

Towards a framework for Primary Health Care Transition in Canada

A discussion document

March 2006

Carmel M Martin, MBBS MSc PhD MRCGP FRACGP FAFPHM
Associate Professor of Family Medicine, Northern Ontario School of Medicine
Adjunct Professor, Indigenous Peoples' Health Research Centre, University of
Saskatchewan
238 Bruyere Street, Ottawa, ON K1N 5E3
Cell: +1 613 878 7372; Fax: +1 613 482 4609; Email: carmel.martin@NorMed.ca

“A PHC-based health system is composed of a core set of functional and structural elements that guarantee universal coverage and access to services that are acceptable to the population and that are equity-enhancing. It provides comprehensive, integrated, and appropriate care over time, emphasizes prevention and promotion, and assures first contact care. Families and communities are its basis for planning and action. A PHC-based health system requires a sound legal, institutional, and organizational foundation as well as adequate and sustainable human, financial, and technological resources. It employs optimal management practices at all levels to achieve quality, efficiency, and effectiveness and develops active mechanisms to maximize individual and collective participation in health. A PHC-based health system develops intersectoral actions to address other determinants of health and equity.

“(PAHO, 2005)

Contents

1.0 Aims	5
2.0 Background: The development of PHC and Primary Care	5
2.1 An International Perspective	5
A PAHO/WHO declaration – the declaration of the Americas for the revitalization and renewal of the vision and concepts of PHC	6
2.2 A Canadian Perspective	8
3.0 Developing a framework for PHC Transition in Canada	9
3.1 The need for a framework	9
3.2 A proposed framework for PHC in Canada	10
3.3 A Vision for PHC Transition in Canada	12
Goals for the transition of the PHC system	12
4.0 A complex systems view of Primary Health Care reforms	14
4.1 What is Complexity?	14
4.2 Applying a complexity-based approach to PHC model development and economic evaluation	16
5.0 Policy/Management/Practice issues in PHC	18
5.1 The pan-Canadian National Evaluation Strategy	18
5.2 Revisiting the National Evaluation Strategy Questions	19
5.3 Reviewing the NES questions in light of a PHC Framework	19
7.0 Conclusion	25
Appendices	26
Appendix 1	27
Appendix 2 National Evaluation Questions	29
References	5

Executive Summary

INTERNATIONALLY, PRIMARY HEALTH CARE - a term derived in 1978 from the World Health Organization declaration of Alma Ata - integrated the strategy of existing models of Primary Care (PC) in developed countries as a level of first contact services, into a broader strategy for health development. Primary Health Care (PHC) aspires to and promotes equitable health and human development. This required the adjustment of health services towards prevention and promotion – achieved by assigning appropriate functions to each level of government, integrating personal and public health services, focusing on families and communities, using accurate data in planning and decision-making, and creating an institutional framework with incentives to improve the quality of services. Almost 28 years later, however, most developed countries are struggling with the challenge to make the transition to PHC, despite evidence that PHC-oriented systems are more efficient and delivery better outcomes than other approaches.

JURISDICTIONS ACROSS CANADA have agreed to ensure not only equitable access to comprehensive PHC health services, but also to strive for equity in health outcomes. The Canadian Primary Health Care Transition Fund (PHCTF) objectives promote high quality care in a community setting that is accessible, affordable, person-centred and continuous over different health episodes; to address most health care needs (comprehensive) and to coordinate with care from other parts of the health care system. However, considerable variation of aim and scope in provincial and federal Canadian PHC definitions indicate the lack of a common vision for health and the lack of an agreed framework for Primary Health Care Transition.

A CANADIAN PRIMARY HEALTH CARE TRANSITION FRAMEWORK would be attuned to local determination and a central vision based upon the National Health Challenges and Health Promotion framework by Health Canada in 2001. It would uphold Canada's principles for national health system renewal and its international commitments to PAHO/WHO's revitalized vision for PHC. "A PHC-based health system is an overarching approach to the organization and operation of health systems that makes the right to the highest attainable level of health its main goal while maximizing equity and solidarity. Such a system is guided by the PHC principles of responsiveness, quality orientation, government accountability, social justice, sustainability, participation, and intersectoriality." (PAHO, 2005) An agreed-upon, yet evolving framework for PHC Transition would hold society, governments, decision-makers and providers accountable for striving for equity and solidarity in health for all Canadians, as well as health system goals of reforming agency and structure. PHCTF National Evaluation Strategy Questions, already broadly based in international terms, aim to evaluate the health sector reform towards PHC. However, because there is a lack of clarity about the scope of PHC – as a first contact level of service with micro-level goals (which are difficult to aggregate to population outcomes) or a sectorial intervention with macro, meso and micro-level goals, a framework of health and equity are needed to evaluate resource allocation and economic effectiveness.

EVALUATING PHC AS A COMPLEX ADAPTIVE SYSTEM incorporates interconnected diverse models of organizations and networks that are accountable for improving health of defined populations. Complex adaptive systems are flexible, dynamic and responsive to needs, resources and capacity. Adaptability leads to the customization of resources to meet local needs, rather than standardization of approach. Restructuring is disruptive and expensive; change must be given time to evolve for unintended consequences to emerge with feedback loops to effect adaptation. A narrowly-focussed linear evaluation approach will ignore important interconnections and impacts.

A PHC TRANSITION FRAMEWORK that incorporates an understanding of complex adaptive systems provides an approach that is important for economic evaluation.

Towards a framework for Primary Health Care Transition in Canada

Even in countries at the top of the WHO's ranking of effective and equitable health systems, national policy seems to be in constant state of flux, beset by citizens still insecure about their medical needs and expenses, besieged by clinicians clamouring for additional resources, and bothered by government ministers convinced that excessive medical spending erodes their government's ability to address other vital societal needs.

Mark Schlesinger. Some Difficult Problems in Health Policy

Journal of Health Politics, Policy and Law, Vol. 30, No. 6, December 2005.

1.0 Aims

The objective of this background paper is to establish the domain for the economic evaluation of primary health care (PHC). Canadian jurisdictions have used many different definitions for PHC, and there has been considerable interchange of the terms “primary health care” and “primary care”, which lead to quite different places in terms of evaluation. This paper presents a framework for PHC that is forward-looking and based on international developments and Canada's international commitments. It also discusses how evaluation questions for PHC can be considered in light of a framework for the transition of the PHC system in Canada.

2.0 Background: The development of PHC and Primary Care

Primary Health Care, a term derived in 1978 from the World Health Organization Declaration of Alma Ata, integrated the existing models of Primary Care - as a level of first contact services in the health system in the UK and Europe - into a broader approach. Primary Health Care (PHC) is an approach to promote more equitable health and human development. “Health is a basic human capacity, a prerequisite for individuals to achieve self-fulfilment, a building block of democratic societies, and a basic human right.” (PAHO, 2005)¹ Despite the policy rhetoric, however, almost 28 years later, many countries (including Canada) are still struggling with the challenge to make the transition from Primary Care to PHC.

2.1 An International Perspective

Governments in the industrialized world are looking for solutions to improve their health care systems. Pressures to achieve better expenditure control and/or greater productivity and efficiency need to be balanced against deeply rooted moral imperatives to maintain universal access to necessary care, and to improve the equity with which services are distributed across social classes (WHO 1996). Reforms are being contemplated, organized or implemented, sometimes in direct contradiction to other policy directions. Each government is challenged to make the system more responsive to user needs, and to bring the health system component parts and providers under particular financial control. Policy-makers in their quest for answers have, in recent years, accepted the importance of primary health care as a key strategy to further the achievement of these goals (WHO 2004).²

The Alma-Ata conference defined primary health care (PHC) as both a “level of care” and an “approach”. The aim was clearly to address basic health care needs more equitably and effectively, and also to address the social, economic and political determinants of poor health.³ The fundamental principles of PHC endorsed during the conference were: universal accessibility and coverage on the basis of need; comprehensive care with the emphasis on disease prevention and health promotion; community and individual involvement and self-reliance; intersectoral action for health; appropriate technology and cost-effectiveness in relation to the available resources.⁴

The vision of Primary Health Care evolved during the 20th Century. “Primary Care” (PC) dated back to 1920⁵ – and made important progress during the post World War II era with the establishment of UK National Health Service (NHS) and British model of general practice. Almost as soon as the Alma-Ata Conference was over, PHC was under revision. The core PHC principle that communities in developing countries would have responsibility for planning and implementing their own healthcare services was rejected by some. A new concept of “Selective Primary Health Care” (SPHC)⁶¹¹ advocated providing only PHC interventions that contributed most to reducing child (< 5 years) mortality in developing countries. The advocates of SPHC argued that comprehensive PHC was too idealistic, expensive and unachievable in its goals of achieving total population coverage. They claimed that by focusing on growth monitoring, oral rehydration solutions, breastfeeding and immunisation, greater gains in reducing infant mortality rates could be achieved at reduced cost.

