ENHANCING INTERDISCIPLINARY COLLABORATION IN PRIMARY HEALTH CARE

AMÉLIORATION DE LA COLLABORATION INTERDISCIPLINAIRE DANS LES SOINS DE SANTÉ PRIMAIRES

Barriers and Facilitators to Enhancing Interdisciplinary Collaboration in Primary Health Care

E I C P

PRIMARY HEALTH CARE
A Framework That Fits

A C I S

LES SOINS DE SANTÉ PRIMAIRES
Une cadre qui réunit tous les morceaux

Professionals: Working Together to Strengthen Primary Health Care

The Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative focuses on how to create the conditions for health care providers everywhere in Canada to work together in the most effective and efficient way so they produce the best health outcomes for their patients and clients.

Canadians know that health care providers on the front line are there to respond with care and skill to their health care needs. Primary health care providers are not only committed to caring for their patients directly, they also facilitate access for patients to other specialized services. But, more and more Canadians are expecting better co-ordination between those providers and they want to optimize their access to the skills and competencies of a range of health care professionals. As much as they want to be treated for illness, they want health promotion advice and information about preventing disease and illness, too.

The EICP Initiative, funded through Health Canada's Primary Health Care Transition Fund, is designed to follow-up on the research evidence that interdisciplinary collaboration in primary health care has significant benefits for both patients and health care professionals. The Initiative spotlights the best practices and examples that show that collaboration is "value-added" for our health care system. The Initiative's legacy will be a body of research, a consultation process that will engage health care providers and get them thinking more about working together, and a framework for collaboration that encourages change and more co-operation.

The EICP Initiative will deliver:

- A set of principles and a framework that will enhance the prospects and options for more collaborative care in settings across the country;
- Research about best practices and the state of collaborative care in Canada;
- A toolkit to help primary health care providers work together more effectively; and
- Recommendations that will help the public, provincial/territorial governments, regional health authorities, regulators, private insurers and educators embrace and implement the principles and framework. With the leadership of some of the key players in primary health care in Canada, the EICP Initiative will capture the very best of what is being achieved in interdisciplinary collaboration in this country and will help us learn from it.

EICP Partners include:

- Canadian Association of Occupational Therapists
- Canadian Association of Social Workers
- Canadian Association of Speech-Language Pathologists and Audiologists
- Canadian Medical Association
- Canadian Nurses Association
- Canadian Pharmacists Association
- Canadian Physiotherapy Association
- Canadian Psychological Association
- College of Family Physicians of Canada
- Dietitians of Canada
- Canadian Coalition on Enhancing Preventative Practices of Health Professionals

Table of Contents

Foreword i

Executive Summary ii

Introduction 1

What Is Primary Health Care? 1

Scope and Location of Services 2

Barrier or Facilitator? Why Definitions Matter 2

Enhancing Interdisciplinary Collaboration: What Promotes Effective Teamwork? 3

Financing and Funding: Elements of Health Care Systems and the Public-Private Mix 4

Policy Instruments and Policy Goals 5

Funding Mechanisms as Barriers or Enablers 5
- Funding Flows 5
- Funding Provider Organizations 7
- Funding: Payment Mechanisms for Funding Health Providers and Their Incentives 8
- Funding Issues: Lumpy Cost Structures 11
- Funding Issues: Volatility 12
- Funding Issues: Risk Selection 12

From Individual Providers to Provider Organizations 14

Financing: Comprehensiveness, Insured Services and the *Canada Health Act* 16

Comprehensiveness Definitions and Primary Health Care 20
- Messages in the Documents Reviewed 21

Electronic Health Records 23

Production Characteristics and the Ability to Monitor Performance 25

Funding Models and Goal Attainment: Productivity 27

Regulatory and Liability Barriers 28

Regulatory Issues: Professions 28

Liability Considerations and Scope of Practice 30

Health Human Resources: Dilemmas 31

Health Human Resources: Forecasting Needs 32

Health Human Resources: Meeting Needs 33

Health Human Resources: Impact on Primary Health Care Models 35

Conclusion 35

Acknowledgements

Team for the preparation of *Barriers and Facilitators to Enhancing Interdisciplinary Collaboration in Primary Health Care*

Authors
Raisa Deber
Andrea Baumann

External Challenger
Wendy Nicklin

Internal Challengers
Yvette Diepenbrock

EICP Secretariat Reviewers
Charles Barrett
Linda Hunter
Gilles Rhéaume
Glen Roberts

Production Management
Ruth Coward
Nicholas Dike
Alison Hill
Jennifer Milks
Darlene Murray

Editing
Margot Andresen
Julie Swettenham

Project Management
Valerie Balderson

Team Lead
Glen Roberts

Foreword

Research is at the heart of the Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative. The Initiative has a mandate to take a hard look at the trend toward collaboration and teamwork in primary health care, both through a broad consultation process with key stakeholders in primary health care, and through commissioned research reports that target elements critical to the implementation and sustainability of interdisciplinary collaboration in primary health care.

The EICP Initiative research plan is designed to:

- Provide an overview of interdisciplinary collaboration in primary health care in Canada, including a literature review;
- Examine the three core elements that affect interdisciplinary collaboration in primary health care nationally:
  - the policy context
  - the responsibilities, capacity and attitudes of individual providers and health service organizations
  - public health and social context;
- Build a case for interdisciplinary collaboration in primary health care;
- Assess readiness for interdisciplinary collaboration in primary health care in Canada; and
- Develop recommendations to enhance interdisciplinary collaboration in primary health care.

The First Wave of EICP Research

The first wave of EICP research is comprised of four distinct research reports and captures domestic and international data about the workable options associated with collaboration.

The reports are:

1. Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada
2. Individual Providers and Health Care Organizations in Canada
3. Canadian Policy Context: Interdisciplinary Collaboration in Primary Health Care
4. Public Health and the Social Context for Interdisciplinary Collaboration

A subsequent report – "Barriers and Facilitators to Enhancing Interdisciplinary Collaboration in Primary Health Care" – provides an in-depth examination of some of the key issues that act as both challenges and opportunities to effective interdisciplinary collaboration in primary health care. This report provided a foundation for the discussions during EICP Barriers/Enablers task group sessions held in January 2005.

The research findings from these reports, along with input from the extensive EICP consultation sessions, will lead to a more complete understanding of the gap between the current state of primary health care in Canada and a possible future where interdisciplinary collaboration is encouraged and well-managed, so that it delivers benefits to patients/clients and health care providers.

These research reports are posted on the EICP web site.

For more information:
EICP Initiative
EICP Secretariat: 613-526-3090 ext. 460
E-mail: info@eicp-acis.ca
Web site: www.eicp-acis.ca

Executive Summary

This report, commissioned by the Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative, first explores the many ways in which primary health care is defined and then concentrates on funding, regulation, liability, electronic health records and health human resources. All of these elements can be both barriers and facilitators to interdisciplinary collaboration. This paper suggests that the nature of these elements varies according to the services included in the primary health care basket, the amount of funding available and how it is allocated.

In examining primary health care, the authors, Deber and Baumann, review the public–private mix and emphasize that it is critical to make the distinction among:

- How care is *financed* (i.e., the sources of funding);
- How it is *funded* (i.e., the way in which funds flow to providers); and
- How it is *delivered*.

They then explore different ways in which funds can flow from payers to providers, pinpointing the key differences between paying individual providers and paying provider organizations. They describe a number of potential payment mechanisms by which providers and provider organizations can be funded, and briefly review some of the advantages and disadvantages of each.

In particular, the report explores three key funding issues: lumpy cost structures (when costs come in relatively large chunks, including both capital expenditures and salaries for employees), volatility of costs (which can be difficult to control and can be particularly problematic for smaller organizations) and risk selection (by which insurers or organizations can choose patients with low anticipated health needs).

The authors observe that many advocates of primary health care reform suggest that a shift from fee-for-service to capitation (a fixed payment based on a patient group profile) or a blended funding model is necessary. This report notes that no funding model is ideal; policy is often about trading off advantages and disadvantages.

Deber and Baumann suggest that funding and financing are not the only issues that require intense focus. They suggest that those seeking reform should look not only at *how* services will be funded, but also at *what* services will be funded. The focus on the merits of fee-for-service versus capitated funding models ignores a key element: most non-physician services in primary health care are currently financed privately. Under the *Canada Health Act* (CHA), provincial insurance plans cover funding for physician and hospital services, but not for non-physicians' services performed outside hospitals. The authors contend that the set of legal definitions inherent in the Canadian Constitution and the CHA, as interpreted by provincial governments, are among the most significant barriers to successful implementation of comprehensive models of primary health care in Canada.

Health care falls under provincial jurisdiction and therefore, the CHA merely sets out federal conditions—tied to transfer payments only—and just for the sub-set of potential services it defines as "insured." The federal conditions are considered a floor, not a ceiling, for coverage. Expansion of the scope of services and providers to be covered, which most advocates of primary health care desire, may require additional resources.

The report then explores electronic health records (EHR). Although no fixed definition of an EHR exists, it is generally agreed to be a secure electronic record of an individual's health history. Many consider EHR to be critical for achieving another goal of interdisciplinary collaboration—improved continuity of care—while bringing the added benefits of reduced duplication and a lower incidence of adverse events. However, a number of potential barriers exist, which advocates are working hard to overcome. Some of these barriers relate to challenges with creating safe, accessible computer-generated records, while others relate to workflow and the ability of the health professionals to generate, add to and share these documents. Another barrier is cost. Both developmental and diffusion costs (in terms of ensuring health care providers in the field have the hardware and software necessary for implementing a common health record) are huge.

Regulation (for example, scopes of practice) clearly increases barriers to market entry, and there is considerable dispute within the policy community as to when (and which) regulatory barriers to competition are appropriate. At one extreme, it is vital that only qualified individuals be allowed to give complex care and perform potentially dangerous procedures. At the other extreme, many see regulation as a form of "turf protection" that serves to increase professional incomes, without necessarily improving patient outcomes.

Professions by definition require specialized knowledge, which includes expertise based on a body of theoretical knowledge, application of the knowledge, commitment to a code of ethics and operational autonomy. Regulation of professions is not static and, in fact, has changed over time across the country. At present, there appears to be a general trend towards a controlled acts model of self-regulation, which allows overlapping scopes of practice. Thus, although many cite regulatory issues as a potential barrier, they appear to be manageable, since they do not represent a clash of values. In short, regulation and legislation are often slow to change, but change is possible.

Liability issues, which also may constitute a barrier, arise from the enforcement of standards of practice. A professional performing below a set standard or outside his or her scope of practice can expect sanctions to be levied, not only through the courts (e.g., medical malpractice), but also through the appropriate complaints and discipline process at their respective professional regulatory bodies. In addition, provider organizations are often responsible for the practices of the professionals working within their facilities. In hospitals, for example, an established legal tradition partitions responsibilities (and liability) between professionals and the employing hospital. Additional research is required to better understand the impact of interdisciplinary collaboration on liability and tort reform.

Finally, Deber and Baumann explore, in some depth, issues involved in ensuring sufficient health human resources and policy alternatives (should policy-makers choose to increase health human resources). They point out that the proliferation of unregulated health care activities in the community sector is currently reducing some of the pressure on existing human resources. Indeed, the current existing shortage of health human resources has the potential to act as a facilitator to interdisciplinary practice to the extent that overloaded providers are less likely to feel threatened by colleagues taking on some of their work.

The authors conclude that EHR, approaches to regulation, liability considerations and health human resources (including the present supply of health professionals, impact of wage structures and the professional substitution debate) are all important, but not necessarily insurmountable

barriers to achieving interdisciplinary collaboration.

It is clear that the human resources required by our health care system will depend upon the scope of services offered. The authors remain adamant that there is no single solution to the problem of health care reform. They suggest that there are four policy alternatives:

1. Increase the resources to publicly funded primary health care;
2. Shift resources within publicly funded primary health care to new services and providers;
3. Continue to rely upon private sources of payment for non-physician services and use these as a revenue stream for the new primary health care teams or organizations; or
4. Link the reform directly to the available resources.

They do not suggest which option is preferable, but stress the importance of confronting the difficult implementation issues that they discuss in this report—funding, services covered under the CHA, electronic health records, regulation, liability and health human resources—directly and immediately, before our failure to do so allows them to sabotage otherwise well-laid plans for a stronger primary health care system for Canadians.

Introduction

This report was commissioned by the Enhancing Interdisciplinary Collaboration in Primary Health Care (EICP) Initiative. EICP is focused on determining how to create the conditions for health care providers to work together in the most effective and efficient way, while producing the best outcomes for patients/clients. This report is one of a series intended to clarify principles and a framework for interdisciplinary collaboration, which EICP has defined as including such issues as primary health care structures, health providers' payment mechanisms, liability and regulatory frameworks, and the issues and challenges related to primary health care reform. This report focuses on the following barriers and facilitators: funding, regulation, liability, electronic health records and health human resources.

What Is Primary Health Care?

Primary health care can de defined in a number of ways. In a review for the World Health Organization (WHO), Atun noted that more than 90 definitions exist.[1] Starfield's definition is among the most influential, and it is the one used by the World Bank and WHO:

> Primary care…is the basic level of health care provided equally to everyone. It addresses the most common problems in the community by providing preventive, curative and rehabilitative services to maximize health and well-being. It integrates care…and deals with the context…Primary care is distinguished from other types of care by clinical characteristics of patients and their problems…Primary care practitioners are…distinguished from their secondary and tertiary counterparts by the variety of problems encountered…primary care is the first point of contact with the health system.[2]

Health Canada's definition of primary health care also explicitly includes the multidisciplinary and preventative perspective:

> Primary health care is usually the first place patients go when they need health advice or care and it is the place responsible for co-ordinating the access to other parts of the health care system. Examples include visits to family doctors, nurse practitioners and mental health workers; telephone calls to health information lines; and advice received from pharmacists. It is also the best part of the health care system to prevent illness and injury and promote good health.[3]

The definition of primary health care that the EICP Initiative uses is similar and also stresses a population health perspective:

> Primary health care involves responding to illness within the broader determinants of health. It also includes co-ordinating, integrating and expanding systems and services to provide more population health, sickness prevention and health promotion by all disciplines. It encourages the best use of all health providers to maximize the potential of all health resources.[4]

In a comprehensive review of primary health care in Finland, the Netherlands, the United Kingdom, New Zealand, Australia and the United States, Marriott and Mable suggest the following series of what they term "essential elements:"[5]

- Citizen participation in governance, management and planning
- Citizen choice of organization and provider
- Rostering to an intermediary organization
- Physicians working in groups
- Multi-disciplinary efforts
- Gatekeeping, usually by general practitioners (GPs)

- Capitation (a fixed payment based on a patient group profile) as funding to the provider organizations
- Health information systems as a priority (rather than as an existing element)

Scope and Location of Services

These and the host of other definitions contain common themes, but also some subtle differences. One key issue differentiating models relates to what we will call "scope of services," that is, the precise activities that are to be incorporated within the care model. One major distinction among models is the extent to which they focus primarily on clinical/medical treatment or seek to address broader determinants of health. This is sometimes captured by the distinction between the terms "primary care" and "primary health care." As Marriott and Mable note:

> Primary care includes diagnosis, treatment and management of health problems with services delivered predominantly by physicians. Primary *health* care incorporates primary care but also recognizes and addresses the broader determinants of health, including population health, sickness prevention, and health promotion with services provided by physicians and other providers, often in group practice and multi-disciplinary teams.[5]

Making international comparisons of approaches to primary health care can be like comparing apples and oranges. Primary health care activities can be conducted in a variety of organizational structures by a variety of providers and do not always fall within the scope of organizations designated to provide primary health care. The responsibilities of the particular organizations being evaluated differ, and thus, so must their evaluation models. In Canada, for example, primary health care activities are handled not only by many other elements of the health care system (e.g., hospital-based clinics), but also by public health units and by organizations falling outside the health care system, including schools, occupational health and safety units (which may be within ministries of labour), environmental health units, and so on. Indeed, it has long been known that most of the determinants of health fall outside the scope of the health care system.[6,7,8]

Barrier or Facilitator? Why Definitions Matter

Assessing primary health care models requires clarification about the sorts of services that are being considered. This definitional question is a particular issue in Canada because of the way the *Canada Health Act* has defined "insured services."

Most health reformers agree that primary health care should be the foundation of a strong health care system.[1,9,10] They note growing dissatisfaction among providers and citizens alike, some of which might be alleviated by strengthening primary health care.[9,11] Canada has demonstrated commitment to this goal through official statements by federal/provincial/territorial health ministers and through grants from the Health Transition Fund towards a number of pilot and/or evaluation projects in primary health care.[3,4,11,12] However, progress on the ground has been relatively slow.[13]

Scrutinizing these efforts reveals a disparity between how "primary care reform" is defined in the literature and how it is implemented in Canada—and indeed, in most developed nations. Although the EICP Initiative defines primary health care fairly broadly, most of the projects implemented in Canada, including those funded by the Health Transition Fund, tend to

concentrate on primary care, and specifically, on physician services.[14]

Definitions of what is meant by primary health care are critical when assessing barriers to and facilitators of reform. Policy-makers rarely pursue single goals. Achieving one particular goal often involves trade-offs with others. For that reason, general agreement may be reached, but often breaks down at the implementation stage, which requires agreement on specifics.[15,16] Many health system elements can thus be either barriers or facilitators, depending upon the characteristics of the proposed models and the goals being pursued. In addition, while certain elements deemed "essential" seem desirable when considered in isolation, they may not always be compatible with one another. The impact of policy choices may also vary in different situations. For example, if the population to be served is relatively small and/or self-selected, capitation can be problematic. Indeed, such elements as capitation as the sole funding model and consumer choice not only present both advantages and disadvantages, viewed independently, but also may be somewhat incompatible with each other.

