70]

Essentially, patient-centred care speaks to relationships—between a client/patient and his/her care providers. As Flocke and colleagues explored in one study, different kinds of provider "styles" can be observed in service delivery.[26] Providers who are personable, sharing/collaborative and who emphasize openness towards social and psychological issues tended to be congruent to a client's/patient's understanding of quality of care.[26] Other studies also emphasize the need to consider the affective relationship in the measurement of shared decision-making.[71] Despite increasing recognition of the value of patient-centred care, interpersonal aspects of care are not yet a routine quality measurement.[72]

TABLE 3

ELEMENTS OF PATIENT-CENTREDNESS	
Research Authors	
Little et al, 2001[73]	• communication and partnership • personal relationship • positive and clear approach to problem • interest in affect on life • health promotion
Mead et al, 2002[70]	• bio-psychosocial perspective • understanding "patient as a person" • sharing power and responsibility • developing a therapeutic alliance • attention to "provider as person"
Michie et al, 2003[74]	• communication skills • matching of beliefs • treatment alliance • autonomous patient • active patient orientation (e.g. motivation) • patient empowerment
Flocke et al, 2002[26]	• physician orientation (problem focused or patient focused) • scope of clinical information (biomedical or bio-psychosocial) • affective connection with patients (personable/friendly or professional distance) • openness to patient agenda • sharing of control in interaction • negotiation of options
Stewart et al, 2000[69]	• exploring disease and illness experience • understanding the whole person • finding common ground • incorporating prevention and health promotion • enhancement of relationship • realistic expectations and practice

Two recent reviews of published research on the outcomes of patient-centred approaches reach similar conclusions:

1. There is evidence that patient-centred approaches can improve treatment compliance, motivate and support behaviour change and is associated with health improvement on some measures;
2. The patterns of associations and findings are not clear and consistent;
3. Different elements of patient-centredness appear to be associated with different health outcomes;
4. Evidence on the effective components and outcomes of patient-centred care have not been reached definitively.[70, 73]

Some of the same research has challenged a fundamental question: Do all clients/patients want patient-centred care? Little and colleagues suggest the answer is "no" and warn against universal application of this kind of care.[73] Even more recently, Levinson and others found that the desire of some people to be involved in their care and care decisions varies by education, age and self-reported health status.[75] However, the same study found that while 52% preferred to leave decisions to the provider, 96% of participants did want to know their options.[75] Essentially, the findings reinforce the perspective voiced by Stewart: being patient-centred is taking into account the client's/patient's desire for involvement and level of information sharing.[76]

The following table lists the indicators that were developed for Objective 6. It includes the type of data source likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 6: To ensure that primary health care is acceptable to patients and that it meets their reasonable expectations of how they should be treated (responsiveness)

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
73	Client/patient satisfaction with PHC providers	Client/Patient Survey	Yes, Partial
74	Client/patient satisfaction with telephone health lines	Client/Patient Survey	Yes
75	Recommendation of PHC provider to others	Client/Patient Survey	No
76	Client/patient participation in PHC clinical decision making	Client/Patient Survey	No
77	Client/patient satisfaction with PHC privacy practices	Client/Patient Survey	No
78	Language barriers when communicating with PHC providers	Client/Patient Survey	No

4.7 Promoting Continuity Through Integration and Coordination

Coordination of services is one of the defining principles of PHC.[77] As is frequently noted, it is impossible for a single provider to possess all the information or provide the scope of services needed to address an individual's potentially wide range of health care needs.[78] To provide comprehensive PHC services, a multitude of PHC providers and organizations must be in incorporated into a single system. However, this becomes even more challenging with a population health lens. Moving beyond medical care, these approaches incorporate an even more diverse range of expertise, providers and organizations. For example, services for seniors may include fall prevention programs that not only include providers such as occupational therapists and physiotherapists, but also be linked with community-based education and health promotion initiatives.

Many share a vision of primary health care as a pivotal integrative structure linking whole person care across an array of providers, organizations and human service sectors. Inter-disciplinary collaboration is increasingly promoted as necessary for continuity.[79, 80] While there is much research focused on how comprehensive PHC services could be shaped in the future, studies have not clearly identified which types of coordination are most effective.[81] Linkage activities can include case management, clinical protocols, case conferencing, inter-agency meetings, written agreements, cross training, co-location of services and shared employees, to mention just some of the options.[82]

Another challenge involves inter-disciplinary collaboration, which is increasingly viewed as a necessary step in ensuring continuity of PHC services. The PHC team is frequently cited as the premier vehicle for enhancing collaboration and continuity, but the definition of what constitutes a team is varied. This can complicate the task of measuring continuity. Furthermore, best practice standards for the composition of PHC teams have not been defined.[81] Some teams are internally based, meaning all members are employees of the same PHC organization. Yet, inter-organizational versions of teams, with members coming from different organizations and even human service sectors, are also being explored.[79] Finally, interdisciplinary collaboration may extend beyond the concept of a "team." Other approaches such as networks, clinical networks, and service coalitions represent other ways of bringing together the expertise of various health care providers.

The study of the effects of interdisciplinary care on health outcomes is still an emerging field in PHC. In general, researchers have focused on whether there are benefits to be derived from combining different types of expertise and approaches. Much of the research on continuity and coordination has looked at varying

configurations and team structures and work processes involving family physicians and nurses.[81] As well, researchers have heavily targeted chronic conditions such as diabetes. This is not surprising as chronic conditions are a major cost driver for the health system and interventions are frequently multiple and complex.

For example, there is an increasing body of research looking at multi-faceted approaches in the management of chronic conditions such as diabetes. While many of the study designs are weak and outcomes mixed, there are some demonstrated benefits to these approaches including enhanced professional collaboration.[83, 84] Other studies have generated positive findings for various types of shared/ collaborative care arrangements between the PHC provider and specialists. A large number of studies have addressed the benefits of collaborative care for depression—various processes of linking psychiatrists to the PHC organization.[85, 86] Palfrey and colleagues have obtained similar findings for dealing with medically complex children.[87]

To measure integration and service coordination at a pan-Canadian level, it is important to return to the objective driving the creation of these diverse approaches and models—namely, continuity. Reid, Haggerty and McKendry remind us that continuity is a multi-dimensional concept—involving relational, informational and management continuity[88] (see Section 4.1 footnote for description). So descriptive measures of the types of models or processes used is important (e.g. team versus network). The critical question is whether coordination and integration are seen to be improving continuity.

The following table lists the indicators that were developed for Objective 7. It includes the type of data source likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

OBJECTIVE 7: To facilitate integration and coordination between health care institutions and health care providers to achieve informational and management continuity of patient care

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
79	Use of standardized tools for coordinating PHC	Organization Survey	No
80	Collaborative care with other health care organizations	Organization Survey	No
81	Intersectoral collaboration	Organization Survey	No
82	PHC client/patient experiences with duplicate medical tests	Client/Patient Survey	No
83	Unnecessary duplication of medical tests reported by PHC providers	Provider Survey	No
84	Point of care access to PHC client/patient health information	Provider Survey	No

4.8 Infrastructure Inputs and Supports Necessary to Sustain PHC

In addition to setting out a series of objectives and questions for evaluating PHC, the NES Evaluation Framework also identifies six critical supports that address the resource inputs and supports needed to enable and sustain PHC over time.[2] Indicators were developed for the following supports:

- Health human resources;
- Interdisciplinary teams;
- Information technology resources;
- Resource allocation; and
- Provider payment.

The PHC indicators included as measures of support provide useful contextual information. In addition, these types of indicators can provide useful data to assist in the interpretation of other indicators.[89]

Health Human Resources

Health care service delivery is primarily a labour intensive activity.[90] It is estimated that over 70% of health care spending is for wages, benefits and fee-for-service remuneration.[90] In answering the question, "are there enough PHC health human resources to address population needs, particularly family physicians/general practitioners and nurse practitioners," various factors have to be taken into account. For example, the answer is partly contingent not only on how many people are currently working in primary health care, but also on the scope of practice of each health professional.

Other important health human resource factors include quality of work life, workplace safety, and satisfaction with working environment.

Interdisciplinary Teams

In Canada there is increasing interest in the development and expansion of interdisciplinary teams, with an emphasis on the inclusion of nursing and allied health professionals. In 2004, the First Ministers reaffirmed their commitment to ensure Canadians have access to an appropriate PHC provider and set 2011 as the target date by which 50% of the Canadian population would be receiving care from a multidisciplinary PHC organization.[57] (See Section 4.7 for further discussion on interdisciplinary care arrangements.)

PHC organizations face the critical challenge of developing ways to meet diverse care needs in an increasingly complex health care environment. As is frequently noted, it is impossible for a single provider to possess all the information required to address a wide range of health care needs.[78, 91] Providing comprehensive services among health and wellness professionals involves the development of relational, information and management continuity. This requires a common purpose, a coordinated care plan, the acceptance and recognition of complementary skills and expertise among different providers, and effective communication among providers.[92]

Information Technology

Information technology is a tool (or set of tools). It can enhance the capacity for improved organizational functioning—both clinically and administratively. As well, information technology has the potential to enable better coordination between providers and organizations. For example, the use of information technology by clinicians to order medication and tests can improve organizational practice performance by reducing errors, improving patient safety, and reducing costs.[93, 94] Many barriers to the uptake and application of electronic systems within PHC practices will be faced as technology evolves.

Some of these are:

- the lack of available infrastructure;
- competing financial/human resources;
- lack of available electronic health record (EHR) expertise;
- privacy and data stewardship issues, non-standardized data capture and terminology; and
- poor integration of EHR training in undergraduate and continuing education.[94]

Resource Allocations and Provider Payment for Primary Health Care

An understanding of resource allocation can assist people in interpreting and evaluating outcomes, processes and models of service delivery. It is important that system managers, policy makers, providers and the public are aware of how resources are allocated across the PHC system. Resources in this context refer to human, financial, information technology, drugs, equipment, and facility, and are examined at several levels (e.g. regional and practice).