In effect, SPHC took the decision-making power and control central to PHC away from the communities and delivered it to foreign consultants with technical expertise in these specific areas. These technical experts, often employed by the funding agencies, were subject to the policies of their agencies, not the communities. SPHC reintroduced vertical programs at the cost of comprehensive PHC.^{7, 8} The PHC versus SPHC debate continued throughout the 1980s until its vision was replaced by Health Care Sector Reform led by the World Bank which was driven by health sector cost-effectiveness models.⁹ Even the WHO¹⁰ shifted its approach away from the vision of comprehensive PHC.

Recently, there has been a revitalization of the PHC vision for developed and developing countries, based on emerging evidence syntheses from the WHO¹¹ and others. Starfield and others have repeatedly demonstrated through international comparative studies that having a generalist first contact level of primary care service in a health system is cost-effective.¹² They have also found that a broadly-based, community-oriented system of primary health care is associated with better health outcomes. While individual first-contact care at the primary care level of services of the health system is a deeply embedded model, there is much greater variability in commitment to interventions which address the determinants of health in communities.

A PAHO/WHO declaration – the declaration of the Americas for the revitalization and renewal of the vision and concepts of PHC

Governments across the Americas (including Canada) recently reaffirmed their commitment to the principles and strategies of PHC by signing the Declaration of

Montevideo in 2005. The reorientation of health systems towards PHC requires the adjustment of health services towards prevention and promotion – achieved by assigning appropriate functions to each level of government, integrating public and personal health services, focusing on families and communities, using accurate data in planning and decision-making, and creating an institutional framework with incentives to improve the quality of services.

The PAHO/WHO Declaration of Montevideo, Sept 2005.¹

I) Commitment to facilitate social inclusion and equity in health.

States should work toward the goal of universal access to high-quality care that leads to the highest attainable level of health. States should identify and work to eliminate organizational, geographic, ethnic, gender, cultural, or economic barriers to access, and to develop specific programs for vulnerable populations.

II) Recognition of the critical roles of both the individual and the community in the development of PHC-based systems.

Local-level participation in the health system by individuals and collectively by communities needs to be strengthened to provide the individual, family, and community a voice in decision-making, strengthen implementation and individual and community action, and effectively support and sustain pro-family health policies over time. Member States should make information on health outcomes, health programs, and health center performance available to communities for use in exercising oversight of the health system.

III) Orientation toward health promotion and comprehensive and integrated care.

Health systems centered on individual care, curative approaches, and the treatment of disease should include actions geared to health promotion, disease prevention, population-based interventions and comprehensive integrated care. Health care models should be based on effective primary care systems, have a family and community orientation, incorporate the life cycle approach, be gender and culturally sensitive, and work for the establishment of health care networks and social coordination that ensures adequate continuity of care.

IV) Development of Intersectoral work.

Health systems need to facilitate coordinated and integrated contributions from all sectors, including the public and private sectors, involved with the determinants of health in order to attain the best possible level of health.

V) Orientation toward quality of care and patient safety.

Health systems should provide appropriate, effective, and efficient care and should incorporate the dimensions of patient safety and consumer satisfaction. This includes processes of continuous quality improvement and quality assurance for clinical, preventive, and health-promoting interventions.

VI) Strengthening of human resources in health.

The development of all levels of educational and continuous training programs needs to incorporate PHC practices and modalities. Recruitment and retention practices should include the essential elements of motivation, employee advancement, and stable work environments, employee-centered working conditions, and opportunities to contribute to PHC in a meaningful way. Recognition of the complement of professionals and paraprofessionals, formal and informal workers, and the advantages of a team approach are essential.

VII) Establishment of structural conditions that allow PHC renewal.

PHC-based health systems require the implementation of appropriate policies and legal and stable institutional frameworks and a streamlined, efficient health sector organization that ensure effective functioning and management, and that can respond rapidly to disasters, epidemics, or other health care crises, including during times of political, economic, or social change.

VIII) Guarantee of financial sustainability.

States must make the necessary efforts to work toward the achievements of sustainable financing for health systems, support the process of primary health care renewal and promote

a sufficient response to population's health needs, with the support of international cooperation agencies.

IX) Research and development and appropriate technology.

Research on health systems, ongoing monitoring and evaluation, sharing of best practices, and development of technology are critical components in a strategy to renew and strengthen PHC.

X) Network strengthening and partnerships of international cooperation to support PHC.

PAHO/WHO and other international cooperation agencies can contribute to the exchange of scientific knowledge, development of evidence-based practices, mobilization of resources, and better harmonization of international cooperation in support of PHC.

2.2 A Canadian Perspective

How has Canada approached PHC reform? The broad principles of the Canadian health system renewal embodied in the Health Accords¹³ include:

- § Principles of universality, accessibility, comprehensiveness, portability and public administration for insured hospital and medical services as per the Canada Health Act;
- § Accountability: a commitment to report regularly to Canadians on health status, health outcomes, and the performance of publicly-funded health services, and the actions taken to improve these services;
- § Population Responsiveness and Acceptability: the adaptation of services to key priorities and emerging needs of Canadians, and to meet their expectations for prompt, respectful and confidential services;
- § Equity: ensuring access to health care and to quality services on the basis of health needs, not individual or social characteristics; this includes a specific commitment to collaborate with Aboriginal people, their organizations and governments to improve their health and well being.
- § Effectiveness: the extent to which the outputs or products of the health system make a positive contribution to the health and wellness of Canadians;
- § Efficiency: the extent to which an organization, policy, program or initiative is producing its planned outputs in relation to expenditure on resources; and,
- § Sustainability: policy direction and framework that is enduring over time. In the Canadian context, the capacity to maintain a publicly-funded program.

The September 2000 Health Accord¹⁴ between the First Ministers stated that improvements in the primary health care system were crucial to providing Canadians with a sustainable health system that provides timely access to quality health services. Following on the Accord, the federal government established an \$800 million Primary Health Care Transition Fund (PHCTF) to accelerate primary health care renewal initiatives by supporting the transitional costs of implementing sustainable, large-scale projects that would act as catalysts of change in the primary health care system. These initiatives aim to support fundamental changes in the organization, funding and delivery of primary health care services resulting in better health outcomes, improved access, more satisfied providers, and the relief of pressures elsewhere in the health system such as emergency rooms and hospital services. Provinces and territories were free to proposed the renewal initiatives that were appropriate to the local context as long as they contributed in a clear way to the common objectives of the PHCTF (which were agreed-to by federal/provincial /territorial (F/P/T) governments).

3.0 Developing a framework for PHC Transition in Canada

3.1 The need for a framework

A commonly-understood framework for PHC is essential to provide direction for the evolution of the health care system, and to hold society, governments, decision-makers and providers accountable for its development. A framework based on internationally-accepted concepts can also facilitate research and evaluation across jurisdictions.

In spite of the broad principles stated in the previous section, however, the Health Council of Canada (2005) identified a fundamental lack of a common vision of PHC in Canada, as evidenced by considerable variation of aim and scope in provincial and federal PHC definitions.¹⁵ Whereas Canadian jurisdictions have professed their support for Alma Ata core principles, in practice they have focussed much more on primary care or selective primary health care than primary health care.

In Canada, it is useful to clarify and distinguish between primary health care and primary care, as these terms lead to the identification of quite different issues when one is speaking about evaluation (discussed later in this paper).

