Towards a Canadian Model of Integrated Healthcare

LEAD PAPER

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Canada does not have integrated healthcare. Canada has a series of disconnected parts, a hodge-podge patchwork, healthcare industry comprising hospitals, doctors' offices, group practices, community agencies, private sector organizations, public health departments and so on. Each Canadian province is experimenting with different types of organizational structures and processes with the intent of improving the coordination of services, facilitating better collaboration among providers and providing better healthcare to the population. However, regional health authorities and their variants in Canada do not possess most of the basic characteristics of integrated healthcare such as physician integration and a rostered population (Hospital Management Research Unit 1996,1997).

In contrast, most developed countries are currently emphasizing integration of the components of healthcare as a

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solution to many of the problems that plague national health systems (Raffel 1997; Saltman and Figueras 1998). This paper uses evidence from the international experience to recommend strategies for achieving integrated healthcare in Canada. In the first section integrated healthcare is defined. Next, some of the reasons why countries are moving towards integrated healthcare are presented. Canadian progress to date towards an integrated system is then outlined. In the last sections of the paper, lessons learned from the international experience are summarized and used as a basis for proposing several strategies of moving towards a distinctive Canadian model.

What Is Integrated Healthcare?

When Shortell and others developed the notion of an "organized delivery system," they began by characterizing an ideal health system as one that:

- focuses on meeting the community's health needs;
- matches service capacity to meet the community's needs;
- coordinates and integrates care across the continuum;
- has information systems to link consumers, providers, and payers across the continuum of care;
- provides information on costs, quality, outcomes and consumer satisfaction to multiple stakeholders - consumers, employees, staff, payers, community groups and external review bodies;
- uses financial incentives and organizational structure to align governance, management, physicians and other providers to achieve objectives;
- is able to continuously improve the care it provides;
- is willing and able to work with others to ensure objectives are met

(Shortell et al. 1996).

From the characteristics was born the concept of integrated or coordinated healthcare.

The Ideal System

Shortell et al. (1993, 1994) originally described organized delivery systems (ODSs) as "networks of organizations that provide or arrange to provide a coordinated continuum of services to a defined population and who are willing to be held clinically and fiscally accountable for the outcomes and the health status of the population being served." Organized delivery systems typically embrace all levels of care – primary, secondary, tertiary, restorative/rehabilitative and long-term. The key characteristics of an organized delivery system are the organization's breadth, depth and geographic dispersion. Organized delivery systems do not require common ownership – what ties the organization together is the clinical and fiscal accountability to a defined population.

Since the seminal 1993 work of Shortell et al. the definitions and models of integrated healthcare focus on the coordination of health services across the continuum of care, as well as the collaboration among providers and provider organizations in the delivery of health services. Two methods of integration have been identified: horizontal integration, which involves the affiliation of organizations that provide a similar level of care under one management umbrella; and vertical integration, which involves affiliation of organizations providing different levels of care under one management umbrella (Conrad and Shortell 1996; Integrated Delivery Systems 1997).

Types of Integration

Types of integration identified by Shortell et al. (1993, 1996) include:

- **Functional Integration** - the extent to which key support functions and activities (such as financial management, human resources, strategic planning, information management, marketing and quality improvement) are coordinated across operating units so as to add the greatest value to the system. Integration involves shared or common policies and practices for each of these functions, but does not mean mere centralization or standardization of these activities.

- **Physician Integration** - the extent to which physicians are economically linked to a system, use its facilities and services and actively participate in its planning, management and governance. Key relationships include the development of a common medical staff, shared credentialing, group practice activity and physicians serving on system boards and committees.

- **Clinical Integration** - reflects an umbrella concept including the notion of continuity of care, coordination of care, disease management, good communication among caregivers, smooth transfer of information and records, elimination of duplicate testing and procedures and, in general, making sure things don't fall between the cracks.

Why Are Many Countries Moving towards Integrated Healthcare?

The evolution of health services has resulted in healthcare being organized around functions; that is, healthcare organizations have responsibility and authority flowing up and down through a series of chimneys. These chimneys are usually more concerned with protecting the territory of providers than with the quality of the experiences of consumers or patients (Griffith, Sahney and Mohr 1995). In other words, healthcare is characterized by multiple practitioners and specialists and complex organizational structures that have been created around the needs of professional groups and not around the needs of patients (Shortell et al. 1996).

The consequence has been increasingly dissatisfied consumers, escalating costs and a recognition by many providers that there has to be a better way of organizing care. Thus, many countries have attempted to take the principles of integrated care and apply them to their own health reforms as a potential solution to many long-standing problems (Marriott and Mable 1998; Klein 1998; Manning 1999). Some of the reasons why many countries are moving towards integrated healthcare are listed below.

Consumers

- *Consumers want "one-stop shopping."* More sophisticated consumers are beginning to demand changes so that care is provided in the right time, in the right place and when convenient for them (Herslinger 1998).
- *Consumers want treatment choices.* They want to know what is the "best" treatment, which, in cases where experts

disagree, means having a choice (Bernstein and Gauthier 1999).
- *Consumers want a greater choice of providers.* Non-medical clinicians (for example, nurse practitioners, midwives, chiropractors and optometrists) are increasingly prominent as healthcare providers, especially in primary care (Cooper et al. 1998). The burgeoning growth of complementary medicine also suggests that Canadians are seeking a wider choice of healthcare providers.
- *Consumers want timely access to health services.* People want to be able to see their family physician or undergo diagnostic tests and treatment within a reasonable period of time (Curtis et al. 1998).
- *Consumers want reassurance that care is of a high quality.* They want to be able to decide between better technical care and interpersonal care, and the location of these services (Finlayson et al. 1999).
- *Consumers want better information to make decisions.* There is no coordinated place for consumers and the general public to obtain relevant, up-to-date information on health and healthcare (Schaeffer and Volpe 1999).
- *Consumers do not want their time wasted by providers.* They do not want to repeat their health histories each time they meet a new provider, have tests and other procedures repeated unnecessarily or wait for the availability of a provider or for necessary services (Berwick 1989).