Provider Payment Methods

Assessing the different ways in which health care providers are paid may lead to a better understanding of how reimbursement is linked to outcomes and other aspects of PHC. For example, recent reviews of the literature have found that the mode of provider reimbursement may affect primary health care physicians' clinical behavior.[95, 96]

The following tables list the indicators that were developed for the supports. They include the type of data source likely to be necessary to calculate the indicators, and whether there is an available data source. Where possible, these indicators can also be examined in terms of equity in order to identify potential disparities in services, outcomes or health status.

SUPPORT 1: Adequate supply of health human resources to meet primary health care needs

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
85	PHC provider full time equivalents	Other Administrative	Yes, partial
86	PHC providers entering/leaving the workforce	Other Administrative	Yes, partial
87	PHC organizations accepting new clients/patients	Organization Survey	No
88	PHC provider satisfaction with use of professional skills	Provider Survey	No
89	PHC workplace safety	Provider Survey	No
90	PHC workplace injuries	Provider Survey	Yes, partial
91	PHC provider burnout	Provider Survey	No
92	PHC provider satisfaction with work life balance	Provider Survey	Yes, partial
93	Needs-based health human resources planning for PHC	Organization Survey	No

SUPPORT 2: Interdisciplinary primary health care teams

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
94	Access to interdisciplinary PHC organizations	Client/Patient Survey	No
95	PHC physicians working in solo practice	Provider Survey	Yes
96	PHC physicians working in group practice	Provider Survey	Yes
97	PHC FPs/GPs/NPs working in interdisciplinary teams/networks	Provider Survey	No
98	Client/patient satisfaction with available PHC services	Client/Patient Survey	No
99	PHC team effectiveness score	Provider Survey	No

SUPPORT 3: Information technology that is adapted to primary health care and links primary health care organizations with the rest of the health care system

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
100	Uptake of information and communication technology in PHC organizations	Organization Survey	No
101	Use of information and communication technology modalities in PHC organizations	Organization Survey	No
102	Use of two-way electronic communication in PHC organizations	Organization Survey	No

SUPPORT 4: Needs-based resource allocations for primary health care

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
103	Average per capita PHC operational expenditures	Other Administrative	No

SUPPORT 5: Provider payment methods that align with primary health care goals

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
104	PHC provider remuneration method	Provider Survey	Yes, partial
105	Average PHC provider income by funding model	Provider Survey	Yes, partial

5.0 Conclusion

Through the consensus building process, a list of 105 PHC indicators was identified and agreed-upon by a broad audience of stakeholders. An abridged list of 30 representative indicators on the following page has been created to serve as an example of a sub-list from the list of 105. Using the lists as a foundation for guiding the enhancement of a data collection infrastructure will, over time, substantially increase the availability of pan-Canadian data on PHC.

As shown in this report, the indicators cover a broad range of important elements of PHC that are relevant to stakeholders across the country. Enhancing a pan-Canadian PHC data collection infrastructure to improve the capacity to report these indicators will require consistent, standard, agreed-upon data captured from a variety of survey based and administrative data sources on a variety of levels (both PHC practice and health region and provincial/territorial). The companion report, *Enhancing The Primary Health Care Data Collection Infrastructure In Canada*, provides an overview of the current availability of data to report the list of agreed-upon indicators, and options for enhancing the pan-Canadian data collection infrastructure.

The agreed-upon list of PHC indicators through an enhanced data collection infrastructure will help provide some of the information required for providers, policy makers and researchers to better understand, assess and improve PHC and ultimately the health of Canadians.

SAMPLE ABRIDGED LIST OF PHC INDICATORS		
ACCESS TO PHC THROUGH A REGULAR PROVIDER	**COMPREHENSIVE CARE, PREVENTIVE HEALTH AND CHRONIC CONDITION MANAGEMENT**	**CONTINUITY THROUGH INTEGRATION AND COORDINATION**
• Population with a regular PHC provider • Difficulties accessing routine PHC*	• Scope of PHC services • Health risk screening in PHC* • PHC client/patient registries for chronic conditions* • PHC programs for chronic conditions* • Client/patient participation in PHC treatment planning	• Collaborative care with other health care organizations
24/7 ACCESS TO PHC	**PATIENT-CENTRED PHC**	**ENHANCING POPULATION ORIENTATION**
• Difficulties obtaining urgent, non-emergent PHC on evenings and weekends • PHC after hours coverage • Difficulties accessing routine PHC	• Client/patient satisfaction with PHC providers • Language barriers when communicating with PHC providers	• PHC client/patient registries for chronic conditions* • PHC programs for chronic conditions* • Specialized PHC programs for vulnerable/special needs populations
QUALITY IN PHC		
Primary Prevention • Influenza immunization, 65+ • Cervical cancer screening • Health risk screening in PHC* **Secondary Prevention for Chronic Conditions** • Screening for modifiable risk factors in adults with coronary artery disease • Screening for modifiable risk factors in adults with hypertension • Screening for modifiable risk factors in adults with diabetes	**Patient Safety** • Use of medication alerts in PHC • Antidepressant medication monitoring **Treatment Goals and Outcomes** • Glycemic control for diabetes • Blood pressure control for hypertension • Treatment of dyslipidemia • Treatment of depression • Ambulatory care sensitive conditions	
PHC INPUTS AND SUPPORTS		
Health Human Resources • PHC organizations accepting new clients/patients **Interdisciplinary Teams** • PHC FPs/GPs/NPs working in interdisciplinary teams/networks **Provider Payment Methods** • PHC provider remuneration method	**Information Technology** • Uptake of information and communication technology in PHC organizations **Allocations for PHC** • Average per capita PHC operational expenditures	

EQUITY

*Indicators repeated because it reflects multiple dimensions.

Appendix A

List of PHC Indicator Development Project Participants and Method of Participation

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Achilles	Sheila	Saskatoon Health Region	–	Attended second conference	Participated
Armstrong	Pat	York University	–	Attended first conference	–
Austin	Stephanie	Health Canada	–	Attended second conference	Participated
Barnes	Marsha	Ontario Ministry of Health and Long-Term Care	Advisory	–	–
Barre	Louis	Manitoba Health	–	Attended first conference	–
Barrett	Juanita	Newfoundland and Labrador Department of Health and Community Services	Advisory	Attended first and second conferences	Participated
Belhadji	Bachir	Health Canada	Advisory, Group B, DCI	Attended second conference	Participated
Bergman	June	University of Calgary	Group C (Lead)	Attended first and second conference	Participated
Booth	Hazel	Yukon Department of Health and Social Services	Group B	Attended second conference	Participated
Boyne	John	New Brunswick Health and Wellness	Group A	Attended first conference	Participated
Brauer	Paula	University of Guelph	–	Attended second conference	Participated

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Briggs	Tom	Howard Research and Management Consulting Inc.	–	Attended second conference	Participated
Broemeling	Anne-Marie	Interior Health Authority	Group A	Attended first and second conferences	Participated
Burnett	Dawn	Canadian Physiotherapy Association	–	–	Participated
Bustros	Jeanine	Health Canada	Advisory	Attended second conference	Participated
Cadotte	Barbara	Ontario Ministry of Health and Long-Term Care	–	–	Participated
Cesa	Frank	Health Council of Canada	–	Attended second conference	Participated
Charlton	Pat	Prince Edward Island Ministry of Health	–	Attended second conference	Participated
Chaudhuri	Nandita	Saskatchewan Health	Advisory*	Attended first conference	–
Coady	Regina	Newfoundland and Labrador Department of Health and Community Services	Group D	Attended first and second conference	Participated
Darcovich	Nancy	Statistics Canada	Advisory, Group A	Attended first and second conference	Participated
Dean	Christopher	Canadian Council on Health Services Accreditation	–	Attended first conference	–
DeHart	Lindsay	Yukon Department of Health and Social Services	Group B	Attended first conference	–
Dietrich	Linda	Dietitians of Canada	–	–	Participated
El-Jardali	Fadi	Health Council of Canada	–	Attended first conference	–

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Forth	Mehrun	Nunavut Department of Health and Social Services	Group C	Attended second conference	Participated
Fronzi	Lucy	Group Health Centre	Group B	Attended first and second conference	Participated
Gass	David	Dalhousie University	Group C	Attended first and second conference	Participated
Grace	Melanie	Canadian Association of Social Workers	Advisory	Attended second conference	Participated
Greeley	Gogi	Nunavut Department of Health and Social Services	–	Attended first conference	–
Groff	Phil	SmartRisk	–	–	Participated
Guttmann	Astrid	Institute for Clinical Evaluative Sciences	Group A (Lead)	Attended first and second conference	Participated
Haggerty	Jeannie	Université de Sherbrooke	Advisory	Attended first and second conference	Participated
Horton	Jan	Yukon Department of Health and Social Services	–	–	Participated
Hasselback	Paul	Interior Health Authority	Group B, DCI	Attended first and second conference	Participated
Howard	Jennifer	Women's Health Clinic Inc.	Group D	Attended first and second conference	Participated
Howard	Peggy	Howard Research and Management Consulting Inc.	Group C, DCI	Attended first conference	Participated
Hutchison	Brian	McMaster University	Advisory (Chair)	Attended first and second conference	Participated
Jaakkimainen	Liisa	Institute for Clinical Evaluative Sciences	Group C, DCI	Attended first and second conference	Participated

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Jackson	Beth	Health Canada	–	Attended second conference	Participated
Jeffers	Betty	Alberta Health and Wellness	Advisory	–	–
Johnston	Riley	Ontario Ministry of Health and Long-Term Care	–	Attended first conference	–
Jones	Wayne	Continuous Enhancement of Quality Measurement in Primary Mental Health Care	DCI	–	–
Katz	Alan	University of Manitoba	Advisory	Attended first and second conference	Participated
Klaiman	Donna	Canadian Association of Occupational Therapists	–	Attended second conference	Participated
Klomp	Helena	Health Quality Council	–	Attended second conference	Participated
Knock	Marian	Canadian Nurses Association	Advisory	–	Participated
Krakowski	Vivian	Saskatchewan Health	–	Attended second conference	Participated
Lafferty	Vicki	Northwest Territories Department of Health and Social Services	Group A	Attended first and second conference	Participated
Landry	Shan	Saskatoon Health Region	–	Attended first conference	–
Lapierre	Louise	Canadian Health Services Research Foundation	–	Attended first and second conference	Participated
Lapointe	Luc	Canadian Lung Association	Group C	Attended first conference	–
Levesque	Jean-Frederic	Institut national de santé publique de Québec	Group A	Attended first and second conference	Participated
Lillie	Donna	Canadian Diabetes Association	–	Attended first conference	Participated