Selective PHC has taken on a different meaning in developed countries such as Australia. The following extract describes their Comprehensive and Selective Models of PHC.¹⁶

DIFFERENCES BETWEEN COMPREHENSIVE AND SELECTED PHC

	Comprehensive PHC	Selective PHC	Medical Model
View of health	Positive wellbeing	Absence of disease	Absence of disease
Locus of control over health	Communities and individuals	Health professionals	Medical practitioners
Major focus	Health through equity and community empowerment	Health through medical interventions	Disease eradication through medical interventions
Health care providers	Multidisciplinary teams	Doctors plus other health professionals	Doctors
Strategies for health	Multi-sectoral collaboration	First level health system interventions	Medical interventions

Reference: Rogers, W. & Veale, B. (2000). Primary Health Care: a scoping report. National Information Service, Dept of General Practice, Flinders University.

There are over 93 definitions of primary care and primary health care; the main differences stem from whether one considers PHC to be a level of health service delivery, or a broader approach to health.¹⁷ The following definitions clarify the similarities, differences, and relations between PC and PHC:

“Primary health care (PHC) incorporates personal care with health promotion, the prevention of illness and community development. The philosophy of PHC includes the interconnecting principles of equity, access, empowerment, community self-determination and Intersectoral collaboration. It encompasses an understanding of the social, economic, cultural and political determinants of health.

Primary care is more clinically focused, and can be considered a sub-component of the broader primary health care system. Primary care is considered health care provided by a medical professional which is a client's first point of entry into the health system. Primary care is practised widely in nursing and allied health, but predominately in general practice. (Kelleher).¹⁸

New Zealand is an example of one jurisdiction that has adopted a broad definition of PHC¹⁹:

DEFINING PRIMARY HEALTH CARE

Quality primary health care means essential health care based on practical, scientifically sound, culturally appropriate and socially acceptable methods that are:

- universally accessible to people in their communities
- involves community participation
- integral to, and a central function of, New Zealand's health system
- the first level of contact with our health system.

This definition is based closely on the World Health Organization's Alma Ata Declaration. Primary health care covers a broad range of services – although not all of them are Government funded:

- participating in communities and working with community groups to improve the health of the people in the communities
- health improvement and preventive services, such as health education and counseling, disease prevention and screening
- generalist first-level services, such as general practice services, mobile nursing services, community health services, and pharmacy services that include advice as well as medications
- first-level services for certain conditions (such as maternity, family planning and sexual health services, and dentistry) or those using particular therapies (such as physiotherapy, chiropractic and osteopathy services, traditional healers and alternative healers).

The Primary Health Care Strategy aims for closer co-ordination across all of these services. However, in the first instance, it has particular relevance for the first three of the above categories.

3.2 A proposed framework for PHC in Canada

The framework proposed here is built upon the values of the Alma Ata and the Montevideo Declarations, and is intended to address the challenges facing the Canadian Health System. Governing principles are those of Canadian Health System Renewal including Equity, Quality, Sustainability, Effectiveness and Efficiency, and Aboriginal rights as outlined in the First Ministers' Health Accord, 2000. It encompasses the PHCTF and broader PHC objectives. The framework is also based on an understanding of health care as a complex, adaptive system at the individual, community and population levels.

For the purposes of this discussion, the following definitions are proposed:

§ A PHC *model* is a type of organizational configuration, characterized by such factors as: method of funding, method of remuneration of practitioners, composition of staff. Examples of PHC models include fee-for-service practice and community health centres.

- § A *PHC organization* is a specific entity responsible for delivering PHC services. An example is Sandy Hill Community Health Centre.
- § A *PHC system* is the combination of PHC organizations that have the responsibility for providing services to a defined population. This system would include organizations from a number of different PHC models.

It is important to note that this framework applies to the *PHC system* serving a given population. Communities and populations will continue to be served by a number of organizations representing a variety of PHC models (not all of which will individually demonstrate all of the characteristics listed below); regional health authorities (or their equivalents) will, however, need to ensure that the overall PHC system develops in such a way that populations receives services based on this framework. *PHC system* organization and provider networking and community development roles are the keys to sustainability and economic viability in PHC.²⁰ In addition, the PHC system interconnects with the broader health system and policy and decision-making.

Values of the PHC system (from the Declaration of Montevideo):

1. Commitment to facilitate social inclusion and equity in health.
2. Recognition of the critical roles of both the individual and the community in the development of PHC-based systems.
3. Orientation toward health promotion and comprehensive and integrated care.
4. Development of intersectoral work.
5. Orientation toward quality of care and patient safety.
6. Strengthening of human resources in health.
7. Establishment of structural conditions that allow PHC renewal.
8. Guarantee of financial sustainability.
9. Research and development and appropriate technology.
10. Network strengthening and partnerships of international cooperation in support of PHC.

Concepts of Health: Individual, Community, and Population

- § *Individual Health* is a complex adaptive process of living well across the lifespan from birth through growing up, aging to peaceful expectation of death in “healthy families”.²¹
- § *Community Health* is a process of “collective sense-making” of the physical, socio-cultural, psychological health, economic, political, and built environments in a local setting. This “sense-making” is based on factors such as social cohesion, networks infrastructures, perceived risks vs. protections, community approaches, lifestyles.
- § *Population health care is an approach to health* that aims to improve the health of the entire population and to reduce health inequities among population groups. In order to reach these objectives, it looks at and acts upon the broad range of factors and conditions that have a strong influence on our health. The population health approach recognizes that health is a capacity or resource rather than a state, a definition which corresponds more to the notion

of being able to pursue one's goals, to acquire skills and education, and to grow. This broader notion of health recognizes the range of social, economic and physical environmental factors that contribute to health. The best articulation of this concept of health is "the capacity of people to adapt to, respond to, or control life's challenges and changes"²².

- § *Community Population Frameworks* uses a population health model to describe health status of residents in an area, community, or across the health authority. By using this framework, services will be shaped to meet population health needs, rather than the alternative of having potential clients fit into existing service components. A service delivery model can be overlaid to show service delivery for a specific segment of the population.

3.3 A Vision for PHC Transition in Canada

Re-orienting the PHC system to enhance individual, family, community and population health in accordance with priorities for pan-Canadian health systems²³

The key elements of the vision are the following:

- § Interconnection of first contact services and other elements of health and social system that impact on the determinants of health: empowered, healthy individuals and families, and participatory communities.
- § Provision of acute, responsive primary medical care and rehabilitative community care.
- § Provision of customized individual care supporting self-efficacy, and chronic disease management within both the community and health care systems.
- § Shared decision-making between clients/patients, families and health practitioners.
- § A leadership role for PHC in addressing local issues related to health and quality of life. This would include an active role in vertical and horizontal integration of services, and recognition of responsibility for all individuals and communities in defined local populations.
- § PHC systems at the population level that are able to respond to the changing needs of the communities they serve in innovative and creative ways.

Goals for the transition of the PHC system

- § Transitioning from Primary Care services based on disease models, or health sector efficiency models to a Primary Health Care approach emphasising health development,
 - Reducing inequities in health status,
 - Enhancing people's capacity to manage illness,
 - Enhancing people's control over, and ability to participate in, their health care.
 - Increasing the health promotion effort ranging from population-wide preventive efforts (when addressing upstream determinants), through targeted prevention/ early intervention approaches (mainly midstream determinants), to individual treatment (downstream level)
 - Addressing local needs,

- Community development, strengthening community services and interdisciplinary networks and teams.
- Horizontal as well as vertical integration is integral to an interconnected system, and
- Capacity to adapt to changing economic, political, cultural and societal conditions and health needs in different populations and communities, as well as to influence these conditions to improve health.

4.0 A complex systems view of Primary Health Care reforms

Two fundamental themes of systems philosophy and approaches are the universal interconnectedness and interdependence of all phenomena, and the intrinsically dynamic nature of reality.
'at each level of complexity we encounter systems that are integrated, self-organizing wholes consisting of smaller parts and, at the same time, acting as parts of larger wholes';
'Order at one systems level is the consequence of self-organization at a larger level'
Frijtof Capra

International experience demonstrates that reforms of primary (health) care systems can bring about improvements such as better management of some common diseases;²⁴ they can also bring about unintended consequences such as: little impact on widening health disparities,²⁵ undesired shifts in types of care provided,²⁶ low professional morale²⁷ and less public satisfaction with general practice.²⁸

Some important general lessons can be learnt from international experience with health sector reform – which is usually based upon restructuring. Structural change is seen as a direct way of controlling systems, but may, paradoxically, take the focus away from other more fundamental issues that are not directly related to structure, such as the creation of resource “silos” in different parts of the system. In addition, restructuring takes time to deliver results; it may not be evident for some time what has occurred and even then the "counterfactual" (what would the outcomes have been under the old regime?) remains unknown.²⁹ Continual restructuring is costly and disruptive, both financially and in health sector morale.