The review of the literature for this report suggests that two of the most important variables in assessing primary health care models are the scope of services to be included and how these services are funded. Confusing *how* services will be financed (i.e., emphasizing the need to shift from fee-for-service to capitation) with *what* services will be financed may be a prescription for misunderstanding and even implementation failure. This is one of the key findings of this report.

Enhancing Interdisciplinary Collaboration: What Promotes Effective Teamwork?

One of the cornerstones of primary health care is the move from solo practice to interdisciplinary or cross-disciplinary care. A considerable body of literature discusses the generic principles that drive effective teamwork in a variety of settings. Excellent summaries have already been produced for the EICP Steering Committee[11,17,18,19,20,21,22] and by professional groups and academics.[23,24,25,26,27,28,29,30,31,32,33,34,35,36] Some clarify the advantages of collaborative approaches within empowered teams, but they pay less attention to the practical details. Others attempt to identify policy barriers that can impede interdisciplinary collaboration; these barriers can operate at individual, organizational and systemic levels. For example, most stress the critical importance of communication, respect, trust, leadership and similar individual and organizational factors.[20,21,37] Another set of issues involves current professional practice, including scopes of practice. These are underpinned not only by legal and regulatory requirements, but also by individual beliefs. Policy responses may thus include both the modification of professional curricula (for future practitioners) and changes to legislative and regulatory requirements. Yet another set of issues relates to the supply, distribution and skills of health human resources.

Because the EICP process has already produced extensive reviews of many of these topics,[11,17-22] this report was commissioned to provide further detail on funding, regulation, liability, electronic health records, and health human resources. These fell into two major categories of potential barriers: those related to *financing and funding*, and those related to the *regulation and supply of health care professionals*, including issues of liability and

communication.[27] To facilitate movement from general "motherhood" statements to agreement on action, we begin with a policy framework that can be used to understand the implications of various policy options for funding health care systems, in general, and primary health care models, in particular.

Financing and Funding: Elements of Health Care Systems and the Public–Private Mix

Health care systems have several elements: how care is *financed*, how care is *delivered*, and how funds are *allocated* (more specifically, the allocation mechanisms used to flow funds from those who pay for care to those who deliver it).[38,39,40,41,42]

Although the terms "financing" and "funding" are often used synonymously "to describe the process of collecting money to fund health care,"[43] they frequently have slightly different nuances. Consistent with international usage, we will use the term *financing* to refer to the questions of how revenue is raised to pay for a good or service, that is the "function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system"[43] and the term *funding* to refer to "providing health care organizations with the financial resources required to carry out a general range of health-related activites."[43] In short, financing will refer to the source of funds, and funding will refer to the ways in which these funds are transferred to providers.

The emphasis in this paper will be on funding mechanisms, rather than on delivery mechanisms, although the two are clearly related.

The public and private sectors can both finance and deliver health care services. As Deber has noted, multiple levels of public and private financing and delivery exist.[40,44] *Public* can refer to the federal (national) government, provincial governments, regions within provinces, or local governments. Similarly, *private* can refer to for-profit investor-owned corporations (FP/c), for-profit small business (FP/s), not-for-profit organizations (NFPs), or individuals and their families. To further complicate matters, there are a number of quasi-public organizations that are nominally private, but heavily regulated by government. Canadian examples include workers' compensation boards and regional health authorities.

In Canada, the public sector finances about 70 per cent of health expenditures.[45,46] The shares paid by public and private sources vary considerably by sub-sector: public sources pay for about 99 per cent of physician expenditures and 90 per cent of hospital expenditures, but only approximately 10 per cent of expenditures for "other health professionals."[47]

One difficulty in monitoring (let alone changing) health care in Canada is that service delivery, in contrast to financing, is almost entirely private. A mix of NFPs (e.g., "public" hospitals), FP/s (e.g., most physicians, many clinics), and FP/c providers (e.g., medical laboratories, some clinics) deliver services. The precise mix depends upon the sub-sector and the province.[48] In this respect, Canada differs from such countries as Australia, the United Kingdom, Germany and Sweden, which all have a sizable proportion of "public" hospitals owned and operated by various levels of government. It is therefore easier for the governments of those countries to use "command-and-control" mechanisms.[49] Similarly, if government owns the primary health care centres, it is easier to mandate how its employees will practise. In contrast, the Canadian models that have been

proposed do not envision public delivery of primary health care services.

Policy Instruments and Policy Goals

Health systems and their sub-systems (including primary health care) pursue many goals. Lamarche et al. suggest that primary health care may have an impact on effectiveness, quality, access and continuity of care, and productivity and responsiveness to both service users and providers.[26] Watson and Wong also note that "a strong PHC [primary health care] system improves the level of distribution of population level health, buffers and effects of socio-economic gradients on health and attains these outcomes at lower cost than health systems that rely more extensively on secondary and tertiary care."[11] At a very broad level, the potential goals relate to cost, quality, access and process (e.g., accountability). Unfortunately for health reformers, the literature does not suggest a clear link between differing payment mechanisms and these health goals. Indeed, Lamarche et al. suggest that no single model can accomplish them all. The ability to accomplish these goals goes far beyond funding. It is mediated by: organizational factors; the population served; the services to be provided; the staff and skill mix; and such important intangibles as respect, communication and role clarity.

Governments also have an array of mechanisms they can use to implement policy goals. Political scientists have placed them on a continuum of increasing coerciveness. At one end, government can use information and encouragement ("exhortation"). It can also provide resources ("expenditure"), require certain courses of action ("regulation"), provide incentives/disincentives through the tax system ("taxation") or provide services itself ("public ownership").[50,51,52] Once exhortation fails, governments usually move to expenditure. Funding is, therefore, a policy instrument that can act as a barrier or an enabler, depending upon how it is implemented.

Funding Mechanisms as Barriers or Enablers

When considering financing/funding, it is important to distinguish between *how much* funding is provided and *how* that funding is allocated to services and providers. The authors of a number of the documents we reviewed noted the importance of ensuring that there are adequate resources to meet desired programming and support the health team.[21, 35] However, they commonly confused the issues of *how* and *how much*. They frequently expressed the view that current methods of reimbursement hinder collaborative relationships, citing the fact that physicians are paid fee for service (FFS), whereas most other professionals are paid a salary.[10,14,33] Indeed, 87 per cent of those who completed an EICP workbook felt that payment mechanisms were an obstacle to interdisciplinary care.[18]

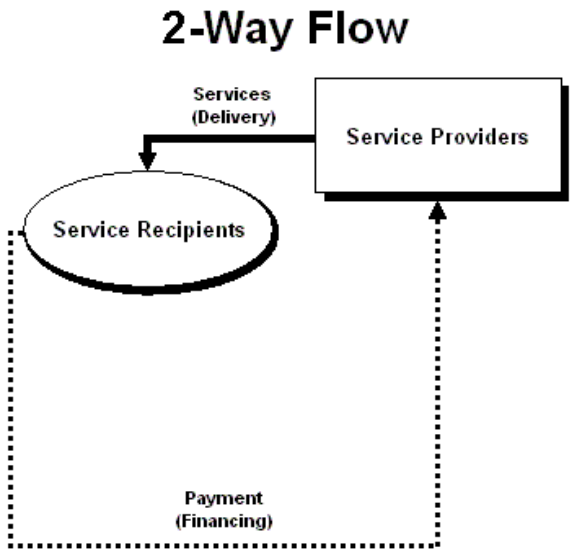
Payment mechanisms clearly affect incentives; however, a full understanding of the implications of funding and when it would act as a barrier or a facilitator requires a more nuanced approach. Therefore, it is important to examine some conceptual issues relating to funding and regulations.

Funding Flows

In a project for the Canadian Policy Research Network (CPRN), Hollander et al. developed a framework for analyzing funding models.[53] In it, they distinguish between two-way, three-way and four-way models of funding flows.

In all these models, a care recipient receives services from a care provider. The difference in these models lies in who pays the provider for those services. In a two-way flow model, the care recipient pays the provider directly. For example, if someone wants to purchase an over-the-counter pharmaceutical to relieve a headache, he or she simply exchanges money for aspirin (see Exhibit 1).

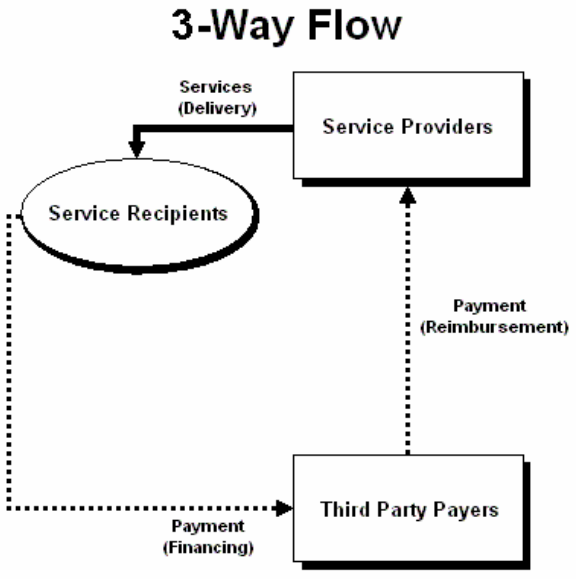
Exhibit 1



Source: Marcus Hollander and Raisa Deber

Although most goods and services in the economy follow a two-way flow model, most health care services do not. Because costs can be large and unmanageable, public policy in most developed countries has chosen to explicitly break the link between receiving certain types of services and paying for them. A three-way flow introduces a third-party payer, which can be public (e.g., government) or private (e.g., private insurer). Potential recipients of care give their money—in advance—to these third-party payers through taxes and/or premiums. In turn, when care is needed, the third-party payer then provides resources to the care providers (see Exhibit 2).

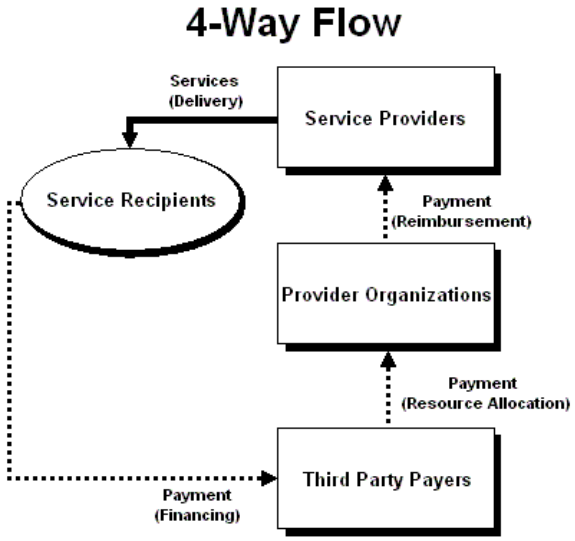
Exhibit 2



Source: Marcus Hollander and Raisa Deber

However, payers may prefer not to have to pay every care provider. Instead, payers can pass their resources on to a provider organization, which can, in turn, arrange with individual providers to provide the needed services. A common example involves hospital care; for the most part, insurers that want to finance hospital services do not pay the nurses, physiotherapists, pharmacists, or other service providers directly. Instead, they pay hospitals, which, in turn, pay the individual service providers. We term this a four-way flow model (see Exhibit 3).

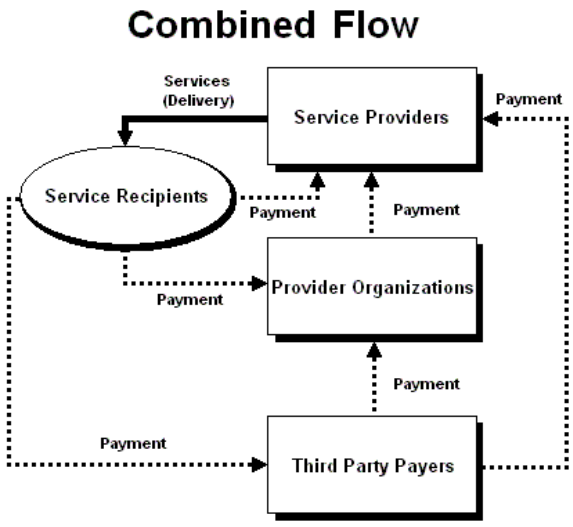
Exhibit 3



Source: Marcus Hollander and Raisa Deber

Finally, the models can be combined, with individual providers receiving revenues from individual care recipients, third-party payers and/or provider organizations. It is likely that payment mechanisms will differ for various services and, therefore, will vary considerably by sub-sector. A pediatrician, for example, may be paid directly for some services (writing notes or signing forms for parents) and be paid for others by insurers (routine visits) and provider organizations (on-call hospital duty). (See Exhibit 4.)

Exhibit 4



Source: Marcus Hollander and Raisa Deber

Funding: Provider Organizations

This distinction between individual providers and provider organizations is a critical one for analyzing payment models. It leads to the recognition that the funding arrangements used to pay provider organizations do not have to be the same as those used to pay individual providers within that organization. It also clarifies the point that the introduction of primary health care models implies a change in organizational form, from reliance upon relatively autonomous individuals in solo practice, to providers working within (and accountable to) a provider organization.

Note that what we are calling "provider organizations" resemble (but are not identical to) what Marriott and Mable termed "intermediary organizations."[5] Marriott and Mable blend the financing and delivery elements, and so, also include in their intermediary organizations category some third-party payers responsible for funding, but not delivery (e.g., sickness funds in the Netherlands). In contrast, the typology used in this report classifies sickness funds as third-party payers, reserving the term *provider*

organization for those bodies actually arranging to provide services to care recipients.

Funding: Payment Mechanisms for Funding Health Providers and Their Incentives

Table 1 categorizes some of the options that can be used to pay individuals or provider organizations, recognizing that blended models are common.[53]

The rows reflect the reality that payment can be made to provider organizations or to individual providers. In fact, provider organizations may be reimbursed on one basis and individual providers who work for them on another. For example, a hospital may receive a fixed budget and then pay its nurses on the basis of time for each shift they work. The columns represent a number of alternative ways to pay providers.

The first option is to pay providers on the basis of the costs they have incurred or are expected to incur. A common example is drug benefit programs; the individual providers (pharmacists) are reimbursed for the cost of the drugs plus a prescribing fee. Organizations may be given line-by-line budgets; these can be based on historical expenditure patterns or on other ways of predicting bills for such cost categories as wages and supplies.[54] The advantage of such models is that they are generally simple and easy to implement, and they reflect likely expenditures. The key disadvantages are that they lack flexibility (which can be remedied by aggregating line items and giving providers freedom to move funds across budget lines) and they offer little incentive to reduce costs. Indeed, higher costs can yield higher reimbursements.

Although purely cost-based formulas are still found in some sub-sectors where providers are not deemed to have the ability to control costs (drug benefits, particularly), there has been a tendency to move away from such formulas in an effort to bring in incentives for more efficient practices. However, most of the forms of reimbursement do contain, at least implicitly, a sense of what the likely costs will be. For example, fee schedules or capitation payments must be sufficient, so as to allow efficient providers to be financially viable.

The second option is to reimburse on the basis of *time* spent. The time units can be based on an hourly rate or aggregated into sessional fees or salaries. Time-based payments are simple to administer but do not contain any incentives to ensure that the time is well spent. On the positive side, there are no incentives to over-service or to "churn" patients. Providers may choose to spend more time with each client. Whether such additional time is cost-effective depends upon the nature of the visit, the needs of the client and

Table 1
Payment Mechanisms

Payment to..	Basis of Payment				
	Costs	**Time**	**Services**	**Population**	**Outcome**
Individual	Cost Plus	Salary Sessional Hourly	FFS* per task FFS per visit	N/A	Performance contracting
Organization	Line by line budgets Average cost models	Per diem Hourly	FFS DRG**	Capitation Fixed budget for a catchment area	Performance contracting

*FFS = fee for service
**DRG = diagnosis related groups

the opportunity costs of other things that might have been done instead during that time. On the down side, productivity may be negatively affected (e.g., fewer services provided) as well as quality (e.g., no way to ensure that the services provided are appropriate, necessary or of high quality). As a result, other mechanisms usually have to be put into place to ensure quality and appropriateness. These usually fall within the realm of management, organizational culture and human resource policies, rather than funding, per se.

For the most part, almost all health providers other than physicians are usually paid on the basis of time spent, and even physicians may be paid sessional fees (e.g., to cover a shift in an emergency room).

Reimbursement on the basis of *services* provided is also common, usually through paying a fixed fee for each service. These funding models relate payments to a standardized fee schedule, regardless of the resources used by a particular episode of care. The incentives are for greater productivity (and greater access), but at the potential expense of abbreviated visit times ("assembly line care") and incentives to over-service. Within organizations, service-based payments may be based on the particular diagnosis (e.g., Diagnosis Related Group) types of models. The provider organization is paid a flat rate for treatment of the medical condition, thereby providing an incentive to be efficient in how services are delivered. These funding models may present implementation difficulties if unit costs legitimately vary across organizations.