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
MacDonald	Don	Newfoundland and Labrador Centre for Health Information	DCI	–	–
MacDonald	Jane	Canadian Nurses Association	–	Attended second conference	Participated
MacKinnon	Neil	Dalhousie University	Group C	Attended first conference	Participated
Martin	Carmel	University of Ottawa	Group D	Attended first and second conference	Participated
Maxted	John	The College of Family Physicians of Canada	Advisory	Attended second conference	Participated
McEwan	Kimberley	British Columbia Ministry of Health	Group C	Attended first conference	Participated
McKim	Bob	Capital Health Authority	–	Attended second conference	Participated
Melanson	Margaret	Canadian Association of Speech-Language Pathologists and Audiologists	–	Attended second conference	Participated
Millar	John	Provincial Health Services Authority, British Columbia	–	Attended first and second conference	Participated
Miller	Carol	Canadian Physiotherapy Association	–	Attended second conference	Participated
Miller	Margaret	Health Canada	Group A	Attended first and second conference	Participated
Moy Lum–Kwong	Margaret	Heart and Stroke Foundation	–	–	Participated
Muttitt	Sarah	Canada Health Infoway	DCI	–	–

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Moy Lum–Kwong	Margaret	Heart and Stroke Foundation	–	–	Participated
Muttitt	Sarah	Canada Health Infoway	DCI	–	–
Nakagawa	Bob	Health Council of Canada	–	Attended second conference	Participated
O'Maonaigh	Conleth	Memorial University of Newfoundland	Group A	Attended first conference	Participated
Oldford	Karen	Labrador–Grenfell Regional Integrated Health Authority	Group D	Attended second conference	Participated
Pentland	Nettie	Manitoba Health	Group D	Attended first and second conference	Participated
Persaud	Vena	Ontario Ministry of Health and Long–Term Care	Group B	Attended first conference	–
Phillips	Robin	Prince Edward Island Ministry of Health	Group B	Attended first conference	–
Pong	Raymond	Laurentian University	Group B	Attended second conference	Participated
Robbins	Carl	Memorial University of Newfoundland	–	Attended first and second conference	Participated
Roberts	Glen	Conference Board of Canada	Group B	Attended first and second conference	Participated
Rosborough	Louise	Health Canada	Advisory, Group B	Attended first and second conference	Participated
Roston	Barbara	Ontario Ministry of Health and Long–Term Care	Group A	Attended first and second conference	Participated
Rourke	Jim	Memorial University of Newfoundland	Advisory	–	Participated

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Russell	Anna	Alberta Health and Wellness	–	Attended first and second conference	Participated
Seguin	Michel	Statistics Canada	DCI	–	–
Service	John	Canadian Psychological Association	Group C	Attended first and second conference	Participated
Sharp	Marsha	Dietitians of Canada	Advisory†	–	Participated
Shosenberg	Nancy	Canadian Institute of Child Health	–	Attended first and second conference	Participated
Spidel	Mark	Prince Edward Island Ministry of Health	Group B	Attended second conference	Participated
Stasiuk	Sonya	Capital Health Authority	Group B	–	Participated
Stewart	Marianne	Capital Health Authority	–	Attended first conference	–
Stewart	Moira	University of Western Ontario	Group D	Attended first and second conference	Participated
Strachan	Jill	Canadian Institute for Health Information	DCI	Attended first and second conference	Participated
Stranc	Leonie	Manitoba Health	–	Attended second conference	Participated
Teare	Gary	Health Quality Council	–	Attended first conference	–
Tousignant	Pierre	McGill University	Group B (Lead)	Attended first and second conference	Participated
Tregillus	Valerie	British Columbia Ministry of Health	–	–	Participated
Ugolini	Cristina	Saskatoon Health Region	–	Attended first and second conference	Participated

LAST NAME	FIRST NAME	ORGANIZATION AFFILIATION	WORKING GROUP** OR ADVISORY COMMITTEE INVOLVEMENT	CONSENSUS CONFERENCE ATTENDANCE	MODIFIED DELPHI SURVEY PARTICIPATION
Ungurain	Merv	Nova Scotia Department of Health	Advisory	Attended first and second conference	Participated
Vail	Stephen	Canadian Medical Association	–	Attended second conference	Participated
Vayda	Eugene	University of Toronto	–	Attended first and second conference	Participated
Vissandjee	Bilkis	University of Montreal	–	Attended second conference	Participated
Vyse	Roberta	Manitoba Health	Group B	Attended first conference	Participated
Waraich	Paul	University of British Columbia	–	Attended first conference	–
Watson	Diane	Centre for Health Services and Policy Research, University of British Columbia	Advisory	Attended second conference	Participated
Williment	Melissa	Nova Scotia Department of Health	Group D	Attended second conference	Participated
Wong	Sabrina	University of British Columbia	Group D (Lead)	Attended first and second conference	Participated

* Moved to new organization and resigned from Advisory Committee in September 2005

† Joined in September, 2005.

**** Working Groups**

- Group A—Accessibility, Responsiveness and Needs Based Allocation
- Group B—Integration, Coordination and Health Human Resources
- Group C—Quality of Services
- Group D—Scope of Services and Whole Person Care
- DCI—Data Collection Infrastructure

Appendix B

Cross Country Consultations

Provinces/Territories

In addition to teleconferences and phone communication with all provincial/territorial jurisdictions, invitations for face–to–face presentations/discussions were also available. The following ministries participated in this mechanism:

- 7 of 10 provinces
  - British Columbia
  - Saskatchewan (included district/region PHC representatives)
  - Manitoba
  - Ontario
  - Quebec
  - Nova Scotia (included district/region PHC representatives)
  - Newfoundland and Labrador (included district/region PHC representatives)
- 2 of 3 territories
  - Yukon
  - Northwest Territories

Health Provider Associations

An invitation for a face–to–face consultation was sent to all professional associations that are represented on the Enhancing Interdisciplinary Collaboration in PHC (EICP) Steering Committee, as well as the EICP itself. One additional consultation was also held with The Chiropractic Association at their request. Presentations/discussions were held with the following organizations:

- Dietitians of Canada
- Canadian Psychological Association
- Canadian Association of Occupational Therapists
- Canadian Association of Speech-Language Pathologists and Audiologists
- The College of Family Physicians of Canada (Executive Committee)
- The Canadian Chiropractic Association
- Enhancing Interdisciplinary Collaboration in PHC (PHCTF–funded initiative)

Appendix C

Third Round Modified Delphi Survey Results

A nine–point scale was used to rate the PHC indicators for importance, with a score of nine referring to high importance and a score of one referring to low importance. Importance was defined as: The indicator measures an important aspect of the PHC system, either directly or in combination with other indicators.

"Median Score" refers to the overall median Delphi rating assigned to each indicator in the third round modified Delphi survey.

"% High" indicates the proportion of respondents who rated the indicator in the highest tertile with a score of 7, 8 or 9.

"% Medium" indicates the proportion of respondents who rated the indicator in the middle tertile with a score of 4, 5 or 6.

"% Low" indicates the proportion of respondents who rated the indicator in the lowest tertile with a score of 1, 2 or 3.

"Number of Respondents" refers to the total number of individuals who responded to each question.

The overall response rate for the third round modified Delphi survey was 86% with 72 out of a total of 84 participants responding.

All indicators that were rated in the third round modified Delphi survey are included in this table, with indicator numbers corresponding to the final list detailed in the body of this document. Indicators that were rated but not included in the final list are included here for reference purposes.

OBJECTIVE 1: To increase the proportion of the population that receives ongoing care from a primary health care provider who assumes principal responsibility for their care and who knows their personal and health characteristics

Evaluation Question 1. What proportion of the population can identify a primary care provider who assumes principal responsibility for their care and knows their health needs and personal values systematically?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
1	% of population who currently have a regular PHC provider, by type of PHC provider.	9	97	3	0	72
2	% of population, 18 years and over, who experienced difficulties obtaining required routine or ongoing PHC services, from their regular PHC provider, over the past 12 months.	8	89	10	1	72
3	% of population, 18 years and over, who experienced difficulties obtaining required health information or advice, from their regular PHC provider, over the past 12 months.	8	75	19	6	72
4	% of population, 18 years and over, who experienced difficulties obtaining immediate care for an emergent but minor health problem, from their regular PHC provider, over the past 12 months.	8	82	15	3	72

Evaluation Question 1.1. Does that proportion differ by geographic region? By socio–economic group? By health status? By cultural or ethnic group*?* This question proposes a number of analytic dimensions for the analysis of the indicators included in Evaluation Question 1 and other questions.

Additional analytical dimensions suggested (that were not originally included in the evaluation question 1.1):

Age/gender/sex/recent immigration status/special populations (people with disabilities)/rural or urban.

Other dimensions (if available): education/language/Aboriginal people/vulnerable populations (homeless, mentally ill, drug users)/sexual orientation.