Because it is complex, primary (health) care is very different to manipulate. Most health system reforms emphasize cost containment³⁰ through changing economic models of care, workforce restructuring, better management of chronic disease and greater emphasis on prevention. Yet in order to implement *transformative* change there is a need to consider PHC as a complex system.

Glouberman and Zimmerman,¹¹ characterize systems as being either simple, complicated, complex, or chaotic. Simple and complicated systems or processes are composed of separate entities or discrete activities. In contrast, complex systems are based on *relationships*; their properties of self-organisation, interconnectedness and evolution are clear and constant.

4.1 What is Complexity?

Complexity theories are based on understanding patterns of complex adaptive systems that are not predictable by traditional evidence and social knowledge. Complexity refers to something that is "made of (usually several) closely connected parts". (Oxford Dictionary) Complex systems have the inherent duality of unique parts (or agents) which are at the same time distinct and connected, and whose interrelationships co-depend on their intrinsic structures and processes.

Complexity theories have developed from life sciences, mathematics, physics, and philosophy as a way to understand the phenomena of interdependent agents interacting in systems in patterns that are non-linear and dynamic. Complexity approaches are “mainstream” in many disciplines; they have been applied to health systems by Berwick in ‘Crossing the Quality Chasm’ and by Glouberman and Zimmerman in the Romanow Commission. Most health systems research, however, is still slow to adopt such approaches, and takes a more reductionist view by examining the parts of the system without adequate consideration of relationships and context.

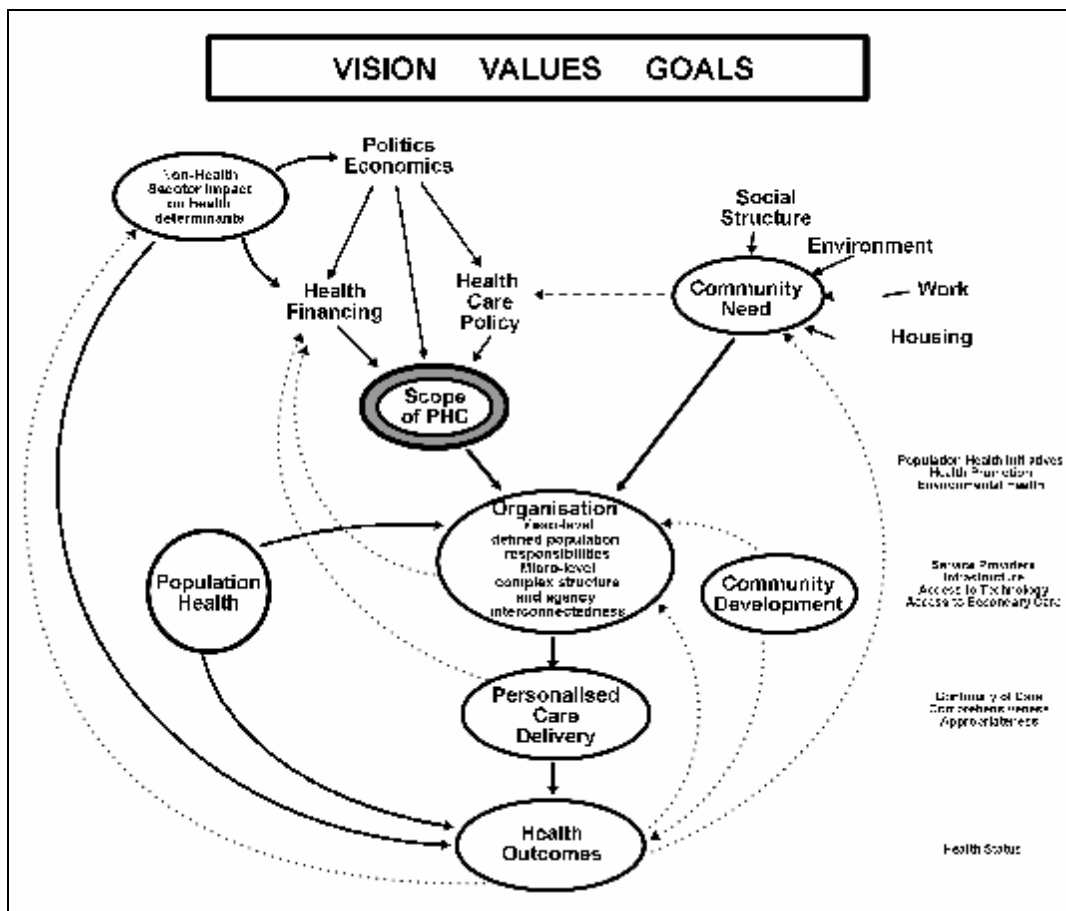
Complexity knowledge allows us to understand the interdependent roles of patient, physician, nursing, pharmacist and other professionals in PHC in self-organizing local networks, as well as the interaction of different models and structures in the health system. This type of approach brings a capacity to generate new insights into how the behaviour of health systems can be understood and modified. It also leads to the identification of different types of issues and questions when evaluating the system.

How could we apply a research approach based on complexity theory to the PHC system? Glouberman and Zimmerman offer a comparison of the main features of the more commonly-used approach (based on simple/complicated knowledge types) with an approach based on complexity:

Organizational Systems	SIMPLE OR COMPLICATED	COMPLEX KNOWLEDGE TYPES (PLURALISM)
Features		
Knowledge Systems	Known and knowable Legitimate best practice/predictable	Understandable, non-predictable, can contain known and knowable subsystems
Methodological Approaches	Reductionism/analysis	Holism/synthesis/complex models
Historicity of System	Classical economics ignores historical evidence as systems always tend to equilibrium	History contains meaning of change and systems evolve in part based on where they have been
System Evaluation Approaches	Measures of efficiency, fit and best practice Linear inputs, process, outputs, outcomes	Functioning of relationships & feedback loops (+ve –ve) around a vision and participation <u>Patterns , structure, process</u>
Implementation framework	PRESCRIPTIVE STANDARDIZATION	ADAPTIVE <u>CUSTOMIZATION</u>

Complexity-based methods for health system evaluation are developing rapidly. Atun³¹ et al recognize **that economic evaluations of a complex PHC system need to encompass the multiple perspectives and influences in a highly contexted environment.** A complex system can encompass subsystems which are simple, complicated or complex and multiple perspectives are interconnected. The unique features of PHC, including its whole person approach, its community context, and longitudinal perspective within different types of local and macro-level complex systems make highly-focussed evaluations difficult and too narrow to really assess true effectiveness and efficiency.³²

A variety of approaches are being used to understand and predict how to intervene in complex systems. Below is an example of an influence diagram by Martin and Sturmberg illustrating the complexity of a transformed PHC system with feedback loops and dynamic interconnections.



4.2 Applying a complexity-based approach to PHC model development and economic evaluation

A policy analysis conducted by Lamarche³³ which compared the main types of Canadian PHC service models and their variants identified four types of organizational models. Lamarche's more recent work makes the important point that

the performance of these models cannot be studied in isolation, but is very much affected by the context in which the model operates, and its relationship to other organizations. This means that the meso-level of analysis (considering the entire PHC system serving a population) may be even more significant than the micro-level (considering individual PHC models or organizations).

Health policy debates in PHC have been driven by a push towards standardization according to the best PHC service. Such a *competition* and attempts at *standardization* of structure and process are not helpful; there is no single PHC model that is “best” for all populations under all conditions. In contrast, a complexity approach looks for the combination of models that will produce the best health outcomes for a particular population. The complexity approach is *adaptability* and *customization*

In order to promote maximum adaptability to local conditions, PHC system development should promote self-organization within the constraints of accountability, and based on evidence. Meso-level coordinating organizations should be funded according to population need to facilitate PHC system development for a given population. For example, in Australia, the Division of GP and in the UK, Primary Care Trusts work to provide networking amongst PHC organizations and some degree of collective responsibility for collaboration, outreach and integrative activities. In Canada, Regional Health Authorities and other similar arrangements play an important role in this process.

