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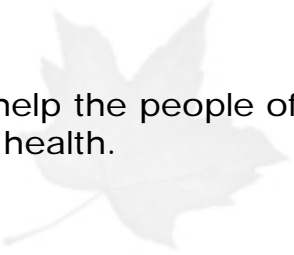
The **Health Transition Fund**

SYNTHESIS SERIES

Integrated Service Delivery

Canada

Our mission is to help the people of Canada maintain and improve their health.

Health Canada

Integrated Service Delivery

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This report is one in a series of 10 syntheses of HTF project results covering the following topics: home care, pharmaceutical issues, primary health care, integrated service delivery, Aboriginal health, seniors' health, rural health/telehealth, mental health, and children's health. The tenth document is an overall analysis. All are available electronically on the HTF website (**www.hc-sc.gc.ca/htf-fass**), which also contains information on individual HTF projects.

Executive Summary

T he Health Transition Fund (HTF), a joint effort between federal, provincial and territorial governments, was created out of the 1997 federal budget to encourage and support evidence-based decision making in health care reform. Between 1997 and 2001, the HTF funded approximately 140 different pilot projects and/or evaluation studies across Canada. In order to communicate research evidence from the projects to decision-makers, experts were employed to synthesize the key process and outcome learnings in each of nine theme or focus areas: home care, pharmacare, primary care/primary health care, integrated service delivery, children's health, Aboriginal health, seniors' health, rural/telehealth, and mental health. This document summarizes the key learnings in the integrated service theme area. It has been prepared by Peggy Leatt, PhD, Liberty Health Chair in Health Management Strategies and Professor, Department of Health Policy, Management and Evaluation, University of Toronto.

Promise of Integrated Service Delivery

Simply put, integrated service delivery is a term used to describe health services that are coordinated around the health needs of patients and communities. But, it is much more than that. Integrated service delivery is currently one of the most active fields of health care inquiry in Canada. Every province except Ontario has implemented some form of regional health authority, while all provinces have been studying experiences with integrated health systems in the United States and elsewhere. Faced with mounting expenses and public dissatisfaction, health care bodies envision a seamless health system without fragmentation, duplication, or gaps in services. The ultimate promise of integrated service delivery

is the creation of a modernized, cost-effective system characterized by closer working relationships between hospitals, long-term care facilities, primary health care, home care, public health, social welfare agencies, schools, police, and others whose services have implications for the determinants of health.

HTF Studies in the Theme Area

This analysis covers 41 HTF studies, all of which were concerned with achieving greater integrated service delivery. Some studies targeted this goal directly by reorganizing services; others worked indirectly by, for example, improving information access for providers and other stakeholders in different geographic locations.

For the purposes of this synthesis, the studies were grouped into three clusters: those focusing on *clinical integration* at the patient care level; those emphasizing the importance of *information management and use of technology;* and a group of projects that demonstrated *vertical integration of services* in a community.

Findings for Clinical Integration

The clinical integration projects facilitated integrated service delivery through the use of standardized tools and processes such as protocols, clinical pathways, and model programs. These approaches were successful in ensuring that care was consistent when patients were transferred between services.

The development and implementation of standardized protocols was helped by such participatory structures as multidisciplinary teams and committees. The projects showed that the use and validation of these new processes required special communication and education strategies. Resistance to change caused difficulties in some projects, and it was exacerbated when, for example, new roles were ambiguous or there was competition amongst providers for patients or other resources.

Findings for Information Management and Use of Technology

The projects focusing on information management and use of technology clearly illustrated that integrated information is essential for integrated service delivery. However, these studies showed that different stakeholders – patients, the public, health care providers, managers, leaders, and governments – need different types of information and designing matching information delivery systems is a major challenge.

The studies did show that integrating information was easier when there was a single electronic health record and, for patients, a single point of entry into the system. However, it was clear much more work needs to be done in this area if decision-makers are to receive the evidence-based information they so greatly need.

Findings for Vertical Integration

These projects took various approaches to vertical integration of services at the community level, often successfully. Joint ventures helped facilitate the care of patients moving between two organizations: patients transferring, for example, from hospitals to home-based or community-based care.

Early results from multi-institutional arrangements, which brought together many different types of services, showed some positive effects on service integration and health outcomes. There were several projects that successfully linked health services with other types of social services, such as employment, education, housing, and legal services.

General Findings and Recommendations

Overall findings from the 41 studies suggest that efficiencies can be achieved and effectiveness improved through integrated services. This leads to two broad recommendations:

Urgent attention should be given to providing Canadians with more information about their own health, health care and the health care system.

Governments and the health professions should accelerate their pace in developing and implementing integrated service agendas.

Preface

In recent years, Canada's health care system has been closely scrutinized with a view to quality improvement and cost-effectiveness. Fiscal pressures and changing demographics are resulting in initiatives to explore how the efficiency of the health care system can be increased while ensuring that high-quality services are affordable and accessible. Within this context, there has been a need for more research-based evidence about which approaches and models of health care have been working and which have not. In response to this requirement for evidence, and on the recommendation of the National Forum on Health, the Health Transition Fund (HTF) was created out of the 1997 federal budget to encourage and support evidence-based decision making in health care reform.

A joint effort between federal, provincial and territorial governments, the HTF funded 141 pilot projects and/or evaluation studies across Canada between 1997 and 2001, for a total cost of $150 million. Of that, $120 million supported provincial and territorial projects and the remaining $30 million funded national-level initiatives. The HTF targeted initiatives in four priority areas: home care, pharmaceutical issues, primary health care, and integrated service delivery. Various other focus areas emerged under the umbrella of the original four themes, including Aboriginal health, rural health/telehealth, seniors' health, mental health, and children's health.

The HTF projects were completed by the spring of 2001. In order to communicate the evidence generated by the projects to decision-makers, experts were employed to synthesize the key process and outcome learnings in each theme area. This document summarizes the key learnings in the integrated service delivery theme area. It has been prepared by

Peggy Leatt, PhD, Liberty Health Chair in Health Management Strategies and Professor, Department of Health Policy, Management and Evaluation, University of Toronto.

Unique Nature of the HTF Projects

The HTF was quite different from other organizations that fund health-related research in this country, such as the Canadian Institutes for Health Research and its predecessor the Medical Research Council.

- It was a time-limited fund, which meant that projects had to be conceived, funded, implemented, and evaluated all in four years – a very short time in the context of system reform.

- It was policy-driven; policy-makers were involved in the project selection process, and wanted to focus on some of the outstanding issues in the four theme areas in the hope that results would provide evidence or guidance about future policy and program directions.

In order to encourage projects to address issues and produce results that would be relevant to decision-makers, the HTF developed an evaluation framework consisting of six elements (access, quality, integration, health outcomes, cost-effectiveness, and transferability). Each project was required to have an evaluation plan addressing as many of these elements as were relevant. In addition, all HTF projects were required to include a dissemination plan (for which funding was provided) in order to ensure that results were effectively communicated to those best able to make use of them. In addition to these individual dissemination plans, the HTF Secretariat is implementing a national dissemination strategy, of which these synthesis documents are one element. This emphasis on evaluation (systematic learning from the experience of the pilot initiatives) and dissemination (active sharing of results) was unique on this scale.

Most national projects were selected by an inter-governmental committee following an open call for proposals, while provincial/territorial initiatives were brought forward by each individual jurisdiction for bilateral approval with the federal government. At both levels, applications came not just from academics in universities, or researchers in hospital settings, but also from non-traditional groups such as Aboriginal organizations, community groups, and isolated health regions. Groups that had rarely, if ever, thought in terms of research, evidence, evaluation, and dissemination began doing so, and these developments bode well for improved understanding and collaboration among governments, provider organizations, and researchers. The role of federal, provincial, and territorial governments in the selection process ensured that the projects delved into the issues that were of high concern in each jurisdiction. By the same token, there was considerable scope in the range of project topics, and the body of projects was not (and was never intended to be) a definitive examination of each theme.

This unique focus and selection process imparts specific features to the HTF body of projects. The projects that were funded represent good ideas that were put forward; they do not represent a comprehensive picture of all the issues and potential solutions in each of the theme areas. The relatively short time frame meant that many researchers struggled to complete their work on time and the results are preliminary or incomplete; some pilot projects might take a number of years to truly show whether they made a difference. This must be left to others to carry forward and further investigate. Perhaps the greatest value in the large body of HTF projects comes from the lessons we can learn about change management from the researchers' struggles and challenges as they undertook to implement and evaluate new approaches to longstanding health care issues.

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1. Setting the Context

Canadian governments and patients are facing what appear to be widespread systemic problems in health service delivery.

Health costs have escalated to the point where some provincial governments are spending up to 40 per cent of their expenditures on health services. Yet the system offers little in the way of accountability for health care costs and use by either providers or consumers. Costs continue to escalate as provinces struggle to find and retain key health professionals. Recent job actions in British Columbia, Saskatchewan and Nova Scotia illustrate that health care workers are dissatisfied and already in short supply. Shortages are also predicted for certain types of physicians and other health professionals.

It does not help that services are fragmented and there may be redundancies and duplication in services because of lack of communication and coordination amongst providers. There is competition amongst parts of the system for control of resources and few incentives for interdisciplinary collaboration. There is still too much reliance on the traditional hospital-based care and slow progress in moving services to more appropriate ambulatory services.

Meanwhile, public confidence in the system is decreasing. The media is full of stories about long waiting lists, excess waiting times in hospital emergency rooms and redundant medical histories and diagnostic tests. People fear that individuals are already falling through the cracks and, as the population ages, services will not be there when they are needed.