Quality of Care and Outcomes

- *There are gaps in care.* The movement of care from the acute inpatient hospital to a home or community

How will patients know when an integrated healthcare system exists?

When they:

- do not have to repeat their health history for each provider encounter
- do not have to undergo the same test multiple times for different providers
- are not the medium for informing their physician that they have been hospitalized or undergone diagnostic or treatment procedures; been prescribed drugs by another physician; not filled a previous prescription; or been referred to a health agency for follow-up care
- do not have to wait at one level of care because of incapacity at another level of care
- have 24-hour access to a primary care provider
- have easy-to-understand information about quality of care and clinical outcomes in order to make informed choices about providers and treatment options
- can make an appointment for a visit to a clinician, a diagnostic test or a treatment with one phone call
- have a wide choice of primary care providers who are able to give them the time they need
- with chronic disease, are routinely contacted to have tests that identify problems before they occur; provided with education about their disease process; and provided with in-home assistance and training in self-care to maximize their autonomy

setting has produced gaps in care, often because of rigidities in provider payment eligibility and methods. Health systems need to adapt more quickly to changes in clinical practice.

- *Primary care and specialty care are not well coordinated.* In the words of an Ontario primary care physician: "There is rarely any communication between family doctors and specialists … We get people coming out of hospital having had treatments and procedures, and we have no knowledge of them" (Foss 1999).
- *There should be more use of evidenced-based practice.* Currently there is little use of outcome research to drive changes in practice. Better integration can provide an environment for outcome research where care and treatment can be linked to changes in population and individual health status (Kindig 1998).
- *There are no incentives to keep people well.* Healthcare is a sickness model driven by episodes of care. Clinical practice increasingly emphasizes disease prevention and health promotion practices and ensures that when people do become sick they are treated at the most appropriate point or location at every point in the continuum of care (Flower 1993).

Cost

- *There are redundancies and duplication in the care process.* Opportunities are being missed to improve the efficiency and effectiveness of services – for example, repeat history taking and diagnostic procedures (Berwick 1989).
- *There are no incentives in place to ensure that the right amount and quality of services are provided.* Some organizations and/or funding mechanisms provide incentives to increase the volume of care, and others provide incentives for less care without appropriate safeguards to ensure that standards are met (Persaud and Narine 1999; Blendon et al. 1998; Enthoven and Singer 1998; Felt-Lisk et al. 1999).

In summary, there is imbalance in the system. The values of professionals and their need for autonomy have overruled the needs of consumers. Integration does not call for an end to professional autonomy, but for greater attention to the common good of communities and individual consumers and patients.

Canadian Progress towards Integrated Healthcare

Every Canadian province is struggling to reduce health expenditures without jeopardizing access and quality of care. Rapidly changing technology, an aging population, demand for greater accountability in the system and growing awareness of unexplained variations in clinical practice compound this challenge. However, the capacity of the system to respond is, in part, a product of how it is organized and funded (Hospital Management Research Unit 1996).

Starting in the mid-1990s, Canadian health policy-makers, academics and practitioners began considering the relevance of the concept of integrated care for Canada. This occurred when costs of healthcare were rapidly escalating and provincial governments were concerned about deficits and reining in spending. There is always reluctance in Canada to look to the United States for ideas about healthcare, but the idea of non-profit, integrated care modified for Canada's

unique situation had a great deal of appeal to many providers (Naylor 1999).

Although no one at that time questioned the importance of the basic tenets of the Canada Health Act, Canadians were willing to explore mechanisms to control costs while maintaining access and quality. Leatt et al. (1996) described a model of Canadian integrated care that included the following characteristics: the system provided a continuum of health services to a defined population; health services were funded by capitation payments, and risk was shared by the system and providers; consumer choice was maintained; primary care practitioners were seen as the coordinators of the system; a full spectrum of care was provided within the system; governance of the system was performance oriented; management was of the system rather than of individual institutions; strategic alliances were seen as an important organizational arrangement; and there was needs-based planning and information-based decision-making.

By the late 1990s, most Canadian provinces, with the notable exception of Ontario, had implemented some form of regional health authority as a way of transferring responsibility for the allocation of resources and control of costs from the provincial to the regional level. To date, there has been little evaluation of the outcomes of the move to regional health authorities. Although this approach may have reduced some of the problems of uncoordinated care among organizations, it is not clear whether it has improved integration of many patient-care processes. Essential components for integrated care have been excluded from the authority of regional bodies – drugs and medical care being the most important. A regional health authority without responsibility for physicians and pharmaceuticals cannot provide integrated healthcare. Finally, there are other systematic differences between integrated delivery systems and regional health authorities (see Figure 1).