These difficulties may arise because payments are often based on average costs, which may not be appropriate for all settings. In the language of accounting, an "average cost" contains both fixed cost and marginal cost components. For example, an emergency room in a small community may not see many patients. This, in turn, inflates their cost per case beyond an average cost for busier facilities. Service-based models contain incentives for providers to decrease their costs to deliver each service (including the time spent per visit) and to increase the volume of services they offer, as long as the payment for those services exceeds the cost of providing them. This incentive can be viewed as efficiency, or skimping, depending upon what is cut. The Kirby Report recommends moving to service-based funding for hospitals in the hope that efficiency will result, but it recognizes that small hospitals may need special funding.[10] Others have expressed concern that service-based funding may increase incentives to provide inappropriate (or marginally appropriate) care.

At present, almost all physician services in Canada are reimbursed on a FFS basis, although some hospital-based providers are reimbursed through alternative payment plans. Pharmacists are also paid through a blend of cost reimbursement and fee-for-service. Community-based physiotherapy services are often paid FFS, although basing these on programs of care rather than individual visits is becoming increasingly common.

The next potential basis for payment is related to the *population* served. Regional models may, in theory, allocate money on the basis of the population of a particular region. However, if the model assumes that people should be free to choose where they receive care, a more explicit way of determining who is serving which populations is required. One common approach is to require that individuals designate their provider—this approach is often termed "rostering." Providers can then be given a fixed payment for each individual on their roster; this "capitated" payment may be adjusted for a variety of factors (usually, age and sex, but possibly including morbidity and/or socio-economic factors). Canadian health reformers often argue that primary health care should be

financed on a capitation basis. Indeed, capitation-based funding is often suggested as an "essential element" of primary health care models.[5]

No single individual can provide care 24 hours a day, seven days a week, therefore capitation-based payments must be tied to the assumption that the recipient of that payment will ensure delivery of services whenever they are needed. Such funding arrangements require a shift from solo practice to a provider organization with the resources to provide the agreed-upon scope of services to the defined population. The organization receiving capitation payments may purchase these services from providers in a number of ways, including a mechanism as simple as continuing with business as usual during office hours, but contracting out after-hours care to another organization. Capitation payments to an organization do not require that the individuals actually providing services also be paid by capitation; they may be paid for their time (e.g., salary, sessional fees) and/or for the particular services they provide.[55] Primary care physicians are paid by capitation in many jurisdictions, although this usually co-exists with salary or fee-for-service components.[56]

Capitation contains incentives that differ considerably from service-based funding. FFS models are open-ended. In contrast, capitation allows payers to cap the total amount they will have to pay. This gives providers incentives to control their cost structures. One way to do this is to be more efficient and adopt best practices. However, another is to offload the care of costly clients to other organizations, rather than providing those services directly. For example, in a letter to *Canadian Family Physician*, a Glasgow-trained family doctor suggested that, under capitation, "we were encouraged to enrol as many patients as possible to maximize our income, but were discouraged from treating them." Instead, they referred as much care as possible to the local hospital, whose costs were not charged back to the practice.[57]

In the United States, over the past decades, payment has been shifting away from fee-for-service payment to capitation, although blended models are common. However, health maintenance organizations often receive fixed payments to provide health care and may contract with other providers to provide these services on a capitation basis.[58]

An extensive literature exists on capitation funding and its implications.[56,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77] Because capitation is so frequently suggested as the optimal mode of funding primary health care models, this report will elaborate on some of its characteristics—which can be both barriers and facilitators—in a subsequent section.

Finally, in theory, providers could be paid based on the *outcomes* achieved. To date, there are relatively few examples of successful performance-based contracting in health care. Some of these problems are technical ones. For example, data requirements can be significant, and the "production characteristics" of particular services (as described later) may not be a good match with performance measurement. Some, however, are conceptual. To the extent that health status is determined by factors beyond the control of health care systems, it is difficult to justify rewarding or penalizing organizations for outcomes that they cannot control. At the margin, however, performance-based elements may be a valuable component of a blended funding model (e.g., paying bonuses to those provider organizations that meet immunization targets).

At first glance, this framework excludes global budgets. However, such budgets (much like fee schedules) must be based on something, and global budgets are likely to reflect a mix of

estimated costs, time and services that will be delivered.

In his comprehensive review of the advantages and disadvantages of these payment mechanisms, Robinson notes that none are perfect; all contain inappropriate incentives.

> Fee-for-service rewards the provision of inappropriate services, the fraudulent upcoding of visits and procedures, and the churning of "ping-pong" referrals among specialists. Capitation rewards the denial of appropriate services, the dumping of the chronically ill, and a narrow scope of practice that refers out every time-consuming patient. Salary undermines productivity, condones on-the-job leisure, and fosters a bureaucratic mentality in which every procedure is someone else's problem.[78]

Robinson suggests paying greater attention to both blended payment mechanisms and the host of non-price mechanisms, by which appropriate behaviour can be monitored and motivated. A similar analysis, within the context of promoting shared mental health care in Canada, reached similar conclusions.[79]

Designing funding mechanisms requires recognition that any payment mechanism, regardless of the basis on which funds are paid, must generate enough revenues to cover the expected costs, which includes providing for reasonable compensation to those providing services. As Deber has noted, designing such mechanisms requires attention to cost structure.[55]

Funding Issues: Lumpy Cost Structures

Economists often view health providers as "firms" that convert such resources as labour (time and skills), raw materials, and plant and equipment into a product.[80] For example, a primary health care practice may convert office space and the time of health professionals into a well-baby visit.

In turn, this way of looking at care delivery focuses attention on the nature of these costs. Economists use the term *cost structure* to refer to the resources needed to produce the desired goods and services. These can be divided into relatively "fixed costs" (e.g., maintaining an office) and the "variable costs" needed to produce each additional unit of output. (In the long term, there are no fixed costs, since offices can move, and staff can be hired or dismissed. However, in the short term, they do exist.) An efficient firm will be able to produce its products at the minimum cost. Poorly designed reimbursement mechanisms can thus produce unwanted consequences.

One set of issues arises if costs are "lumpy"—that is, they come in relatively large chunks. Fixed costs are usually quite lumpy. One cannot easily offload the costs of a temporarily empty examination room, or hire one hour of a physician, nurse, or nutritionist to manage a temporary bottleneck. There is usually an irreducible cost of maintaining a clinic, even if no patients appear.

Capitation formulas, in contrast, are usually based on the average costs of handling the patients for whom the provider organization has taken responsibility. If the cost structure is lumpy, then adding a patient, at the margin, will generate a "surplus" (in that the additional payment will be greater than the cost of handling him/her), while losing a patient, at the margin, will generate a "deficit" (in that the payment loss

is greater than the "savings" from not seeing him/her). Similar problems can arise in other sectors with lumpy cost structures, such as school boards, hospitals and universities, if they are paid on an average-cost basis. Under those circumstances, if the cost of having an additional student in a class (or patient in an under-capacity office) is trivial, the fiscal gain from increasing the number served can be substantial. Conversely, if savings from having one less student or one less patient are trivial (i.e., the class or office must still be staffed), the fiscal loss from enrolment decline can pose a major threat to sustainability for those students or patients remaining.

Funding Issues: Volatility

Volatility of costs may also threaten fiscal survival if the provider organization is too small. Volatility arises because averages are just that—the mid-range of peaks and valleys. To the extent that the distribution of expenditures does not group tightly around its mean, payments will be too generous for those falling below the mean and inadequate for those in the upper tail. If variation is random, then such volatility is likely to even out over time; high-spending years might be followed by low-spending ones. In the short run, however, a very high-cost patient could bankrupt an organization.[55] Such circumstances could be managed through some combination of larger groups (Primary Care Groups in the United Kingdom average 100,000 clients) and re-insurance/stop-loss protection catastrophic expenditures.[56] However, even such policies do not deal with the issues of risk selection.

Funding Issues: Risk Selection

A major potential problem with any capped funding mechanisms occurs when costs are incurred as a result of factors beyond the control of providers, but those costs are not recognized by the funding formula. Capitation, for example, may assign a fixed cost for every patient. However, it is well recognized that certain patients have more severe underlying conditions and a greater need for time and services.[81] As a consequence, the costs incurred by a population are highly skewed, with a small proportion of individuals accounting for the vast majority of expenditures.[55,82,83] Because the most profitable patients tend to be those at lowest risk of incurring expenditures, strong incentives exist for provider organizations to avoid high-cost individuals. In contrast to any capped mechanism, FFS payment offers providers incentives to provide services.

Although professionalism strongly mitigates the extent to which health providers will respond to these fiscal incentives, a variety of studies has clarified that money does influence provider organizations. For example, a study of a managed care program for blind and disabled beneficiaries in Tennessee found "substantial evidence of persistent risk selection among plans."[84] Another U.S. study found that 40 per cent of the physicians surveyed "encouraged more complex and ill patients to avoid capitated plans" and 23 per cent encouraged their healthier patients to join.[85]

The usual response by advocates of capitation has been an attempt to "risk-adjust" the payment rates so that they more accurately reflect the costs likely to be incurred. However, several reviews of risk adjustment have reached similar conclusions: there is no commonly accepted way of doing risk adjustment, and existing approaches do not explain much of the variation in expenditures.[56,58,65,71,72,86,87,88,89,90,91,92] In general, they do not yet explain a high proportion of the variation in costs. Age and sex alone explain less than 5 per cent of the variance (usually much less), while the sort of information that is helpful is expensive to collect, potentially invasive of privacy and may introduce perverse incentives of its own. (As one example, prior expenditure is a relatively good predictor of future expenditure, but using that measure, in

effect, encourages providers to increase costs, rather than pursue efficiencies.)

As a consequence, most existing methods will overpay some providers and underpay others. Economic incentives will encourage the underpaid providers to either exit that market—which can accentuate access issues, particularly in an environment of health human resources shortages—or attempt to systematically avoid high-cost patients. In practice, this can be relatively simple (e.g., providers can emphasize the sort of services that are attractive to low-cost patients, such as wellness programs, and de-emphasize the sort of services that are attractive to high-cost individuals, such as mental health care). At the same time, overpaid providers continue to "reap undeserved rewards."[78] For example, this dynamic was seen to be operating in Ontario's experiments with Health Service Organizations (HSOs), which encouraged physicians to roster low-needs clients and discouraged them from rostering those likely to incur higher costs. As a result, HSOs were seen to be more expensive than their FFS counterparts.[60,93,94]

From the viewpoint of health reform, the implications are paradoxical. Although capitation is widely cited as the key to improving quality of care, a badly designed capitation model may instead result in adverse implications, particularly for vulnerable populations. The reason springs directly from the cost structure considerations discussed above—most capitation models do not account for the higher costs of high-needs populations and, as such, are likely to discourage primary health care providers from caring for the patients most likely to benefit from interdisciplinary practice.

Cost structures impose a tension between organizational stability and service integration. Primary health care reformers tend to urge the inclusion of a very comprehensive array of services. An often-stated rationale is that this is necessary to improve co-ordination of care and discourage cost-shifting across silos of funding. For example, a recent policy synthesis suggested that "funding of primary care should be allowed on a per capita formula and should include specialized medical and hospital services, drugs, diagnostic and therapeutic services, homecare and palliative services."[26] Regardless of the undoubted merits of promoting clinical integration and co-ordinated care, such comprehensive models also introduce greater volatility and an associated fiscal risk. One critically ill patient who requires extensive services could put a highly integrated practice in fiscal jeopardy. Adding more services, without increasing the size of the population to be served, also brings up the question of critical mass. In effect, these models represent a policy trade-off between comprehensiveness and size. At the extreme, they might require all of those providing primary health care services to work within provider organizations that serve 100,000 people. Clearly, such models are unlikely to be viable in much of Canada where the population is too small, and they may be unattractive to many potential patients and providers, even in larger communities.

In our view, the trade-offs suggest that it is probably unwise to make primary health care organizations fiscally responsible for such a wide scope of services, although greater co-ordination with other providers (including the support of virtual networks) would seem highly appropriate. Others clearly disagree. However, our conceptual framework suggests that structural elements and context will yield different results under different circumstances. We suspect that it may be unwise to rely upon any single mode of payment, particularly for provider organizations that are as small as most primary health care practices tend to be. Blended models, varied to take account of local conditions, would likely make the most sense.

From Individual Providers to Provider Organizations

The conceptual funding framework outlines described in "Funding Flows" require that most primary health care reform models move from three-way to four-way funding models, allowing third-party payers to deal with provider organizations rather than continuing to deal with individual providers. This paper will not examine the advantages and disadvantages of provider organizations versus solo practices, as other EICP reports cover them well. However, this report clarifies that primary health care models will have to make several critical "design decisions" that will, in turn, determine how funding models affect collaborative practice. We highlight some of these decisions here:

1. It is critical to determine the *scope of services* the provider organization will be responsible for providing. This affects the range of professionals whose skills might be called upon. In her report, Nolte notes the following:

   > The composition of a team depends on the client being served and the environment in which it is working. Teams change and evolve to meet the needs of patients and groups of patients and can include nurses, physicians, dietitians, nurse practitioners, physiotherapists, occupational therapists, social workers, mental health workers, psychologists, pharmacists, speech therapists, family service workers and other practitioners required to respond to the needs of the client.[21]

   Clearly, not all potential clients will benefit equally from all of these services. Some will need professional services; others will not. A review of collaborative practice in Quebec's Centres Locales de Services Communautaire (CLSCs) suggests that context is critical, and therefore, interdisciplinary practice is far less likely to develop when potential clients need only stand-alone professional interventions.[37]
2. It is critical to determine the *size* of the population the provider organization will serve. As noted, the literature clearly suggests, and health providers recognize, that not all patients will need all services; not everyone will need a consultation with a pharmacist or a nutritionist, but selected patients will benefit greatly. Size thus helps determine which services will have a large enough population (critical mass) to justify hiring particular providers, as opposed to contracting out such services. The size and characteristics of the population being served will be a crucial factor in determining which professionals should be an integral part of the team. For example, if a particular organization provides services to populations with specific diseases, the service needs would be different from organizations that serve a relatively healthy clientele.[21,37]
3. Equally critical is determining how to identify the individuals the provider organization will serve. Will the population be rostered? Will it serve everyone in a particular geographical unit? Will the organization simply serve those who "turn up" for a particular service? Will the provider organization be able to choose its clients? How much choice will clients themselves have? Primary health care initiatives in less populated areas, where patients' options are generally more limited or non-existent, do not face the same sort of risk selection issues that larger urban settings do.[95]
4. The provider organization will have to determine who provides particular services; this leads to issues of scope of practice, and accountability and regulatory frameworks. Nonetheless, the literature suggests that questions about the boundaries between nurse practitioners and family practitioners,

> for example, are largely perceptual rather than based on evidence.[27]

This conceptual framework emphasizes that primary health care reform can be seen as a mechanism for replacing solo practitioners with provider organizations, and for giving them a mandate to handle specified services. Certainly, moving from individual providers to groups is an essential precondition if policy-makers were to implement capitation funding. However, it would seem equally possible to fund primary health care organizations on budget-based models and still realize most of the advantages of primary health care.

From the viewpoint of barriers and facilitators, introducing provider organizations would appear to be a necessary, if not sufficient, precondition for collaborative practice, as envisioned in EICP documents. That is because, if reimbursement goes to individuals, no mechanism exists to pay for other team members. If funding instead goes to a provider organization and there are no regulatory barriers—such as requirements that the physician see each patient personally in order to be reimbursed—then there may be great incentives to use a different mix of providers, as long as this can be cost-effective. However, for this to happen, there must be a critical mass of patients who might benefit.

Accordingly, model designers should be aware that a number of "essential elements" of other primary health care models may contradict one another. As one example, Marriott and Mable argue that free choice of provider organizations and capitation are both essential elements.[5] Yet, capitation models contain strong incentives for provider organizations to practise risk selection, and free choice provides a mechanism for implementing it. (Although issues of parallel private sector alternatives are beyond the scope of this report, such systems have strong incentives to select low-risk patients.) Even strong advocates of integrated capitation models note the risks of financial incentives with risk selection:

> The method of funding of these models may, however, negatively affect the clinical decisions of primary care professionals. It may provide an incentive to balance the financial risks against the severity or the complexity of people's health problems in the selection of clients.[26]

Lamarche et al. suggest that minimizing this risk is feasible, as long as two elements are present: the per capita amount payable must have a "strong relationship" with the anticipated costs of caring for the population to be served, and risk-sharing systems must be put in place to ensure that the financial viability of a provider organization is not threatened by a few high-use individuals. These are sensible precautions. However, because these authors also suggest inclusion of an extremely wide scope of services, "to include non-medical primary healthcare, specialized medical and hospital services, drugs, diagnostic and therapeutic services, homecare and palliative care," it seems plausible that such models would be feasible only if applied to rather large populations, which may not be workable in many Canadian communities.[26]

In that connection, it is striking that the models reviewed by Marriott and Mable incorporate targeted funds, make relatively limited use of non-physician providers (with the exception of Finland, where GPs tended to be on salary) and have encountered strong physician resistance. It is also notable that the more comprehensive international models cited could not avoid issues of risk selection, even though they tended to serve large populations (Primary Group Practices in the United Kingdom had rosters between 46,000 and 255,000 patients).[5] In short, implementation of primary health care models may not require all elements to be in place to realize many of the benefits.