At the same time, consumers are increasingly aware of their rights to information about their own health and about the availability of health services. The public is becoming more aggressive in its requests for access to information for decision-making and real choice in providers of services. Influenced by information in the United States and elsewhere, Canadians are increasingly aware of the real possibility of medical or, to name them more accurately, health system errors.

1.1 The Vision of Integrated Service Delivery

Canada's health care sector sees integrated service delivery as a way to attack these health service problems on multiple fronts.

"Integrated service delivery" is a synonym for health care services that are coordinated around the needs of patients or specific population groups. It has emerged as a term to capture a broad set of strategies focusing on the coordination of services at the care process level.

In Canada, integrated health services are developing within a broad framework best described by Stephen Shortell, Robin Gillies and David Anderson's "signposts of integration" in *The New World of Managed Care: Creating Organized Delivery Systems* (1994). These include:

- developing clinical protocols, pathways, and case management systems;

- linking cross-institutional clinical services for programs for cardiovascular care, oncology care, behavioral medicine, and women's health;

- accelerating clinical applications of continuous quality improvement and expansion to the entire continuum of care;

- developing and validating outcome measures and other methods of evaluating performance such as the use of balanced scorecards;

- downsizing of the acute hospital inpatient capacity;

- consolidating community programs and services;

- expanding the number of primary health care providers; and

- accelerating the growth of group practices for primary and specialty group practices.

This list gives a sense of the grand hopes for integrated service delivery. Health care providers and provincial governments envision healthier communities and more satisfied patients served by a seamless health system without fragmentation, duplication or gaps in services. They see a system that would be characterized by closer working relationships between hospitals, long-term care facilities, primary health care, home care, public health, social welfare agencies, schools, police, and others whose services have implications for the determinants of health.

1.2 Ongoing Initiatives

Traditionally, Canada has addressed major health service problems by reorganizing or restructuring at a provincial level. When in doubt, restructure! So, it is no surprise that this has been the health sector's main approach in trying to achieve more cost-effective service delivery and to achieve integration.

Ideas about service integration have followed two distinct models: Regional Health Authorities (RHAs), which decentralize decision-making to a local level, and Integrated Health Systems (IHSs), which are based on organized delivery systems developed in the United States and other countries.

1.2.1 Regional Health Authorities

Starting with Quebec in 1989, every province except Ontario has worked on implementing some type of regional health authority structure. In this model, individuals are appointed or elected to the RHA for the local community, and they are accountable for the health and health services of a defined population or particular geographical area.

In most provinces, RHAs are accountable for resource allocation and managing hospitals, community health centres, home care programs, public health, ambulance services, and different types of long-term care facilities. They may also be responsible for hiring physicians, nurses, laboratory technicians and other health professionals needed to deliver services. The provincial government, in most instances, retains responsibility for mental health, cancer, and other select services, and most regional health authorities do not have authority for deciding expenditures for physician services or drugs.

The main rationale for creating RHAs is twofold: to increase accountability at the local level for the provision and cost of health services; and to involve local citizens in health care decisions affecting their community. RHAs are thought to facilitate integrated service delivery because there is one local governing body that is accountable for most health services in the region. They are thought to ease reallocation of resources to accompany transfer of services from inpatient hospital care to community-based services in keeping with population health needs.

The big question is whether or not RHAs are achieving their goals. Since most provinces are still modifying them, the evidence is not yet in. Nor has there been much evaluative research to date.

Jonathan Lomas, John Woods and Gerry Veenstra (1997) reported that a national survey of RHA board members showed RHAs in the institutional sector had managed to consolidate some hospital programs into fewer sites. But Lomas et al. also concluded that attempts to integrate hospital programs into the community sector was hindered by the RHAs' lack of authority over large parts of the health budgets, such as funding for physician services and drugs.

1.2.2 Integrated Health Systems

Integrated health systems evolved in the United States as an outgrowth of managed care. In Canada, they have been discussed extensively in all provinces but no province has yet implemented a full version of the IHS model.

IHSs are designed as networks of organizations (usually with common governance) that provide,

or arrange to provide, a coordinated continuum of services to a defined population. They are accountable clinically and fiscally for the health status of the population and outcomes of health services. IHSs provide a comprehensive array of services from health promotion, primary care, diagnostic, treatment, and rehabilitation and long-term care services to enrollees for a fixed capitation (per head) fee.

In terms of integrated service delivery, IHSs require a paradigm shift from one focusing on "providers" to one focused on "customer" (consumer) service. The advantages of the IHS model to consumers are thought to be more timely access to services, "one-stop shopping," less duplication of services, elimination of gaps and fragmentation in care processes, and better coordination and transfer between primary and secondary services. Ideally, consumers have evidence-based information about the alternative treatments available to them, such as where to receive the best care, and which health professionals have the best track records for the services they need.

Again, there are very few empirical evaluations, although there have been a number of IHS case studies. *Remaking Health Care in America* (1996, repeated in 2000), which focuses on 10 integrated systems in the United States, is among the most influential. The main conclusions by authors Shortell, Gillies, Anderson, Erikson, and Mitchell were that most systems had made progress in bringing together hospital service organizations through horizontal integration. Some systems had been successful in integrating physicians into the organizations and providing economic incentives for physicians to collaborate. The area with the least successful outcomes was clinical integration – that is to say, the key part of integrated service delivery.

In 2000, Peggy Leatt, George Pink and Michael Guerriere reviewed the research evidence on IHSs in a lead paper for Healthcare *Papers* titled *Towards*

a Canadian Model of Integrated Healthcare. Leatt et al. concluded by suggesting six strategies for moving forward with integrated service delivery. They recommended that policy should focus on the individual consumer and his/her needs; start with primary health care as a core service at the centre; develop needs-based population funding models; share information amongst providers and promote technology; create virtual coordination networks at local levels; and implement mechanisms to monitor and evaluate service delivery.

Ontario has also given IHSs serious examination as part of its health reform drive. In 1996, Ontario appointed the Health Services Restructuring Commission (HSRC) with a four-year mandate to modernize hospital services and to design strategies for the creation of IHSs. The commission's achievements included integration of hospital services through mergers and *A Legacy Report: Looking Forward, Looking Back* (2000), which offered a blueprint for health information management, primary health care, performance management, and vertical integration in communities. The full impact in Ontario of the commission's work has not yet been felt.

Despite these positive indicators, the IHS model is controversial in Canada. The idea of market-driven competitive systems does not sit well with some Canadians, and health professions and other provider organizations have wavered in their support of some key IHS principles. Discussions of IHSs in Ontario have pressed on with increasing emphasis on "virtual" IHSs, as described by Jeff Goldsmith in *The Illusive Logic of Integration* (1994). Goldsmith suggested that a single umbrella governance structure for IHSs is difficult to achieve, and that virtual integration is the answer. He also felt that integration may not require common governance or ownership but may be achieved by a variety of strategic alliances, such as joint ventures, contracts, networks and other multi-institutional arrangements.

1.3   Outstanding Issues

From a practical point of view, evidence to support the idea that integrated service delivery leads to improved health outcomes and patient satisfaction is sparse. Part of the problem lies with the lack of clear and consistent interpretation of what is meant by integrated service delivery. The term seems to have evolved without specific grounding in theory or research. If you were to ask patients about the integration of health services, they would probably reply with some surprise: "You mean my care is not coordinated now? The specialist did not tell my family doctor that I had major heart surgery last month? You mean I can't arrange my blood work, X-rays and other tests with one phone call to the hospital?"

At a Healthcare *Papers* conference in June 2001, Michael Guerriere captured the essence of what patients want from a health care system – and what many believe integrated service delivery has the potential to provide:

- no repetition of questions or tests;

- providers who know what other providers have done;

- no waiting at one level of care for resources to be available at another;

- 24-hour access to comprehensive primary health care;

- access to comparative information about quality and outcomes of providers;

- one point of access for scheduling multiple encounters; and

- proactive care in which patients are contacted about necessary interventions, educated about disease processes, and get adequate in-home help to maximize their autonomy.

But achieving this is not easy. Leonard Friedman and Jim Goes raise the question *Have Integrated Health Networks Failed?* (2001) in their paper of that title.

They point to issues that are all-too familiar to Canadians:

- too much focus on providers instead of patients;

- partners/providers who are unwilling to surrender autonomy;

- professional cultures and incentives that do not match integration needs;

- lack of trust between stakeholders;

- lack of commitment and leadership;

- poor communication; and

- health outcomes that are difficult to define and measure.

Friedman and Goes suggested that in order for integration to work, health care leaders and policy-makers must recognize the intensity of change today and that their responsibility is to create a positive culture of change.

2. Overview of HTF Studies

Forty-one studies were included in this analysis (see Appendix A). All of the studies have the goal of achieving greater integrated service delivery, either directly through reorganizing services or through more indirect means, such as improving access to information by providers and other stakeholders in different geographic locations.

2.1   Methodology

In terms of methodology, the projects were quite diverse and not easily categorized. Most studies, rather than experimenting directly with implementation, described services that could be integrated and detailed the processes appropriate to implementing

the new approach. Most studies used multiple methodologies, including the analysis of secondary data (when available), surveys, interviews, and focus groups. Five projects set out to formally evaluate new programs and used outside consultants to bring objectivity to the evaluation. Many of the studies were single-case studies, with relevance mostly to the local community and, perhaps, to similar communities in the same province.

The researchers used innovative methods to answer key questions: Was health services integration achieved? What factors promoted integration? What effects did the integration strategies have on the opinions and attitudes of health care providers? How were health outcomes for individual patients and the health of the community affected? Were patients and their families and friends satisfied with the services? Should this program be expanded to other communities? And so on.