In Ontario, the Health Services Restructuring Commission (1997) developed a vision of integrated healthcare that was widely distributed. Provider interest in the concepts of integrated care gained momentum and resulted in many communities submitting proposals for pilot projects that were not taken up by the Ontario Ministry of Health. Meanwhile, the Health Services Restructuring Commission was actively rationalizing the hospital system through horizontal integration and recommending major reinvestment in community settings.

Lessons Learned about Integrated Healthcare

A literature review using key words such as "integrated care" or "integrated health system" produces hundreds of articles, most of them focused on specific diseases, health conditions, or care processes. Unfortunately, there is a paucity of literature relating to performance of integrated health systems as a whole. There are a number of case studies such as Coddington et al. (1996, 1997), but the ability to generalize from these cases is limited. Shortell et al. (1996) compared 11 organized delivery systems and found substantial variation in the extent of functional, physician and clinical integration. Functional integration was easier to achieve than physician and clinical integration. Most of the system literature

focuses on managed care, which includes a much greater diversity of organizations than just integrated care. Nevertheless, some lessons learned that are relevant to a Canadian model of integrated care can be discerned from the system literature and are summarized here.

Figure 1: Comparison of Integrated Delivery Systems with Regional Health Authorities

Typical Characteristics of an Integrated Delivery System	Typical Characteristics of a Regional Health Authority
Membership is defined by consumer choice	Membership is defined by geography
Consumers can choose among multiple systems in large urban centres	Consumers have no choice of system
Money follows the consumer	Money does not follow the consumer
Competition among systems for consumers	No competition for consumers
IDS manages all essential health issues	RHA does not manage physicians, drugs and other services
System revenue is determined by capitation payment for each enrolled consumer	RHA revenue is based on historical provider budgets or capitation for geographically defined population
Practitioner payment mechanism is primarily capitation	Practitioner payment mechanism is primarily fee-for-service
Financial incentives to providers for good performance - quality of care, clinical outcomes, productivity and consumer satisfaction	No financial incentives to providers for good performance
System-wide and provider-specific information systems	Provider-specific information systems only
Widespread adoption of clinical guidelines and pathways that transcend providers	Variable adoption of clinical guidelines and pathways that are provider-specific
Primary care focus	Ad hoc focuses

Adapted from *"Integrated Delivery Systems: Providing a Continuum of Care,"* G.H. Pink (ed.). Hospital Management Research Unit/Joint Policy and Planning Commission/Sunnybrook Health Science Centre, July 1, 1996.

What Are the Characteristics of Successful Integrated Care?

Coddington et al. (1997) as well as other authors identified some common characteristics of successful integrated health systems:

- *Physicians play a key leadership role.* Whether or not they are the CEO, physician-leaders are instrumental in bringing together physicians and the other parts of the system. An increasing number of integrated systems have a physician leader and non-physician administrator working side by side (Schulz et al. 1997).
- *The organizational structure promotes coordination.* For example, there may be joint ownership, management contracts and joint executive committees to promote collaboration across the system (Kaluzny et al. 1995; Zuckerman and Kaluzny 1995).
- *Primary care physicians are economically integrated.* A top priority with many integrated health systems is recruitment and retention of primary care physicians through generous compensation, financial incentives, continuing education opportunities and other ways of improving their quality of professional life (Luft 1996; Luft and Greenlich 1996).
- *Practice sites provide geographic coverage.* The delivery of healthcare is planned to take into account demographic trends, geographic barriers, commuting patterns, travel times and other relevant factors. The provision of the entire continuum of services – including physicians' offices, diagnostic facilities, ambulatory surgery centres, and tertiary and quaternary care – is planned to maximize accessibility and minimize duplication (Robinson 1998).
- *The system is appropriately sized.* The number of health professionals, inpatient facilities and community sites is sufficient to anticipate demand, and there is back-up available to handle unanticipated demand.
- *Physicians are organized.* There is movement from physicians working in solo practice to multidisciplinary team settings (Mullan 1998).
- *Health plans are owned by the system.* Health plans work in partnership with the system, sharing risk and being actively involved in ensuring that the system is efficient and effective. Enthoven and Vorhaus (1997) indicated a high-quality managed care plan is characterized by excellence in physician selection and development; health improvement; information systems; continuous quality improvement; cooperation with health purchasers; alignment of financial incentives and appropriate capitation; and patient involvement.

How Can Integrated Care Improve Quality?

In the last few years, several attempts have been made to review managed care plans in terms of their effectiveness in providing quality of care. Some of the major reviews are summarized below. In all of these studies, quality of care was defined as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Institute of Medicine 1990: 21).

Hellinger (1998) reviewed evidence from 1990 onward about the relationship between managed care and quality.

This review concluded that managed care has not decreased the overall effectiveness of care, but may have adverse effects on some vulnerable sub-populations. Evidence also suggests that enrollees in managed care are less satisfied with their care and have more problems accessing specialized services. Younger, wealthier and healthier persons are more satisfied with their health plans than older, poorer and sicker persons.

Miller and Luft (1997) analyzed evidence on the performance of managed care plans (mostly health maintenance organizations or HMOs) from 37 recently published peer-reviewed studies. Evidence from 15 studies comparing HMO results with non-HMO results showed basically no difference in quality of care. However, in several studies, enrollees with chronic conditions showed worse quality of care. The evidence did not support fears that HMOs uniformly lead to worse quality of care. However, hopes that HMOs would improve quality were not supported, either in part because of slow clinical practice change, lack of visit-adjusted capitation rates, or inadequate quality measurement and reporting.