Financing: Comprehensiveness, Insured Services and the Canada Health Act

Although "comprehensive services" is one of the key principles suggested in most of the documents produced as part of the EICP process,"[28,96] the ability to implement this principle is influenced by the way in which Canadian jurisdictions have defined *insured services*. The set of legal definitions inherent in the Canadian Constitution and the *Canada Health Act* are, in our judgment, among the most significant barriers to successful implementation of comprehensive models of primary health care in this country.

In the Constitution, health care falls largely under provincial jurisdiction. This means that progress must be made province by province and reflect the realities in each. There is considerable controversy as to the desirability of having national standards dictate provincial policies. While some believe it is essential, other organizations, such as the Canadian Association of Social Workers, have adopted "subsidiarity" and "constitutional integrity" as core principles.[28]

Should the federal government wish to encourage national standards, the main policy lever it has is financing. To receive federal funds for health care, provincial insurance plans must comply with federal terms and conditions as exemplified in the *Canada Health Act*, 1984 (CHA).[97] To what extent can this legislation act as a barrier or as a facilitator?

At first glance, the CHA might be used to facilitate the broader view of health inherent in the definition of primary health care. The preamble to the CHA defines *health care* broadly, citing as one reason for the legislation:

> …that Canadians can achieve further improvements in their well-being through combining individual lifestyles that emphasize fitness, prevention of disease and health promotion with collective action against the social, environmental and occupational causes of disease, and that they desire a system of health services that will promote physical and mental health and protection against disease;
> …that future improvements in health will require the cooperative partnership of governments, health professionals, voluntary organizations and individual Canadians.

Section 3 provides further support to expanding the definition of *care*. It reads:

> 3. It is hereby declared that the primary objective of Canadian health care policy is to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers.

The next section stresses that the purpose of the CHA is far narrower. Because health care is under provincial jurisdiction, the Act merely sets out federal conditions, and only for the sub-set of potential services it defines as insured.

> 4. The purpose of this Act is to establish criteria and conditions in respect of insured health services and extended health care services provided under provincial law that must be met before a full cash contribution may be made.

In short, the Act is intended to be both a barrier and facilitator. It curtails the latitude of provinces in some areas and allows them considerable freedom of independent action in other areas. What are the criteria and conditions? Five are specified in Section 7 of the CHA:

public administration; comprehensiveness; universality; portability; and accessibility.

The CHA goes on to define all of these terms. For primary health care, the most important of the five are the requirements that everyone be covered (universality), for all insured services (comprehensiveness) and without financial barriers (accessibility).

The definition of *universality* thus precludes risk selection by the provincial health insurance plan. Everyone must be covered; the province cannot refuse to cover legal residents just because they are likely to be high-cost. This principle differs from systems allowing third-party payers to compete for clients, which encourages risk selection. In the United States, or in the Canadian market for third-party health and travel insurance, insurers may refuse to cover high-risk individuals at all, exclude pre-existing conditions, and/or charge such high premiums that coverage is effectively denied.

> Section 10 of the CHA stipulates: "In order to satisfy the criterion respecting *universality*, the health care insurance plan of a province must entitle one hundred per cent of the insured persons of the province to the insured health services provided for by the plan on uniform terms and conditions."

However, this condition applies only to the provincial health insurance plan. Accordingly, it does not preclude risk selection by provider organizations, should the province choose to move from service-based funding to capped approaches. This condition may thus be a barrier—in our view a fully appropriate one—to primary health care models that allow providers to decide which individuals they wish to enrol. Indeed, they may arguably apply to models that allow provider organizations to take measures intended to discourage high-cost individuals. The CHA universality provision thus implies that regardless of the model chosen, some mechanisms will need to be incorporated to ensure that someone takes responsibility for caring for high-cost clients.

The CHA definition of *accessibility* also has implications for primary health care models. It precludes additional charges to insured persons for insured services and thus constrains provider organizations in the revenue sources that will be available to them. However, it does *not* preclude them from charging additional sums for uninsured services or for uninsured persons. It also does not require either full or equal access; "reasonable access," although not fully defined, would presumably allow variability in the ability to access care across jurisdictions and/or organizations. In short, this provision (coupled with the comprehensiveness definitions discussed below) leaves options for provider organizations to incorporate a wide array of uninsured services and to charge both patients and insurers for them. (In turn, this opens up the public–private financing debates so evident in the Romanow and Kirby processes.) The CHA defines *accessibility* as follows:

> 12. (1) In order to satisfy the criterion respecting *accessibility*, the health care insurance plan of a province:
> (a) must provide for insured health services on uniform terms and conditions and on a basis that does not impede or preclude, either directly or indirectly, whether by charges made to insured persons or otherwise, reasonable access to those services by insured persons;
> (b) must provide for payment for insured health services in accordance with a tariff or system of payment authorized by the law of the province;
> (c) must provide for reasonable compensation for all insured health services rendered by medical practitioners or dentists; and

> (d) must provide for the payment of amounts to hospitals, including hospitals owned or operated by Canada, in respect of the cost of insured health services.

The definition of *accessibility* also goes some distance in requiring "reasonable compensation," but only for insured services offered by physicians, dentists and hospitals. (As will be noted, however, almost no dental services qualify as insured services under the terms of the CHA, making that provision somewhat moot.) The terms are also somewhat open to interpretation. In the case of hospitals, they mandate a result—the costs must be covered. However, in the case of physicians, they mandate only a process:

> 12(2) In respect of any province in which extra-billing is not permitted, paragraph (1)(c) shall be deemed to be complied with if the province has chosen to enter into, and has entered into, an agreement with the medical practitioners and dentists of the province that provides
> (a) for negotiations relating to compensation for insured health services between the province and provincial organizations that represent practicing medical practitioners or dentists in the province;
> (b) for the settlement of disputes relating to compensation through, at the option of the appropriate provincial organizations referred to in paragraph (a), conciliation or binding arbitration by a panel that is equally representative of the provincial organizations and the province and that has an independent chairman; and
> (c) that a decision of a panel referred to in paragraph (b) may not be altered except by an Act of the legislature of the province.

This provision thus provides a barrier to implementing funding mechanisms seen to violate the reasonable compensation provision, although it does not require that providers be satisfied with their remuneration.

The barriers discussed can be seen as relatively uncontentious. They constrain policy, but do so in ways that most observers have deemed appropriate. In contrast, in our view, one of the most important barriers to interdisciplinary practice arises from the nuances inherent in the CHA's definition of comprehensiveness. The precise wording is:

> 9. In order to satisfy the criterion respecting *comprehensiveness*, the health care insurance plan of a province must insure all insured health services provided by hospitals, medical practitioners or dentists, and where the law of the province so permits, similar or additional services rendered by other health care practitioners.

Note that this provision in one sense is only a barrier to de-insuring such services. It becomes a barrier to interdisciplinary practice largely because provinces, feeling under fiscal pressure, have interpreted the CHA conditions as a ceiling, rather than as a floor, and frequently refuse to insure services unless required to do so by the CHA's terms and conditions. This is by no means universal; many provinces can and do extend coverage far beyond the national requirements. But enough examples exist of provincial governments choosing to de-insure services that fall outside the Act (or refusing to cover them altogether) that it is worth examining the precise definitions within the Act:

> *insured health services* means hospital services, physician services and surgical-dental services provided to insured persons, but does not include any health services that a person is entitled to and eligible for under any other Act of Parliament or under any Act of legislature of a province that relates to workers' or workmen's compensation;

> *extended health care services* means the following services, as more particularly defined in the regulations, provided for residents of a province, namely,
> (a) nursing home intermediate care service,
> (b) adult residential care service,
> (c) home care service, and
> (d) ambulatory health care service.

Where would primary health care services fit into these definitions? To analyze this, we can examine the CHA definitions of the three components of insured health services:

> *hospital services* means any of the following services provided to in-patients or out-patients at a hospital, if the services are medically necessary for the purpose of maintaining health, preventing disease or diagnosing or treating an injury, illness or disability, namely,
> (a) accommodation and meals at a standard or public ward level and preferred accommodation if medically required,
> (b) nursing service,
> (c) laboratory, radiological and other diagnostic procedures, together with the necessary interpretations,
> (d) drugs, biologicals and related preparations when administered in the hospital,
> (e) use of operating room, case room and anaesthetic facilities, including necessary equipment and supplies,
> (f) medical and surgical equipment and supplies,
> (g) use of radiotherapy facilities,
> (h) use of physiotherapy facilities, and
> (i) services provided by persons who receive remuneration therefore from the hospital, but does not include services that are excluded by the regulations;
>
> *physician services* means any medically required services rendered by medical practitioners;
>
> *surgical-dental services* means any medically or dentally required surgical-dental procedures performed by a dentist in a hospital, where a hospital is required for the proper performance of the procedures;

Since hospitals are almost never required for surgical-dental services in this era of day surgery, it is not surprising that Canadian Institute for Health Information (CIHI) reports that about 99 per cent of dental services are privately financed. The CHA also defines *hospital* and *medical practitioners* as follows:

> *hospital* includes any facility or portion thereof that provides hospital care, including acute, rehabilitative or chronic care, but does not include:
> (a) a hospital or institution primarily for the mentally disordered, or
> (b) a facility or portion thereof that provides nursing home intermediate care service or adult residential care service, or comparable services for children;
>
> *medical practitioner* means a person lawfully entitled to practise medicine in the place in which the practice is carried on by that person;

The CHA permits, but does not require, provincial insurance plans to cover similar services covered by health care practitioners, defined as follows:

> *health care practitioner* means a person lawfully entitled under the law of a province to provide health services in the place in which the services are provided by that person.

The CHA lists what was intended to be the minimum health services that must be insured. Provinces are free to go beyond the terms of the Act, and many have done so. However, recent studies have noted that provinces under fiscal

constraint have often chosen to interpret this floor as a ceiling, and de-list/de-insure care that falls outside the CHA's definition of medical necessity.[15]

Comprehensiveness Definitions and Primary Health Care

The CHA definitions present a major problem for primary health care models. It draws distinctions across providers—care given by physicians must be fully paid for, while care given by other providers need not be. Ontario, for example, defines 24 health professions, but requires public payment only for physicians and midwives (designated by the province as "health care practitioners" under the CHA). It draws distinctions across sites of care—necessary care by non-physicians given in hospitals must be fully insured, while similar care in the community does not receive such prominence from the provisions of the Act.

Can primary health care services fall under the definitions of *extended health services*? The short answer is no—the enumerated services do not encompass primary health care activities. Even if this had been the case, however, the terms and conditions of CHA do not apply to extended health services.

The barrier becomes apparent. Current primary care funding, for the most part, does not currently encompass most of the activities envisioned by reformers as falling within the scope of a comprehensive primary health care service. It does not encompass health promotion and rehabilitation unless those services are provided by physicians, within hospitals, or by other organizations beyond the scope of the CHA (e.g., public health units, schools). Some of these non-included services have been shown to be cost-effective if targeted to vulnerable populations; one example is a case management program for mood-disordered single parents on social assistance, which was provided outside the primary health care system by public health nurses.[98]

If one assumes that the only issue is the mode of reimbursement, then one also implicitly assumes that existing funding envelopes will be sufficient to pay for the envisioned full range of activities and providers. This is unlikely to be the case. Indeed, Watson and Wong have independently reached similar conclusions.[11]

This analysis was confirmed by the recent Supreme Court of Canada decision in the Auton case. Part of its decision read:

> In this case, the government's conduct did not infringe the petitioners' equality rights. The benefit claimed—"funding for all medically required treatment"—is not provided by law. The *Canada Health Act* and the relevant British Columbia legislation do not promise that any Canadian will receive funding for all medically required treatment. All that is conferred is core funding for services delivered by medical practitioners and, at a province's discretion, funding or partial funding for non-core services, which, in the case of British Columbia, are delivered by classes of "health care practitioners" named by the province. More specifically, the law did not provide for funding for ABA/IBI therapy for autistic children. At the time of the trial, the province had not designated providers of ABA/IBI therapy as "health care practitioners" whose services could be funded under the plan. Since the government had not designated ABA/IBI therapists as "health care practitioners," the administrative body charged with administration of the provincial legislation had no power to order funding for ABA/IBI therapy.

The legislative scheme is not itself discriminatory in providing funding for non-core services to some groups while denying funding for ABA/IBI therapy to autistic children. The scheme is, by its very terms, a partial health plan and its purpose is not to meet all medical needs. It follows that exclusion of particular non-core services cannot, without more, be viewed as an adverse distinction based on an enumerated ground. Rather it is an anticipated feature of the legislative scheme. One cannot, therefore, infer from the fact of exclusion of ABA/IBI therapy for autistic children for non-core benefits that this amounts to discrimination. There is no discrimination by effect.[99]

One clear conclusion from our review is the importance of not conflating the encouragement of interdisciplinary delivery models with changes in the range of services to be publicly insured. Both may be desirable, but they are not identical. Models that do not recognize this are, in our view, likely to present implementation problems. For example, cost comparisons may not reflect the level of care provided in the models being compared. A more comprehensive model may thus seem more expensive—and hence be portrayed as less cost-effective—than current practice, but only because it is providing a wider scope of services. This wider scope may be highly cost-effective from a societal viewpoint, but it may nonetheless represent higher costs for particular payers.

Messages in the Documents Reviewed

Many documents reviewed for this paper instead take a narrower focus and justify the important contributions that various health professions could make to care.[100] These documents perform a valuable service. They explain the special skills of each group and how better use might improve the health of the population. They go on to note that the current system results in barriers, which impede many from receiving potentially beneficial services. They then assume that changing a funding model would resolve the issue for access.

For example, having recognized that there are systematic problems in obtaining adequate access to psychological care, and linking this to the failure of provincial medical systems to fund psychologists unless they are practicing within tertiary care institutions, the Canadian Psychological Association's proposed solution is interdisciplinary community-based primary health care.[96] Similarly, the Canadian Pharmacists' Association suggests that, because pharmacists are "the drug experts on the health care team," primary health care should incorporate such valuable, but currently uninsured services, as: "pharmacy-based home visits, multidisciplinary reviews of patients' progress, screening for diseases, pharmacist-managed therapies such as tobacco control strategies, chronic disease management like diabetes, asthma, lipid-lowering, osteoporosis, and anti-coagulation therapies [and] information, education and counseling to patients."[23] The Dietitians of Canada also note the important contributions that nutritional services can make to the health of the population. They conclude, "The lack of population-needs–based funding has created inequitable access to required nutrition services, in spite of repeated demonstration of the cost effectiveness of nutrition services."[31] The recommendation is that policy decision-makers establish appropriate plans, and "develop and apply appropriate population-needs–based funding mechanisms to support PHC nutrition services within their jurisdictions" and implement these into PHC.[31]

Presumably, the authors believe that changing the funding model will be a vehicle for quietly changing the bundle of insured services. From a policy standpoint, however, the analysis is incomplete. One might parse it as follows:

1. This is what our members do, and these are the services they can provide.

2. There is evidence that these services can be useful to some members of the population and can improve their health status.
3. Providing these services can be cost effective (particularly if it can avert hospitalizations).
4. At present, most primary health care is funded through fee-for-service payments to physicians.
5. Public funding for non-physician primary health care services outside of hospitals is low, meaning that most of our members work either in hospitals or for private payment.
6. There are negative implications for access.
7. Changing public funding for primary health care from fee-for-service to another form (usually, population-based funding) will mean that there are resources to hire our members, and these resources will allow them to work within their full scope of practice.

All of these statements can be justified. However, the policy implications require attention to be paid to several other issues:

a. Establishing that a service can be useful to members of the population does not tell us that it will be useful to all—usually, one has to target which recipients are likely to benefit. In turn, this raises the issue of whether there will be a critical mass of those potential clients. Without a critical mass, it is hard to justify adding a team member (although it is certainly feasible to "contract" for those services under those circumstances). Thus, clarifying how to provide such services depends upon how primary health care models are organized (size and scope).
b. Establishing that a service can be useful does not establish who should provide it. Resolving this requires attention to scope of practice issues, as EICP has recognized.
c. Most critically, establishing that a service can be useful does not tell us whether it should be added as an insured service. From an evidence-based policy perspective, it is important to recognize the distinction between better use of services, use of the same services in different places (with different legal entitlements to coverage), and more use of services.

From an economic and political point of view, however, it is critical to distinguish between total costs and the costs borne by particular payers. Even when more comprehensive care can be shown to reduce the total costs to society, the distribution of who pays may change. Commonly, when such reforms increase the costs for particular payers (including government), there is likely to be resistance, even if society would benefit.

Policy analysts must recognize who bears what costs. Consider, for example, the costs borne by people who must travel to receive care. Regionalization of services will increase the costs for people to travel farther to receive care; these costs are not borne by the health care system and hence may not show up in a system of accounting. Conversely, Telehealth increases the costs to particular facilities (they must pay for the equipment, for the staff time, and so on) but may decrease travel costs for individuals. Quality of care may be improved, but there is also a shift of costs from private to public accounts.