OBJECTIVE 2: To increase the number of primary health care organizations who are responsible for providing planned services to a defined population

Evaluation Question 2. Do PHC organizations know the composition of their catchment and practice populations in terms of age structure, morbidity profile, cultural diversity, socio–economic status, social and physical environment?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
5	% of PHC organizations who used information on the composition of their practice population to allocate resources for programs/services, over the past 12 months.	8	75	20	6	71

Evaluation Question 2.1. Do PHC organizations have a registry of patients with chronic conditions (diabetes, asthma, heart disease, stroke, depression) for whom they develop specific programs?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
6	% of PHC organizations who currently have a PHC client/patient registry for chronic conditions.	8	89	10	1	71
7	% of PHC organizations who currently have specific programs for PHC clients/patients with specific chronic conditions.	8	90	10	0	71

Evaluation Question 3. What processes for planning services for their defined population do PHC organizations have?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
5	% of PHC organizations who used information on the composition of their practice population to allocate resources for programs/services, over the past 12 months.	8	75	20	6	71
	% of PHC organizations who currently have community representation on board governance.	6	45	41	14	71
8	% of PHC organizations who currently have processes to involve community input for planning the organization's services (e.g. advisory committees, focus groups).	7	72	23	6	71
	% of PHC organizations whose PHC providers currently participate in planning local health services.	7	59	30	11	71

Evaluation Question 4. Do regional health authorities support PHC organizations with information and processes that allow them to target services and provide referrals to hard-to-reach individuals and communities (e.g. ethnic minorities, intravenous drug users, shut-ins, adolescent parents, those in remote areas)?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
9	% of PHC organizations who currently do outreach to deliver PHC services to vulnerable/special needs population groups.	8	72	25	3	71
10	% of PHC organizations who currently provide specialized programs for vulnerable/special needs population groups.	8	76	17	7	71
11	% of PHC organizations who currently receive information or process support from their health region to serve vulnerable/special needs population groups.	7	72	18	10	71

OBJECTIVE 3: To enhance the provision of whole–person, comprehensive primary health services, including acute episodic and ongoing care with increased emphasis on health promotion, disease and injury prevention, management of common mental health conditions and chronic diseases

Evaluation Question 5. Do PHC organizations have defined policies to ensure that their practice populations receive: rapid management of acute, urgent health problems; timely provision of non–urgent routine care (including well care and chronic illness management), recommended preventive services; referral to hospitals and specialist; follow–up care after hospitalization; primary mental health care; full maternity and child care; coordinated care of the frail elderly; end–of–life care?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
12	% of PHC organizations who currently provide the following services: • Management of care for an emergent but minor health problem (e.g. sprained ankle, unexplained rash); • Non–urgent routine care (e.g. well care [baby, child, woman and/or man], and chronic illness management); • Prevention and health promotion and/or education services; • Full maternity and child care; • Primary mental health care; • Psychosocial services (e.g. counselling advice for physical/emotional/financial problems); • Liaison with home care; • Referral to and follow–up care from specialized agencies such as hospitals, youth centers, specialists and/or other providers (through formalized arrangements and/or agreements); • Rehabilitation services; • Nutrition counselling services; • Provision of home visits by PHC physicians/ nurses/nurse practitioners/pharmacists; and • End–of–life care.	8	82	13	6	71

Evaluation Question 6. Has there been a reduction in health risk (lower BMI, lower smoking rates, higher activity, lower rates of sexually transmitted disease, lower adolescent pregnancy rates, less substance misuse)? Do people attribute reduced health risks to orientation and advice that they received in primary health care?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
13	% of PHC clients/patients, 12 years and over, who were screened by their PHC provider for the following common health risks over the past 12 months: • Tobacco use; • Unhealthy eating habits; • Problem drug use; • Physical inactivity; • Overweight status; • Problem alcohol drinking; • Unintentional injuries (home risk factors); • Unsafe sexual practices; and • Unmanaged psychosocial stress and/or depression.	8	87	7	6	71
14	% of PHC clients/patients who are smokers, 12 years and over, who received specific help or information to quit smoking from their PHC provider, over the past 24 months.	8	80	16	4	71
15	% of PHC clients/patients with problem alcohol drinking, 12 years and over, who received specific help or information to manage alcohol consumption, over the past 24 months.	8	78	18	4	71
16	% of PHC clients/patients with unhealthy eating habits, 12 years and over, who received specific help or information on healthy dietary practices from their PHC provider, over the past 12 months.	8	76	18	6	71
17	% of inactive PHC clients/patients, 12 years and over, who received specific help or information on regular physical activity from their PHC provider, over the past 12 months.	7	76	21	3	71
18	% of PHC organizations who currently have specific programs and/or initiatives (including self help and self management groups) to reduce the following health risks in their practice population: • Tobacco use; • Unhealthy eating habits; • Problem alcohol drinking; • Obesity; and • Physical inactivity.	8	78	14	9	71

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
19	% of health regions who currently have specific programs and/or initiatives (including self help and self management groups) to reduce the following health risks in the population: • Tobacco use; • Unhealthy eating habits; • Problem alcohol drinking; • Obesity; and • Physical inactivity.	8	76	16	9	71
20	% of population, 12 years and over, who are current smokers.	8	78	13	10	71
21	% of population, 12 years and over, who currently consume five or more servings of fruits and vegetables daily.	7	62	28	10	71
22	% of population who are currently overweight or obese.	8	80	10	10	71
23	% of population who currently engage in regular physical activity.	8	79	13	9	71
24	% of population, 12 years and over, who report heavy alcohol drinking behaviour, in the past 12 months.	7	72	18	10	71

Evaluation Question 7. Do PHC organizations enable patients with chronic health conditions (e.g. diabetes, asthma, coronary heart disease, depression, hypertension) develop competencies and self–efficacy for better managing their health?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
	% of PHC clients/patients, 18 years and over, with a chronic health condition(s), and/or informal caregivers, whose PHC organization provided them with useful health care information (e.g. pamphlets, books, tapes, videos, websites, or other community resource lists) over the past 12 months.	7	69	27	4	71
25	% of PHC clients/patients, 18 years and over, with a chronic health condition(s), whose PHC organization provided them with resources to support self–management or self–help groups.	8	78	18	4	71
26	% of informal caregivers who received support for their care giving role from their PHC organization over the past 12 months.	8	68	27	6	71
27	% of PHC clients/patients, 18 years and over, with a chronic condition(s), who had sufficient time in most visits to confide their health–related feelings, fears and concerns to their PHC provider.	8	75	21	4	71
28	% of PHC clients/patients, 18 years and over, with a chronic condition(s), who actively participated in the development of a treatment plan with their PHC provider over the past 12 months.	8	90	9	1	71

Evaluation Question 7.1. Do self–management strategies for patients with chronic conditions significantly improve quality of life, reduce the number of visits to specialists, reduce hospital admissions (number and length of stay) and achieve better outcomes? Other analytical approach required.

OBJECTIVE 4: To enhance 24/7 access for patient–initiated urgent care which is effectively linked with the patients' usual primary health care provider

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
29	% of population, 18 years and over, who experienced difficulties obtaining immediate care for an emergent but minor health problem, from their regular PHC provider, during evenings and weekends (5:00 pm to 9:00 pm, Monday to Friday or 9:00 am to 9:00 pm, Saturdays and Sundays), over the past 12 months.	8	80	17	3	71
	% of population, 18 years and over, who experienced difficulties obtaining immediate care for an emergent but minor health problem, from their regular PHC provider (via PHC coverage arrangement or other), during the night, over the past 12 months.	7	66	24	10	71

Evaluation Question 8. What proportion of the population has a usual primary health care provider that has organizational arrangements for 24/7 access that are effectively linked to the usual provider?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
30	% of PHC organizations who currently provide after hours coverage (beyond 9:00 am to 5:00 pm Monday to Friday) for their practice population.	8	94	6	0	71
31	Average number of extended hours (beyond 9:00 am to 5:00 pm, Monday to Friday), provided by PHC organizations per month, by PHC organization.	8	79	17	4	71

Evaluation Question 9. What are the costs and consequences of providing 24/7 access alternatives for patient–initiated urgent care (other than contact physician services) in terms of health outcomes, patient and provider satisfaction, and utilization of health care? Other analytical approach required.

Evaluation Question 10. What is the wait time for acute and episodic care? For routine non–urgent care (including well care and chronic illness management)? For referred care?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
32	Average length of time in days between PHC client/patient appointment request with their regular PHC provider and the appointment for an emergent but minor health problem.	7	65	24	11	71
	Average length of time in days between client/patient appointment request with their regular PHC provider and the third available appointment for non–urgent routine care.	7	60	27	13	70

Evaluation Question 10.1. What is the level of patient satisfaction with wait times?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
33	% of PHC clients/patients, 18 years and over, who are satisfied with wait time to obtain an appointment with their regular PHC provider for an emergent but minor health problem.	8	75	24	1	71
34	% of PHC clients/patients, 18 years and over, who are satisfied with wait time to obtain an appointment with their regular PHC provider for non–urgent routine care.	8	72	27	1	71

Evaluation Question 10.2. Do wait times differ systematically by urban/rural/remote region? By socio–economic group? By ethnic group? This question proposes a number of analytic dimensions for the analysis of the indicators included in Evaluation Question 10.2 and other questions.

OBJECTIVE 5 : To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
35	Age–standardized acute care hospitalization rate for conditions where appropriate ambulatory care prevents or reduces the need for admission to hospital, per 100,000 population 75 years and under.	8	87	7	6	70
36	% of PHC clients/patients, ages 18 to 64 years, with established diabetes mellitus (Type 1 and Type 2) who have had an acute myocardial infarction or above or below knee amputation or began chronic dialysis within the past 12 months.	7	71	19	10	69
37	% of PHC clients/patients, ages 6 to 55 years, with asthma who visited the emergency department in the past 12 months.	8	84	10	6	68
	% of PHC clients/patients ages 6 to 55 years, with asthma who were dispensed high amounts (greater than 4 canisters) of short–acting beta2–agonist within the past 12 months.	7	57	27	16	67
38	% of PHC clients/patients, ages 20 to 75 years, with CHF who visited the emergency department for CHF in the past 12 months.	8	78	13	9	68
39	% of PHC clients/patients, 18 years and over, with diabetes mellitus in whom the last HbA1c was 7.0% or less (or equivalent test/reference range depending on local laboratory) in the last 15 months.	8	73	21	6	66
40	% of PHC clients/patients, 18 years and over, with hypertension for duration of at least one year, who have blood pressure measurement control (i.e. less than 140/90 mmHg).	8	79	13	7	68

Evaluation Question 11. What percent of recommended preventive care guidelines by the Canadian Task Force on Preventive Health Services are implemented by PHC providers?