Miller (1998) reported on a review of peer-reviewed literature for two HMO populations: those with chronic conditions and diseases, and those subject to discrimination due to income, colour or ethnic background. The findings again were mixed. Miller's analysis of elderly, ill persons showed worse quality of care as well as low utilization rates, and raised concerns about access to care and, in particular, access to home care. Miller concluded that access could be improved through capitation strategies, such as improving access to specialists; better geographic access and choice of providers and facilities; more focus on providing culturally sensitive care; reduced waiting times; and providing incentives to attract enrollees.

Luft (1998) in a review of Medicare and managed care concluded that the published evidence on the performance of managed care plans is surprisingly even-handed in terms of satisfaction and quality. He pointed out that this is in contrast to the media coverage, which typically focuses on the problems of managed care. Luft suggested that the media might be relying on "old" data or that there is little interest in covering "no problem" stories. Brodie et al. (1998) examined media coverage of managed care over the past seven years and concluded that there has been a shift in the reporting of managed care from a "business" perspective to one emphasizing the "patient care" perspective with television and newspapers describing negative stories and anecdotes.

A number of studies have focused on the effects of HMOs on patients with specific diseases. For example, Seidman et al. (1998) reviewed 22 studies that compared the quality of cardiovascular care in HMO versus non-HMO settings. The studies had been published in peer-reviewed journals and included both measures of process and outcomes of quality of care. The conclusions were that the HMO settings provided at least as good, and in some cases better, quality than the non-HMO settings. Outcomes of care for cardiovascular care were actually better in HMO settings.

Retchin et al. (1997) examined the experiences of stroke patients who were hospitalized in either HMO or

fee-for-service settings (400 each). Both experiences provided similar survival patterns and readmission rates for both sets of patients; however, HMO patients were less likely to be discharged to a rehabilitation facility. The authors concluded it could not be determined whether the higher use of nursing homes and the lower rate of rehabilitation use among HMO stroke patients in their study was a judicious use of expensive resources or a withholding of necessary care.

A number of studies have argued for a broader set of services to be provided by managed care plans. For example, a study of 35 HMOs (Schauffler et al. 1998) showed that California health plans that included health promotion and disease prevention were low in number, and participation rates of enrollees (only 2 to 3% plus) were promoted more as a marketing device than an attempt to improve health services.

Schlesinger and Gray (1988) indicate that, historically, managed care plans have been viewed within the narrow context of providing health services. This context should be widened to include contributions to all components of the community – schools, social services, employees and public health, for example. In future, plans should be viewed in terms of their benefit to the community as a whole by focusing on the social and economic factors affecting community health. Kindig (1998) also argues that a major reason for slow progress towards health outcome improvement is that there is no operational definition of what constitutes "population health" and little understanding of the financial incentives for achieving that goal. Kindig defines population health to include health, functionality and health-related quality of life.

A number of methodological cautions were raised in all of these reviews through inconsistent definitions of quality of care and access to care (McGlynn 1997). Berwick (1996) also pointed out that studies of managed care performance are unable to separate the effects of capitation funding from other aspects of healthcare delivery.

How Should Integrated Care Be Organized?

According to Goldsmith (1993, 1994), a basic flaw in the integration movement in healthcare is the use of an obsolete, 19th-century, asset-based model of integration, in which the accumulation of assets is assumed to mean economic advantage. Goldsmith advocates that integration does not necessarily need ownership, and it may be achieved by a variety of inter-organizational arrangements such as strategic alliances, joint ventures and contracts. For these types of arrangements to achieve meaningful effects for patient care, there has to be a common (or at least connected) clinical information infrastructure. Coordination is not possible in a cost-effective way without good information exchange and a common understanding of the care process.

According to Bazzoli et al. (1999), horizontal integration and vertical integration can occur in both ownership-based and contractual-based integration. However, there is considerable debate on the relative cost-effectiveness and financial viability of each. Ownership-based integration can reduce transaction costs between separate production processes, produce economies of scope and scale, and facilitate imposition of

common information and clinical practice standards. Contractual-based arrangements are more flexible and can respond to local needs more easily. They can build trust between organizations, and elaborating within the contract can strengthen these ties. Networks allow the organizations to identify their core competencies and then purchase necessary inputs from others (Shortell et al. 1996).

Virtual integration refers to an arrangement in which healthcare organizations exist within a network of organizations working towards a common goal of providing healthcare to a given population but without common ownership. In describing virtual integration, Goldsmith (1994:27) indicates "it is clear that the hospital is not the center of the emerging healthcare delivery system. Where this center is, exactly, may vary from place to place inside a state but it is somewhere inside the physician community." Goldsmith states that virtual healthcare systems invest substantial resources in developing and maintaining their provider networks, focusing primarily on the community-based network of physicians.

There has been little empirical research on virtual integration in healthcare. One exception is Robinson and Casalino (1996), who evaluated two alternative forms of virtual integration under managed care: (1) unified ownership between primary-care-centred medical groups and specialists, and (2) contractual networks between physicians and hospitals. In comparison with solo and small group practice, primary-care-centred medical groups had the advantages of economies of scale (better sharing of facilities); joint purchasing; coordinating administrative services; risk sharing for unexpected health needs; lower transaction costs (more efficient negotiations); and potential for innovation. The authors concluded that vertical integration and unified ownership offer the potential for better coordination under changing circumstances. In vertically integrated organizations, subunits are united by common mission and goals, clear hierarchy and bottom line. Virtual integration through contractual relations has the advantage of autonomous adaptation to changing environments, and coordination is achieved by negotiated payments and performance guarantees. However, neither unified ownership nor contractual networks necessarily achieve integrated care from the patient's perspective.