Another set of costs not often counted are those concerned with waiting time. If understaffing causes people to wait for a longer time for service, their time costs are not usually reported. Sometimes, these are real costs, such as when a person must take time off work. However, even if an individual is not working, his/her time is still valuable. Satisfaction, dissatisfaction and other intangibles are even less likely to be captured. These "soft" costs are a major issue for cost-effectiveness analysis.[101]

Taken together, these considerations may explain why so many of the attempts to evaluate reformed models find that costs increase, rather than decrease. Providing more comprehensive care may indeed reduce hospital admissions, but in most cases, the effect is minimal because so few people need hospitalization. For example, an evaluation of the reformed model in Taber, Alberta, concluded that although there was indeed a reduction in both hospital usage and in the growth rate for support services, it was not large enough to offset the additional costs associated with the initiative (an intake co-ordinator, a nurse practitioner, and enhanced information systems). The researchers concluded that "the improvements in primary care will come at an additional short-term cost."[95] It should be noted that this model was relatively basic; it did not appear to incorporate the array of other services implied by a truly comprehensive plan.

The policy conclusion suggested by our analysis is that merely changing the mode of funding will not eliminate the need to determine which services will be provided and what these will cost. Although the EICP's desired future includes "adequate resources to deliver services," most of the documents do not focus on coverage. Providers recognize this point, and the EICP Regional Workshop snapshot notes:

> Resource allocation and payment methods remain a major part of collaboration and primary health care reform. Physicians remain in the publicly financed domain, while most other primary health care providers outside of health institutions are funded through private sources such as employer sponsored health plans and out-of-pocket payments.[17]

Watson and Wong also recognize that the currently proposed models are likely to require a significant investment of new funds.[11]

Electronic Health Records

New funds are also likely to be required for the implementation of electronic health records (EHR).[24] Although no fixed definition of an EHR exists, it is generally agreed to be a secure electronic record of an individual's past and present health status and care.

Many consider EHR to be critical for achieving another goal of interdisciplinary collaboration—improved continuity of care. In a 2002 review, Reid argues that continuity has two core elements ("the experience of care by a single patient with his or her provider[s] and continuation of that care over time). He also claims that there are three types of continuity:

> *Informational continuity* refers to information on prior events that is used to give care that is appropriate to the patient's current circumstance.
> *Relational continuity* recognizes the importance of knowledge of the patient as a person; an ongoing relationship between patients and providers is the underpinning that connects care over time and bridges events.
> *Management continuity* ensures that care received from different providers is connected in a coherent way. Management continuity is usually focused on specific, often chronic, health problems.[102]

Clearly, improved records may be helpful in achieving these goals, particularly informational and management continuity. At present, the potential of EHR systems to improve practice, reduce duplication and reduce the incidence of adverse events has not been fully realized.[103,104,105] A number of potential barriers exist, which advocates are working hard to overcome. Some of these barriers relate to challenges with creating safe, accessible computer-generated records, while others relate

to the ability of the health professionals to generate, add to and share these documents.

As McDonald noted, many of the barriers result from differences in the interfaces between data sources, which he describes as residing "on many isolated islands with differing structures, differing levels of granularity, and different code systems."[106] These barriers can, in theory, be overcome, as the informatics community develops standards. A number of interesting initiatives are underway,[107] particularly in Telehealth.[108,109]

Another set of problems not yet fully overcome is how to efficiently capture the "soft" data elements contained in the notes of health professionals, including physicians. McDonald was less sanguine that this set of barriers would be as easy to answer, particularly "because the productivity demands limit the amount of physician time that could be dedicated to structured data entry."[106] Similar issues will arise for other team members. In contrast, it is relatively easier to determine the data elements for laboratory tests or prescription drugs.

Other issues arise from privacy, consent and confidentiality issues.[104,105,110,111,112,113,114] These, too, have not yet been overcome. Although better records may be necessary for efficient communication, they are not sufficient. As is widely recognized, improved records—whether electronic or not—cannot guarantee collaboration.

Consequently, there are substantially different barriers and facilitators, depending upon the providers that are to be linked. It is possible to distinguish several levels of record sharing:

1. Sharing records *within* a co-located provider organization;
2. Sharing records within a virtual provider organization at multiple sites;
3. Sharing records with other providers outside of the provider organization; and
4. Sharing records with funders, regulators and researchers in the wider system.[113,115]

It is relatively simple for a single provider organization to set standards for their record keeping. Within a single location, it is not essential that the records be electronic, but there must be adequate funds to support record-keeping and communication.

Virtual organizations and collaborations have been suggested as a valuable alternative to co-location.[20] Setting standards within a virtual organization can present more difficulties but can be done with adequate leadership, commitment and funds. A commonly cited initiative in advancing EHR in Canada is the Western EHR Regional Collaborative. A number of western regions are working towards greater adoption and use of the EHR across the continuum of care.

However, once policy attempts to link many organizations, it is essential to set and enforce common standards. These processes *cannot* be done by the individual organization; they require leadership at a higher level. Notwithstanding some notable exceptions (such as a number of systems linking pharmacies), links have been slow in arriving. Issues of confidentiality, security and privacy become far more critical once they move beyond a single organization.[20] To the extent that links occur between not-for-profit and for-profit providers, these problems are accentuated by fears about commercialization of data and, in some cases, differing legal obligations. In addition, the interaction becomes critical between provider organizations and:

- the federal government (which has instituted privacy legislation under the *Personal Information Protection and Electronic Documents Act*);
- provincial governments (which can and, in many cases, do implement their own legislation, thereby superceding federal

legislation, as long as it is deemed to be in substantial compliance with it); and
- professional regulatory bodies (which have provisions mandating how confidential patient information will be dealt with).[114]

Public opinion plays a critical role, and it appears that the public is far more tolerant of information-sharing within provider organizations than among them. For these reasons, EHR may facilitate widespread collaboration, but they may also constitute a barrier if providers wish to share information beyond their own organizations or are not fully computer literate.

The Canada Health Infoway lists a number of priorities in its business strategy. These include: info-structure (including setting standards); registries; drug information systems; diagnostic imaging systems; laboratory information systems; and Telehealth. Primary health care is not listed. The unstated rationale appears to be some combination of the high cost of linking the many settings in which primary health care can occur, the relative absence of easily identified leverage points and identifiable private sector partnerships, and the relative difficulty in defining data elements for the sorts of services likely to be offered in primary health care.

At the EICP Leaders' Forum on Interdisciplinary Collaboration in Primary Health Care, held on Dec. 7, 2004, electronic health records were discussed through a process of focusing on the root causes of an issue. Participants proposed the following actions:
- Fund a broad cost/benefit analysis of the role of EHR in the broader health care system.
- Expand the definition of "electronic health record" to include who has access to it and what the client's understanding of it is.
- Address the issue of ownership of the health record.
- Educate health providers and the public about EHR and their issue.
- Survey other EHR systems in primary health care so that the "wheel is not reinvented." A wealth of experience with EHR in interdisciplinary settings has already been developed in some regions across Canada.

On Jan. 17, 2005, a Barrier and Enabling Task Group on Electronic Health Records was convened to discuss the challenges and opportunities for EHR. The group identified the following challenges as being the most significant:
- Change management, especially with respect to education and training of providers (there is a value proposition that needs to be made, including incentives);
- Privacy and confidentiality, ownership and use of information, and redefining access;
- Funding at an individual and system level (individual providers are concerned that there could be financial and administrative burdens imposed on them);
- Maintaining client-centredness in the EHR; and
- Improving technology for standardization and security (specifically, data interface and the capture of data elements have been problematic).

In the long run, these issues do not appear to be insurmountable, although they will present managerial challenges.

Production Characteristics and the Ability to Monitor Performance

Another set of issues likely to affect the delivery of primary health care relates to what economists call the "production characteristics" of the goods and services (e.g., visits, treatments). The current stress on accountability requires the ability to monitor and evaluate

performance. However, the characteristics of goods and services are likely to affect the ability to monitor performance. Deber, citing Preker and Harding,[116] describes three such characteristics—contestability, measurability and complexity—which have major implications for the ability to monitor performance.[48]

"Contestable" goods are characterized by low barriers to entry and exit from the market. In contrast, non-contestable goods have high barriers, including sunken costs (for example, the cost of building an automated laboratory), monopoly market power, geographic advantages, and "asset specificity," (meaning that it is relatively difficult to transfer assets intended for use in a given transaction, such as an intensive care unit bed, to other uses).[117] Compare the ease of ordering books on-line from distant providers to the difficulty in receiving "hands-on" health care services from distant health care providers. These differences in production characteristics protect local health care providers from competition in a way that many local stores cannot benefit from. A local hardware store can be put out of business by a big-box store hiring minimum wage employees with little knowledge of the product they sell. However, health professionals cannot as easily be displaced by lower skilled workers, particularly when regulations enforce a particular scope of practice.

Nonetheless, contestability clearly varies across sub-sectors. For example, if a firm offering homemaking services loses a contract, it might go out of business, and the firms gaining the contracts could hire the now-available workers. In contrast, few jurisdictions have wanted to encourage excess capacity for open-heart surgery, if for no other reason than the need to maintain sufficient volumes to ensure quality outcomes. In addition, since trust and expertise are key factors that limit contestability, theory tells us that contestability is hampered by the existence of organizations (or individuals) that consumers wish to retain as care providers, even though they might be able to purchase services elsewhere for less money.

Regulation clearly increases barriers to market entry, and there is considerable dispute within the policy community as to when (and which) regulatory barriers to competition are appropriate. Clearly, at one extreme, it is vital that only qualified individuals be allowed to give complex care and perform potentially dangerous procedures. At the other extreme, regulation is seen by many as a form of "turf protection" that serves to increase professional incomes without necessarily improving patient outcomes. The balance between these two viewpoints depends on context and ideological predisposition.

The second characteristic that affects the ability to monitor performance is measurability, which relates to "the precision with which inputs, processes, outputs and outcomes of a good or service can be measured."[117] It is easy to specify the characteristics of a good pharmaceutical product; it is much more difficult to specify the contents of a good visit with a primary health care provider. Evaluating performance is made more difficult when measurability is low.

Particularly given the difficulty in defining the expected product, the "transaction costs" of trying to monitor quality of performance for most primary health care services would be high. A related set of issues involves the balance between competition and co-operation, particularly when quality implies better clinical integration of services. In addition, it is not reasonable to expect investor-owned corporations to go beyond the requirements specified in contracts, particularly if this would interfere with their fiduciary obligation to provide a high return on investment to their shareholders.

The ethos of health care as being provided on the basis of need may conflict with the ethos of a profit-maximizing market. As a result, the literature suggests that NFP or FP/s firms are more likely than FP/c organizations to produce satisfactory results when measurability is low. Indeed, there is a trend in some international models towards reliance on "high trust" approaches that emphasize the stewardship inherent in professionalism, in part to reduce the transaction costs inherent in trying to monitor that which cannot be monitored. As Saltman and Busse have noted, "Entrepreneurs inevitably seek to segment markets, so as to exploit profitable niches, while publicly accountable regulators try to ensure that the entire market is served efficiently and affordably."[118]

The sectors also differ in how they define efficiency: "In the private sector, the surrogate symbols for efficiency are, typically, increased profits as well as expanded market share and, in some industries, improved quality of product and service to customers. In the public sector, the surrogate symbols are improved volume and quality of service to clients, as well as generating a financial surplus and, in some sub-sectors, enhanced market share."[118]

Saltman and Busse cite a number of examples of "dysfunctional outcomes from unconstrained entrepreneurialism in the health sector"[118] affecting cost, access and quality. These include bankrupt insurance companies, efforts by sickness funds in the Netherlands to design service baskets that will "chase away undesirable (i.e., more expensive) subscribers,"[119] and even incompetence and fraud. They suggest that "stewardship" models may be more appropriate, as long as regulators and funders "trust, but verify."[118]

A third characteristic likely to affect primary health care models is "complexity," which refers to whether the goods and services stand alone or require co-ordination with other providers. Even laboratory tests, which are highly measurable, gain much of their value by being embedded within a system of care in which providers order tests appropriately and are aided in interpreting and acting upon their results. Primary health care models assume a high degree of co-ordination with other components of the health care system. Most models do not recognize how time-consuming such efforts can be and may not sufficiently include those costs in their cost structures.[120]

These considerations lead to the conclusion that competitive models can be highly problematic in the primary health care setting, particularly when risk selection is allowed (or unavoidable). Canadians regard choice as an essential element, but it must be recognized that a choice-based model comes with policy trade-offs with other characteristics. Our expectation of choice may be another reason to moderate the emphasis on capitation-based funding and upon trying to capture the full range of costs within the model, rather than adopting other models that stress co-ordination of care and similar best practices.[121]

Funding Models and Goal Attainment: Productivity

Different funding models clearly vary in their incentives to provide more or fewer services. However, linking these incentives to productivity can be problematic. *Productivity* should not be defined as just "doing more," it must have a strong component of "appropriateness"—that is, of doing more of the right thing. Sometimes, this may mean spending more time with a particular patient, which classical models of productivity would classify as decreasing productivity. Similarly, pharmacists may often contribute more to the health of their patients by recommending against filling particular prescriptions, although service-based models would heavily penalize them for doing so.

One suggestion is to adopt a "human capital" approach and recognize that a high-quality workforce is essential, particularly given the consequences of error.[122,123] For the record, the World Health Organization (WHO) states that "The argument that health is not only an outcome of development, but also a prerequisite for it, is related to the recognition of the importance of human capital."

Regulatory and Liability Barriers

Although regulatory issues are frequently noted as a potential barrier, more careful scrutiny has suggested that these are manageable.[27] This is not to say that regulation is simple, but that the extent to which it is a barrier tends to be based in potential legislative and regulatory deficiencies rather than in fundamental conflicts of values or interests.

Certainly, when various health professionals find overlap in the scope of services they can perform, turf wars and resistance to change can result.[124] Nonetheless, the existing shortages of health human resources in many communities can act as a facilitator, rather than a barrier; people who are already overloaded are less likely to feel threatened by colleagues taking on some of their work. In addition, hospitals already have regulatory frameworks that allow interdisciplinary activities and that could, presumably, be adapted for primary heath care organizations. Similarly, regulatory frameworks in many provinces have already adapted to changing times by adding categories; a case in point is Ontario's approach to delegated medical acts. In short, legislation may be a barrier because change is slow, but it does not appear to be a major or insurmountable one.

Regulatory Issues: Professions

Professions, by definition, require specialized knowledge. Sociologists have identified the following characteristics of professions: expertise based on a body of theoretical knowledge; application of this knowledge in the form of specialized skills and competencies; commitment to professional codes of ethics; and strategic and operational autonomy (what you do and how you do it).[124]

Because this knowledge is specialized, it is difficult for those without such training to evaluate performance. For this reason, it is common to allow professions to regulate themselves, with provisions to ensure that this regulation protects the public interest. Self-regulation often rests upon a delegation of authority by government, which backs up (and constrains) how the profession regulates its members.

It is important to recognize that the CIHI definition of *other health professionals* is not the same as the definition used when speaking of regulatory bodies. For purposes of regulation, health professionals are often defined in terms of their activities, training and inclusion under provincial acts. In contrast, the CIHI definition deals only with "use of funds" and defines this group as follows:

> Other professionals—services, at the aggregate level, represent expenditures for the services of privately practicing dentists, denturists, chiropractors, massage therapists, orthoptists, osteopaths, physiotherapists, podiatrists, psychologists, private duty nurses and naturopaths. Discrete identification of many of the professions included under other professional services is often possible only when they are reported by provincial medical care insurance plans.[125]

It must, therefore, be recognized that the CIHI category does not capture the large proportion of other professionals whose services are reimbursed through salaries from a provider organization (often paid through public sector sources). Indeed, nurses are included only to the extent that they are private-duty nurses who bill fee-for-service (FFS) and whose activities are captured by provincial reporting arrangements.

The extent of professional authority can vary considerably depending upon the legislative and regulatory structure imposed by government. The following models illustrate this point:

1. *State-enforced monopoly.* No one is allowed to perform the activities associated with that profession unless they have been certified by their professional association. For example, lawyers usually have a monopoly over performing legal work.
2. *State-enforced monopoly over controlled acts only.* Some provinces, such as Ontario, have instead, specified a series of acts.[22]
3. *State-enforced monopoly over controlled acts, but with the ability to delegate these acts to others*. For example, nursing assistants may be allowed to perform nursing activities as long as a structure is in place to monitor the delegated activities.
4. *State-enforced protection of title, but not of activities*. For example, the state may put constraints on the ability of people to call themselves psychologists, but allows anyone to perform psychological counselling. Similarly, Ontario protects the title of physiotherapists, but allows almost anyone to perform physical therapy.
5. *No state-enforced protection*. For example, practitioners of traditional Chinese medicine or naturopathy may have their own professional bodies, but government may still allow individuals without such certification to call themselves naturopaths.