Health Promotion, Screening and Prevention

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
41	% of PHC clients/patients, 65 years and over, who received an influenza immunization within the past 12 months.	8	94	1	4	69
42	% of PHC clients/patients, 65 years and over, who have received a pneumococcal immunization.	8	84	9	7	68
43	% of PHC clients/patients who received screenings for congenital hip displacement, eye and hearing problems by 3 years of age.	8	79	15	6	68
44	% of PHC clients/patients who received required primary childhood immunizations by 7 years of age.	8	87	7	6	69
45	% of women PHC clients/patients, who had a live birth and received counselling on breast feeding, education programs and postpartum support to promote breast feeding.	8	86	10	4	70
46	% of women PHC clients/patients who are pregnant or post partum who have been screened for depression.	8	90	7	3	70
47	% of PHC clients/patients with children under 2 years who were given information on child injury prevention in the home.	8	86	6	9	70
48	% of PHC clients/patients, 50 years and over, who received screening for colon cancer with Hemoccult test within the past 24 months.	8	84	15	1	69
49	% of women PHC clients/patients, ages 50 to 69 years, who received mammography and clinical breast examination within the past 24 months.	8	91	7	1	70
50	% of women PHC clients/patients, ages18 to 69 years, who received papanicolaou smear within the past 3 years.	8	97	1	1	70
51	% of women PHC clients/patients, 65 years and older, who received screening for low bone mineral density at least once.	8	75	19	6	69

Health Promotion, Screening and Prevention (cont'd)

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
52	% of women PHC clients/patients, 55 years and over, who had a full fasting lipid profile measured within the past 24 months.	7.5	74	21	6	68
53	% of men PHC clients/patients, 40 years and over, who had a full fasting lipid profile measured within the past 24 months.	7	70	25	6	69
54	% of PHC clients/patients, 18 years and over, who had their blood pressure measured within the past 24 months.	8	86	11	3	70

Secondary Prevention for PHC Clients/Patients With Coronary Artery Disease, Hypertension and Diabetes Mellitus

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
55	% of PHC clients/patients, 18 years and over, with coronary artery disease (CAD) who received annual testing, within the past 12 months, for all of the following: • Fasting blood sugar; • Full fasting lipid profile screening; • Blood pressure measurement; and • Obesity/overweight screening.	8	90	10	0	68
56	% of PHC clients/patients, 18 years and over, with hypertension who received annual testing, within the past 12 months, for all of the following: • Fasting blood sugar; • Full fasting lipid profile screening; • Test to detect renal dysfunction (e.g. serum creatinine); • Blood pressure measurement; and • Obesity/overweight screening.	8	88	12	0	67
57	% of PHC clients/patients, 18 years and over, with diabetes mellitus who received annual testing, within the past 12 months, for all of the following: • Hemoglobin A1c testing (HbA1c); • Full fasting lipid profile screening; • Nephropathy screening (e.g. albumin/creatinine ratio, microalbuminuria); • Blood pressure (BP) measurement; and • Obesity/overweight screening.	8	88	12	0	66

Evaluation Question 12. Does the care for specific key conditions (diabetes, COPD/ asthma, congestive heart failure, depression, hypertension, smoking) conform to current evidence and commonly accepted standards?

Diabetes Mellitus

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
58	% of PHC clients/patients, 18 to 75 years, with diabetes mellitus who saw an optometrist or ophthalmologist within the past 24 months.	8	86	8	6	66

Asthma

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
59	% of PHC clients/patients, ages 6 to 55 years, with asthma, who were dispensed high amounts (greater than 4 canisters) of short–acting beta 2–agonist within the past 12 months AND who received a prescription for preventer/controller medication (e.g. inhaled corticosteroid—ICS).	7	71	23	6	66

Congestive Heart Failure (CHF)

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
60	% of PHC clients/patients, 18 years and over, with CHF who are using ACE inhibitors or ARBs.	8	82	14	5	66

Coronary Artery Disease (CAD)

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
61	% of PHC clients/patients, 18 years and over, with established CAD and elevated LDL–C (i.e. greater than 2.5 mmol/L) who were offered lifestyle advice and/or lipid lowering medication.	8	83	12	5	66
62	% of PHC clients/patients who have had an AMI and are currently prescribed a beta blocking drug.	8	79	18	3	67

Mental Health

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
63	% of PHC clients/patients with depression who are taking antidepressant drug treatment under the supervision of a PHC provider, and who had follow–up contact by a PHC provider for review within two weeks of initiating antidepressant drug treatment.	8	93	6	1	69
64	% of PHC clients/patients, 18 years and over, with depression who were offered treatment (pharmacological and/or non–pharmacological) or referral to a mental health provider.	8	87	12	2	68
65	% of PHC clients/patients, 18 years and over, with a diagnosis of panic disorder or generalized anxiety disorder who were offered treatment (pharmacological and/or non–pharmacological) or referral to a mental health provider.	8	87	10	3	69

Addictive Substance(s) Use Problems

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
66	% of PHC clients/patients, with prescription or illicit drug use problems who were offered, provided or directed to treatment by the PHC provider.	8	83	13	4	69

Evaluation Question 12.1. Does the emphasis on management of common chronic diseases (diabetes, COPD/asthma, heart disease, depression) compromise the quality of care received by people with other chronic diseases or with multiple co–morbidities? Other analytical approach required.

Evaluation Question 13. Do PHC organizations have defined, non–prejudicial confidential processes for staff to report potential errors in delivery, treatment or management?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
67	% of PHC providers whose PHC organization has processes and structures in place to support a non–punitive approach to medication incident reduction.	8	70	22	9	69

Evaluation Question 14. Do PHC organizations measure their performance against recognized standards and modify their practices in response (including issues of patient safety)?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
68	% of PHC organizations who currently use an electronic prescribing/drug ordering system that includes client/patient specific medication alerts.	8	75	20	4	69
69	% of PHC organizations who implemented at least one or more changes in clinical practice as a result of quality improvement initiatives over the past 12 months.	8	83	16	1	70

Evaluation Question 14.1. Are there structures and processes in place to ensure optimal and safe medication management?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
70	% of PHC organizations with a process in place to ensure that a current medication and problem list is recorded in the PHC client/patient's health record.	8	93	7	0	70
71	% of PHC clients/patients who report that their regular PHC provider (e.g. FP/GP, NP) has not explained the side effects of medications when prescribed, within the past 12 months.	8	77	14	9	70

Evaluation Question 14.2. Do PHC professionals participate in continuing profession development that reflects the needs of the PHC organization and the local health needs of the community?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
72	% of PHC providers and support staff whose PHC organization provided them with support to participate in continuing professional development within the past 12 months, by type of PHC provider and support staff.	8	76	19	6	70

OBJECTIVE 6: To ensure that primary health care is acceptable to patients and that it meets their reasonable expectations of how they should be treated (responsiveness)

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
73	% of PHC clients/patients, 18 years and over, who were satisfied with the care received from their regular PHC provider, over the past 12 months.	8	90	9	1	71
74	% of the population, 18 years and over, who were satisfied with the telephone health information or advice line, over the past 12 months.	8	80	17	3	71
75	% of PHC clients/patients, 18 years and over, who would recommend their regular PHC provider to their family or friends.	8	69	24	7	71
76	% of PHC clients/patients, 18 years and over, who were involved in clinical decision–making regarding their health, with their regular PHC provider, over the past 12 months.	8	75	18	7	71
	% of PHC clients/patients, 18 years and over, whose regular PHC provider treated them in a caring manner, over the past 12 months.	7	65	25	10	71

Evaluation Question 15. Are patients satisfied that the PHC organization and providers respect their right to privacy, confidentiality and dignity?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
77	% of clients/patients who were satisfied with the level of privacy provided by their PHC organization (e.g. staff in reception, clinicians in exam room), over the past 12 months.	8	79	18	3	71

Evaluation Question 16. Are patients confident that PHC organizations and providers are responsive to their culture and language needs?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
78	% of PHC clients/patients, 18 years and over, who experienced language barriers when communicating with their regular PHC provider, over the past 12 months.	8	86	13	1	71

OBJECTIVE 7 : To facilitate integration and coordination between healthcare institutions and healthcare providers to achieve informational and management continuity of patient care

Evaluation Question 17. What types of structures and activities have been developed to link primary health care organizations with other health care organizations?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
79	% of PHC organizations who currently coordinate client/patient care with other health care organizations using standardized clinical protocols or assessment tools.	8	84	16	0	70
	% of PHC organizations who currently coordinate client/patient care with other health care organizations using case conferences with providers from other health care organizations.	7	69	26	6	70
80	% of PHC organizations who currently have collaborative care arrangements with other health care organizations.	8	87	10	3	70
81	% of PHC organizations who currently have collaborative care arrangements with providers/organizations beyond the health care sector (e.g. housing, justice, police, education).	7	74	24	1	70

Evaluation Question 17.1. Do these structures and activities lead to active collaboration and facilitated referral and feedback between primary health care organizations and other health care organizations? Other analytical approach required.

Evaluation Question 18. Do patients experience management continuity of care?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
	% of PHC clients/patients, 18 years and over, who repeated their demographic and clinical history to different health care providers over the past 12 months.	7	53	34	13	70
82	% of PHC clients/patients, 18 years and over, who felt that unnecessary medical tests were ordered because the test had already been done, over the past 12 months.	7	64	24	11	70

Evaluation Question 18.1. Do patients undergo repeated investigations when they see different providers?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
83	% of PHC FPs/GPs/NPs who repeated tests because findings were unavailable over the past month.	8	83	13	4	70

Evaluation Question 19. Do providers experience informational continuity of care?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
83	% of PHC FPs/GPs/NPs who repeated tests because findings were unavailable over the past month.	8	83	13	4	70

Evaluation Question 19.1. Do providers have complete information at the point of care about individual patients' health and previous care received from other providers?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
84	% of PHC providers who had complete information (essential demographic and clinical information) at the point of care, most of the time, over the past 12 months.	8	83	14	3	70

Evaluation Question 19.2. Are providers confident that their care plan and actions will be recognized and considered by other providers? Other analytical approach required.