How Should Systems Be Funded?

A common method of integrating care is population needs-based funding or global capitation, defined as the system funding that will pay for all insured health (and specific social) services required by the enrolled population for a predetermined period of time (for example, one year). The amount of money per enrollee is set prospectively and does not depend on the actual services provided to a person in that time period. Under capitation there are incentives to produce services efficiently and to use services to enhance enrollees' health. However, critics of capitation point out there are also incentives to stint on care and put select enrollees at risk (Dudley et al. 1998).

The United States, the United Kingdom, the Netherlands and New Zealand have the most experience with capitation. These countries have

implemented formulas that include a wide range of need and risk adjustments, such as age, gender, standardized mortality rates, welfare status, disability and geography (Persaud and Narine 1999). In Canada, several provinces have also implemented capitation formulas with a variety of adjusters as a method of funding regional health authorities and various forms of primary care.

In an extensive review of the literature pertaining to capitation formulas, Hutchison et al. (1999) found that the evidence on the validity of alternative capitation formulas is sparse and inconclusive. Furthermore, the available literature suggests that the appropriateness and validity of adjusters included in capitation formulas can be expected to vary across settings. The authors stated that based on current research evidence, capitation formulae for integrated healthcare should include, at a minimum, age and sex and, where appropriate, additional needs adjusters and adjustments for geographic variation in costs of healthcare inputs. Examples of additional needs adjusters can be found in a recent study by Lamers (1999), who determined that, among other factors, perceived health and having functional disabilities, cancer, diabetes or rheumatoid arthritis were important for allocating healthcare resources in the Netherlands.

Lessons Learned

When the experience of system-level integration is examined, the conclusions are ambiguous. Although the number of highly integrated systems continues to grow (Industry Scan 1999), no agreement about the elements of a basic workable model has emerged. Managed care has reduced costs through competition among plans and providers and through capitation. However, the potential of integrated care to improve quality of care, achieve better outcomes and increase access has not yet been widely realized (Burns et al 1998). To date, the system-level focus has been coordination at the corporate level among the insurance plan, physician organizations and hospitals. There appears to be less emphasis on out-of-hospital care or on the experiences of individual consumers in a seamless delivery of the continuum of care.

International experience provides a number of lessons for Canada:

- In comparison with traditional fee-for-service payment models, managed care plans show no overall difference in terms of satisfaction or quality of care.
- Under managed care, access may be adversely affected for specific populations such as the sicker elderly, those with chronic conditions, low income groups and certain ethnic groups, and satisfaction with services may be less for these groups.
- Bringing together hospitals, physicians and payers at the corporate level may, in some circumstances, provide financial incentives for integration, but this level of integration has no relationship to that at the local patient-care level.
- Although big-picture, integrated health systems may be the long-term goal, the goal of integration is achieved in a series of incremental steps.
- There is no "one best way" to achieve coordination. A variety of strategies must be tried in different communities.
- Some functional integration (administrative efficiencies) has been achieved.

However, realigning physicians and other clinicians to provide a seamless continuum of care has only just begun.
- Development of collaborative and interorganizational relationships among providers has met with limited success.
- Little consideration has been given to coordination of services at the community and individual levels, providing consumers with information or understanding wants, needs and preferences.
- There has been some attention paid to integrating the acute, inpatient experience, but insufficient attention to provision of services closer to home and in the community.
- There have been very few systematic attempts to monitor and evaluate integrated health systems as they have evolved.
- There is no one capitation formula that is appropriate in all settings, and much more research needs to be done to develop valid, needs-based formulas.

In theory, "integration" means coordination of health services and collaboration among provider organizations to create a genuine health system. In practice, this has not yet been realized.

Where Does Canada Go from Here? Strategies for Moving Ahead

Given these lessons learned, where does Canada go from here? What strategies for achievement of integrated healthcare should provinces be considering? Although there is no one model for achieving coordinated care at the community level, there are strategies that can be adapted to different circumstances to improve the patient-care experience.

After reviewing the literature on integrated care, we propose that provinces should consider the following six interrelated strategies.

1. Focus on the Individual

Greater attention needs to be given to healthcare as experienced by individuals and their families. The lens used to examine healthcare should be shifted from a provider focus to a focus on the needs and preferences of individuals. Methods must be developed for assessing individual and population health needs. Healthcare begins by providing individuals with access to knowledge about their health and how to maintain or improve it. Health services should be provided in the home or as close to home in the community as possible, where volumes are large enough to maintain high quality and economies of scale. Incentives must be realigned from treating disease to keeping people healthy.

There should be more emphasis on service quality in healthcare. Providing culturally sensitive care, publishing information in the languages of consumers, reducing wait times, answering questions, preserving dignity, customizing experiences, offering choices and providing comfort may not improve clinical outcomes, but are nevertheless important to individuals. Clinicians focus on high quality of care, but attention also needs to be placed on identifying who the consumers are, simplifying care processes, obtaining providers' commitment to service quality and paying regular attention to consumer satisfaction.