The general trend in Canada appears to be towards the third approach; that is, specifying controlled acts, but allowing overlapping scopes of practice for various health professionals. Ontario's approach has been to allow overlapping scopes of practice; various professions are allowed to perform the same controlled acts. Similarly, the Alberta government is introducing a Health Professions Act (HPA) that establishes a common framework for the governance, regulation and discipline of all regulated health professions in that province. It also eliminates exclusive scopes of practice in favour of complementary and overlapping areas of practice.

At the EICP Leaders' Forum on Interdisciplinary Collaboration in Primary Health Care on Dec. 7, 2004, participants discussed regulation and proposed the following:

- Establishing a common understanding of the scope of the patient's control (individual or extended to family), skill sets for professionals, and roles and responsibilities for providers;
- Clarifying the roles and jurisdiction of key health regulatory agencies; and
- Promoting collaboration to leaders in the health care community in order to effect change.

On Jan. 20, 2005, an EICP Barrier and Enabling Task Group on Regulation was convened and identified the following challenges as being the most significant for regulation:

- Regulatory frameworks for interdisciplinary collaboration within each province, with particular attention to the division of responsibilities between provincial governments and professional regulatory bodies;
- Scope of practice for each profession, particularly where there are inconsistencies in how scopes of practice are defined in different jurisdictions;

- Competencies, with particular attention to differentiating overlapping/shared competencies from those that are specific to a certain profession; and
- Education for providers, the public and regulators.

The most commonly cited recommendations made by the Task Group related to the need to:

- establish regulators for each profession in all provinces/territories;
- draw up agreements from provinces/territories on the scopes of practice for each profession; and
- promote education and communication among all stakeholders on the discussed challenges.

Liability Considerations and Scopes of Practice

A key element of self-regulation is enforcement of standards of practice. This, in turn, affects liability. A professional not performing to the set standard can expect sanctions not only through the courts (e.g., medical malpractice), but also through the appropriate professional regulatory body. In addition, provider organizations are often expected to take responsibility for the practice of the professionals they allow to see their patients. In hospitals, for example, an established legal tradition partitions responsibilities (and liability) among professionals and the employing hospital.

In theory, primary health care organizations could adopt similar approaches. The efforts of the EICP to develop a national template appear to be both appropriate and valuable.

In that connection, it will be important to clarify roles and responsibilities for team activities. There may be a need to modify regulatory frameworks to clarify expectations for teams (and to ensure that the funding formula provides enough resources to do this). There will also be a need to clarify the responsibilities of professional regulatory bodies for particular professions and the responsibilities of the provider organization.

The way in which organizations are structured will be important. If the various team members are co-located in a single setting, it should be possible to set up and enforce peer review mechanisms to scrutinize the activities of particular providers. Solo practices are far more autonomous, and the ability to scrutinize is diminished accordingly. When care is provided in the home setting, this scrutiny is even less feasible. Similarly, there may be different legal implications when professionals are employed by the provider organization, or when they serve as independent providers whose services are hired on contact. For example, community pharmacists have suggested a model in which they continue in private practice, but are contracted to perform drug reviews; this model, presumably, would evoke very different legal consequences than models that employ nurse practitioners or physicians in one office.

Another key distinction between models is the mode of regulation. At one extreme, regulation can use sanctions and penalties; Berwick has termed this the “bad apple” approach.[126] At the other extreme, the continuous quality improvement model uses education to attempt to improve the overall level of practice. Incentives can be used to encourage desired behaviour and discourage practices that appear inappropriate or inefficient. Thus, liability can be regarded as placing constraints upon sub-standard practice; this does not necessarily encourage the full scope of practice desired by health reformers. At the EICP Leaders’ Forum on Interdisciplinary Collaboration in Primary Health Care, significant discussion took place concerning liability, with the following actions being proposed:

- Tort reform, including the establishment of a ceiling, threshold and class actions;

- A common insurer for all members of a particular primary health care group;
- Increased focus on health outcomes and best practices;
- An effective team process in which policies/procedures and best practice are clarified;
- Client involvement in care;
- Effective communication; and
- More research on collaborative work.

On Jan. 10, 2005, an EICP Barrier and Enabling Task Group on Liability identified the following challenges as being important:

- Culture—moving away from a culture of blame to patient safety and risk management focus;
- National standards for scope of practice;
- Clarification among providers of the potential liability issues in an interdisciplinary collaboration (IDC) setting;
- Legislative reform; and
- Public education about interdisciplinary collaboration.

The Task Group recommended the following:

- Work with the Patient Safety Institute to put a national focus on primary health care;
- Create a national coalition of provincial/territorial regulators to effect legislative reform;
- Develop teambuilding through a process of policy, education and training for providers; and
- Develop joint statements from professional liability protection providers.

The development of action plans for primary health care will thus require further exploration of the balance between "bad apple" and continuous quality improvement approaches to regulation. Again, there is no inherent reason why this could (and should) not happen.

Health Human Resources: Dilemmas

Resource requirements for primary health care include a wide array of health professionals, as well as a variety of support workers, such as personal care workers. The number of specific professionals that will be needed will depend upon the scope of services to be offered and the skill set that will be needed to provide them. In turn, this will link to funding models; not surprisingly, much of the human resources development that occurs in the community/primary health care setting has been found to be associated with funding models that drive the growth of services.

A commonly used framework for analyzing resource requirements uses three components, which Hall terms "planning, production and management."[127] The *planning* aspect includes understanding the current supply and requirements, as well as projecting future needs. The *production* component refers to the system's ability to produce the appropriate number of graduates to meet the demand in a variety of sectors. The *management* aspect is concerned with issues such as salaries, benefits, job satisfaction and working conditions in all sectors (including remuneration, incentive schemes, career development and continuing education, as well as matters related to employment use, evaluation and motivation of all categories of health care workers).[128]

A series of recent studies has increased our understanding of the planning component by analyzing the supply of the current health care workforce in Canada and where providers are located. CIHI has been accumulating national databases to gain a fuller understanding of where people are working and possible future needs.[129,130,131,132,133,134,135,136,137] Human Resources and Skills Development Canada has been conducting a series of "sector studies," which are intended to "focus on human resources

analyses of specific industries and occupations, examining the impact of business and technological change." To date, however, available databases tend to include the most detail about those working in the publicly paid sub-sectors (physicians and hospitals). Work is currently underway to further define workers in a variety of community-based sectors that could provide the backbone of the primary health care system.

Because primary health care tends to be a service industry where providers and care recipients meet face-to-face, health human resources studies must also determine whether the issue is shortage or maldistribution.[138] Again, problems obtaining the necessary providers are likely to vary according to location.

Health Human Resources: Forecasting Needs

Another barrier that has been pointed out is the shortage of health human resources, which is likely to be accentuated in the future, given the aging of the workforce. As current studies have confirmed, most health professions in Canada have similar characteristics—an aging workforce, the desire to improve quality of life, which may translate into reluctance to work the "killer hours" formerly expected of many providers, and resulting shortages in key regions or sub-sectors of care.[122,133,139,140,141,142,143,144,145,146,147,148]

Successful implementation of any primary health care model relies, therefore, on whether there will be enough practitioners to do the desired work. Again, it must be recognized that policy trade-offs are inevitable, and that in making them, it is important to strike balances among competing priorities. One obvious one is the balance between easing constraints on the supply of health human resources and maintaining the ability to control costs by managing supply; another is the balance between freedom of movement and the ability to ensure that providers work where they are most needed.

Forecasting requirements for health human resources has been notoriously problematic. Over the past decades, valiant efforts to construct predictive models have generated estimates that have proven to be wildly inaccurate, often for reasons well beyond the control of the forecasters.[135,137,149]

Among the reasons for poor forecasting performance are:

- Poor data sources, which are difficult to merge;
- Difficulty in accounting for changes in the practice environment, including shifts in disease burden and practice patterns;
- Providers' budgets and hiring practices;
- Labour substitution; and
- Distribution issues (e.g., shortages may exist in some communities but not others).

In that regard, regulation can constitute a barrier by making it difficult for people trained in one jurisdiction to practise in others, and by making it difficult to co-ordinate across provinces and training programs to ensure that the right numbers of people are being educated.

The consequences of forecasting errors can be significant. If the model underestimates the number of practitioners needed, the resulting shortages inflate the wages that must be paid to attract workers. If the model overestimates the number needed, there is a waste of highly skilled workers who cannot find jobs, with consequences for the ability to recruit and retain people to that sector. Nursing has been characterized by these "boom and bust" cycles.[150]

As long as the potential workers absorb all the costs of labour surplus, the system will be biased towards systematic under-provision. Nursing, for

example, was seen as a less attractive profession when highly skilled nurses found themselves unable to secure stable employment. Medicine has been an exception, to the extent that physicians were free to bill public insurance plans for the work they did. In that connection, movement towards non-FFS payment mechanisms has the potential to constitute a major reduction in physician autonomy and to cause a major shift in that labour market. Again, these issues can be dealt with, but they must be recognized. Indeed, to the extent that the funding models for primary health care models guarantee stable employment and reasonable working conditions, they may help improve labour shortages. Conversely, poorly designed models may accentuate health human resources problems.

Even within the present community system, heterogeneity exists. The community can be categorized into multiple sub-sectors, with wages and working conditions varying greatly. For example, for-profit organizations play a major role in home visit nursing in many provinces. In Ontario, this growth has often been at the expense of older, not-for-profit organizations, such as the Victorian Order of Nurses. The managed competition models Ontario has been using for home care are based on limited-term contracts (often two to three years). These contracts make it difficult to hire full-time professionals, and thus they place additional obstacles in the way of retaining staff.

Another outstanding issue has been the change in practice patterns. Over the last decade, various health care professions have shown trends that indicate a changing workforce. For example, a shortage of family physicians may be exacerbated by female physicians wanting to work part-time to accommodate raising their children, older physicians working reduced hours as they prepare for retirement, and new graduates unwilling to work the 70-hour weeks common among earlier cohorts of physicians. New nursing graduates, particularly within the long-term care and home care sectors (which are now characterized by high proportions of part-time and casual staff). Indeed, a recent Ontario study found that two-thirds of home care nurses in not-for-profit agencies and up to 90 per cent in for-profit agencies worked part-time.[151]

Health Human Resources: Meeting Needs

Perhaps because training is seen as a provincial responsibility, there are no national strategies directed towards health human resources (HHR) as yet, although a number of sector studies are attempting to gather better information. Some authors recommend a framework for the implementation and integration of health practitioners working in a primary health care setting. This framework includes such steps as defining the patient population, identifying the stakeholders and determining a new model of care.[152,153]

Should policy-makers want to increase the supply of health human resources, a number of possible solutions exist. The most obvious approach is to increase the number of providers in a particular profession. This may involve training more providers, and/or simplifying the ability of foreign-trained professionals to be licenced.[152,153] The difficult issues involved in determining how best to incorporate foreign-trained providers into the system are beyond the scope of this report.

A second approach is the creation of new categories of practitioner (e.g., the primary health care nurse practitioner).[152,153] New categories of unregulated workers have appeared as a result of targeted demand for workers with a narrow scope of expertise. This approach is evident within public health, where the need to target population health has been met in part by de-emphasizing the use of nurses and increasing

the use of non-regulated health educators. Addiction counsellors meet the need for supportive care in the mental health system. There has also been an increase in the number of personal estheticians who advertise services of a preventative nature. These new categories are often unregulated and may suffer from a lack of standardization and regulation, problems that may need to be addressed by policy changes.

A third approach that has been used to stretch resources is "de-skilling," that is, using fewer trained personnel to provide particular services.[154] This is particularly evident in certain sub-sectors, such as long-term care. Funding agencies may also support de-skilling in the belief that it can reduce costs. This approach can be problematic, however, for a number of reasons. First, the existing regulatory framework may not permit such substitution, which could necessitate revision of current legislation. Second, de-skilling can be "penny wise and pound foolish" if the care given is not of high quality. Finally, to the extent that interdisciplinary practice requires respect and communication for the expertise of the individual professions, de-skilling can hinder buy-in to accepting interdisciplinary practice and, in the process, constitute a major barrier towards implementation.

A fourth and more viable approach is the careful consideration of the scope of services that the primary health care model is expected to provide, followed by determining what skill set is required to support this. Again, one size will not fit all; the nature of the team will depend upon the population to be served, the funding provided and the responsibilities assigned.

A fifth approach is to re-examine other policies that have had unintended consequences for recruitment and retention. Policies that relate to wages, working conditions and the availability of full-time jobs have affected recruitment and retention. Although most people trained as physicians tend to remain in practice, sizable numbers of those trained as nurses, physiotherapists, etc., may not. Nursing studies, largely in the hospital setting, have addressed such staffing issues as high turnover, substitutions, increased cost and recruitment and retention,[155] but far less is known about the community sector. Trends like the privatization of community health services and shifting from full-time to casual employment appear to have further encouraged workers to leave the profession. Recruitment and retention are always issues, and the extent to which well-trained nurses, physiotherapists and other health professionals have chosen to retire from their profession has been a clear contributor to current shortages. Similarly, young doctors are not encouraged to train as family physicians or to offer the same comprehensive service mix as previous generations.[32,156] To what extent has the trend to non-competitive wage structure, poor working conditions and increased use of part-time or casual work contributed to shortages? To what extent have shortages led to burnout and upward wage pressures, and to people leaving their professions and/or their province? Policies that effect short-term savings at the expense of longer-run problems are well overdue for closer examination.

These five approaches are not mutually exclusive; and policy-makers are likely to use various combinations of them. Policy-makers and providers should recognize that, under some circumstances, labour shortages can facilitate inter-professional collaboration, particularly if they erode "turf protection" modes of regulation and scope of practice in favour of approaches that ensure that care needs are met in the most appropriate, cost-effective manner possible, and that the available skills of providers are employed accordingly.

Health Human Resources: Impact on Primary Health Care Models

One barrier to the implementation of a primary health care model is the trend towards privatization of health services in the community (e.g., physiotherapy). Policy attention has commonly focused on the impact on clients who often have to pay considerable costs for such services as physiotherapy. The potential impact on the workers employed by these agencies has generally received less attention. Competitive pressures may lead to better wages and working conditions, particularly if there is a shortage of the relevant health professionals. At other times, however, cost pressures have led these employers to institute a non-competitive wage structure, poor working conditions and/or increasing use of part-time or casual work. Unless these problems are addressed, the community setting may not necessarily be an attractive workplace.

The rhetoric related to primary health care leads us to believe that it would be a more effective system. There is an intuitive appeal about it (i.e., one-stop access to a multitude of highly qualified health professionals, using evidence-based approaches). However, as highlighted in the report, many barriers must be overcome. No one model has been tested and proven ready to be implemented at either the national or provincial level. In many jurisdictions, primary health care initiatives may be co-opted by vested interests and merely recreate a service that is already there. Costs can be high; "hassle" factors can impede implementation; benefits can be questionable beyond clear target groups; and public support can be problematic.[157,158] However, it is also true that the movement towards primary health care is international and that there are clear potential benefits. People recognize that the current system is by no means ideal, and the EICP process has unleashed great support and enthusiasm from providers.

The benefits of a more community-based system have been evident for decades. Yet, despite decades of policy advice, the public seems to support restoring resources to the status quo. Clear attention to some of the issues raised in this report could assist in implementation and in setting out the steps that need to be taken to enable the potential benefits of primary health care and interdisciplinary collaboration to be realized.

Conclusion

What does this rather technical review imply for primary care reform and interdisciplinary co-ordination? Although Canada, like the rest of the world, continues to profess adherence to the importance of a strong primary health care system, it is evident that more work needs to be done. The process is rather like constructing a building. The foundation has been laid, and the building materials are being amassed, but the architects have not yet agreed upon the blueprint. The reports commissioned by EICP move us closer to that goal but force us to confront implementation difficulties at a more detailed level.

This review concludes that regulation, liability, EHR, and health human resources are all important but not necessarily insurmountable barriers to achieving interdisciplinary collaboration. Financing, however, presents some major issues, which are, in turn, reflected in funding mechanisms.

However, no clear relationship exists between funding approaches and achieving most of the desired policy goals of primary health care reform, assuming that primary health care organizations have enough resources to provide

the needed services. In that, we echo the conclusions of Giacomini and colleagues:

Two fundamental conclusions of this initiative are:

1. That a single type of funding change (e.g., capitation, block funding, salary) can be interpreted by stakeholders to possess any number of financial "incentive" properties; and
2. To the extent that a funding system creates a financial incentive, the meaning depends on contextual factors beyond, but by no means excluding, the technical structure of the funding arrangements. "The devil is in the details." These crucial details include relationships between and within affected organizations, social role expectations, the regulatory framework and structural supports, such as information and institutions.[159]

Although comprehensive models relying upon capitation funding are frequently recommended, we suggest that they may introduce some major problems, including risk selection and threats to financial viability. Careful attention to context would appear to be of critical importance. Blended models are likely to be required.

Most importantly, this report suggests that the usual focus upon service-based versus capitation funding ignores a key element; under the *Canada Health Act*, services by non-physicians outside of hospitals do not have to be covered. It is possible to produce excellent evidence that many such services should be covered; but this evidence may, or may not, be translated into policy. However, almost all models reviewed assume that primary health care means an expansion both of the providers covered and of the services that will now be insured.

A number of policy alternatives present themselves, each of which has implications that extend far beyond the scope of this report.