5.0 Policy/Management/Practice issues in PHC

5.1 The pan-Canadian National Evaluation Strategy

The National Evaluation Strategy (NES) Questions³⁴, developed to evaluate PHC reform in Canada, were derived from an analysis of Primary Health Care Transition Fund (PHCTF) policy objectives and Canadian and selected international PHC policy documents. The documents reviewed focussed on policies related to common PHC transition activities, their implementation and evaluation. The policy analysis was not mandated to identify a pan-Canadian vision, goals and framework for PHC and was not overtly framed by the core principles of Alma Ata³⁵. The NES articulated new objectives beyond the PHCTF as a basis for indicators as well as future research and evaluation of PHC.

Table 1

National Evaluation Strategy Objectives & 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 patients' 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.
System Supports for Primary Health Care
1. Adequate supply of health human resources to meet primary health care needs.
2. Multidisciplinary 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 PHC goals
6. Ongoing support from policy-makers for primary health care

See Appendix 1 for the PHCTF Objectives and modified PHC Objectives.

5.2 Revisiting the National Evaluation Strategy Questions

The closest document to a national policy document posing key policy, management and practice questions for PHC is 'Asking the Right Questions' by Haggerty and Martin, 2005.³⁶ Several frameworks, in particular the Logic Model of Watson et al, are generally accepted as analytic frameworks for PHC evaluation, with new or expanded frameworks expected to emerge from PHCTF projects in 2006.

Interpreting existing National Evaluation Questions questions

In 'Asking the Right Questions', Haggerty and Martin, coded and transformed approximately 450 policy and evaluation statements into 395 questions. These were analyzed, refined and prioritized by experts and provincial and federal representatives into the National Evaluation Questions (NES). (See Appendix 2)

The NES Pan-Canadian PHC Indicators

The objective of the Primary Health Care (PHC) Indicator Development project has been to identify a core set of agreed-upon PHC indicators that can be used to compare and measure PHC at multiple levels within jurisdictions across Canada, based upon the NES Objectives and Questions. As part of this project, CIHI will provide advice on the future data collection infrastructure required to support the reporting of these indicators.

The scope and depth of these indicators are world-leading, well beyond those of comparable countries including Australia and New Zealand. However, during the indicator development process it became clear to some participants that many of the questions involving resource allocation and economic efficiency were difficult to address without a PHC framework involving a broad vision and goals, despite the comprehensiveness of the NES Questions.

Was a broad vision of PHC prioritized by the stakeholders and experts?

In retrospect, the methods and process used to develop the NES questions may have favoured the concept or idea of primary care first-contact services driven by current policy imperatives and the PHCTF objectives, rather than a PHC approach. Issues such as health equity, community and population health, and aboriginal health were less well-represented in the question prioritization and indicator construction. Hence, it was determined, that there was a need to revisit the questions using the PHC framework proposed in this paper.

5.3 Reviewing the NES questions in light of a PHC Framework

Some key evaluation questions for the NES and the national health care challenges are almost impossible to address without a clarification of the scope of PHC.

The PHCTF reform initiatives pertain mostly to micro-level reform, yet implicitly are structured within the broader population/community based services to achieve population health outcomes and responsiveness.

The NES questions were classified as either macro, meso, and micro levels of evaluation based on Ferlie&Shortell 2001,³⁷ Campbell *et al*,2000,³⁸, Evans *et al*,

2001³⁹, and Watson, 2004⁴⁰) as adapted by Haggerty and Martin (See Below). However, the questions that were prioritized and developed into indicators often related to micro-level first-contact organizations. Disease, risk profiles and morbidity outcomes have been difficult to measure as either contextual or attributional information because of a lack of linkage to PHC organizations. Hence these measures will be aggregated at regional and population levels in the absence of any pan-Canadian consistency of PHC system population base. (personal communication Webster and Wray, 2006⁴¹)

Macro- level evaluation questions relate to the health care system and Canadian population. They refer to factors that are under the control and thus the responsibility of government authorities, whether at the federal, provincial, territorial, or regional level. They are the policy and governance activities that affect the fiscal, material and human resource inputs into primary health care; they are also the final outcomes of population health and a sustainable, equitable, and effective health system.

Meso-level questions relate to regional and local primary health care organizations and refer to factors that are under the direct control of organizational governance. The structures and processes at the meso level are the activities related to management and clinical decisions that impact on the availability, volume, type and quality of services that are offered. Meso outcomes that are accrued at the level of organizational or provider are workforce satisfaction and retention, but also the client responsiveness and acceptability that allows it to retain its practice population. *PHC systems would generally function as a meso-level system*

Micro-level questions relate to impacts on individual patients or the practice population of services that are under the direct control teams or individual providers of care. They are the volume, type and qualities of services that are provided and their immediate outcomes in increased knowledge, and reduced risk and effect of health conditions. *PHC organizations predominately operate at a micro-level*

‘Meso’-level organizational structures are essential to ensure a population-based approach to PHC. This is the level at which population-based and community-based indicators fit most comfortably. These structures also provide increased networking and interconnectedness with other sectors and facilitate collaborative arrangements between organizations. In some parts of Canada, the regional health authorities provide this umbrella function.

The lack of an articulated common vision, framework and scope of PHC, both now and in the future, leave many potential gaps in research and evaluation approaches. These include addressing the many of the core “*interconnecting principles of equity, access, empowerment, community self-determination and intersectoral collaboration.*”

A review of the original NES questions, based on the framework for PHC transition proposed in this paper and the National Health Challenges identified the following gaps:

Reducing Inequities

Gaps exist in the equitable distribution of and access to “*health promotion, the prevention of illness and community development*”^{vii}

The existing NES evaluation questions below demonstrate a lack of clarity of scope without a framework that includes a system perspective:

- Are there sufficient numbers of PHC health professionals, in particular primary care nurse practitioners and family physicians, to meet the demand for PHC?
- Does the regional authority have an assessment of health human resources to meet the community's needs?
- Do provincial authorities have plans to recruit and train health human resource requirements to meet the needs of the jurisdiction?

Suggested additional questions from 'Asking the Right Questions' by Haggerty and Martin, 2005

<ul style="list-style-type: none"> • Do health care organisations (<i>within a system</i>) enable all members of the population to access services equally and offer equitable choice in access to services and treatment?
<ul style="list-style-type: none"> • Do PHC reforms reduce the proportion of Canadians who experience difficulties when they access the system?
<ul style="list-style-type: none"> • Does better integration of health services reduce the gap in health status between Aboriginal and non-Aboriginal Canadians?
<ul style="list-style-type: none"> • Do PHC organizations <i>and systems</i> have defined policies to ensure that their practice populations receive: care that addresses health inequalities?
<ul style="list-style-type: none"> • Do the PHC organizations <i>and systems</i> manage continuity of the services provided to the vulnerable clientele and individuals in their territories?

Enhancing People's Capacity to Cope

Outcomes of disease-management approaches are very well-represented. The outcomes of chronic illness, wellness, quality of life and health measures for individuals and community related to enablement, self-efficacy and empowerment are not well represented.

The NES evaluation questions below demonstrate a disease management approach without including an underpinning of health development and complex illness pathways:

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

Suggested additional questions from 'Asking the Right Questions' by Haggerty and Martin, 2005:

<ul style="list-style-type: none"> • Do PHC reforms support the following: targeted support for hard-to-reach individuals and communities, including Aboriginal and minority ethnic groups; and increased chronic disease patient choice in PHC?
<ul style="list-style-type: none"> • Do PHC reforms provide options for caring for elderly patients through: specialized community mental health services; drug treatment; or preventive and rehabilitative intermediate care?
<ul style="list-style-type: none"> • Do PHC organizations (<i>systems</i>) enable self-efficacy and quality of life in chronic illness, rehabilitative and palliative care for all of the their population and reduce inequities?

Increasing the Prevention Effort (broadening its scope)

Is PHC a particular model of service delivery (i.e. multi-disciplinary, small, community-located organizations carrying out a core set of functions primarily for their patients/clients) and or is it a broader approach responsible for broadly-based health promotion for mainstream and disadvantaged groups and communities?

The NES evaluation questions below demonstrate a lack of clarity of scope without a PHC framework:

- How should the mix and number of providers on a multidisciplinary team reflect the needs of the community or practice population?
- 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
- Has the range of publicly-funded services provided (directly or indirectly) by PHC organizations increased over time?