SUPPORT 1: Adequate supply of health human resources to meet primary health care needs

Evaluation Question 1. Are there sufficient number of PHC health professionals, in particular primary care nurse practitioners and family physicians, to meet the demand for PHC?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
85	PHC provider full time equivalents (FTEs) per 100,000 population, by type of PHC provider.	8	84	11	4	70
86	Ratio of PHC providers entering/leaving the workforce over the past 12 months, by type of PHC provider.	8	81	13	6	70
87	% of PHC organizations who are currently accepting new PHC clients/patients.	8	91	7	1	70

Evaluation Question 2. What incentives attract and retain health professionals in PHC organizations (financial, work flexibility, continuing professional development)? Other analytical approach required.

Evaluation Question 3. Are PHC professionals working to their full scope of practice (as per training and regulation)?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
88	% of PHC providers who are satisfied that they utilize the full extent of their skills, by type of PHC provider.	8	80	19	1	70

Evaluation Question 4. Is the quality of work–life acceptable to staff and health care providers?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
89	% of PHC providers who report that there are currently adequate provisions to ensure their safety in their workplace, by type of PHC provider.	7.5	76	16	9	70
90	% of PHC providers who had a workplace related injury over the past 12 months, by type of PHC provider.	8	73	21	6	70
91	% of PHC providers who missed work due to burnout (2 weeks or more) over the past 12 months, by type of PHC provider.	7.5	73	21	6	70
92	% of PHC providers who were satisfied with the overall quality of work life balance over the past 12 months, by type of PHC provider.	8	80	17	3	70

Evaluation Question 5. Does the regional authority have an assessment of health human resources to meet the community's needs?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
93	% of health regions that are currently implementing a plan to meet their PHC health human resource needs.	8	79	17	4	70

Evaluation Question 6. Do provincial authorities have plans to recruit and train health human resource requirements to meet the needs of the jurisdiction? Other analytical approach required.

SUPPORT 2: Interdisciplinary primary health care teams

Evaluation Question 7. What is the extent and nature of interdisciplinary teams?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
94	% of population who received PHC services from an interdisciplinary PHC organization, over the past 12 months.	8	76	21	3	70
95	% of FPs/GPs who currently work in a solo PHC practice as their main PHC practice setting.	8	86	11	3	70
96	% of FPs/GPs who currently work in a group physician PHC practice as their main PHC practice setting.	8	86	11	3	70
97	% of FPs/GPs/NPs who are currently working in an interdisciplinary PHC team or network as their main practice setting, by type of PHC provider.	8	87	13	0	70
98	% of PHC clients/patients who report that the current range of services offered by their PHC organization meets their needs.	8	81	14	4	70

Evaluation Question 7.1. How should the mix and number of providers on a interdisciplinary team reflect the needs of the community or practice population? Other analytical approach required.

Evaluation Question 8. How do changes in the mix and number of providers on the PHC team impact on the responsiveness, quality and the cost–effectiveness of care? Other analytical approach required.

Evaluation Question 9. What factors facilitate health care providers working together to provide comprehensive PHC (scope of practice regulations, primary health care funding, training, continuing professional development)?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
99	Average team effectiveness score based on: • Strong leadership; • Clear objectives shared by all team members; • Mechanisms for working in and with the community; • Focus on quality care; • Client/Patient focused goals; • Efficient and effective communication; • Appropriate variety of health care providers; • Mechanisms for conflict resolution; • Interdisciplinary professional development; • Shared decision–making; and • Clear understanding of scope of practice and team role.	8	73	21	6	70

SUPPORT 3: Information technology that is adapted to primary health care and links primary health care organizations with the rest of the health care system

Evaluation Question 10. Do PHC organizations have computerized information systems to support clinical activities (decision support, electronic health records, electronic prescribing, electronic test requisitions and reporting, electronic consultation reporting)? Which systems are being used?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
100	% of PHC organizations who primarily use electronic systems to complete their professional tasks.	8	87	10	3	70

Evaluation Question 11. Do PHC organizations, in different geographic settings, have communication linkages with teletriage and advice services? with telehealth services? with emergency services? with hospitals? with laboratories? with long–term care facilities?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
101	% of PHC organizations that currently use a variety of electronic communications modalities in the exchange of health care information with other PHC providers.	7.5	76	23	1	70
102	% of PHC organizations who currently have two–way electronic communication linkages (beyond fax and telephone) with other health care organizations (e.g. hospitals, community mental health agencies, LTC facilities, public health).	8	86	14	0	70

SUPPORT 4: Needs–based resource allocations for primary health care

Evaluation Question 12. Do regional funding allocations for PHC reflect population age and morbidity structure and vulnerable groups? Other analytical approach required.

Evaluation Question 13. Has the range of publicly funded services provided (directly or indirectly) by PHC organizations increased over time? Other analytical approach required.

Evaluation Question 14. What is the per capita operational cost of providing primary health care services at a practice level? At a regional health authority level (accounting for geographic location)?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
103	Average annual per capita operational expenditures of PHC services for: • Health Human Resources; • Family Physicians/General Practitioners; • Nurse Practitioners; • Other PHC providers; • Supplies; • Equipment; • Administration/overhead; and • Other _____.	7.5	80	16	4	70

Evaluation Question 15. Have capital investments increased for new technology and equipment for PHC? For physical facilities? For information technology? Other analytical approach required.

SUPPORT 5: Provider payment methods that align with primary health care goals

Evaluation Question 16. How are PHC providers paid?

INDICATOR NUMBER	INDICATOR DEFINITION	MEDIAN SCORE	% HIGH	% MEDIUM	% LOW	NUMBER OF RESPONDENTS
104	% of PHC providers who were primarily remunerated by the following method over the past 12 months by type of provider: • Fee for service; • Salary; • Capitation; and • Mixed system.	8	81	14	4	70
105	Average % of PHC provider income derived from each of the following PHC funding models for one fiscal year, by type of PHC provider: • Fee for service; • Salary; • Capitation; and • Mixed system.	8	76	20	4	70

Evaluation Question 17. How does provider remuneration method affect the volume, type and quality of services that are provided? Other analytical approach required.

Evaluation Question 17.1. Do non–FFS payment systems for physicians increase the proportion of clinical time dedicated to prevention and chronic disease management activities? To planning and quality improvement activities? Other analytical approach required.

SUPPORT 6: Ongoing support from policy–makers for primary health care

Other analytical approach required for all questions in support 6.

Evaluation Question 18. What kind of policies are in place to influence or contribute to ongoing renewal and sustainability of PHC? (e.g. FPT agreements, provincial plans, tripartite agreements, legislation).

Evaluation Question 19. Have the responsibilities of PHC organizations been clearly identified in the health system, especially related to a central role in coordination of patient care?

Evaluation Question 20. What amounts of financial and human resources are dedicated to PHC? Are there gaps in whole–person, comprehensive care because of resource limitations?

Appendix D

Research and Other Evaluation Approaches for NES Evaluation Questions

An indicator is defined as a single summary measure, most often expressed in quantitative terms, that represents a key dimension of health status, the health care system or related factors. An indicator can provide a basis for comparisons; track changes over time and space; provide evidence to support programs and policies; provide clear statements about the start and desired end point of an intervention; and identify levels of and gaps in health and health care for a population or community.[97] Indicators cannot, however, be used to provide answers to research questions or to explain reasons for disparities, variations or change. Indicators cannot be interpreted without further drill–down or other investigation and should not be used in the absence of contextual data.[97]

At the May 2005 1st Consensus Conference, all NES Evaluation Questions were reviewed during the small group process. At this time, a number of NES Evaluation Questions were identified as being "research questions." That is, the questions address complex interrelationships and issues of causality that cannot be addressed through an indicator. The decision to identify an NES Evaluation Question as a research question was based on agreement among the small group participants (and in all cases, agreement was unanimous). These decisions from the May 2005 conference were reviewed and confirmed with Health Canada staff.

The following NES Evaluation Questions identified as research or the evaluative approaches are listed below. Where available, research activities that might generate findings in relation to the question have been identified through the report, "Inventory of Research and Evaluation Projects of Primary Healthcare Renewal."[98]

OBJECTIVE 1: To increase the proportion of the population that receives ongoing care from a primary health care provider who assumes principal responsibility for their care and who knows their personal and health characteristics

Evaluation Question 1.1. Does that proportion differ by geographic region? By socio–economic group? By health status? By cultural or ethnic group?

This question proposes a number of analytic dimensions for the analysis of the indicators included in Evaluation Question 1 (What proportion of the population can identify a primary care provider who assumes principal responsibility for their care and knows their health needs and personal values systematically?) and other questions.

Additional analytical dimensions suggested:

Important additions: Age/gender/sex/recent immigration status/special populations (people with disabilities)/rural urban.

Other Dimensions (if available): education/language/Aboriginal people/vulnerable populations (homeless, mentally ill, drug users)/sexual orientation.

OBJECTIVE 3: To enhance the provision of whole–person, comprehensive primary health services, including acute episodic and ongoing care with increased emphasis on health promotion, disease and injury prevention, management of common mental health conditions and chronic diseases

Evaluation Question 7.1. Do self–management strategies for patients with chronic conditions significantly improve quality of life, reduce the number of visits to specialists, reduce hospital admissions (number and length of stay) and achieve better outcomes?

OBJECTIVE 4: To enhance 24/7 access for patient–initiated urgent care which is effectively linked with the patients' usual primary health care provider

Evaluation Question 9. What are the costs and consequences of providing 24/7 access alternatives for patient–initiated urgent care (other than physician services) in terms of health outcomes, patient and provider satisfaction, and utilization of health care?

Projects and research that may help address this question include:

1. Non–urgent emergency department patient characteristics and barriers to primary care. Marc Afilalo (Project Lead), McGill University, Montréal, Quebec.

   Descriptive study involving secondary analysis of data collected from a prospective observational study using a convenience sample of ED patients from five Quebec hospitals.

2. An emergency department based nurse discharge coordinator for elderly patients: Does it make a difference? Alex Guttmann (Project Lead), McGill University, Montréal, Quebec.

   Study examines the impact on unscheduled return visits within 14 days of discharge, admission following a revisit, satisfaction with discharge recommendations, adherence with discharge instructions, and perception of well being.

3. Utilization of emergency services and walk–in clinics among patients from Family Health Network (FHN) versus non–FHN family practices. Michelle Howard (Project Lead), McMaster University, Hamilton, ON.