1. *Increase the resources to primary health care*. Although this is clearly the preferred option for the EICP process, particularly in the current fiscal climate, it also implies that these resources must be taken from other sources. Policy analysts have long realized that "redistributive" politics are a prescription for conflict.[160,161] Redistribution is feasible but is likely to be more difficult than many documents suggest. Should this approach fail, participants will have to determine which, if any, of the alternative policy options are preferable.
2. *Shift resources within primary health care to new services and providers*. In the immortal words of Willie Sutton, he robbed banks "because that was where the money was." For primary health care, most of the publicly funded resources currently go to physicians. Would taking resources away from physicians result in expanded models? This approach is also an example of redistributive politics, and physicians are likely to resist this approach. Public opinion suggests that the public would probably support them in this resistance. It is unclear whether the aggregate resources spent on physician care are excessive, although improvement in resource spending of any kind is always possible. It must also be recognized that, given the current shortage of family physicians in many jurisdictions, there will be pressure to increase rather than decrease their remuneration and to improve their working conditions. In short, this policy direction is likely to pose major implementation problems. One international example comes from Australia, where the authors examined inter-agency co-operation between hospitals and community health services. Success factors were seen to be organizational rather than financial, with a strong focus on trust, partnerships and power. However, the authors also concluded that:

Problems can be encountered when collaboration and integration require the redistribution of resources between agencies or services. A clinician commented: "I guess where it doesn't work very well is where it comes to redistribution of resources, because it is very difficult, I think, to see how you can redistribute resources and achieve a win-win situation.[162]

The Canadian Nurses Association recognized this issue but termed it "financial competition" and suggested that it might be remedied if only physicians were salaried.[27] However, for this approach to work, the total amount of resources available to physicians' practices would have to be sufficient. That is, salaries for physicians would have to at least equal to their former earnings from FFS practice, plus be enough to pay salaries to other professionals—that is, be more closely related to the first option we describe. It is somewhat disquieting that most of the literature reviewed tends to gloss over this point, as though changing the *form* of remuneration would, in itself, be sufficient.

3. *Continue to rely upon private sources of payment for non-physician services and use them as a revenue stream for the new primary health care organizations.* This approach presents a host of problems and opportunities associated with parallel private financing. We also note that it is likely to evoke considerable resistance from the public, re-open the debate about public and private financing, and divert attention from other reforms.
4. *Link reform to available resources,* by providing whatever range of services can be afforded, given needs and budgets.

This report cannot judge which option is preferable; the preferred option, or blend of options, is likely to vary considerably, depending upon local situations, including the health status of the population to be served and the services currently being used. Nonetheless, it does stress the importance of confronting these difficult implementation issues directly, rather than allowing them to sabotage viable plans at a later date.

[1] R. Atun, *What Are the Advantages and Disadvantages of Restructuring a Health Care System to Be More Focused on Primary Care Services?* (Copenhagen: WHO Regional Office for Europe's Health Evidence Network, 2004).

[2] B. Starfield, *Primary Care: Concept, Evaluation and Policy* (New York: Oxford University Press, 1992).

[3] Health Canada, *Primary Health Care,* 2003 First Ministers Health Accord Factsheet [on-line]. Available from: <http://www.hc-sc.gc.ca/english/hca2003/primary.html, 2003>.

[4] A.L. Mable and J. Marriott, *Sharing the Learning: The Health Transition Fund Synthesis Series—Primary Health Care* (Ottawa: Health Canada, Minister of Public Works and Government Services Canada, 2002).

[5] J. Marriott and A.L. Mable, *Opportunities and Potential: A Review of International Literature on Primary Health Care Reform and Models* (Ottawa: Health Canada, 2000).

[6] M Lalonde, *A New Perspective on the Health of Canadians: A Working Document* (Ottawa: Information Canada, 1974).

[7] R.G. Evans et al., eds., *Why Are Some People Healthy and Others Not: The Determinants of Health of Populations* (New York: Walter de Gruyter Inc., 1994).

[8] World Health Organization, *Declaration of Alma-Ata,* Policy Statement from the World Health Organization (1978).

[9] Commission on the Future of Health Care in Canada (Roy J. Romanow Commissioner), *Building on Values: The Future of Health Care in Canada: Final Report* (Ottawa: Queen's Printer, 2002).

[10] Standing Senate Committee on Social Affairs Science and Technology, *The Health of Canadians—The Federal Role: Volume Six: Recommendations for Reform,* Final Report on the State of the Health Care System in Canada (October 2002).

[11] D. Watson and S. Wong, *Interdisciplinary Collaboration in Primary Health Care,* Draft Prepared for Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada Initiative (2004).

[12] C. Fooks, "Implementing Primary Care Reform in Canada: Barriers and Facilitators." In R. Wilson et al., eds., *Implementing Primary Care Reform: Barriers and Facilitators* (Montréal and Kingston: McGill-Queen's University Press, 2004), pp. 129–137.

[13] B. Hutchison et al., "Primary Care in Canada: So Much Innovation, So Little Change," *Health Affairs* 20, 3 (2001), pp. 116—131.

[14] C. Bosco, "Health Policy and IECPCP." In: I. Oandasan et al., eds., *Interdisciplinary Education for Collaborative, Patient Centred Practice* (Ottawa: Health Canada, 2004), pp. 203–223.

[15] P.M. Baranek et al., *Almost Home: Reforming Home and Community Care in Ontario* (Toronto: University of Toronto Press, 2004).

[16] J.L. Pressman and A. Wildavsky, *Implementation: How Great Expectations in Washington Are Dashed in Oakland* (Berkeley: University of California Press, 1973).

[17] Enhancing Interdisciplinary Collaboration in Primary Health Care, *Regional Workshop Snapshot*, Draft (EICP, November 2004).

[18] Enhancing Interdisciplinary Collaboration in Primary Health Care Initiative, *Provider Workbook Analysis*, Draft (EICP, November 2004).

[19] C. Stonebridge, *Principles and Framework Literature Review* (EICP, July 2004).

[20] C. Stonebridge, *Individual Providers and Health Care Organizations Report*, Report submitted to EICP Steering Committee (November 2004).

[21] J. Nolte, *Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada*, Draft prepared for Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada Initiative (Nov. 9, 2004).

[22] W. Lahey and R. Currie, *Regulatory and Medico-legal Barriers to Interdisciplinary Practice,* Draft (Ottawa: EICP Initiative, 2004).

[23] Canadian Pharmacists Association, *Pharmacists and Primary Health Care* (Ottawa: CPhA, May 2004).

[24] British Columbia Medical Association, *Getting It Right: Patient Centered Information Technology. A Discussion Paper by B.C.'s Physicians* (Vancouver: British Columbia Medical Association, January 2004).

[25] J.A. Miller and M.J. Hollander, *Validating the Range and Scope of New Models for the Delivery of Medical Services: Final Report and Synthesis,* Prepared for Task Force Two: A Physician Human Resource Strategy for Canada (October 2004).

[26] P.A. Lamarche et al., *Choices for Change: The Path for Restructuring Primary Healthcare Services in Canada* (Ottawa: Canadian Health Services Research Foundation, November 2003).

[27] Canadian Nurses Association and F. El Jardali, *Barriers to Effective Collaboration between Nurse Practitioners and Family Physicians: A Discussion Paper Submitted to Health Canada* [on-line]. Available from: <http://www.caapn.com/discussionpaper.pdf, 2003>.

[28] Canadian Association of Social Workers, *Social Policy Principles* (Ottawa: CASW, March 2003).

[29] Canadian Hospice Palliative Care Association, *Working Together in the Canadian Health System: Collaboration between National Voluntary Health and Health Professional Organizations* (Ottawa: Health Canada, June 2003).

[30] British Columbia Medical Association, *Ensuring Excellence: Renewing B.C.'s Primary Care System—A Discussion Paper by BC's Physicians* (September 2002).

[31] Dietitians of Canada, *The Role of the Registered Dietitian in Primary Health Care: A National Perspective* (Ottawa: DC, May 2001).

[32] College of Family Physicians of Canada, *Primary Care and Family Medicine in Canada: A Prescription for Renewal* (Mississauga: College of Family Physicians of Canada, October 2000).

[33] D. Pringle et al., "Interdisciplinary Collaboration and Primary Health Care Reform Statement from the Ontario Chairs of Family Medicine and the Council of Ontario University Programs in Nursing," *Canadian Family Physician* 46, 4 (2000), pp. 763-765, 771-774.

[34] Southeast Ontario District Health Council, *Public Health and Primary Care: Partners for Health* (Kingston: Southeast Ontario DHC, December 2000).

[35] Canadian Association of Occupational Therapists, Canadian Dietetic Association, Canadian Nurses Association, Canadian Physiotherapy Association. *Integrated Health Human Resources Development: An Inventory of Activity in Canada* (Ottawa: IHHRDP, February 1996).

[36] Canadian Medical Association, Canadian Nurses Association, *Working Together: A Joint CNA/CMA Collaborative Practice Project, HIV/AIDS Examples* (Ottawa: CMA, 1996).

[37] C. Sicotte et al., "Interdisciplinary Collaboration within Quebec Community Health Care Centres," *Social Science and Medicine*, 55 (2002), pp. 991–1003.

[38] R.B. Deber et al., "International Healthcare Systems: Models of Financing and Reimbursement." In J.A. Boan, ed., *Proceedings of the Fifth Canadian Conference on Health Economics* (Regina: Canadian Plains Research Center, 1994), pp. 76–91.

[39] R.B. Deber and B. Swan, "Puzzling Issues in Health Care Financing: Puzzling Issue 3." In National Forum on Health, ed., *Striking a Balance: Health Care Systems in Canada and Elsewhere,* 4 (Sainte-Foy, Québec: Éditions MultiMondes, 1998), pp. 307–342.

[40] R.B. Deber, "Getting What We Pay for: Myths and Realities about Financing Canada's Health Care System" *Health Law in Canada,* 21, 2 (2000), pp. 9–56.

[41] M.J. Hollander et al., *Models of Resource Allocation and Reimbursement* (Ottawa: Health Network, Canadian Policy Research Networks Inc., 1997).

[42] R.B. Deber et al., "The Public-Private Mix in Health Care." In National Forum on Health, ed., *Striking a Balance: Health Care Systems in Canada and Elsewhere,* 4 (Sainte-Foy, Québec: Éditions MultiMondes, 1998), pp. 423–545.

[43] European Observatory on Health Systems and Policies, *Glossary* [on-line]. Available from <http://www.euro.who.int/observatory/Glossary, 2004>.

[44] R.B. Deber, *Delivering Health Care Services: Public, Not-for-profit, or Private?* Commission on the Future of Health Care in Canada, Discussion Paper No. 17 (August 2002).

[45] Canadian Institute for Health Information and Statistics Canada, *Health Indicators* (Ottawa: CIHI, 2004).

[46] Canadian Institute for Health Information, *Preliminary Provincial and Territorial Government Health Expenditure Estimates 1974/1975 to 2002/2003* (Ottawa: CIHI, November 2003).

[47] Canadian Institute for Health Information, *National Health Expenditure Trends, 1975–2002,* National Health Expenditure Database (Ottawa: CIHI, 2002).

[48] R.B. Deber, "Delivering Health Care: Public, Not-for-Profit, or Private?" In G.P. Marchildon et al., eds., *The Fiscal Sustainability of Health Care in Canada* (Toronto: University of Toronto Press) 2004, pp. 233–296.

[49] A.S. Preker and A. Harding, eds., *Innovations in Health Service Delivery: The Corporatization of Public Hospitals,* 1st ed. (Washington: The World Bank, 2003).

[50] G.B. Doern and R.W. Phidd, *Canadian Public Policy: Ideas, Structure, Process,* 2nd ed. (Toronto: Nelson Canada, 1992).

[51] R.B. Deber, *Regulatory and Administrative Options for Canada's Health Care System,* Background Paper Prepared for The Health Action Lobby (Ottawa: HEAL, Oct. 8, 1991).

[52] R.B. Deber, "National Standards in Health Care," *Policy Options* 17, 5 (1996), pp. 43–45.

[53] M.J. Hollander et al., eds., *A Critical Review of Models and Resource Allocation and Reimbursement in Health Care: A Report Prepared for the Ontario Ministry of Health* (Victoria, B.C.: Canadian Policy Research Networks, Inc., 1998).

[54] M.J. Hollander et al., *A New System of Reimbursement of Care Facilities in the British Columbia Long Term Care Program,* Selected Proceedings of the Third Annual Pacific Health Forum (Vancouver: Vancouver General Hospital, 1985).

[55] R.B. Deber, "Rationales for Primary Health Care Reform: Why Are We Doing This? An Economic Perspective." In R. Wilson et al., eds., *Implementing Primary Care Reform: Barriers and Facilitators* (Montréal and Kingston: McGill-Queen's University Press, 2004) pp. 25–38.

[56] B. Hutchison et al., *Capitation Formulae for Integrated Health Systems: A Policy Synthesis* (Ottawa: Canadian Health Services Research Foundation, 1999).

[57] L. Draper, "Choosing Fee-for-Service," *Canadian Family Physician* 48 (2002), p. 1612.

[58] A. Majeed et al., "Use of Risk Adjustment in Setting Budgets and Measuring Performance in Primary Care: How It Works," *BMJ* 323 (2001), pp 604–607.

[59] S. Birch et al., *Development and Application of a Needs-based Methodology for Calculating a Capitation Rate for a Comprehensive Health Organization*, Centre for Health Economics and Policy Analysis Working Paper Series 90–13 (Hamilton: McMaster University, November 1990).

[60] B. Hutchison et al., *Health Services Organizations: The Evolution of Capitation-funded Physician Care in Ontario*, Centre for Health Economics and Policy Analysis Working Paper Series 96–11 (Hamilton: McMaster University, September 1996).

[61] B. Hutchison et al., *Needs-based Primary Medical Care Capitation: Development and Evaluation of Alternative Approaches,* Centre for Health Economics and Policy Analysis Working Paper Series 97–10 (Hamilton: Centre for Health Economics and Policy Analysis, 1997).

[62] S.C. Stearns et al., "Physician Responses to Fee-for-Service and Capitation Payment," *Inquiry* 29, 4 (1992), pp. 416–435.

[63] D. Persaud, "Cross-national Comparison of Capitation Funding: The American, British and Dutch Experience," *Health Services Management Research* 12 (1999), pp. 121–135.

[64] T.S. Bodenheimer and K. Grumbach, "Capitation or Decapitation: Keeping Your Head in Changing Times," *Journal of the American Medical Association* 276, 13 (1996), pp. 1025–1031.

[65] J. Hurley et al., *Policy Considerations in Implementing Capitation for Integrated Health Systems: A Policy Synthesis,* The Canadian Health Services Research Foundation Document Series (1999).

[66] T. Rice, "Physician Payment Policies: Impacts and Implications," *Annual Review of Public Health* 18 (1997), pp. 549–565.

[67] J.C. Robinson and L.P. Casalino, *Re-evaluation of Capitation Contracting in New York and California*, Health Affairs Web Exclusive, 2001 Project HOPE, 2001.

[68] J. Gillett et al., "Capitation and Primary Care in Canada: Financial Incentives and the Evolution of Health Service Organizations," *International Journal of Health Services: Planning, Administration, Evaluation* 31, 3 (2001), pp 583–603.

[69] Régie Régionale de la Santé et des Services Sociaux Montérégie, *Projet capitation: Un réseau de soins et de services integers,* Rapport d'évaluation, 31 mars 2001.

[70] N. Rice and P. Smith, Editorial: Capitation and Risk Adjustment in Health Care, *Health Care Management Science* 3, 2 (2000), pp. 73–75.

[71] N. Rice and P. Smith, "Capitation and Risk Adjustment in Health Care Financing: An International Progress Report," *The Milbank Quarterly* 79, 1 (2001), pp. 81–113.

[72] A. Shmueli and D. Chinitz, "Risk-adjusted Capitation: The Israeli Experience," *European Journal of Public Health* 11 (2001), pp. 182–184.

[73] P.K. Mulligan, "Capitation: The Wrong Direction for Primary Care Reform," *Canadian Family Physician* 48, (2002), pp. 233–235.

[74] T. Gosden et al., "Capitation, Salary, Fee-for-Service and Mixed Systems of Payment: Effects on the Behaviour of Primary Care Physicians," *Cochrane Review* (2003).

[75] T. Ostbye and S. Hunskaar, "A New Primary Care Rostering and Capitation System in Norway: Lessons for Canada?" *Canadian Medical Association Journal* 157, 1 (1997), pp. 45–50.

[76] P.K. Mulligan, "Capitation by Any Other Name," *Canadian Family Physician* 48 (2002), p. 258.

[77] J. Lomas et al., "Registering Patients and Paying Capitation in Family Practice," *BMJ* 311 (1995), pp. 1317–1318.

[78] J.C. Robinson, "Theory and Practice in the Design of Physician Payment Incentives," *The Milbank Quarterly* 79, 2 (2001), pp 149–177.

[79] C.S. Dewa et al., "Using Financial Incentives to Promote Shared Mental Health Care," *Canadian Journal of Psychiatry* 46 (2001), pp. 488–495.