Suggested additional questions from ‘Asking the Right Questions’ by Haggerty and Martin, 2005

- | |
|--|
| <ul style="list-style-type: none">• Does the primary health care system achieve a balance of population health activities aimed at the whole population and clinical activities provided to individuals? |
|--|

Addressing local needs

PHC activities are often not defined beyond individual care, omitting services in schools, day care, workplace, institutions and homes. *Needs assessments based on community level data and indicators of the impact of PHC have not been addressed.* Little or no attention has been paid to health determinants at any level of measurement – micro, meso and macro. Small area data can be aggregated up to population level where there can be planning, resource allocation and accountability for health outcomes .

The NES evaluation questions below demonstrate a lack of clarity of scope:

- What processes for planning services for their defined population do PHC organizations have? Population *unspecified*.

Suggested additional questions from ‘Asking the Right Questions’ by Haggerty and Martin, 2005

- | |
|---|
| <ul style="list-style-type: none">• Do PHC organizations increasingly plan for and deliver care that reflects the views and health needs of the population served, based on agreed evidence or best practice? |
| <ul style="list-style-type: none">• Do reforms provide a framework for planning and standards for locally controlled care? |
| <ul style="list-style-type: none">• Do reforms identify gaps in health care (social/SES conditions) and incorporate this information in clinical governance? |

Strengthening community health services

To meet community needs through *community development* there is a need for the inclusion of concept of community services including case work and care planning, as well as capacity-building with the broader community and social sectors, the justice, education systems and other sectors.⁴²

The NES evaluation questions below demonstrate a lack of clarity of scope of comprehensive PHC:

- Do provincial authorities have plans to recruit and train health human resource requirements to meet the needs of the jurisdiction?
- Are PHC professionals working to their full scope of practice (as per training and regulation)?
- What factors facilitate health care providers working together to provide **comprehensive PHC**?

The current indicator on service types does not reflect the many services and approaches of community development. Competencies and responsiveness to needs should shape work, as well as professional or health system priorities.^{ii 43}

Suggested additional questions from ‘Asking the Right Questions’ by Haggerty and Martin, 2005

• Do PHC organizations engage and represent people and communities to play a strengthened role in their own care, and the PHC programs and services?
• Do reforms engender planning mechanisms at local (<i>PHC system</i>) level, focused on the strategic development of local services? Does this result in innovation to improve care for their communities?
• Do reforms increase (with PHC providers) population health approaches, collaboration, an enhanced role for health promotion and partnerships with communities?
• Do PHC reforms (better information given to health care administrators) ensure that communities’ needs are addressed and that resources are allocated to priority needs?

Horizontal as well as vertical integration - Coordination

Population and community-based indicators - including services for chronically marginalized families - must demonstrate improved networking and connectedness within PHC and inter-sectorial links.

The NES evaluation questions below demonstrate a lack of clarity of scope:

- Have the responsibilities of PHC organizations been clearly identified in the health system, especially related to a central role in coordination of patient care? (**Coordination within the PHC sector and local community is missing**)

Horizontal as well as vertical integration - Accountability

Responsibility for co-ordination of services across, among and between PHC organizations is not addressed. PHC micro-level organizations require broad external support at meso-levels of health systems to achieve this. In order for PHC to have accountability for a defined population beyond an individual service, there is a need for meso-level infrastructure.⁴⁴

The NES evaluation questions below demonstrate a lack of clarity of scope:

- Do regional funding allocations for PHC reflect population age and morbidity structure and vulnerable groups? (accounting for geographic location is missing)

- What amounts of financial and human resources are dedicated to PHC? Are there gaps in whole-person, comprehensive care because of resource limitation.
- What is the per capita operational cost of providing primary health care services at a practice level? At a regional health authority level?

Suggested additional questions from 'Asking the Right Questions' by Haggerty and Martin, 2005

- Are population health strategies adapted to local conditions? Are local communities involved in their design and implementation?
- Are the services offered by the PHC organizations reflective of the needs identified and priorities established?

7.0 Conclusion

An agreed-upon, yet evolving framework for a Canadian Transition to Primary Health Care is essential to hold society, governments, decision-makers and providers accountable for striving for the achievement of common health goals for all Canadians. This accountability must go beyond cost containment to include the principles of responsiveness, government accountability, social justice, sustainability, community participation, and intersectorality. While there is high level pan-Canadian policy commitment to a PHC approach to health system reforms, the implementation and evaluation of the approach appear by default to favour the "health sector reform", economic approaches..

The lack an articulated pan-Canadian vision, framework and scope of PHC, leaves significant potential defaults and gaps for the transition of the PHC system in order to address the Canada Health Act and the F/P/T stated goals of improving health. . These gaps include a lack of attention to the principles of equity, access, empowerment, community self-determination and vertical and horizontal integration in the system. They also include the need to build the PHC system on an understanding of the social, economic, cultural and political determinants of health⁴⁵

The Primary Health Care system has the potential to improve health outcomes by providing customized individual and collective responses to the majority of the community who experience a broad range of highly contextualized health and illness and risk factors as well as specific disease. This potential will only be achieved if the system is developed with a clear vision and goals, as well as appropriate organizational models in the context of complex systems.

It is useful to employ a complexity perspective for the reform, research and evaluation of health systems because simplistic approaches - which fail to recognize the dynamic, interconnected and participatory dimensions of human systems - have had limited success and negative unintended outcomes. A complexity perspective can generate new levels of understanding and different solutions to the challenges of transition of the PHC system.

Appendices

Appendix 1

Table 1. Common objectives of the Primary Health Care Transition Fund and modifications recommended by the PHC Expert Consultation Group to reflect general goal principles of PHC and the Health Accords.

PHCTF Objectives	<i>Modified PHC Objectives</i>
To increase the proportion of the population having access to primary health care organizations that are accountable for the planned provision of a defined set of comprehensive services to a defined population;	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. To increase the number of primary health care organizations who are responsible for providing planned services to a defined population
To increase emphasis on health promotion, disease and injury prevention, and management of chronic diseases;	To enhance the provision of whole-person, comprehensive primary health services, including acute, episodic and ongoing care and increased emphasis on health promotion, disease and injury prevention, management of common mental health conditions and chronic diseases.
To expand 24/7 access to essential services;	To enhance 24/7 access for patient-initiated urgent care which is effectively linked with the patients' usual primary health care provider.
To establish multidisciplinary primary health care teams of providers, so that the most appropriate care is provided by the most appropriate provider;	(Moved to structures and process that support PHC)
To facilitate coordination and integration with other health services, i.e. in institutions and in communities.	To facilitate integration and coordination between and among healthcare institutions and healthcare providers to achieve continuity of patient care.
None	To deliver high quality and safe primary health services and promote a culture of quality improvement.
None	To ensure that primary health care is acceptable to patients and meets their reasonable expectations of how they should be treated (responsiveness).

Appendix 2 National Evaluation Questions

No.	Évaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
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.				
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?	Outputs, Access	micro	Romanow, NZ
1.1	Does that proportion differ by geographic region? By socio-economic group? By health status? By cultural or ethnic group?	Indirect outcomes, equity	macro	HM
Objective 2. To increase the number of primary health care organizations who are responsible for providing planned services to a defined population.				
2	Do PHC organizations know the composition of their catchments and practice populations in terms of age structure, morbidity profile, cultural diversity, and socio-economic status, social and physical environment?	Activities, Management-level, community participation	meso	NB, NZ
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?	Activities, Management-level, Quality of care	meso	BC, UK, Aus(Vic)

No.	Evaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
3	What processes for planning services for their defined population do PHC organizations have?	Activities, Management-level, Community participation	meso	NS, NB, NFLD, Romanow, NZ, UK, Aus
4.	Do regional authorities support PHC organisations 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)?	Activities, Management-Level, Community participation	meso	Qc, UK, NZ, Aus
<p>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.</p>				
5.	<p>Do PHC organizations have defined policies to ensure that their practice populations receive:</p> <ul style="list-style-type: none"> Ø Rapid management of acute, urgent health problems? Ø Timely provision of non-urgent routine care (including well care and chronic illness management)? Ø Recommended preventive services? Ø Referral to hospitals and specialist? Ø Follow-up care after hospitalization? Ø Primary mental health care? Ø Full maternity and child care? Ø Coordinated care of the frail elderly? Ø End-of-life care? 	Activities, Management-level, Comprehensiveness	meso	Alta, BC, NB, NFLD, QC