2.2   Geographic Scope

The geographic location of the projects is potentially important because integrated service delivery can be enhanced or restricted by legal, social, economic, political, and other environmental characteristics.

There were five projects of national scope or implications. One study involved the Canadian Mental Health Association, while another experimented with integrating tele-home care in Alberta, Newfoundland and Ontario. A study of waiting lists operated out of the western provinces, but the results have potential for broad application. Of the two remaining national projects, one involved merging health data from both the national and provincial levels, and the other, a study of health care delivery in Inuit regions, had implications for other small and hard-to-reach communities.

To some extent, the geographic distribution of provincial projects reflected each province's differing

style and development of Regional Health Authorities and other health reforms designed to facilitate service delivery integration. There were 19 projects in Quebec, five in Saskatchewan, five in British Columbia, three in Ontario, two in Prince Edward Island, and one each in New Brunswick and Nova Scotia. The province with longest implementation of RHAs is Quebec, followed by Saskatchewan.

3. Discussion of Significant/ Relevant Findings

While the term integrated service delivery seems to defy precise definition, all these projects contained operational definitions that mapped out their particular area of interest. On this basis, three interrelated clusters emerged from the 41 studies: clinical integration; information management and technology; and vertical integration in local communities. Many of the projects contributed valuable information to more than one cluster, but these groupings reflect and highlight the breadth and diversity of the studies. Several projects appear in more than one cluster because their findings have multiple applications.

3.1   Clinical Integration

In this cluster, 14 studies illustrated the challenges inherent in providing clinical integration of the continuum of care for people with similar diseases or health problems.

Clinical integration has much in common with "disease management" because both approaches focus on the coordination of services for groups of patients with similar disease problems. Persons with chronic illnesses, who require ongoing contact with health services for monitoring and treatment, can benefit

from this type of approach. Clinical integration can be enhanced through the use of clinical protocols, pathways, guidelines, care plans, case management, outcome measures developed by clinical experts around standard treatments, and care processes based on clinical evidence. Opportunities can also be provided to advance continuous quality improvement processes in both hospital inpatient and ambulatory care programs. Health services research has provided clear evidence that decreasing variation in practices through standardizing procedures can improve outcomes.

Clinical integration requires three basic interrelated activities. First, standardized procedures and processes such as protocols, clinical pathways, assessment processes and model programs must be developed. Second, participatory structures and policies must be in place to ensure that the standardized protocols and guidelines are accepted as valid by health care experts and the general public. Finally, communication strategies about the new approaches and education programs must be provided for all stakeholders.

3.1.1   Standardized Processes and Procedures

Many studies recognized the advantages of clinical protocols, guidelines and formally defined model programs in increasing the standardization of assessment processes and treatment interventions. For example, a standardized protocol was developed by four Montréal hospitals in a project for *Seniors Discharged from Hospital Emergency Departments at Risk of Adverse Outcomes: Screening and Intervention* (QC405*).* The screening tool was used to identify seniors who were likely to experience a major decline in their functioning within a period of four months following a hospital emergency visit. Areas of possible functional decline included in the protocol were increasing pain, advancing arthritis, difficulties with the activities of daily living, behavioral problems such as anxiety or depression, and social problems. Results showed that, by using the protocol, seniors' risk

factors could be anticipated and communicated to family physicians, who could then coordinate community care.

Nursing protocols were used by telephone through an *Info-Santé CLSC: Pilot Project for Telephone Intervention in the Area of Mental Health* (QC430). Persons with mental health problems are a particular challenge for call-in services because they often phone late at night or on weekends, when there are few resource people available to answer questions or give advice. Twenty-eight protocols were developed for use with children, adolescents, adults, older adults, and family and friends of people with mental health problems. The protocols were computerized and translated into English and nurses were trained in their use.

The researchers reported considerable success with the project in terms of increasing nurses' knowledge of persons with mental illnesses. An unanticipated benefit was that the protocols were thought to help in recruiting and retaining nurses because they experienced less stress in responding to callers with complex mental health problems.

Clarifying procedures and processes is particularly important when patients cross service delivery sites or institutional boundaries to receive different types of care. Clinical pathways were used in an *Evaluation of Clinical Paths for Congestive Heart Failure Patients Spanning the Continuum of Care* (BC402*).* Developed by two teaching hospitals in Vancouver, standardized procedures were outlined for patients transferring from hospital to community care. They included diagnostic tests, specialist consultations, treatments and other interventions, activities and rest, medication, nutrition, elimination, patient teaching, discharge planning, and desired patient outcomes. A steering committee was responsible for the development of the pathways with input and feedback from liaison nurses, pharmacists and other members of interdisciplinary teams in the hospital and the community.

In their findings, the authors emphasized the challenges of implementing interdisciplinary approaches in environments where some professionals, such as physicians, may be accustomed to solo practice with few evidence-based guidelines for what services should be provided.

It is essential that standardized tools and measures be based on up-to-date clinical and research evidence. This type of background research was used in a *Regional Evaluation of Surgical Indications and Outcomes* (BC401). Hospitals in the Vancouver/Richmond Health Region assessed the feasibility of evaluating a process to measure "need" for six high-volume elective surgical procedures: cataract, cholecystectomy, hysterectomy, lumbar disc surgery, prostatectomy, and total hip surgery. A standard set of criteria for indications for surgery was used with providers, as well as a measure of patients' perceptions of quality of life. The project's key participants were part of a steering committee of surgeons and administrators representing the British Columbia Ministry of Health, the Vancouver/Richmond Health Region, six surgical divisions and five hospitals.

The study showed that this type of assessment of surgical outcomes is important because, in some instances, surgery might be recommended despite minimal indications of need. About 140 surgeons participated in the study, and they were generally accepting of the results. However, the study illustrated the complexities of implementing changes that might be perceived as interfering with traditional medical decision-making.

A *Frail Seniors Service Delivery Model Evaluation* (BC123) was conducted in the North Shore Health Region of British Columbia. The "model" home care program outlined standardized processes for rehabilitation services, adult day care, community geriatric mental health and outreach services, recreation therapy and health education, and services from a case manager. The model determined when

it was still realistic for seniors to remain in their homes and at what point additional supportive care was needed for them and their caregivers. Similarly, *An Integrated Mental Health Response for Seniors* (PE121) in Prince Edward Island provided a model of service delivery designed to ease the integration of home care and community mental health services for seniors experiencing dementia or depression. Both models might have useful application elsewhere.

Deciding precisely which services should be standardized and which procedures are essential to protocol implementation is a complex process. A standardized referral process (Rehabilitation Service Plan) was designed for patients needing rehabilitation services in New Brunswick (*A New Approach to the Delivery of Rehabilitation Services* [NB102]). In this case, the most important clinical factors in referring patients for rehabilitation were identified by a working committee of representatives from rehabilitation professions and other stakeholder groups, who participated in a series of consensus building sessions. The working committee created 24 strategies to coordinate all rehabilitation services in the province. The project included the development of a Priority Rating Scale, together with a users' manual, with the aim of promoting consistent prioritization of referred individuals and, consequently, equitable access to services throughout the province. The scale was evidence-based and included patients' and providers' viewpoints.

This rating scale was successfully implemented. Users were able to assess each patient's functional ability and the potential outcome of services, and thus determine a person's need for rehabilitation relative to others on the waiting list.

When services are being integrated, it is important that all participating organizations have a full under-standing of their role. In Ontario, a *Coordinated Stroke Strategy* (ON428) was developed to coordinate services for stroke patients across the continuum of care.

While there is much to learn from this project on the use of protocols, guidelines and pathways, one of the most important contributions of this project was the written contracts for new roles and responsibilities for participating organizations. Standardized agreements clearly spelled out exactly who should provide each of the services involved in the transport of patients between regional stroke centers and community services near their home. The agreements were essential to ensure that a person experiencing a stroke could receive necessary medication (tPA) within a three-hour window of a stroke occurring. The participating hospitals agreed to offer tPA around the clock and to assume the associated increased cost for drugs and emergency services. Findings emphasized the complex process of negotiating contracts for inter-organizational arrangements.

3.1.2   Participatory Structures and Policies

In developing standardized approaches to integrated service delivery, it is essential to have the support of key interdisciplinary groups. Participatory structures and policies assure professional groups, consumers, and other stakeholders that their opinions and expertise are essential; this helps pave the way for smooth acceptance of the protocol or guidelines when the final product is implemented.

Participatory approaches to decision-making were used to develop and validate protocols in *From Chaos to Order: Making Sense of Waiting Lists in Canada* (NA489). In this Western Canada waiting list project, one of the principal challenges was to find a measure of standardized waiting lists that would be acceptable to key stakeholders.

The goal was to develop tools that physicians could use to measure the urgency of surgical procedures of patients waiting for cataract surgery in Saskatoon, hip and knee replacements in Edmonton, general surgery in Winnipeg, MRI scanning in Calgary, and children's mental health services in Vancouver. A scoring system

was developed through clinical input from five multidisciplinary panels, interviews with health professionals, and field-testing. To ensure that the measure would be acceptable to both professionals and patients, close to 3,000 patients and 150 clinicians were involved. Public opinion was also sought through seven focus groups to validate the waitlist processes.

The project involved a consortium of 19 members – four provincial health ministries, seven regional health authorities, four medical associations, and four health research centres. The partnership was an unprecedented undertaking, demonstrating the complex inter-organizational relationships that are necessary for this type of work to be a success.