2. Start with Primary Healthcare

Primary healthcare is one of the building blocks of integrated healthcare. It is the first level of care and should be the first point of contact with the health services system. Individuals should be able to choose their own primary healthcare physician and other healthcare providers and expect timely access close to home or work. Multidisciplinary primary healthcare groups that provide a comprehensive range of services to a defined population should be established. Individuals should be asked to enroll with a primary care group. Both patients and providers make a commitment to meet the expectations set out in the enrolment agreement. Patients commit to receiving their services from the group, and providers commit to meeting the primary healthcare needs of the enrolled population. Primary healthcare services should typically include health promotion and disease prevention, diagnosis and treatment, supportive and rehabilitative services, comprehensive health assessments and being the referral agency to other parts of the system. When a particular provider is not available, an alternative provider in the group should be available to provide services.

Services should be available seven days a week and 24 hours a day. In addition to regular working hours, services must be accessible during evenings and weekends either through on-call services, after-hours services or telephone triage. Emergency departments of hospitals in urban centres should be used for true emergency situations. In rural or remote areas, emergency departments may remain the best after-hours care setting.

The services themselves should be provided by the health professional that can best meet the individual's needs. For example, nurse practitioners, registered nurses, chiropractors, naturopaths, midwives, optometrists, pharmacists and others (assisted by comprehensive clinical practice guidelines) should be utilized to provide the right services for the population. Use of these clinicians leaves the physicians' time and skills for the more complex cases needing medical treatment.

The primary healthcare group should be responsible for coordinating each person's care with other community providers. Each group would make arrangements with specialist services, hospitals, home care, long-term care, mental health agencies and social services to ensure that the appropriate services are available when needed. Population health planning and target setting should be carried out (perhaps in conjunction with Public Health) and regular report cards provided to enrollees and payers on the extent to which health goals for the population are met and enrollees are satisfied with the services. The potential benefits to consumers, providers and payers of an approach to integrated care that places primary care at the centre of the system are great. Therefore, new models of primary care should be top priority for further system reform.

3. Share Information and Exploit Technology

The importance and power of information management and technology have been well recognized in most industries. Healthcare in Canada has been slow to embrace the broad advances in information management. Many providers are currently experimenting with various

approaches to increase the accessibility of health records by providers, but these efforts are not coordinated.

The way healthcare is delivered will have to change dramatically in order to take full advantage of information technology. For example, much of the ongoing care of persons with diabetes, hypertension, asthma and other chronic diseases will shift from physicians to other health professionals supported by clinical practice guidelines. Physicians will focus more on diagnosis, intervention during acute episodes and care-plan design. Monitoring will happen automatically through internet-based devices communicating with smart databases that warn physicians of significant changes in patient condition.

In order to achieve more integration of care processes and better collaboration among providers, information must be shared across the system. Management strategies must be developed to eliminate the necessity for duplicate history taking and repeat diagnostic tests because of the lack of ability to share information. Providers must have timely access to patient information that, at the same time, protects the privacy and confidentiality of health records. Healthcare organizations must be willing to share management information in order to improve functional and clinical efficiencies.

In Ontario, the Health Services Restructuring Commission has proposed a vision for an integrated health information network with an electronic consumer record at its core (see Figure 2). The proposed "network rigorously protects individual privacy and confidentiality and allows the real-time capture and exchange of relevant, accurate, standardized, and consumer-oriented health information" (Ontario Health Services Restructuring Commission 1999:14). The strategy will enable consumers to make better lifestyle and healthcare decisions; providers to deliver better quality, affordable healthcare; health system managers to make fact-based decisions; and payers to plan, allocate resources and improve policy decisions to meet population health needs. For example, the ICES Atlas on Cardiovascular Health and Services (1999) identified variations in drug prescribing, suggesting significant preventable morbidity and mortality among post-myocardial infarction patients. An integrated health information network that includes user-friendly clinical practice guidelines would help keep physicians abreast of new medical knowledge and help to ensure that patients receive optimal care.

Funding mechanisms must be adjusted to create incentives for integrated information systems, perhaps through inclusion of incentives in physician fee-for-service payment schedules. For example, a health ministry could license health networks that met certain connectivity standards and security criteria. The payment schedule could be two-tiered: in addition to a standard technical fee for an X-ray, there could be a premium paid if the image is posted to a licensed network within 24 hours. This would allow the private sector to assist in the creation of health networks because a business case for financing this type of technology could be made. The government would not have to spend anything on network development until the network was up and running and successful as defined by the licence

Figure 2: Long-Term Vision of an Integrated Health Information Network

CONSUMERS

- Belief and comfort that privacy of health information is being respected
- Broad awareness of factors affecting good health
- Access to quality information on their own health to inform decision-making
- Improved quality of care
- Understanding of available healthcare resources and services, and comfort with system performance

MANAGERS

- Accurate analysis and evaluations of healthcare systems performance at regional, institutional and provider-specific levels
- Ability to measure, monitor and analyze care delivery processes and the consequent clinical quality, cost and health outcomes achieved
- Ability to effectively forecast needs

HEALTH INFORMATION NETWORK

The real-time capture and secure exchange of relevant accurate, standardized and consumer-oriented health information across the care continuum, upholding privacy needs.