No.	Evaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
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?	Indirect outcomes, Effectiveness,	micro	Alta, UK, Aus (Vic)
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?	Activities, Clinical-level	micro	Alta, UK, Aus (Vic)
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 health outcomes?	Activities/Intermediate outcomes, Self-management, effectiveness	micro	BC, UK, Aus (NSW), (Vic)
Objective 4. To enhance 24/7 access for patient-initiated urgent care which is effectively linked with the patients' usual primary health care provider.				
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?	Activities/Output, Management-level /Accessibility	micro	NB, Alta, NS, BC
9.	What are the costs and consequences of providing 24/7 access alternatives for patient-initiated urgent care (other than physician contact services) in terms of health outcomes, patient and provider satisfaction, and utilization of health care?	Output/Intermediate, Access/ Appropriateness, Appropriate provider	meso	BC, CIHI, Kirby, Romanow, UK,

No.	Évaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
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?	Outputs, Access	micro	CIHI, Acc, Kirby
10.1	What is the level of patient satisfaction with wait times?	Intermediate outcome, Acceptability	micro	EX
10.2	Do wait times differ systematically by urban/rural/remote region? By socio-economic group? By ethnic group?	Intermediate outcome, Equity	micro	HM
Objective 5. To deliver high quality and safe primary health services and to promote a culture of quality improvement in primary health care organizations.				
11.	What percent of recommended preventive care guidelines by the Canadian Task for on Preventive Health Services are implemented by PHC providers?	Outputs, Technical effectiveness,	meso	BC, Romanow, CIHI
12.	Does the care for specific key conditions (diabetes, COPD/asthma, congestive heart failure, depression, hypertension, and smoking) conform to current evidence and commonly-accepted standards?	Outputs, Technical effectiveness	meso	BC, UK,
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?	Immediate outcomes, Technical effectiveness	meso	HM, EX

No.	Évaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
13.	Do PHC organizations have defined, non-prejudicial, confidential processes for staff to report potential errors in delivery, treatment or management?	Activities, Management-level, Quality of care	meso	UK
14.	Do PHC organizations measure their performance against recognized standards and modify their practices in response (including issues of patient safety)?	Activities, Management-level, Quality of care	meso	EX
14.1	Are there structures and processes in place to ensure optimal and safe medication management?	Activities, Management-level, Quality of care	meso	NZ
4.2	Do PHC professionals participate in continuing professional development that reflects the needs of the PHC organization and the local health needs of the community?	Activities, Clinical-level, Quality of care	meso	BC, NFLD, UK, CBF
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).				
15.	Are patients satisfied that the PHC organization and providers respect their right to privacy, confidentiality and dignity?	Intermediate, Acceptability	micro	QC
16.	Are patients confident that PHC organizations and providers are responsive to their culture and language needs?	Intermediate, Acceptability	micro	HM

No.	Évaluation Question, PHC Objectives (Table 2)	PHC Logic Model	Evaluation Level	Source *
Objective 7. To facilitate integration and coordination between healthcare institutions and healthcare providers to achieve informational and management continuity of patient care.				
17.	What types of structures and activities have been developed to link primary health care organizations with other health care organizations?	Activities, Management-level	meso	EX
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?	Activities, Clinical-Level	meso	EX
18.	Do patients experience management continuity of care?	Outputs, Continuity of care		EX
18.1	Do patients undergo repeated investigations when they see different providers?	Outputs/Intermediate, Continuity/Efficiency	micro	2003 Accord
19.	Do providers experience informational continuity of care?		meso	EX
19.1	Do providers have complete information at the point of care about individual patients' health and previous care received from other providers?	Outputs, Continuity/Coordination	meso	CIHI
19.2	Are providers confident that their care plan and actions will be recognized and considered by other providers?	Output, continuity/Coordination	meso	HM

* Sources : Kirby= The Health of Canadians: Federal Role, Romanow = Future of Health Care in Canada, BC=British Columbia, Alta = Alberta, Sask=Saskatchewan, MN=Manitoba, ON=Ontario, QC=Quebec, NFLD=Newfoundland and Labrador, NB=New Brunswick, NS=Nova Scotia, PEI=Prince Edward Island, NWT=Northwest Territories, YK=Yukon, UK=United Kingdom, Aus=Australia, NZ=New Zealand, CIHI = Canadian Institute for Health Information, EX=expert consultation, HM=Haggerty-Martin.

Table 3: Recommended evaluation questions for the PHC National Evaluation Strategy around PHC inputs and supports that are beyond the direct control of PHC organizations. Secondary questions are indicated as subsets (x.1, x.2). Each question shows the corresponding area in the PHC logic model and the analytic unit that needs to be evaluated (micro=individual persons; meso=providers or practices, macro=policy or system level). The source column shows the policy documents from which the question was abstracted and which was endorsed by the expert group; question with source is EX were raised only by the expert group and HM only by Haggerty and Martin.

No.	Evaluation Question, PHC Supports (Table 3)	PHC Logic Model	Evaluation Level	Source
Adequate supply of health human resources to meet primary health care needs.				
1.	Is there sufficient number of PHC health professionals, in particular primary care nurse practitioners and family physicians, to meet the demand for PHC?	Input, HHR	macro	HM/EX
2.	What incentives attract and retain health professionals in PHC organizations (financial, work flexibility, continuing professional development)?	Immediate outcomes, Work-life	meso	BC, NS
3.	Are PHC professionals working to their full scope of practice (as per training and regulation)?	Activities, Clinical-level, HHR	meso	Kirby, Romanow, UK, NS
4.	Is the quality of work-life acceptable to staff and health care providers?	Immediate outcomes, Work-life	meso	EX
5.	Does the regional authority have an assessment of health human resources to meet the community's needs?	Input, HHR	macro	EX
6.	Do provincial authorities have plans to recruit and train health human resource requirements to meet the needs of the jurisdiction?	Input, HHR	micro	EX
Multidisciplinary primary health care teams.				
7.	What is the extent and nature of multidisciplinary teams?	Input, HHR	meso	CIHI, NB, NS

No.	Evaluation Question, PHC Supports (Table 3)	PHC Logic Model	Evaluation Level	Source
7.1	How should the mix and number of providers on a multidisciplinary team reflect the needs of the community or practice population?	Input, Governance level	macro	EX
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?	Activities/Intermediate, Efficiency, effectiveness	meso	CIHI
9.	What factors facilitate health care providers working together to provide comprehensive PHC (scope of practice regulation, primary health care funding, training, continuing professional development)?	Activities, Management-level	meso/macro	Alta, NB, NFLD, Kirby, NS
Information technology that is adapted to primary health care and links primary health care organisations with the rest of the health care system.				
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?	Input, material	meso	CIHI
11.	Do PHC organisations, 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?	Input, material	meso	Alta, CIHI, BC, NFLD
Needs-based resource allocations for primary health care.				

No.	Evaluation Question, PHC Supports (Table 3)	PHC Logic Model	Evaluation Level	Source
12.	Do regional funding allocations for PHC reflect population age and morbidity structure and vulnerable groups?	Input, Fiscal	macro	NS, Kirby
13.	Has the range of publicly funded services provided (directly or indirectly) by PHC organizations increased over time? Are there gaps in whole-person, comprehensive care because of resource limitations?	Outputs, comprehensiveness	micro	NS, Kirby
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)?		meso	EX
15.	Have capital investments increased for new technology and equipment for PHC? For physical facilities? For information technology?	Input, Material	macro	2000 Accord
Provider payment methods that align with PHC goals				
16.	How are PHC providers paid?	Input, Governance	macro/meso	EX
17.	How does provider remuneration method affect the volume, type and quality of services that are provided?	Intermediate outcomes, Efficiency, effectiveness	meso	NS, Aus
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?	Output, Type	micro	Romanow, Aus
Ongoing support from policy-makers for primary health care.				