In other studies, new or enhanced roles for such health care workers as nurses, social workers, pharmacists, and rehabilitation therapists were designed with the expectation that they would work in teams to help break down barriers across organizational boundaries. These roles were frequently transdisciplinary: responsibilities often overlapped between one role and another, so that people from different disciplines and backgrounds could take them on.

This type of trans-disciplinary role has been used successfully in Assertive Community Treatment (ACT) teams for mental health services in a number of communities. Douglas Psychiatric Hospital in Montréal implemented ACT teams for persons who had the combined problems of severe mental illness and alcohol and substance abuse *(Delivery of Integrated Care for Persons with Severe and Persistent Mental Disorders in their Home Environment* [QC407]). The investigators highlighted the difficulties in finding appropriate education programs to train Francophone team members for this work. Another project was successful in created expanded roles for pharmacists, which helped them work with family physicians in the same community to optimize drug therapy for seniors requiring multiple medications (*Randomized Trial Evaluating Expanded Role Pharmacists in Seniors*

Covered by a Provincial Drug Plan in Ontario — Seniors Medication Assessment Research Trial [ON221]).

Committees or taskforces were frequently used in the studies to ensure adequate participation in decision-making and appropriate leadership. For example, coordinating committees were established at three levels to facilitate integration of a full continuum of services in *Mechanism for Coordination of Geronto-Geriatric Services in Bois-Francs* (QC403*).* The committee structure was designed to support the development and implementation of clinical protocols and a system for case management. The committees were strategic (director level), tactical (coordinator level), and clinical (case manager level).

A variety of methods was used in an independent evaluation of the committee structure (*Development and Implementation of a Cost System for Home Care and Home Services in Connection with the Demonstration Project for an Integrated Services Network in the Bois-Francs, with Coordination of Services through Case Management* [QC123]). The committees' work was monitored through observing the decision-making at committee meetings, interviewing committee members, and clarifying the roles of case managers and team members. Findings indicated that the strategic level of coordination was a major facilitator of integrated services because this committee had the authority to reallocate funding for services as necessary to meet the needs of patients. Evaluation of the project as a whole showed that integrated service delivery could improve outcomes for patients and families without an increase in costs.

3.1.3 Communication and Education

Appropriately designed communication and education strategies are essential in achieving clinical integration. As T.J. Larkin and Sandar Larkin pointed out in their *Harvard Business Review* article, "Reaching and Changing Frontline Employees"

(1996), poor communication can be damaging and as a result change processes may take longer. According to Larkin and Larkin, people are more likely to change the way they work if they learn what is expected from them early on, and if they consider the communicator to be a familiar and credible source.

These two principles were followed in the *Evaluation of Clinical Paths for Congestive Heart Failure Patients Project* (BC402). Early in the project, communication strategies and education sessions were developed and provided to 417 acute care and community care staff. Clinical project leaders, who were well known to the staff, presented the components of the clinical pathways and the details for how they should be used. A variety of different communication approaches was used, including formal lectures, videos, discussion groups, and written materials. The sessions were held at different times of the day and at different sites, so that there was every opportunity for staff to attend. In spite of this multimedia approach, however, it was difficult to reach everyone. The changes brought out different philosophies and cultures among providers about patient care and teamwork. Roles and responsibilities of health professionals also seemed ambiguous or else conflicted with traditional roles and responsibilities.

3.2 Information Management and Technology

In the second cluster, 13 projects focused on the essential steps of integrating information management and on the use of technology to achieve integration.

The importance and power of information management and technology have been well recognized in most industries, yet health care in Canada has been slow to embrace broad sweeping advances in information management. Integrated service delivery requires information to be collected and shared across traditional organizational and professional boundaries without undermining consumers' sense of privacy

and confidentiality. One of the most important challenges is to ensure all stakeholders have access to information when and where they need it.

Four main stakeholder groups need access to health and health services information for decision-making: individual patients and the general public; health care providers including physicians, nurses and other providers; managers and clinical leaders; and governments and other payers for services. Information found valuable by one set of stakeholders is also likely to be useful to other groups. This principle was illustrated in such projects as BC401 (*Regional Evaluation of Surgical Indications and Outcome*), NA489 (*Western waiting lists*) and ON428 (*Coordinated Stroke Strategy*).

3.2.1 Individual Patients and the General Public

Patients need information about their own health, their health history and about actions they can take on a personal level to improve their health. Historically, patients have not had access to their own medical records and, consequently, may have little under-standing of the nature of their own health problems.

In an attempt to communicate with patients about their own health problems, chronically ill patients in downtown Regina and Saskatoon were provided with information about their blood pressure, blood cholesterol levels, and other problems that might be associated with diabetes, smoking, and alcohol consumption (*Transition to an Integrated Primary Health Services Model* [SK330]). Preliminary results from this project suggested that most patients were not aware of the seriousness of their own health problems and more work is necessary to improve their awareness, as well as to educate them about common health issues.

In *Establishment of Regional Network of Clinics for Prevention of Health Disease* (QC409), the results were more encouraging. Patients in Saguenay-Lac-Saint-

Jean were provided with information about smoking, physical activities, and eating habits as a means of risk management for cardiovascular diseases. Researchers found that providing patients with this information had positive effects on their blood lipid levels and their level of physical activity.

One of the goals in providing consumers with health-related information is the hope that patients will assume responsibility for their own health. A project entitled *Populational and Organizational Impact of Introducing an Integrated Approach to Asthma Control in the Territory of the Arthur-Buies CLSC* (QC301) was a program in the emergency department of Hotel-Dieu hospital in Saint-Jerome. The goal of the project was to assist asthma patients to assume more initiative for their own care and to improve their quality of life.

Researchers found that patients benefited from the program and were satisfied with the services overall. However, practitioners concluded that the emergency department of a hospital was not the best place for this type of education program.

In a different type of setting in Prince Edward Island, the *Provincial Social Support Program for Teen Parents* (PE422) was introduced to provide teenage parents with information about health-related social programs, legal services, and employment opportunities. This program produced positive results. Once the teenagers were made aware of the range of options available to them, they were able to plan their lives and obtain child care, so that barriers to their completing high school were reduced.

The general public is often uninformed about basic health issues and about how the health care system operates. In the *Coordinated Stroke Strategy* (ON428) in Ontario, a pilot project was conducted to investigate the public's knowledge of stroke symptoms. Much to the investigators' surprise and dismay, about a third of the participants could not name the "five warning signs of stroke." As a result, extensive public relations and marketing strategies were developed.

Questions about the effectiveness and efficiency of Canada's health care system are frequently debated in the media and consumers are expressing greater interest in how health care dollars are spent and for what purposes. The waiting list project (NA489), mentioned above, gathered public input in seven western cities on the current state of waiting lists and on waiting times for five clinical areas. Based on their own personal experiences, word of mouth and media coverage, the focus group members expressed strong concerns about current waiting times and the apparently non-systematic methodology behind patient rankings. Acknowledging they were generally unaware of how waiting list decisions are made, the participants requested clear, fair and transparent processes should be in place.

3.2.2   Health Care Providers

No matter where patients are located within the system, providers need ready access to patients' clinical and non-clinical data. A single point of access for patients and an integrated computer system are essential components in such an information network.

In Quebec, for example, both these components were part of a telecommunications network developed so that providers could access the medical records of breast cancer patients transferring from one part of the system to another (*Oncology Network Demonstration Project* [QC426]). Similarly, a single access point and integrated electronic communications were essential components of the Regina Health District implementation examined in *Evaluation of a System-Wide Admission and Discharge Department* (SK424).

This system was formed to facilitate clients receiving the right care at the right time in the right place. As a result, information could be shared amongst providers and they were able to collaborate with each other at different stages of patient care processes. Among the positive outcomes for patients were fewer admissions to non-acute hospitals and more referrals to home care. However, the new system did not change

everything: there was no change in the number of patients visiting emergency departments or in the number of acute hospital readmissions. Reasons for the limited success were perceived to be ambiguity in provider roles, inadequate communication, lack of confidence in the system by physicians, incomplete implementation of the protocol, and delays in implementing a patient information system.

Providers' need for timely and accurate information when making complex patient care decisions was illustrated by the *Regional Evaluation of Surgical Indications and Outcomes* (BC401) in British Columbia. One of the goals of this research was to provide surgeons with information about their current surgical practices compared to evidence-based guidelines. The surgeons had mixed feelings about the project, and some found the information somewhat threatening. However, most surgeons were sufficiently interested in the results of the research to explore the possibility of this type of information becoming part of the medical chart on a routine basis.

The project also revealed important concerns around information management. For example, it showed that automated tracking of information was a major cost: the project tracked over 6,200 episodes of surgery at a cost of $6 per outcome or $12 for a pre- and post-operative protocol. Other thorny issues were unique patient identifiers, confidentiality of patients' records, and policies governing research access to the information.

Tele-health is increasingly being used to help providers or patients tap into information from long distance. The *Tele-HomeCare: Multi-Site Modeling Component* (NA161) project experimented with providing home care for children through the Hospital for Sick Children in Toronto, the Alberta Children's Hospital in Calgary, and the Janeway Child Health Centre in St. John's. The local hospital and home care program collaborated to provide integrated sub-acute care to patients in their homes through audiovisual

monitoring. The services included patients' health assessment, community service planning, training and education, and linking discharge from hospital to the delivery of service in the home.

This core service model has the potential to increase access to services in remote areas and improve continuity during transition from hospital to community. The investigators indicated that the model could successfully reduce length of hospital stays, number of emergency room visits, and readmission rates.