[80] R.G. Evans, *Strained Mercy: The Economics of Canadian Health Care* (Toronto: Butterworths & Co., 1984).

[81] J.P. Newhouse, "Health Reform in the United States," *The Economic Journal* 106 (1996), pp. 1713–1724.

[82] E.L. Forget et al., "Medical Savings Accounts: Will They Reduce Costs?" *Canadian Medical Association Journal* 167, 2 (2002), pp. 143–147.

[83] R. Deber et al., "Medical Savings Accounts in a Universal System: Wishful Thinking Meets Evidence," *Health Policy* 70, 1 (2004), pp. 49–66.

[84] S.C. Hill et al., Risk Selection among SSI Enrollees in TennCare, *Inquiry* 39, 2 (2002), pp. 152–167.

[85] M.K. Wynia et al., "Patient Protection and Risk Selection: Do Primary Care Physicians Encourage Their Patients to Join or Avoid Capitated Health Plans According to the Patients' Health Status?" *Journal of General Internal Medicine* 17, 1 (2002), pp. 40–47.

[86] J.P. Newhouse, "Risk Adjustment: Where Are We Now?" *Inquiry* 35 (1998), pp. 122–131.

[87] M. Giacomini et al., "Risk-adjusting Community-rated Health Plan Premiums: A Survey of Risk Assessment Literature and Policy Applications," *Annual Review of Public Health* 16 (1995), pp. 401–430.

[88] J.B. Fowles et al., "Taking Health Status into Account When Setting Capitation Rates: A Comparison of Risk-adjustment Methods," *Journal of the American Medical Association* 276, 16 (1996), pp. 1316–1321.

[89] W.P.M.M. Ven de Ven et al., "Risk-adjusted Capitation: Recent Experiences in the Netherlands," *Health Affairs* 13, 5 (1994), pp. 120–136.

[90] R. Reid et al., *Do Some Physician Groups See Sicker Patients Than Others? Implications for Primary Care Policy in Manitoba* (Manitoba: Manitoba Centre for Health Policy and Evaluation, July 2001).

[91] A. Majeed et al., "Use of Risk-adjustment in Setting Budgets and Measuring Performance in Primary Care II: Advantages, Disadvantages, and Practicalities," *BMJ* 323 (2001), pp. 607–610.

[92] R.M. Scheffler, "Adverse Selection: The Achilles Heel of the NHS Reforms," *The Lancet* 1, 8644 (1989), pp. 950–952.

[93] B. Hutchison et al., "Do Physician-payment Mechanisms Affect Hospital Utilization? A Study of Health Service Organizations in Ontario," *Canadian Medical Association Journal* 154, 5 (1996), pp. 653–661.

[94] S. Birch, *HSO Performance: A Critical Appraisal of Current Research,* Centre for Health Economics and Policy Analysis Working Paper Series 90-1 (Hamilton: McMaster University, January 1990).

[95] P. Hasselback et al., *The Taber Integrated Primary Care Project: Turning Vision into Reality* (Ottawa: Canadian Health Services Research Foundation, August 2002).

[96] S.F. Mikail et al., *Strengthening Primary Care: The Contribution of the Science and Practice of Psychology* (Ottawa: Canadian Psychological Association, November 2000).

[97] Government of Canada, *Canada Health Act, Bill C-3,* Statutes of Canada, 1984, 32-33 Elizabeth II (R.S.C. 1985, c. 6; R.S.C. 1989, c. C-6), 1984.

[98] M. Markle-Reid et al., "The 2-year Costs and Effects of a Public Health Nursing Case Management Intervention on Mood-disordered Single Parents on Social Assistance," *Journal of Evaluation in Clinical Practice* 8, 1 (2002), pp. 45–59.

[99] *Auton (Guardian* ad litem *of) v. British Columbia (Attorney General)* Supreme Court of Canada 78 (2004).

[100] L.D. Ogilvie and L.I. Reutter, "Primary Health Care: Complexities and Possibilities from a Nursing Perspective." In J.C. Ross-Kerr and J.J. Wood, eds., *Canadian Nursing: Issues and Perspectives,* 4th ed. (Toronto: Mosby Canada, 2002), pp. 441–465.

[101] M.R. Gold et al., eds., *Cost-effectiveness in Health and Medicine* (New York: Oxford University Press, 1996).

[102] R. Reid et al., *Defusing the Confusion: Concepts and Measures of Continuity of Healthcare*, Prepared for the Canadian Health Services Research Foundation, the Canadian Institute for Health Information, and the Advisory Committee on Health Services of the Federal/Provincial/Territorial Deputy Ministers of Health (Ottawa: March 2002).

[103] S.J. Wang et al., A Cost-Benefit Analysis of Electronic Medical Records in Primary Care, *The American Journal of Medicine* 114 (2003), pp. 397–403.

[104] Office of Health and the Information Highway (OHIH), *Towards Electronic Health Records* (Ottawa: Health Canada, Office of Health and the Information Highway, January 2001).

[105] P. Williams, *The Politics of Implementing the Electronic Health Record in the Post-Romanow Era,* Presentation to the Ontario Hospital Association Convention, Nov. 3, 2003.

[106] C.J. McDonald, The Barriers to Electronic Medical Record Systems and How to Overcome Them, *Journal of the American Medical Informatics Association* 4, 3 (1997), pp. 213–221.

[107] A. Cousins, *The Road Less Traveled: How the Calgary Health Region Can Help Pave the Way for Electronic Personal Health Records* (Quality Improvement and Health Information, April 18, 2002).

[108] Health Telematics Unit, *Socio-economic Impact of Telehealth: Evidence Now for Health Care in the Future. Volume Two: Policy* Report, Final Report (Calgary, AB: University of Calgary, Jan. 17, 2003).

[109] R.B. Deber et al., *Policy Implications for Geography and Scope of Services for Telehealth* [on-line]. (Ottawa: Health Canada Knowledge Development and Exchange Applied Research Initiative, 2003). Available from: <http://www.hc-sc.gc.ca/ohih-bsi/pubs/kdec/ongeographrpte.html, 2003>.

[110] Privacy Commissioner of Canada, *Personal Information Protection and Electronic Documents Act and Ontario's Draft Privacy Legislation Proposal* [on-line]. Available from: <http://www.privcom.gc.ca, 2003>.

[111] TecKnowledge, *Telehealth and Electronic Health Record: A Guide to Sustainability* (Ottawa: ADCOM Videoconferencing for the Office of Health and the Information Highway, Health Canada, August 2002).

[112] C. Brebner et al., "Electronic Medical Consultation: A New Zealand Perspective," *Journal of Medical Internet Research* 3, 1 (2001), pp. 1–7.

[113] M. Carter, "Integrated Electronic Health Records and Patient Privacy: Possible Benefits but Real Dangers," *The Medical Journal of Australia* 172 (2000), pp. 28–30.

[114] R.E.G. Upshur et al., "The Privacy Paradox: Laying Orwell's Ghost to Rest," *Canadian Medical Association Journal* 165, 3 (2001), pp. 307–309.

[115] M. Rigby et al., "Integrated Record Keeping as an Essential Aspect of a Primary Care Led Health Service," *BMJ* 317 (1998), pp. 579–582.

[116] A. Harding and A.S. Preker, eds., *Private Participation in Health Services*, 1st ed. (Washington, D.C.: The World Bank, 2003).

[117] A.S. Preker and A. Harding, *The Economics of Public and Private Roles in Health Care: Insights from Institutional Economics and Organizational Theory*, Health, Nutrition and Population Discussion Paper (Washington: Human Development Network, World Bank, June 2000).

[118] R.B. Saltman and R. Busse, "Balancing Regulation and Entrepreneurialism in Europe's Health Sector: Theory and Practice." In R.B. Saltman et al., eds., *Regulating Entrepreneurial Behaviour in European Health Care Systems* (Buckingham: Open University Press, 2002), pp. 1–52.

[119] R.B. Saltman and C. von Otter, eds., *Implementing Planned Markets in Health Care: Balancing Social and Economic Responsibility* (Buckingham: Open University Press, 1995).

[120] S. Boblin-Cummings et al., "Critical Elements in the Process of Decision-making: A Nursing Perspective," *Canadian Journal of Nursing Leadership* 12, 1 (1999), pp. 6–13.

[121] M. Rachlis, *Prescription for Excellence: How Innovation Is Saving Canada's Health Care System* (Toronto: HarperColins Publishers Ltd., 2004).

[122] A. Baumann and J. Blyth, Restructuring, Reconsidering, Reconstructing: Implications for Health Human Resources, *International Journal of Public Administration* 26, 14 (2003), pp. 1561–1579.

[123] G.R. Baker and P. Norton, "Making Patients Safer! Reducing Error in Canadian Healthcare," *Healthcare Papers* 2, 1 (2001), pp. 10–31.

[124] E. Freidson, *Professional Powers: A Study of the Institutionalization of Formal Knowledge* (Chicago: The University of Chicago Press, 1986).

[125] Canadian Institute for Health Information, "Composition of Total Health Expenditures by Source of Finance," *NHEX Definition.* Available from: <http://www.cihi.ca/facts/nhex/defin.htm, 2004>.

[126] D.M. Berwick et al., *Curing Health Care,* 1st ed. (San Francisco, Oxford: Jossey-Bass, 1991).

[127] T. Hall and A. Mejia, *Health Manpower Planning: Principles, Methods, Issues* (Geneva: World Health Organization, 1978).

[128] World Health Organization, *Coordinated Health and Human Resources Development. Report of a WHO Study Group,* Technical Report Series 801 (Geneva: WHO, 1990), pp. 1–53.

[129] Canadian Institute for Health Information, "Southam Medical Database," *Facts and Figures: National Information* [on-line]. [Cited Sept. 22, 2000]. Available from: <http://www.cihi.ca/facts/natsmdb.htm>.

[130] Canadian Institute for Health Information, *Supply and Distribution of Registered Nurses in Canada, 2000 Report*, Executive Report (Ottawa: CIHI, 2000).

[131] Canadian Institute for Health Information, *Health Personnel in Canada, 1988 to 1997* [on-line]. [Cited Sept. 14, 2000]. Available from: <http://www.cihi.ca/medrls01/june2000.htm, 2000>.

[132] Canadian Institute for Health Information, *Supply, Distribution and Migration of Canadian Physicians, 1999* [on-line]. Available from: <http:///www.cihi.ca/medrls/smdb0900exec.htm, 2000>.

[133] L. O'Brien-Pallas et al., *Bringing the Future into Focus: Projecting RN Retirement in Canada* (Ottawa: Canadian Institute for Health Information, 2003).

[134] Canadian Institute for Health Information, *Supply and Distribution of Registered Nurses in Canada, 2001 Report* (Ottawa: CIHI, 2001).

[135] B.T.B. Chan, *From Perceived Surplus to Perceived Shortage: What Happened to Canada's Physician Workforce in the 1990s?* (Toronto: Canadian Institute for Health Information, June 2002).

[136] Canadian Institute for Health Information and Statistics Canada, *Health Care in Canada: 2004—A Focus on Safe Care* [on-line]. Available from: <http://www.cihi.com, 2004>.

[137] Canadian Institute for Health Information, *Canada's Health Care Providers* (Toronto: Canadian Institute for Health Information, 2001).

[138] Canadian Medical Association Journal, "Physicians: Too Many or Too Few?" *Canadian Medical Association Journal* 170, 13 (2004), p. 1885.

[139] L. O'Brien-Pallas et al., *Stepping to Success and Sustainability: An Analysis of Ontario's Nursing Workforce* (Toronto: Nursing Effectiveness, Utilization, and Outcomes Research Unit, University of Toronto, October 2003).

[140] G.T. Murphy and L.L. O'Brien-Pallas, *How Do Health Human Resources Policies and Practices Inhibit Change? A Plan for the Future,* Discussion Paper No. 30 (Ottawa: Commission on the Future of Health Care in Canada, October 2002).

[141] L. O'Brien-Pallas et al., "The Economic Impact of Nurse Staffing Decisions: Time to Turn Down Another Road?" *Hospital Quarterly* 4, 3 (2001), pp. 42–50.

[142] Canadian Health Services Research Foundation, *Health Human Resources in Canada's Healthcare System,* Issue/Survey Paper Prepared for the Commission on the Future of Health Care in Canada (Ottawa: Commission on the Future of Health Care in Canada, July 2002).

[143] Canadian Policy Research Networks Inc., *Health Human Resource Planning in Canada: Physician and Nursing Work Force Issues*, Summary Report, Health Human Resources (Ottawa: Commission on the Future of Health Care in Canada, October 2002).

[144] P. and H. Armstrong, *Planning for Care: Approaches to Health Human Resource Policy and Planning*, Discussion Paper No. 28 (Ottawa: Commission on the Future of Health Care in Canada, October 2002).

[145] Canadian Health Services Research Foundation, *A Roundtable on Integrated Health Human Resource Planning* (Ottawa: CHSRF, May 2003).

[146] Northwestern Ontario District Health Council, *Strategies to Enhance Health Human Resources Capacity and Utilization in Northwestern Ontario* (Thunder Bay, Ont.: Northwestern Ontario District Health Council, May 2003).

[147] Ontario District Health Councils, Long-term Care Health Planning Branch, *From Practice to Policy: Report of the Health Human Resources Capacity and Utilization Project,* A Joint Project of the Ontario District Health Councils and the Ministry of Health (Toronto, November 2003).

[148] F. Teplitsky, *Health Human Resources Planning in Ontario: A Status Report* (Toronto: Toronto District Health Council, December 2000).

[149] M.L. Barer and G.L. Stoddart, *Toward Integrated Medical Resource Policies for Canada: Background Document,* Report Prepared for the Federal/Provincial/Territorial Conference of Deputy Ministers of Health, June 1991.

[150] A. Baumann and J. Blythe, "Nursing Human Resources: Human Cost Versus Human Capital in the Restructured Health Care System," *Health Perspectives* (2003), pp. 27–34.

[151] A. Baumann et al., *Capacity, Casualization, and Continuity: The Impact of SARS*, Report to the Walker Expert Panel, Ontario, 2004.

[152] D. Bryant-Lukosius et al., "Advanced Practice Nursing Roles: Development, Implementation and Evaluation," *Journal of Advanced Nursing* 48, 5 (2004), pp. 519–529 (N).

[153] D. Bryant-Lukosius and A. DiCenso, "A Framework for the Introduction and Evaluation of Advanced Practice Nursing Roles," *Journal of Advanced Nursing* 48, 5 (2004), pp. 530–540 (N).

[154] A. Baumann and B. Silverman, "De-professionalization in Health Care: Flattening the Hierarchy." In L. Groake, ed., *The Ethics of the New Economy: Restructuring and Beyond* (Waterloo, ON: Wilfrid Laurier University Press, 1998), pp. 203–211.

[155] H.P. Mckenna, "Nursing Skill Mix Substitutions and Quality of Care: An Exploration of Assumptions from the Research Literature," *Journal of Advanced Nursing* 21 (1995), pp. 452–459.

[156] B.T.B. Chan, "The Declining Comprehensiveness of Primary Care," *Canadian Medical Association Journal* 166, 4 (2002), pp. 429–434.

[157] S. Iliffe and P. Lenihan, "Integrating Primary Care and Public Health: Learning from the Community-oriented Primary Care Model," *International Journal of Health Services* 33, 1 (2003), pp. 85–98.

[158] C. Schoen et al., "Primary Care and Health System Performance: Adult's Experiences in Five Countries, *Health Affairs* (2004). [on-line epub ahead of print, no volume yet in PubMed]. Available from: <http://www.content.healthaffairs.org/cgi/content/full/hlthaff.w4.487/DC1>.

[159] M. Giacomini et al., *The Devil in the Details: Some Conclusions about How Funding Changes Translate into Financial Incentives in the Canadian Health System,* Centre for Health Economics and Policy Analysis Working Paper Series #96-14 (Hamilton: McMaster University, September 1996).

[160] A.J. Kellow, "Promoting Elegance in Policy Theory: Simplifying Lowi's Arenas of Power," *Political Studies Journal* 16, 4 (1988), pp. 713–724.

[161] T.J. Lowi, "Four Systems of Policy, Politics, and Choice," *Public Administration Review* 32, 1 (1972), pp. 298–310.

[162] H. van Eyk and F. Baum, "Learning about Interagency Collaboration: Trailing Collaborative Projects between Hospitals and Community Health Services," *Health and Social Care in the Community* 10, 4 (2002), pp. 262–269.

The Enhancing Interdisciplinary Collaboration
in Primary Health Care (EICP) Initiative
c/o The Conference Board of Canada
255 Smyth Road
Ottawa (ON) K1H 8M7 Canada
Tel: 613-526-3090 ext. 460
Fax: 613-526-4857
info@eicp-acis.ca
www.eicp-acis.ca

EICP Steering Committee

- Canadian Association of Occupational Therapists
- Canadian Association of Social Workers
- Canadian Association of Speech-Language Pathologists and Audiologists
- Canadian Medical Association
- Canadian Nurses Association
- Canadian Pharmacists Association
- Canadian Physiotherapy Association
- Canadian Psychological Association
- Canadian Coalition on Enhancing Preventative Practices of Health Professionals
- Dietitians of Canada
- The College of Family Physicians of Canada