PROVIDERS

- Rapid access to the consumers' relevant clinical and non-clinical data at all care delivery sites (e.g., demographics, health problems, encounters, test results, drugs prescribed, and dispensed, and treatments)
- Access to clinical practice guidelines and authoritative texts, journals and electronic resource to make better clinical decisions and provide better medical treatment at point of care (e.g., cost of various therapeutically equivalent treatment options, potential drug interactions and dosage errors)
- Secure electronic ordering, results transfer, scheduling and communication across the care continuum

PAYERS AND THE GOVERNMENT

- Tools for accessing population health
- Fact-based policy decision-making
- Understanding the availability of resources and demands to be met
- Understanding the cost of care
- Accurate assessment of healthcare spending/allocation effectiveness

Note: This long-term vision has been widely discussed and is broadly shared by organizations/agencies across Ontario and Canada.

requirements. Hence, the government would face no risk of failed network implementation.

4. Create Virtual Coordination Networks at Local Levels

Although the creation of corporate governance models may in the long run prove to be the most efficient and effective type of integrated care, the notion of further extensive system-wide restructuring in Canada is daunting. Virtual networks that facilitate coordination without the necessity of sharing assets can be developed. Organizations that provide patient populations with the full continuum of care (primary care, long-term care, home care, public health, hospitals, rehabilitation programs and so on) can join together around common vision, goals, and standardized information systems and clinical practice guidelines. This could be achieved through financial incentives, regulation and consumer demands for more coordination among providers.

Interorganizational arrangements such as strategic alliances, joint executive committees, amalgamations and contracts can be used to enhance coordination of care and ensure collaboration among providers. These arrangements would enable the local system to assume responsibility and accountability for population health needs assessment, strategic planning, resource sharing, program alignment, service delivery and monitoring of quality and outcomes. Systems that serve small populations may not have the scale to undertake these responsibilities on their own and thus may have to share these types of resources with other systems. These activities would be greatly enhanced by the provision of timely population health databases. Information, organized geographically, by critical mass of providers, by population groups, and/or in defined self-sufficient health regions, would enable better planning, delivery and evaluation of health services. At the higher system level, it is necessary to define and ensure standards are met, to set policy and to truly provide governance to the system in the interest of the people being served.

5. Develop Practical Needs-Based Funding Methods

The current state of the art in capitation can be characterized as a classic "town versus gown" phenomenon. The town includes insurers and providers who need practical methods of forecasting expenditures in order to obtain managed care contracts. The town argues that the most dependable method of predicting next year's healthcare costs for a group of people is to look at previous years' costs of the same group. The town favours risk-based capitation formulas that are based on previous utilization simply because they work better than other methods. The gown includes academics and policymakers who prefer a method that allocates resources based on the healthcare needs of the population. The gown argues that prior-use methods perpetuate historical inequities and are highly related to provider supply and practice patterns that may or may not be appropriate. The gown favours needs-based capitation formulas because they drive change from a provider-focused to a population-focused healthcare system.

Both perspectives are understandable. The bottom line is that if Canada wants to move towards integrated care, then

there is an urgent requirement for more research into development of needs-based capitation formulas that are relevant in the Canadian setting. Capitation formulas that adjust for age and sex only are not credible with many providers, especially those who care for historically undeserved groups such as the mentally ill, recent immigrants and aboriginal peoples. Also the traditional capitation problems of adverse selection and stinting on care may be less likely if funding formulas explicitly adjust for the relatively high need of various groups. Needs-based capitation formulas that result in funding reallocations of plus or minus 50% might be interesting from an academic perspective, but would likely be greeted with hostility or ridicule from those charged with providing the care. In summary, the ideological superiority of needs-based funding has to be backed up with valid and practical methods that are credible to providers.

There should be experiments with alternative approaches to funding of integrated care. Perhaps healthcare for high-need groups should be funded through program budgets instead of capitation. It may be better for highly specialized services such as cardiac surgery to have specific eligibility criteria and be funded on a fee-for-service basis. In some circumstances, a reverse "peel the onion" approach should be taken to capitation - start with primary healthcare only and gradually add layers of care to the capitation funding as experience is gained. Explicit financial incentives could be considered for attainment of important health goals and system objectives. As a country with a health system in which there is one dominant payer, Canada should be at the forefront of research and development into new methods of funding healthcare.