3.2.3   Managers and Clinical Leaders

Managers and health care leaders need information to ensure that health services are both efficient and effective. A hospital in Sherbrooke was interested in the value for money of routinely ordered laboratory tests (*Use of a Self-Control Method for an Effective Change of Practice Applied to the Rationalization of the Use of Diagnostic Tests* [QC427]). A computerized program called "Autocontrol" was used to assess the extent to which physicians on a general surgical unit found automatic ordering of laboratory tests to be useful. After five tests (full blood count, sodium, potassium, urea and creatine) were examined, some were deemed to be irrelevant to patient care and their automatic use was discontinued. This study resulted in considerable financial saving and demonstrated how information can improve the efficiency and effectiveness of services.

Health care reform in Saskatchewan in 1991 involved the closing of many small rural hospitals and the integration of acute services under regional health boards. A study was carried out to assess the impact of closing small rural acute hospitals on hospitalization rates and on the perceptions of local residents with regard to access to care (*An Evaluation of the Impact of and Solutions Implemented in Rural Health Service Restructuring and Integrated Service Delivery* [SK422]).

The data showed that closing the hospitals did not result in a decrease in hospitalization rates or an increase in mortality rates. In fact, the opposite seemed to be true. In communities where hospital sites were closed, the mortality rates actually fell. Nevertheless, focus groups and telephone interviews suggested that residents felt their access to health services had declined.

This type of research can provide invaluable information for managers and leaders in communities undergoing health system change. The results showed that greater attention needs to be given to communicating with residents in local communities about the rationale for health care changes and the outcomes they can expect.

3.2.4   Governments and Other Payers

Governments and other payers need access to information in order to assess population health needs, set standards, decide policies, and monitor system performance. An integrated health-information systems tool was developed in Ontario that brought together data from different sectors – for example, quality indicators for home care and new approaches to funding psychiatric, long-term care, and rehabilitation cases (*Integrated Health Information Systems for Community, Institutional and Hospital Based Care Based on the RAI series of Instruments* [ON421]). Conclusions from this study were very positive. The tool was found to be both very practical for monitoring integrated health system performance and ready for use by governments, other payers, and provider organizations.

In a national project, researchers tried to assemble an integrated data resource by combining information from federal health surveys with provincial health care utilization data (*Socio-Economic Differences in the Use of Health Care: Why Are There Non-Financial Barriers to Medically Necessary Services?* [NA369]). The researchers were unsuccessful in accessing the data because of complex governmental policies and

approval processes. The study sends a useful message to different levels of government that changes in legislation and policy may be necessary if governments and other provider organizations are to integrate data from different sources.

From Chaos to Order: Making Sense of Waiting Lists in Canada (NA489), in the area of monitoring and managing waiting lists, also provided important information for provincial health ministries, regional health authorities, medical associations, and health research centres. Similar approaches could be adapted to review waiting lists in other provinces and to analyze other types of waiting list, such as those for diagnostic procedures.

The projects described in this section recognized the needs of different stakeholders for information and that the use of information must be actively managed across traditional organizational boundaries. However, many challenges remain to be overcome before true integrated information can be achieved. More research is needed for a full understanding of such complex issues as patient privacy, unique patient identifiers, single point of entry networks, and other strategies designed to improve information accessibility.

3.3   Vertical Integration in Communities

All 41 projects focused on integrated service delivery, but 17 of them provided particularly rich examples of vertical linkage and the diversity of inter-organizational arrangements that can be employed to achieve it.

In vertical integration, health care organizations from different stages in the continuum of care come together to provide coordinated and integrated services. The goal is to achieve a smooth transition as patients move from one service to another in local communities. The intent is to eliminate traditional "silos" in care processes where gaps in care might occur and where patients might slip through the cracks.

Vertical integration is especially critical in the current health care context, in which traditional inpatient hospital services are being reduced, and responsibilities and accountability for service delivery are being transferred to other community agencies. The hospital's role as central coordinator and source of "all knowledge" about a community's health services is gone, but it is not yet clear which group will assume this important function.

Vertical integration can take on different forms. In its simplest form, integration may involve a joint venture between two organizations: for example, between a hospital and a home care program. At a more complex level, multi-institutional arrangements may occur in which several agencies join forces to provide a continuum of services for a particular patient group or population. This type of arrangement may be *virtual,* as described by Goldsmith (1994), and organized as a network of services with no common governance or ownership. Alternatively, a group of organizations may be joined together under an umbrella governance model, such as that provided by a regional health authority. Vertical integration can also be expanded to include linkages with services involving broad determinants of health: social services, employment, schools, environmental agencies, and the like.

3.3.1   Joint Ventures

A joint venture was developed in the *Integrated Postpartum Care and Lactation Support* (BC422) project, which linked the hospital in an isolated British Columbia community with the public health services. The main goal of the project was to ensure new mothers received follow-up care, including breast feeding and other postpartum help, from public health nurses in the community. Similarly, in *Evaluation of Geriatric Psychiatry Outpatient Consultation for Elderly Depressed Patients: Perspectives of the Patient and Family, Referring Physician and Consultant* (QC428), primary care physicians in a

Montréal geriatric clinic attempted to link depressed elderly patients with the specialist services of a consulting psychiatrist.

The links were successfully made and patients and their families appeared to be satisfied with the specialists' services, but there were some problems with communications. It was not always made clear to either the patients or the psychiatrists why the referrals were being requested, and this resulted in a number of appointment cancellations.

In order to improve the links between hospitals and continuing care in the Simon Fraser Health Region, a program called "Carelinks" was introduced (*Evaluation of the Alternative level of Care Management Initiative* [BC421]). The program was financed through the closure of 30 beds in the hospital and was described as "in-reach." Clients were admitted to Carelinks through a single intake process, using client coordinators. They worked inside the hospital to assess patients, so that patients could be discharged on a timely basis from the acute care setting to their homes, home care, day care or long-term care facilities. Existing discharge planning units were converted to Transitional Care Units to provide care to a wider range of patients scheduled for discharge.

Findings of this study showed that Carelinks was instrumental in helping patients move from one setting to another, as well as in reducing hospital length of stay and costs. Other positive findings were that health care workers were satisfied with the program and clients reported improvements in quality of life.

On a national scale, the Canadian Mental Health Association wanted to improve the link between hospitals and publicly funded home care services for mental health patients. In *Home Care and People with Psychiatric Disabilities: Needs and Issues* (NA149), 77 branches of the Canadian Mental Health Association and 140 home-care agencies were surveyed. In

addition, focus groups and interviews were carried out to identify the range of problems with the current system for mental health patients. As a result, recommendations were made that would improve vertical integration of services for persons with mental illnesses: for example, the use of clinical protocols; standardized assessment processes; case management; and mechanisms for sharing information across service boundaries.

3.3.2 Multi-institutional Arrangements

Multi-institutional arrangements were a feature of *Enhancing the Care of People with Mental Illnesses in the Community: A Model for Primary Care Service Integration in the Area of Mental Health* (NS421). The goal of this Nova Scotia project was to promote early intervention and improve access to a range of services for people with mental illnesses. The arrangement was called a "shared care model" and involved four service delivery sites: an inner city community health centre, an urban family medicine centre, a rural family practice, and a comparison site for research purposes. Results showed that patients at the intervention sites had better access to services and reduced waiting times for services; visits to hospital emergency rooms were also decreased. In concluding, the authors stressed the critical need for coordinated primary health services for persons with mental illnesses.

In order to improve integration of palliative care services in the Moosejaw-Thunder Creek Health District, a comprehensive program linking home care, acute care and long-term care was implemented (*Palliative Care Program Review* [SK121]). In evaluating the new program, researchers focused on the perceptions of caregivers (patients' families and friends). While most caregivers were satisfied with the palliative care services, some family members felt their loved ones were sent home from the program too soon. Caregivers also thought the program did not have enough resources. For example, caregivers thought there should be more respite beds, more staff,

better bereavement programs, and that there should be more physicians involved in the program.

In a similar palliative care program in Montréal, a pilot project sought to establish a complete set of palliative care services provided in the home and through a day hospital (*Towards the Implementation of a Continuum of Palliative Care Services for Terminally Ill Adults* [QC406]). A new organizational agreement was developed through a partnership among five local community service centres (CLSC's – *centres locaux des services communautaires*) and McGill University Health Centre. Some palliative care services were already in place, such as a specialized unit and consultation team, but additional services were made available. New services included on-call nursing, medical and pharmaceutical services, intensive home care, direct phone-line to caregivers, and round-the-clock psychological, social and bereavement support.

The researchers had many recommendations for improving integration. They advocated advertising the new services more effectively in the community; greater involvement with the program by primary health care services; and improved face-to-face communication between providers to make patient information available in real time when caregivers were in the patient's home.

In theory, vertical integration should be easier to achieve in provinces that have a single board, such as an RHA, that is responsible for a full range of health services. In these circumstances, RHAs have the authority to reallocate resources from one type of service to another as the health needs of the population change.

The province of Quebec, with its long experience of regional health authorities, is fertile ground for experimenting with multi-institutional arrangements. The regional health authorities in Quebec have responsibilities for both health and social services, opening the potential for vertical integration of a

much broader range of services than the traditional. Quebec RHAs are accountable for population health planning and delivery of a full range of services and, as such, they share many characteristics with the Integrated Health Systems described earlier. Three large projects, set in different regions of Quebec, illustrated experimentation with key components of IHSs.