   Study examines an innovative model for frequency and type of visits and patient and physician satisfaction.

4. E. Lang, M. Afilalo, A.C. Vandal, J–F. Boivin, X. Xue, A. Colacone, R. Leger, I. Shrier, S. Rosenthal, "Impact of an electronic link between the emergency department and family physicians: a randomized controlled trial," *Canadian Medical Association Journal,* 174, 3, (January 31, 2006): pp. 313–8, [online] cited Feb 1, 2006 from <http://www.cmaj.ca/cgi/content/full/174/3/313?etoc>.

Evaluation Question 10.2. Do wait times differ systematically by urban/rural/remote region? By socio–economic group? By ethnic group?

This question proposes a number of analytic dimensions for the analysis of the indicators included in Evaluation Question 10—What is the wait time for acute and episodic care? For routine non–urgent care (including well care and chronic illness management)? For referred care and other questions.

OBJECTIVE 5: To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations

Evaluation Question 12.1. Does the emphasis on management of common chronic diseases (diabetes, COPD/asthma, heart disease, depression) compromise the quality of care received by people with other chronic diseases or with multiple co-morbidities?

OBJECTIVE 7: To facilitate integration and coordination between health care institutions and health care providers to achieve informational and management continuity of care

Evaluation Question 17.1. Do these structures and activities lead to active collaboration and facilitated referral and feedback between primary health care organizations and other health care organizations?

Projects that may help address this question include:

1. Coordination of Care: Factors that influence horizontal and vertical information transfer between primary care practices and medical specialists. Whitney Berta (Project Lead), University of Toronto, Department of Health Policy, Management and Evaluation, Toronto, ON. Web site: <http://www.utoronto.ca/hpme/primarycare/coordinationofcare/>.

2. Western Canada Chronic Disease Management Infostructure. Michael Hurka (Project Director), Alberta. <http://www.whic.org/public/profiles/cdm.html>.

   This project is responsible for development of an innovative and sustainable Chronic Disease Management "Infostructure," including creation of data standards for chronic disease management, information interchange messages and related data definitions, and the capacity to share this data in support of clinical decision making for primary health care teams. Project participants include the Western Health Information Collaborative (WHIC) jurisdictions. The WHIC partners are British Columbia, Alberta (lead), Saskatchewan and Manitoba.

Evaluation Question 19.2. Are providers confident that their care plan and actions will be recognized and considered by other providers?

Projects that may help address this question include:

1. Introducing a collaborative model between physicians and chiropractors in a primary care reform setting. Silvano Mior (Project Lead), Canadian Memorial Chiropractic College, Toronto, ON.

   Research examines—How does the introduction of a collaborative care model affect communication and professional relationships between chiropractors and physicians? The strategy involves an observational study of provider relationships and patient outcomes following introduction of incentives of collaborative practice.

2. Paul Hasselback and Rob Wedel, *The Taber Integrated Primary Care Project—Turning Vision into Reality. Final Report*, (undated), [online] cited January 27, 2006 from <http://www.uleth.ca/man/taberresearch/finalreport.shtml>.

3. Impact of Internet based standardized communication system linking the emergency department and family physicians. Eddy Lang, (Project Lead) Contact: Marc Afilalo, McGill University, Montréal, Quebec.

   The study objective is to determine the effects of a standardized communication system (SCS) on measures of continuity of care.

SUPPORT 1: Adequate supply of PHC health human resources to meet primary health care needs

Evaluation Question 2. What incentives attract and retain health professionals in PHC organizations (financial, work flexibility, continuing professional development)?

A project and a report that may help address this question include:

1. Family Physician Compensation Models and PHC Renewal. Kelly Grover (Project Lead), Government of Nova Scotia.

   Expected results of the study include distribution and discussion of an inventory and analysis of family physician compensation options for consideration by the provincial/territorial governments, professional organizations and individual health professionals.

2. A. Backman, *Job Satisfaction and Retention, Recruitment and Skill Mix for a Sustainable Health Care System*, (Regina, Saskatchewan: Ministry of Health of Saskatchewan, 2000) [online] cited February 3, 2006 from <http://www.health.gov.sk.ca/mc_dp_WORCS.pdf>.

Evaluation Question 6. Do provincial authorities have plans to recruit and train health human resource requirements to meet the needs of the jurisdiction?

Conference proceedings that may help to answer this question include:

1. "Mainstreaming Health Human Resources Innovation," Dalhousie University, School of Public Administration, September 20–22, 2005. For individual conference presentations, go to <http://spa.management.dal.ca/HHRI/eng/HHRI_individual_presentations.htm>.

SUPPORT 2: Interdisciplinary primary health care teams

Evaluation Question 7.1. How should the mix and number of providers on a interdisciplinary team reflect the needs of the community or practice population?

Evaluation Question 8. How do changes in the mix and number of providers on the PHC team impact on the responsiveness, quality and the cost–effectiveness of care?

Projects that may help address this question include:

1. Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative. Contact: c/o The Conference Board of Canada. For more information, please go to Web site: <www.eicp-acis.ca>.

   The objective of the EICP initiative is to encourage health professionals to work together in the most effective and efficient way to produce the best health outcomes for patients and for providers. The research agenda is designed to gain new insights into successful primary care models in both urban and rural settings. They also plan to develop practical tools to encourage interdisciplinary collaboration, and a supportive policy and regulatory environment. Deliverables include a set of guiding principles and a framework for collaboration that will inspire health care providers and governments to ensure that Canadians have access to the right professional and the right services, at the right time. A Steering Committee of physicians, nurses, social workers, physiotherapists, speech–language pathologists, audiologists, dietitians, psychologists, pharmacists, occupational therapists and a national coalition on preventative practices provide leadership and direction. EICP's work will be of interest to health services providers and policy–makers.

2. La réorganization des services de première ligne comme outil de changement des pratiques. André Tourigny (Project Lead) Contact: Nathalie Houle <Nathalie.houle@ext.msp.ulaval.ca>.

3. Building Knowledge and Skills for Effective Leadership for Change in Primary Care. Ross Baker, Jan Barnsley (Project Leads), University of Toronto, Department of Health Policy, Management and Evaluation, Toronto, ON.

   This leadership development project is based on an action–learning model. Participants will learn and apply best practices in four areas critical to advancement of primary care: information management, work redesign, collaboration and integration, and performance improvement. Participants include teams of primary care practitioners from Ontario practices who will participate in three learning sessions with faculty and experts, test and evaluate local changes to improve their practices, and share their learning with other participants. To validate the four areas of critical knowledge, an assessment of practitioner's needs, identification of existing best practices and review of the scholarly literature will be conducted. The project will be evaluated in terms of individual learning and changes in practice. Materials developed through this project will be disseminated electronically and through conference presentations.

SUPPORT 4: Needs–based resource allocations for primary health care

Evaluation Question 12. Do regional funding allocations for PHC reflect population age and morbidity structure and vulnerable groups?

Literature and reports that may help to address this question include:

1. G. Browne, J. Roberts, C. Byrne, A. Gafni, R. Weir, B. Majumdar, "The Costs and Effects of Addressing the Needs of Vulnerable Populations: Results of 10 Years of Research," *Canadian Journal of Nursing Research*, 33,1 (January 2001): pp.65–76.

2. Manitoba Centre for Health Policy Report, *How Does Need Count In Allocations For Health Care?* (1997), [online] cited Jan 18, 2006 from <http://www.umanitoba.ca/centres/mchp/reports/reports_97–00/allocat.htm>.

   Summary written by Norm Frohlich, Charlyn Black and Cheryl Hamilton, based on the report: *Issues in Developing Indicators for Needs–Based Funding*, by Norman Frohlich and Keumhee Chough Carrière (August 1997).

Evaluation Question 13. Has the range of publicly funded services provided (directly or indirectly) by PHC organizations increased over time?

Evaluation Question 15. Have capital investments increased for new technology and equipment for PHC? For physical facilities? For information technology?

Proceedings that may be helpful in answering this question include:

1. Key Informants Session on E–health and Primary Health Care Renewal, April 2004. Organized and hosted by: Primary and Continuing Health Care Division, Health and the Information Highway Division, Health Canada on April 20–21, 2004 [online] cited January 26, 2006 from <http://www.hc-sc.gc.ca/hcs-sss/pubs/ehealth-esante/2004-prim/index_e.html>.

2. Bahman Assadi, *Information and Communications Technologies in the Canadian Health System: An Analysis of Federally–Funded ICT–Related Projects,* (Ottawa: Office of Health and the Information Highway, Health Canada, 2003) [online] cited January 26, 2006 from <http://www.hc-sc.gc.ca/hcs-sss/pubs/ehealth–esante/2003-ict-tic-analys–proj/index_e.html>.

Evaluation Question 17. How does provider remuneration method affect the volume, type and quality of services that are provided?

Evaluation Question 17.1. Do non–FFS payment systems for physicians increase the proportion of clinical time dedicated to prevention and chronic disease management activities? To planning and quality improvement activities?

Projects currently underway that may be helpful in answering these questions include:

1. Evaluation of PHC payment and delivery models on the screening, detection and control of hypertension. Karen Tu (Project Lead), Institute for Clinical Evaluative Sciences, Toronto, ON.

   Study objectives are to identify if primary health care payment and delivery models impact optimal screening, detection and treatment of hypertension, and to determine current screening rates and practice patterns by physicians with respect to hypertension.

2. Measuring quality improvement in preventive care services for Family Health Networks (FHN) in the Greater Toronto area. Michelle Greiver (Project Lead), Toronto, ON.

   Study objectives are to determine whether FHN financial incentives improve the provision of preventive care services, and to develop feedback mechanisms applicable to community–based primary care FHN practices.

SUPPORT 6: Ongoing support from policy–makers for primary health care

Evaluation Question 18. What kind of policies are in place to influence or contribute to ongoing renewal and sustainability of PHC? (e.g. FPT agreements, provincial plans, tripartite agreements, legislation).