6. Implement Mechanisms to Monitor and Evaluate

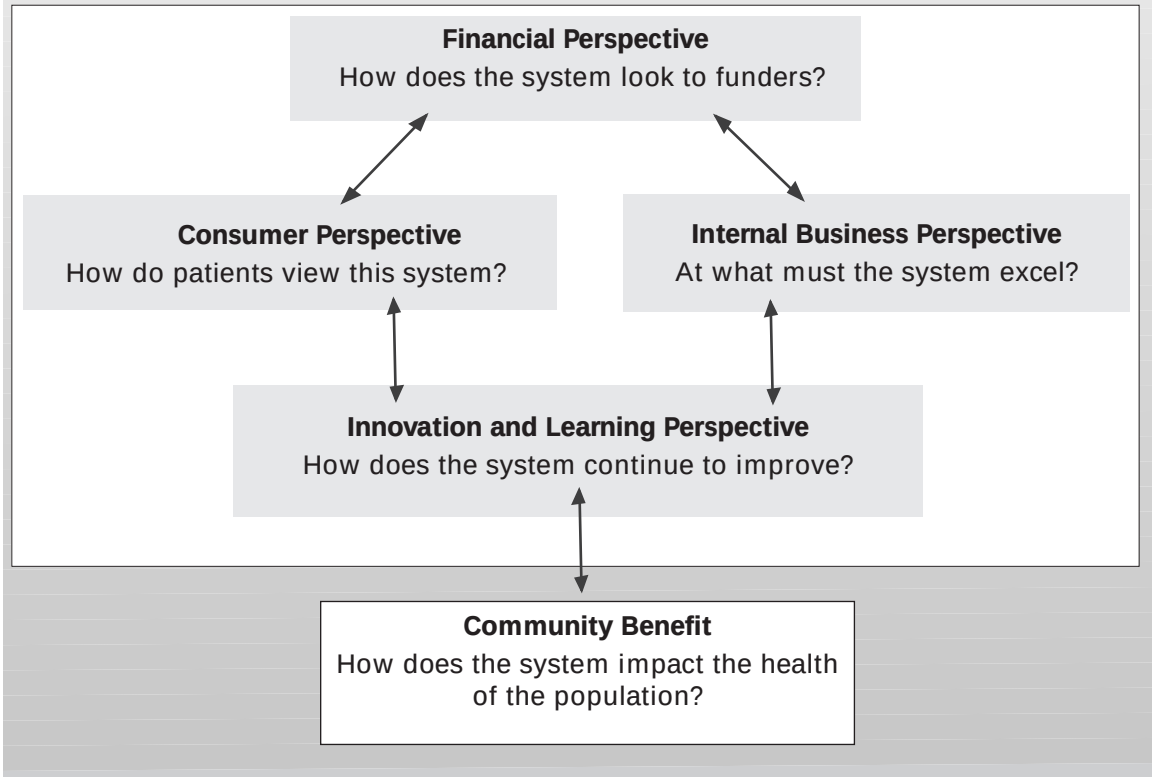
Systematic mechanisms need to be developed to monitor and evaluate the impact of large-scale organizational change. Although such mechanisms are fraught with methodological difficulties (see, for example, Leggat and Leatt 1997), a framework with reliable indicators must be developed to monitor the effects of health reform on access, quality and affordability of health services. Although different stakeholders have different expectations and evaluative criteria for performance, an evaluation framework that considers the system as a whole can yield valuable information for consumers, providers, managers and payers (see also: Fowles et al 1996; Gruenberg et al. 1996; Robinson 1996).

Considerable progress has been made in recent years in the development of scorecards and report cards. To date, this work has focused primarily on hospitals and is only recently allowing comparison of performance among individual organizations or groups of providers. One of the most difficult challenges is identifying a succinct set of indicators that are valid and relevant to most stakeholders. So far, most efforts have been limited by their dependence on secondary data sets (usually collected for other administrative purposes) that are fraught with reporting variations and other data quality problems. These problems are exacerbated when the measurement unit of analysis is at the system level.

A popular approach that focuses attention on a mix of measures as opposed to the traditional emphasis on financial measures only is the "Balanced Scorecard" (Kaplan and Norton 1991) illustrated in Figure 3. Another approach might be to develop an "integration index" that would rate providers on various dimensions of integration. Formal measures of integration would allow empirical studies on the effects of integration, more rigorous accreditation assessments and more effective use of financial incentives to attain integration objectives.

One important question about monitoring and evaluation is "Who should perform the activities?" One strategy advocated by the National Health Service (1997) in the United Kingdom, and by the Agency for Health Policy Research in the United States is the formation of an independent council or commission made up of consumers and providers. Such a body (what Naylor, 1999, refers to as a Quality Council) would monitor accessibility, quality of care and outcomes; identify system-level problems or issues; and contract with appropriate researchers or consultants to investigate. The council would also have the responsibility to recommend policy changes and other actions to correct or improve the situation. The move to regional health authorities is changing the unit of analysis for performance measurement from individual organizations to regions or systems.

Figure 3: Framework for Monitoring the Performance of a Health System



As information systems catch up with practice, inter- and intra-provincial comparisons of system performance will be possible.

Conclusion

In comparison with other developed countries, Canada has a relatively static healthcare system. Many providers are organized and paid in the same ways as when medicare was implemented in the 1960s. Although regional health authorities have addressed some of the pervasive problems of Canadian healthcare, progress has been slow and is incomplete. Fundamental system problems have either not been addressed or have been dealt with at the margin only, usually by throwing money at them. Unfortunately, fundamental problems are not solved in this way, and the list of problems is long: uncoordinated care, underuse of non-medical practitioners, provider payment methods with perverse financial incentives, emphasis on disease treatment, unexplained variations in service utilization, geographical maldistribution of practitioners, little use of information and information technology, waits and other access problems, retarded dissemination of proven technology, little emphasis on consumer satisfaction, sparse evaluations of quality of care and outcomes, shortages of various health professionals, rigid role definitions that do not allow new models of care, and looming significant cost increases. These problems will only get worse as the demanding, consumerist generation of baby boomers reaches the age when people begin to use the health system in substantial numbers.

In the mid-1990s, provincial governments and providers were deterred by the magnitude of change implied by a move towards integrated care. Now that there is some international experience with integrated care and a greater appreciation of its strengths and weaknesses, it is time to move ahead with the Canadian tradition of incremental change. If we focus on the individual, start with primary care, share information and exploit technology, create virtual coordination networks at local levels, develop practical needs-based funding methods and implement mechanisms to monitor and evaluate, we believe that progress will have been made in creating a genuine and effective model of integrated healthcare in Canada.

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