Establishment and Start-up of Integrated Care Model (QC404) was initiated by the Montréal-Centre Regional Health and Social Services Board to evaluate the values and shortcomings of regional service integration for the frail elderly. This demonstration project, also known as SIPA, was designed to test the feasibility and cost-effectiveness of a new way of organizing, financing, and delivering services for the frail elderly. The integration strategies included clinical protocols; case management and team work; coordination between institutions; combined medical and social services; round-the-clock on-call system; increased budget for community services; and promotion of a broad financial model, similar to capitation funding, that covered all health and social services.

Results after one year of operation are encouraging. They suggest some clinical success has been achieved by reducing the waiting list for hospital admission, shortening lengths of stay in emergency departments, and increasing access to home care. Quality of care was perceived by patients to have improved.

The project is still in progress and continuing adjustments are being made to smooth day-to-day operations – simplifying the on-call system, for example, and reducing the workload of case managers. The initial cost analysis shows the cost of community services has increased slightly, without a compensatory decrease in hospital costs. However, it is early days yet for this project.

The second Quebec study, *Capitation Project in the Haut Saint-Laurent RCM* (QC431), used capitation funding as a way to improve access, effectiveness, and

efficiency of services. Capitation funding systems allocate a set dollar amount per capita (per head) for health care in a region irrespective of services that are actually used by the population there. In addition, this project implemented several of the above-mentioned integration strategies, such as clinical protocols and an information network linking provider organizations. Seven databases, with information about 200,000 patients, were amalgamated to facilitate analysis and use by decision-makers.

Preliminary results showed an increase in the use of out-patient and home aid services, shorter hospital lengths of stay, fewer hospital admissions, and fewer visits to emergency departments. Consolidation of the services at the local level has resulted in improved continuity and coordination among institutions. New resources were developed, including an information pamphlet for the public entitled, *Capitation Project, an Integrated Care and Services Network*, which provided a social and health portrait of the population of the region, described care delivery processes for 20 clinical problems, and outlined model agreements for how services should collaborate.

The third study, *Evaluation of Regional Ambulatory Care and Services Programs and of the Laval Ambulatory Hospital Centre* (QC422), evaluated a new ambulatory care centre created by the board of the Laval Health and Social Services Region. The centre provided the Laval population with a broad array of services: abortion and sexual assault services; day surgeries for ophthalmology patients; post-surgery follow-up for cancer patients; a pacemaker service for coronary cardiac patients; day-stay services for mental health patients; and other services.

The study monitored access and use of services, as well as the economic impact of the centre on the health system as a whole. Referral patterns of patients to existing hospitals and health care centres were also analysed. The authors used a single-case study design with various levels of qualitative analyses. They

conducted semi-structured interviews of health professionals and managers and compared clinical programs before and after implementation of new programs. Data were also collected from patients' interviews, questionnaires, and file abstraction. The evaluation was particularly challenging because of the complexity of the integration mechanisms and the provincial health budget cuts at the time of the project.

The authors were encouraged by results suggesting services are now more accessible to the Laval population. However, they noted many continuing challenges, including blurring of roles between primary, secondary and tertiary levels of care, and power struggles between public and political groups. The evaluation is still in progress.

These three Quebec projects demonstrate that broad integration of health and social services with key elements of IHSs is achievable and, even in early stages, can produce positive results. Clearly, both implementation processes and evaluation strategies are not easy. It is likely to take more time and experimentation before the full value of this approach can be realized.

3.3.3   Determinants of Health Linkages

Several projects embodied the vision and philosophy that health is more than just the provision of health services and may be determined by a host of complex social, environmental and ecological factors. These projects attempted to link health services with a broader range of services associated with the health status of individuals and populations. Teenage parents were linked to social, education, employment, and legal services in a Prince Edward Island project (PE422); in the Battleford Health District of Saskatchewan, liaison workers were hired to assist First Nations individuals in accessing a myriad of health and social services from 44 different community agencies (SK402); and, in Quebec, access to housing support was a key component of a project addressing

the needs of patients with severe and persistent mental health problems (QC408).

Two projects in this group were carried out in extremely challenging environments. One project, in 14 remote villages along Hudson Bay and Ungava coasts in Nunavik, was remarkably successful in reaching 12 clients with severe mental illness, suicidal tendencies and drug abuse problems; it provided them with a therapeutic milieu so that they could acquire social skills and reintegrate into the community (QC434). Another study, of Inuit populations in six disparate Inuit regions of Canada (NA485), added to the health system's sparse knowledge of the health needs of Canadians living in remote areas.

Overall, the results of these projects were positive, and the studies themselves represent a trend that should be encouraged. In linking the provision of health care to broader determinants, they recognize that a holistic approach to the health and well-being of Canadians is important for the future.

4. Implications for Policy and Practice

The studies synthesized in this paper represent an enormous accumulation of experience and knowledge about integrated service delivery strategies and the effects of integration on health care processes and outcomes. However, it is difficult to draw practical lessons from projects implemented in the field, where findings are not always precise or concrete. The studies also represent a wide range of type and methodology. Some studies were limited by small sample sizes, lack of a comparison group, or by trying to complete a project in a difficult setting. Most projects were challenged by lack of precise definitions and measures for service integration, as well as the complexity of identifying valid measures of health outcomes.

In terms of relevance, some studies are likely to be most applicable in their local environments, where the culture and characteristics of local circumstances have strong influences on the health of the population. Findings from other projects have provincial or national relevance. The Western Canada waiting list project (NA489), the *Regional Evaluation of Surgical Indications and Outcomes* (BC401) in Vancouver and the SIPA project (QC404) in Montréal all have the potential for broad applicability across Canada.

The lingering question is how these projects contribute to the systemic problems of health care delineated at the start of this paper. What lessons have been learned and where do we go from here?

4.1 Better Use of Human Resources

Experience from these projects suggests that integrated service delivery could offer flexibility and some potential for better use of human resources.

One of the hindrances to alleviating health-worker shortages is that the current roles of professionals are embedded in provincial legislations, making them difficult to change. These studies show that, during the process of implementing integrated service delivery, traditional roles and responsibilities of health professionals often became blurred. In spite of initial resistances to change, new trans-disciplinary roles evolved; professionals with a variety of educational backgrounds and experiences were able to assume a broader set of responsibilities. New liaison positions were developed to facilitate linkages across different organizations. Opportunities were opened for case managers, nurses, nurse practitioners, social workers, pharmacists, and others to take up work in primary health care – especially care involving patients with chronic illnesses. This type of flexibility in work and work environments offers much promise for future human resources management.

4.2 Streamlining and Process Successes

The studies suggested that the most successful projects in eliminating redundancies or gaps in services were those that focused on patients with specific diseases – smooth integration was more likely when the service to be integrated had distinct boundaries.

Consistent progress was demonstrated in testing standardized clinical guidelines, protocols, assessment tools, and model programs. Participatory structures and policies provided an encouraging environment for health professionals to be directly involved in decisions about the validity of guidelines; as a consequence, participants became enthusiastic supporters of their use. Education and retraining were shown to be essential for health care providers to acquire the necessary skills and knowledge to work in their new roles.

A small number of studies demonstrated methods of saving costs – by eliminating unnecessary routine laboratory tests, for example – but, on the whole, projects were not focused on cost savings.

4.3 Information Integration

The projects reinforced the principle that integrated information is essential for integrated service delivery. However, most studies found it a challenge to achieve integrated information systems that ensured the different stakeholders had appropriate information for decision-making. It is clear there are still many difficult aspects to be resolved.

Studies that attempted to communicate with patients or with the general public met with only limited success. More work is urgently required to learn more about the critical needs of Canadians for health information. It is essential that the confidence Canadians had in their health system be restored; to achieve this, individuals must be provided with information that will assure them high-quality services wherever and whenever they need it. The public must have access to information that allows them to compare health service access, quality and outcomes, and make choices accordingly.

Health care providers need access to information about their patients, no matter where in the continuum of care the patients are located. A single entry point and a computerized information system were found to be invaluable in facilitating service delivery integration. Managers, clinical leaders, governments and other payers all require information to be able to plan, deliver and evaluate health services; a number of projects illustrated the challenges in making this type of information accessible in a usable form. Technological projects – telemedicine, for example – demonstrated

the potential benefits of connecting services at a distance, but an overall strategy is needed to ensure these developments are aligned provincially and nationally.

Coordinating health services in a community is a major challenge for local providers. Traditionally, the local hospital has been the main coordinator of health care but, with the closure of some community hospital sites, new coordinators are needed. Individual patients must be educated in the possibility that they may be the best coordinators of their own care and, if so, how they can assemble their health records and an inventory of available services.

4.4   Integration Models

Experience in other countries, as well as in these projects, has shown that voluntary collaboration among providers has limited success – incentives must be in place to encourage integration. The studies show that practical structures, such as joint ventures between two service providers and multi-institutional arrangements, can successfully encourage integration.

Vertical integration can be facilitated by such common governance structures as regional health authorities; the three Quebec projects demonstrated early success in implementing core components of integrated health systems. These experiments offered a full range of health and social services to specific populations, using clinical protocols, case management and teams, capitation funding, common medical electronic records, a single point of entry, and other integration strategies.

Conclusions from these 41 studies suggest that there is not one ideal model for integrated services delivery. Comprehensive integration is likely to take a long time – up to 10 years – and will be achieved through incremental steps and continuous adjustments to suit community needs. Early results suggest that such supportive structures as RHAs are a necessary, if not

sufficient, tool for enabling comprehensive service integration. Regional structures appear to facilitate the development of performance measures, while offering the potential of putting this type of information in the hands of local residents and consumers.

5.   Recommendations

A number of recommendations can be made that arise directly from the projects. Other recommendations are the result of gaps or omissions in the research where further work is essential to achieve integrated health services delivery.