No.	Evaluation Question, PHC Supports (Table 3)	PHC Logic Model	Evaluation Level	Source
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)	Input, Policy	macro	HC and HM
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?	Input, Policy, Integration	macro	NB, Romanow, BC
20.	What amounts of financial and human resources are dedicated to PHC?	Input, Fiscal	macro	Romanow, NS, NB, Kirby

* Sources : Kirby= The Health of Canadians: Federal Role, Romanow = Future of Health Care in Canada, BC=British Columbia, Alta = Alberta, Sask=Saskatchewan, MN=Manitoba, ON=Ontario, QC=Quebec, NFLD=Newfoundland and Labrador, NB=New Brunswick, NS=Nova Scotia, PEI=Prince Edward Island, NWT=Northwest Territories, YK=Yukon, UK=United Kingdom, Aus=Australia, NZ=New Zealand, CIHI = Canadian Institute for Health Information, EX=expert consultation, HM=Haggerty-Martin.

References

-
- 1 REGIONAL DECLARATION ON THE NEW ORIENTATIONS FOR PRIMARY HEALTH CARE (DECLARATION OF MONTEVIDEO) Pan American Health Organization/World Health Organization 46th Directing Council 57th Session of the Regional Committee. Sept 2005
- 2 Felix-Bortolotti M and Martin C. A Theoretical and Conceptual Framework for Primary Health Care. Virtual Office of Synthesis and Information publication, www.normed.ca/vosi
- 3 Tarimo and Webster 1997, in Bortolotti-Felix and Martin, opus cit 2006.
- 4 Tarimo & Webster 1994; 1997, p 3-5; Sanders 1998, p 3; Kekki 2004, p 6 in Bortolotti-Felix and Martin, opus cit 2006.
- ⁵ Starfield et al 2005 in Bortolotti-Felix and Martin, opus cit 2006.
- ⁶ Warren K. The evolution of selective primary health care. *Soc Sci Med* 1988; 26: 891-898.
- ⁷ Unger J, Killingsworth J. Selective primary health care: a critical review of methods and results. *Soc Sci Med* 1986; 22: 1001-1013
- ⁸ John J Hall and Richard Taylor Health for all beyond 2000: the demise of the Alma-Ata Declaration and primary health care in developing countries *MJA* 2003 178 (1): 17-20
- ⁹ John J Hall and Richard Taylor Health for all beyond 2000: the demise of the Alma-Ata Declaration and primary health care in developing countries *MJA* 2003 178 (1): 17-20
- ¹⁰ World Health Organization. The World Health Report 2000. Health systems: improving performance. Geneva: WHO, 2000. <http://www.who.int/whr2001/2001/archives/2000/en/contents.htm>.
- ¹¹ Atun RA. What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services? Director Health Management Programme The Business School, Imperial college London Health Evidence Network (HEN) theses/primaryvsspecialist/200401
- ¹² Atun RA. What are the advantages and disadvantages of restructuring a health care system to be more focused on primary care services? opus cit
- ¹³ First Ministers Health Accord FMM2000, www http://www.hc-sc.gc.ca/hcs-sss/delivery-prestation/fptcollab/2003accord/index_e.html
- ¹⁴ First Ministers Health Accord 2000 opus cit
- ¹⁵ Primary Health Care. Health Council of Canada July 2005 www.healthcouncilcanada.ca.
- ¹⁶ Rogers and Veale. Opus cit.
- ¹⁷ Tarimo, E. and Webster, E.G. (1994). Primary Health Care Concepts and Challenges in a changing world: Alma-Ata revisited. (Current Concerns SHS Paper number 7, WHO/SHS/CC/94.2). Geneva: World Health Organisation, p 61
- ¹⁸ Keleher H 2001. Why Primary Health Care Offers a more Comprehensive Approach to Tackling Health Inequalities than Primary Care. *Australian Journal of Primary Health* 7 (2): 57-61.
- ¹⁹ Ministry of Health New Zealand Primary Health Care Strategy. <http://www.moh.govt.nz/primaryhealthcare>
- ²⁰ David Sanders. Twenty Five Years of Primary Health Care Lessons Learned and Proposals for Revitalisation. http://www.medico-international.de/hintergrund/almaata/hintergrund_sanders1.asp
- ²¹ Sturmberg JP and Martin CM Re-thinking General Practice - Part 1: Far from Equilibrium, *Asia-Pacific Journal of Family Practice* (in press April-May 2006)
- Martin CM and Sturmberg JP Re-thinking General Practice – part 2: Strategies for the future. *Asia-Pacific Journal of Family Practice* (in press April-May 2006)
- ²² Frankish et al.opus cit 1996.
- ²³ Achieving Health for All: A Framework for Health Promotion Health Canada 2001
-
- ²⁴ Improvements in quality of clinical care in English general practice 1998-2003: longitudinal observational study. Stephen M Campbell, Martin O Roland, Elizabeth Middleton, David Reeves *BMJ* 2005;331:1121, doi:10.1136/bmj.38632.611123.AE
- ²⁵ Smeeth L.; Heath I. Why inequalities in health matter to primary care. *British Journal of General Practice*, Volume 51, Number 467, 1 June 2001, pp. 436-437(2)
- ²⁶ Smith P. On the unintended consequences of publishing performance data in the public sector. *Int J Pub Admin* 1995; 18: 277-310.
- ²⁷ Guro Huby, Marian Gerry, Brian McKinstry, Mike Porter, Johnstone Shaw, Robert Wrate Morale among general practitioners: qualitative study exploring relations between partnership arrangements, personal style, and workload *BMJ* 2002;325:140, doi:10.1136/bmj.325.7356.140

-
- ²⁸ Effect of diverging policy across the NHS Arturo Alvarez-Rosete, Gwyn Bevan, Nicholas Mays, Jennifer Dixon *BMJ* 2005;331:946-950, oi:10.1136/bmj.331.7522.946
- ²⁹ R. Lewis, J. Smith, and N. Mays. The big story. The impact of primary care-led commissioning and how commissioning might best develop in the future. *Health Serv.J.* 114 (5928):13-15, 2004.
- ³⁰ P. Wilton Primary care reform: a three country comparison of "budget holding". *Health Policy*, Volume 44, Issue 2, Pages 149-166
- ³¹ Atun RA, Menabde N, Saluvere K, Jesse M, Habicht J. Introducing a complex health innovation-Primary health care reforms in Estonia (multimethods evaluation). *Health Policy*. 2006 Jan 4;
- ³² Martin CM, Sturmberg JP. General practice--chaos, complexity and innovation. *Med J Aust.* 2005 Jul 18;183(2):106-9.
- ³³ Lamarche, P. A., Beaulieu, M-D., Pineault, R., Contandriopoulos, A.-P., Denis, J.L., & Haggerty, J. (2003) Choices for Changes: The Path for Restructuring Primary Healthcare Services in Canada. Ottawa
- ³⁴ Haggerty J and Martin C. Asking the Right Questions. The National Evaluation Strategy for Primary Health Care, Health Canada 2005
- ³⁵ Declaration of Alma-Ata International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978
- ³⁶ Declaration of Alma-Ata International Conference on Primary Health Care Opus cit
- ³⁷ Ferlie, E. B. & Shortell, S. M. (2001). Improving the quality of health care in the United Kingdom and the United States: a framework for change. *Milbank Q.*, 79, 281-315
- ³⁸ Campbell, S. M., Roland, M. O., & Buetow, S. A. (2000). Defining quality of care. *Social Science & Medicine*, 51, 1611-1625.
- ³⁹ Evans, D. B., Edejer, T. T., Lauer, J., Frenk, J., & Murray, C. J. (2001). Measuring quality: from the system to the provider. *Int J Qual Health Care*, 13, 439-446.
- ⁴⁰ Watson DR, Broemeling A.-M., Reid RJ, & Black C (2004). A Results-Based Logic Model for Primary Health Care. College of Health Disciplines - The University of British Columbia.
- ⁴¹ Webster G and Wray R personal communication February 2006.
- ⁴² Frankish J. (1999) Background Paper on Community Health Indicators for the Canadian Community Health Survey. Report for the Policy Development & Coordination Division, Health Canada.
- ⁴³ A Review of Scopes of Practice of Health Professions in Canada: A Balancing Act Health Council of Canada Nov 2005 www.healthcouncilcanada.ca.
- ⁴⁴ National Quality and Performance System for Divisions – APHCRI Consultancy Report – 2004
- ⁴⁵ Declaration of Alma-Ata International Conference on Primary Health Care Opus cit