A project that may be helpful to answer this question is:

1. Helping to Sustain Canada's Health System: Nurse Practitioners in Primary Health Care. Contact: Marian Knock (Executive Director), Canadian Nurse Practitioner Initiative.

Evaluation Question 19. Have the responsibilities of PHC organizations been clearly identified in the health system, especially related to a central role in coordination of patient care?

Evaluation Question 20. What amounts of financial and human resources are dedicated to PHC? Are there gaps in whole–person, comprehensive care because of resource limitations?

A project that may help to answer these questions include the following:

1. S. Simoens and J. Hurst, *The Supply of Physician Services in OECD Countries. OECD Health Working Papers No. 21* (France: OECD, 2006).

Appendix E

List of PHC Indicators

"Likely Data Source"[1] refers to the type of data source likely to be needed to calculate the indicator—clinical administrative, other administrative or survey based data.

"Availability of Data Source"[2] indicates whether the indicator can be calculated using an existing pan–Canadian data source. *"Partial"* refers to indicators that can be calculated but only for some dimensions of the indicator (e.g. indicator can be calculated for physicians but not all PHC provider types). *"No"* refers to indicators that either require a new data source, or require additions or modifications to an existing data source to support pan–Canadian reporting.

OBJECTIVE 1: To increase the proportion of the population that receives ongoing care from a primary health care provider who assumes principal responsibility for their care and who knows their personal and health characteristics

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE[1]	CURRENT AVAILABILITY OF DATA SOURCE[2]
1	Population with a regular PHC provider	Client/Patient Survey	Yes, partial
2	Difficulties accessing routine PHC	Client/Patient Survey	No
3	Difficulties accessing PHC health information or advice	Client/Patient Survey	No
4	Difficulties accessing urgent, non–emergent PHC	Client/Patient Survey	No

OBJECTIVE 2: To increase the number of primary health care organizations who are responsible for providing planned services to a defined population

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
5	PHC needs–based planning	Organization Survey	No
6	PHC client/patient registries for chronic conditions	Organization Survey	No
7	PHC programs for chronic conditions	Organization Survey	No
8	Community input for PHC planning	Organization Survey	No
9	PHC outreach services for vulnerable/special needs populations	Organization Survey	No
10	Specialized programs for PHC vulnerable/special needs populations	Organization Survey	No
11	Support for PHC vulnerable/special needs populations	Organization Survey	No

OBJECTIVE 3: To enhance the provision of whole–person comprehensive primary health services, including acute episodic and ongoing care with increased emphasis on health promotion, disease and injury prevention and management of common mental health conditions and chronic diseases

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
12	Scope of PHC services	Organization Survey	No
13	Health risk screening in PHC	Client/Patient Survey	No
14	Smoking cessation advice in PHC	Client/Patient Survey	Yes, partial
15	Alcohol consumption advice in PHC	Client/Patient Survey	No
16	Dietary advice in PHC	Client/Patient Survey	No
17	Advice on physical activity in PHC	Client/Patient Survey	No
18	PHC initiatives for reducing health risks	Organization Survey	No
19	Health region programs for reducing health risks	Organization Survey	No
20	Smoking rate	Client/Patient Survey	Yes
21	Fruit and vegetable consumption rate	Client/Patient Survey	Yes
22	Overweight rate	Client/Patient Survey	Yes
23	Physical activity rate	Client/Patient Survey	Yes
24	Heavy drinking rate	Client/Patient Survey	Yes
25	PHC resources for self–management of chronic conditions	Client/Patient Survey	No
26	PHC support for informal caregivers	Client/Patient Survey	No
27	Time with PHC provider	Client/Patient Survey	No
28	Client/patient participation in PHC treatment planning	Client/Patient Survey	No

OBJECTIVE 4: To enhance 24/7 access for patient–initiated urgent care which is effectively linked with the patients' usual primary health care provider

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
29	Difficulties obtaining urgent, non–emergent PHC on evenings and weekends	Client/Patient Survey	No
30	PHC after hours coverage	Organization Survey	No
31	Average number of PHC extended hours	Organization Survey	No
32	Wait times for PHC urgent, non–emergent PHC	Organization Survey/ Administrative	No
33	Satisfaction with wait times for urgent, non–emergent PHC	Client/Patient Survey	No
34	Satisfaction with wait times for routine PHC	Client/Patient Survey	No

OBJECTIVE 5: To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
35	Ambulatory care sensitive conditions	Clinical Administrative	Yes
36	Complications of diabetes	Clinical Administrative	No
37	Emergency department visits for asthma	Clinical Administrative	No
38	Emergency department visits for congestive heart failure	Clinical Administrative	No
39	Glycemic control for diabetes	Clinical Administrative	No
40	Blood pressure control for hypertension	Clinical Administrative	No
41	Influenza immunization, 65 +	Clinical Administrative or Client/Patient Survey	No
42	Pneumococcal immunization, 65 +	Clinical Administrative	No
43	Well baby screening	Clinical Administrative	No
44	Child immunization	Clinical Administrative	No
45	Breast–feeding education	Clinical Administrative	No
46	Depression screening for pregnant and post–partum women	Clinical Administrative	No
47	Counselling on home risk factors for children	Clinical Administrative	No

OBJECTIVE 5: To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations *(cont'd)*

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
48	Colon cancer screening	Clinical Administrative	No
49	Breast cancer screening	Clinical Administrative	No
50	Cervical cancer screening	Clinical Administrative	No
51	Bone density screening	Clinical Administrative	No
52	Dyslipidemia screening for women	Clinical Administrative	No
53	Dyslipidemia screening for men	Clinical Administrative	No
54	Blood pressure testing	Clinical Administrative	No
55	Screening for modifiable risk factors in adults with coronary artery disease	Clinical Administrative	No
56	Screening for modifiable risk factors in adults with hypertension	Clinical Administrative	No
57	Screening for modifiable risk factors in adults with diabetes	Clinical Administrative	No
58	Screening for visual impairment in adults with diabetes	Clinical Administrative	No
59	Asthma control	Clinical Administrative	No
60	Treatment of congestive heart failure	Clinical Administrative	No
61	Treatment of dyslipidemia	Clinical Administrative	No
62	Treatment of acute myocardial infarction	Clinical Administrative	No
63	Antidepressant medication monitoring	Clinical Administrative	No
64	Treatment of depression	Clinical Administrative	No
65	Treatment of anxiety	Clinical Administrative	No
66	Treatment for illicit or prescription drug use problems	Clinical Administrative	No
67	PHC support for medication incident reduction	Provider Survey	No
68	Use of medication alerts in PHC	Organization Survey	No
69	Implementation of PHC clinical quality improvement initiatives	Organization Survey	No
70	Maintaining medication and problem lists in PHC	Organization Survey	No
71	Information about prescribed medication by PHC providers	Client/Patient Survey	No
72	Professional development for PHC providers and support staff	Provider Survey	No

OBJECTIVE 6: To ensure that primary health care is acceptable to patients and that it meets their reasonable expectations of how they should be treated (responsiveness)

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
73	Client/patient satisfaction with PHC providers	Client/Patient Survey	Yes, Partial
74	Client/patient satisfaction with telephone health lines	Client/Patient Survey	Yes
75	Recommendation of PHC provider to others	Client/Patient Survey	No
76	Client/patient participation in PHC clinical decision making	Client/Patient Survey	No
77	Client/patient satisfaction with PHC privacy practices	Client/Patient Survey	No
78	Language barriers when communicating with PHC providers	Client/Patient Survey	No

OBJECTIVE 7: To facilitate integration and coordination between health care institutions and health care providers to achieve informational and management continuity of patient care

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
79	Use of standardized tools for coordinating PHC	Organization Survey	No
80	Collaborative care with other health care organizations	Organization Survey	No
81	Intersectoral collaboration	Organization Survey	No
82	PHC client/patient experiences with duplicate medical tests	Client/Patient Survey	No
83	Unnecessary duplication of medical tests reported by PHC providers	Provider Survey	No
84	Point of care access to PHC client/patient health information	Provider Survey	No

SUPPORT 1: Adequate supply of health human resources to meet primary health care needs

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
85	PHC provider full time equivalents	Other Administrative	Yes, partial
86	PHC providers entering/leaving the workforce	Other Administrative	Yes, partial
87	PHC organizations accepting new clients/patients	Organization Survey	No
88	PHC provider satisfaction with use of professional skills	Provider Survey	No
89	PHC workplace safety	Provider Survey	No
90	PHC workplace injuries	Provider Survey	Yes, partial
91	PHC provider burnout	Provider Survey	No
92	PHC provider satisfaction with work life balance	Provider Survey	Yes, partial
93	Needs–based health human resources planning for PHC	Organization Survey	No

SUPPORT 2: Interdisciplinary primary health care teams

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
94	Access to interdisciplinary PHC organizations	Client/Patient Survey	No
95	PHC physicians working in solo practice	Provider Survey	Yes
96	PHC physicians working in group practice	Provider Survey	Yes
97	PHC FPs/GPs/NPs working in interdisciplinary teams/networks	Provider Survey	No
98	Client/patient satisfaction with available PHC services	Client/Patient Survey	No
99	PHC team effectiveness score	Provider Survey	No

SUPPORT 3: Information technology that is adapted to primary health care and links primary health care organizations with the rest of the health care system

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
100	Uptake of information and communication technology in PHC organizations	Organization Survey	No
101	Use of information and communication technology modalities in PHC organizations	Organization Survey	No
102	Use of two–way electronic communication in PHC organizations	Organization Survey	No

SUPPORT 4: Needs–based resource allocations for primary health care

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
103	Average per capita PHC operational expenditures	Other Administrative	No

SUPPORT 5: Provider payment methods that align with primary health care goals

INDICATOR NUMBER	INDICATOR LABEL	LIKELY DATA SOURCE	CURRENT AVAILABILITY OF DATA SOURCE
104	PHC provider remuneration method	Provider Survey	Yes, partial
105	Average PHC provider income by funding model	Provider Survey	Yes, partial

Appendix F

Endnotes

1. Health Council of Canada, *Primary Health Care: A Background Paper to Accompany Health Care Renewal in Canada—Accelerating Change*, (Toronto: Health Council of Canada, 2005).

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