The driving force for successful integration should be the health needs of Canadians and the well-being of communities. Governments should lead the way by investing in incentive programs that signal to physicians, nurses and other providers the importance of integrated "patient-focused" care.

Urgent attention must be given to providing Canadians with more information about their own health, health care, and health systems in general. They need to know what choices are available to them as individuals in terms of healthy lifestyles, treatments, drugs, and so on. They deserve to know what choices are available to them, which means enabling them to compare health care organizations and their effectiveness in access, quality, and outcomes. Canadians need assurance of high-quality services and wise use of health care dollars. Providing Canadians with this type of information will empower them to act and "demand" better integrated services.

Greater investment is necessary to develop and validate measures of health services access, quality, and outcomes. Targets should be set regionally for performance improvement. This information should

be routinely collected on a regional basis and be available to the public.

The pace of developing and implementing clinical guidelines, protocols, and model programs across the country should be accelerated. Professional associations and colleges should provide leadership and give priority to interdisciplinary work in clinical guideline and protocol implementation.

Education programs for physicians, nurses, and other health care workers in universities, colleges, and professional associations should modernize their curricula to reflect integrated service delivery. Health care workers should be educated in clinical guidelines, protocols, case management, interdisciplinary team approaches, participatory decision-making, organization cultures, inter-organizational relationships, organizational change, and so on.

Primary health care is the backbone of integrated service delivery. Implementation of primary health care models that use multidisciplinary approaches should be accelerated across the country. Legislation regulating professions should be examined to allow for more flexible roles and the introduction of new categories of workers.

Immediate attention must be given at federal and provincial levels to ensure that information and technology developed at local levels are compatible and can be linked.

Integration requires commitment and champions. Governments must lead the way by ensuring their internal structures do not reflect outdated silo thinking, which presents barriers to integration. Individuals must be appointed with specific accountability for achieving service delivery integration.

Continuing research is necessary to explore other facilitators and barriers to integration, along with their effects on outcomes. System level and service level integration experiences should be monitored and communicated widely.

In summary, these 41 projects suggest that integration efforts have not failed as Friedman and Goes (2001) indicated, but that implementing integrated service delivery in Canada takes time and continuous adjustment. We have not yet achieved the consumers' vision of an ideal model of health care, as outlined by Guerriere (2001). Gaps and duplication in services remain, information for consumers is sparse, and services are not yet organized primarily for the convenience of consumers. Clearly, there is still much more work to be done.

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Appendix A: List of HTF Projects Relevant to Integrated Service Delivery

This appendix provides summary information on the HTF projects which were reviewed in the preparation of this document. For further information, please refer to the HTF website (www.hc-sc.gc.ca/htf-fass).

(NA149) Home Care and People with Psychiatric Disabilities: Needs and Issues

Recipient: Canadian Mental Health Association, Toronto

Contribution: $204,900

This national study explored the issue of how adults with serious mental illness (not including Alzheimer's) in Canada might benefit from publicly funded home care services. The project conducted a national evaluation of the accessibility, appropriateness, and effectiveness of existing home care services for adults with serious mental illness by reviewing completed surveys from 77 branches of the CMHA and 140 home care organizations, comments from patients and families in 13 cross-Canada focus group sessions, and information from face-to-face interviews with 142 key stakeholders. Concurrently, site-specific pilot programs were developed, implemented, and evaluated in Taber, Ottawa, and St. John's, showing that there is a variety of ways to integrate mental health and home care. The report recommends a series of changes to policy and practice that would relieve the "revolving door syndrome" of the mentally ill cycling in and out of hospital: making admission planning to home care part of hospital discharge planning, providing more support to caregivers and home care staff, and undertaking intensive case management. The report also makes the case for improving the integration of home care and mental health services in all parts of Canada.

(NA161) Tele–Home Care: Multi-Site Modelling Component

Recipient: The Hospital for Sick Children, Toronto

Contribution: $87,240

This report compares three regionally produced models of tele-home care, one (in Toronto) that was operational and the other two (in Calgary and St. John's) that were theoretical, pinpointing common elements and noting site-specific differences. The project enlisted local hospital and home care personnel to develop the two theoretical tele-home care models by identifying broad service concepts, defining a patient population, pinpointing essential service elements, and making recommendations about technology requirements. The models were then compared with one currently being tested at the Hospital for Sick Children in Toronto. The project developed a "blueprint" for a core Canadian tele-home care service that could enable higher-intensity care in the home for up to six months after hospital discharge: establishing an audio-visual connection between the monitoring centre and the patient, monitoring patients at least once a day, and offering tertiary support to the patient and the community care provider. Tele-home care is an adjunct to, not a substitute for, traditional home care. The result was a better understanding of the nature, advantages, and adaptability of a new model of service delivery, which may increase health system efficiency but may also help resolve access issues for patients in rural and remote regions.

(NA369) Socio-Economic Differences in the Use of Health Care: Why Are There Non-Financial Barriers to Medically Necessary Services?

Recipient: Canadian Institute for Health Information, Toronto

Contribution: $213,044

While undertaking a study of socio-economic differences in access to health care in Canada, a team of university researchers from five provinces has revealed a deeply flawed and fractured system of provincial/federal health data keeping. The result is an examination of the barriers to assembling data for appropriate research purposes. Although a study examining inequitable access to prescription drugs, home care and long-term care is still expected, in this report the researchers outline a complex and time-consuming array of approvals, clearances, contractual

arrangements, and policies that had to be cleared before the project could proceed. They encountered provincial diversity in legislation, policies, and procedures to ensure privacy and confidentiality of personal health information; little support for data sharing between provinces; and conflicting bureaucratic priorities. Data-keeping itself was problematic, with different coding systems in each province for physician claims, hospital discharge data, and other databases, creating a major barrier to interprovincial research on health services utilization and outcomes. The authors suggest that their organizational framework – a pan-Canadian network of researchers, analysts, provincial research centres, and federal agencies – could pave the way for future research. The study sheds light on the inefficiencies in data collection and data protection systems in Canada, which will require political and administrative will to resolve.

(NA404/QC404) Establishment and Start-up of Integrated Care Model

Recipient: Régie régionale de la santé et des services sociaux de Montréal-Centre

Contribution: $2,798,781

This demonstration project tested the feasibility and cost-effectiveness of a new way of organizing, financing, and delivering services for the frail elderly. It was referred to as SIPA (*Système de services intégrés pour personnes âgées en perte d'autonomie*), a system of integrated services for the frail elderly, in which the financing was a simulation of capitation. The report describes how two CLSC districts in Montréal put the system into practice with the help of interdisciplinary teams that coordinated all medical and social services, both primary and secondary, and dealt with both acute and chronic care for all their patients. The aim was to respond to the needs of the frail elderly and to maintain their autonomy and ability to choose appropriate solutions. For the health and social service system, the goal was to optimize the use of resources, whether community, hospital, or institutional. The report details difficulties and delays in implementation and obstacles to the effective management of the project, including difficulty involving doctors in private practice. Nonetheless, patients (and their caregivers) in the SIPA group reported perceiving a higher quality of services and a greater sense of security than did those in the control group. The SIPA group also

significantly reduced its use of hospital resources, and there was a tendency to less institutionalization among these patients. The cost analysis indicated that the costs of care were slightly higher for patients in the SIPA group and that the increased use of community services was not financially compensated for by a reduction in the use of hospital services, at least during the time of the experimentation. However, the authors suggest that it may become more cost-effective when the cost of long-term care is factored in over a longer period.

(NA485) Evaluation of Models of Health Care Delivery in Inuit Regions

Recipient: Inuit Tapirisat of Canada, Ottawa

Contribution: $163,800

This study examined the way health care is delivered in the six disparate Inuit regions of Canada, among populations that have the highest suicide rate, lowest life expectancy, and highest birth rate of all Aboriginal peoples in Canada. Using a holistic, population health-based approach in interviews with 41 key informants and an evaluation of commentary from the Inuit Health Policy Forum, this report lays the foundation for a future analysis of models of health care delivery. It finds that mental health issues and suicide prevention are considered top priorities in all Inuit regions and that all communities have basic, front-line nursing services, although staff shortages are straining the system. Regional differences are evident with respect to physician care. There is a general need for an emphasis on prevention, education, and health promotion and a need for Inuit involvement at all levels of the system in order to integrate traditional knowledge and culture.

(NA489) From Chaos to Order: Making Sense of Waiting Lists in Canada

Recipient: University of Alberta

Contribution: $2,118,762

Making waiting times for medical care shorter and more fair was the aim of this multidisciplinary western Canadian project. Currently, waiting lists are not standardized, coordinated, or managed in any comprehensive way. Involving a consortium of four provincial health ministries, seven regional health authorities, four medical associations, and four health research centres, this project developed practical,

physician-scored tools to measure the level of urgency in patients waiting for care in five clinical areas: cataract surgery, hip and knee replacements, general surgery, MRI scanning, and children's mental health. Clinicians found the priority-criteria tools to be valid and valuable, most so in the areas of general surgery and hip and knee replacement and least so for MRI scanning. Regional health authorities supported the methods of assigning patients to waiting lists, although there was evidence of resistance to change.

(BC123) Frail Seniors Service Delivery Model Evaluation

Recipient: North Shore Health Region

Contribution: $139,875

This six-month project compared integrated home care services for frail seniors with non-integrated services. It also evaluated cost-effectiveness and relative health outcomes of integrated home care. Clients in the treatment group received continuing attention from a care coordinator, generous occupational and physiotherapy rehabilitation services, access to an adult day program, advice from mental health and geriatric outreach teams, recreation therapy, regular attention at interdisciplinary team conferences, and the services of a salaried home support worker. The program was found to be very cost-effective. In the six-month period, the total cost of services for the treatment group was $7,367 per client, compared with $11,279 per client for the comparison group. No significant differences existed in health outcomes between the two groups.

(BC401) Regional Evaluation of Surgical Indications and Outcomes (RESIO)

Recipient: Vancouver Hospital and Health Sciences Centre

Contribution: $810,191

This project explored the effectiveness of six common elective surgical operations from the patients' point of view. Rather than charting mortality and morbidity – the typical outcomes from a physician's perspective – the researchers asked patients to rate their health-related quality of life and to assess the difference that surgery made to their well-being. The procedures were cataract extraction, cholecystectomy, hysterectomy, lumbar disectomy, prostatectomy, and total hip replacement. The results were, first, that such large-scale, systematic

outcome evaluation is feasible, useful, and relatively inexpensive. The majority of patients reported improvement in every surgical procedure, but for each surgery some patients' post-operative well-being was unchanged or even worse. Cataract surgery showed the most inconsistencies with clinical guidelines. As well, 1 per cent of cataract patients said their quality of life had remained the same, and 26 per cent reported that their situation had worsened after the surgery. In general, the more pain and discomfort before the surgery, the greater the improvement after it. The authors noted that a further exploration of these findings could help surgeons and patients determine who can benefit from the operation and reduce the chance of poor outcomes.

(BC402) Evaluation of Clinical Paths for Congestive Heart Failure Patients Spanning the Continuum of Care

Recipient: Vancouver Hospital and Health Sciences Centre

Contribution: $509,982

This project developed and implemented two clinical paths for complex congestive heart failure (CHF), one for use in the acute care setting and one for use in community care. The clinical paths consisted of a standardized flow chart to describe and guide the care of the CHF patient while in hospital and, subsequently, through transition to the community. The hospital path identified four phases of care: emergency, acute, stabilization, and discharge. The community path consisted of three phases: assessment, acute care, and maintenance. The acceptance of the clinical path in the home care setting by community nurses was very good. However, significant challenges were encountered in the hospital setting due, among other things, to conflicts about the roles and philosophies of various health providers, lack of leadership, entrenched hospital cultures, and staff shortages.

(BC421) Evaluation of the Alternative Level of Care Management Initiative (The Carelinks Program)

Recipient: Simon Fraser Health Region

Contribution: $199,700

This project evaluated Carelinks, a program introduced in 1999 in two hospitals in the Simon Fraser Health Region that was designed to improve coordination between hospitals and continuing care. Carelinks was financed by a restructuring that included closing a ward of 30 beds and eliminating some staff positions. Researchers reported generally positive perceptions of the program's success on the part of physicians and other staff. Also, clients of Carelinks reported greater health improvement than was the case in a control group. Other indicators, including the use of physician and hospital services, showed no difference between the two groups. Cost savings in the year after the restructuring and implementation of Carelinks totalled almost $1 million. Researchers concluded that the diversion of resources to Carelinks was cost-effective and improved health status and provider satisfaction.

(BC422) Integrated Postpartum Care and Lactation Support

Recipient: North West Community Health Services Society

Contribution: $63,037

This project developed a partnership between an acute care hospital and public health services to provide postpartum care in an isolated, semi-urban, northern community in British Columbia. The project was undertaken in response to concerns about the effects of early discharge from hospital on postpartum outcomes, particularly breastfeeding. Women could attend a clinic seven afternoons a week or receive a home visit during the first two weeks postpartum. Topics addressed at the clinic included breastfeeding, baby development, family adjustment, and links with other services. Client satisfaction was high, and health care providers expressed confidence in the service. However, the 12-month time frame did not permit an evaluation of health outcomes.

(NB102) A New Approach to the Delivery of Rehabilitation Services

Recipient: Department of Health and Community Services, Government of New Brunswick

Contribution: $2,972,983

This study assessed the impact of the Rehabilitation Service Plan, developed in 1994 to improve the delivery of community-based rehabilitation services in New Brunswick by improving client access and coordinating service delivery. Lacking baseline data, the researchers measured perceived changes through qualitative evaluations. They conclude that rehabilitation services have indeed improved: they are seen as client-centred, and clients are generally satisfied; certain clients have access to a wider range of services; the referral process is easier; a new assessment process ensures that the neediest patients receive attention first; hospital and community services are better coordinated; and the Stan Cassidy Centre for Rehabilitation has taken a leading role in the province. The report also identifies remaining challenges, principally the need for sufficient human resources and funding for continuing training.

(NS421) Enhancing the Care of People with Mental Illnesses in the Community: A Model for Primary Care Service Integration in the Area of Mental Health

Recipient: The Nova Scotia Hospital

Contribution: $397,200

This project piloted a "Shared Care" model of mental health delivery to improve identification, early intervention, access to appropriate services, and outcomes. The Shared Care model deployed mental health workers and psychiatrists in primary care settings at four sites in Nova Scotia: an inner-city community health centre, an urban family medicine centre, a rural family practice, and a comparison site. Each intervention site had three FTE family physicians on salary and a receptionist, psychiatrist, and mental health worker. The comparison site had fee-for-service physicians. A total of 241 patients gave written consent to participate in the research. The evaluation found that patients at the intervention sites received improved access to appropriate mental health services: decreased waiting times, reduced visits to emergency, more referrals for mental health consultations at their own site, and high rates of patient

satisfaction. The patients' mental health outcomes were improved, and there was improved collaboration and communication between health care providers.

(ON221) Randomized Trial Evaluating Expanded-Role of Pharmacists in Seniors Covered by a Provincial Drug Plan in Ontario – Seniors Medication Assessment Research Trial (SMART)

Recipient: McMaster University, Hamilton

Contribution: $677,860

The study evaluated a five-month program that linked family physicians with pharmacists trained to provide cognitive, clinical, patient-based care (known as "expanded role pharmacists" or ERPs) in an attempt to optimize drug therapy for seniors. The study used a "cluster randomized control trial design" that involved 889 senior patients, each using five or more medications, in 48 family practices in urban and rural Ontario. The SMART project twinned pharmacists with family physicians in the intervention group, provided access to medical records and patient interviews, facilitated recommendations on identified drug-related problems, and determined over the next five months which recommendations would be implemented. The report notes that the experiment was successful, effective, and reproducible: drug-related problems were identified in 88 per cent of the patients in the intervention group; physicians agreed to implement 84.2 per cent of the recommendations they received; and after five months, 56.5 per cent of those changes had been implemented successfully. The study found no significant differences between the intervention and control groups in terms of mean number of daily medications or medication units, proportions of appropriate or inappropriate drug use, the proportion of patients reporting a problem with their medications, or quality of life. Both physicians and pharmacists said they would recommend the method of collaboration to colleagues.

(ON421) Integrated Health Information Systems for Community, Institutional, and Hospital-Based Care Based on the RAI Series of Instruments

Recipient: University of Waterloo

Contribution: $1,648,644

This study investigated the feasibility and usefulness of informatics tools (RAI instruments) that help health care providers and administrators see how their practice compares with that of reference groups. Researchers and administrators can use RAI instruments to track health indicators and therefore to guide population health strategies. There were four parts to this two-year study; all of the substudies involved the secondary analysis of data obtained from health organizations that voluntarily pilot tested one or more RAI instruments as part of their normal practice. Results were returned to clinicians, who could incorporate them in activities and care plans. The substudies successfully introduced assessment instruments that support integrated information systems (IHIS), home care quality indicators (HCQIs), and a new case mix classification system for in-patient psychiatry (RAI-MH). The fourth study reviewed and endorsed the results of using an instrument called RUG-III to fund long-term care and complex continuing care.

(ON428) Coordinated Stroke Strategy

Recipient: Heart and Stroke Foundation of Ontario

Contribution: $750,000

This study evaluated a Coordinated Stroke Strategy demonstration project, which is integrating stroke care across "the continuum of care" from health promotion and risk factor management to pre-hospital and acute care through to rehabilitation and community reintegration. The study examined efforts to improve secondary prevention strategies in two pilot programs and tested the effectiveness of some marketing strategies for messages about the warning signs of stroke. Each demonstration region developed networks and mobilized stakeholders in its own way; the variations and resulting benefits or problems are laid out in this study. The project has also added knowledge about processes and protocols at successful stroke-prevention clinics.

(PE121) An Integrated Mental Health Response for Seniors

Recipient: Prince Edward Island Department of Health and Social Services

Contribution: $140,000

This two-year study developed and field-tested a model of service delivery to integrate home care and community mental health services for seniors experiencing dementia or depression, the most common mental disorders among seniors. The main objectives were earlier assessment, care planning, and appropriate intervention. Planning of the model was cautious in order to allow key home care and mental health workers a chance to become comfortable with objectives. Once launched, the project undertook to increase the confidence and competence of front-line staff with workshops (for home care workers) and intense training on seniors' health (for mental health personnel). Researchers developed a "screening tool flow chart" for identifying early signs of illness during home visits and a multidisciplinary diagnostic protocol for client and caregiver assessments. The project improved the accessibility of mental health expertise for home care staff; challenges included staff retention and gaining support from family physicians.

(PE422) Provincial Social Support Program for Teen Parents

Recipient: Prince Edward Island Department of Health and Social Services

Contribution: $137,500

This two-year project helped teenage parents access social, educational, legal, and health supports. With a provincial mandate, the project coordinator worked at the grassroots level with teenaged clients in five health districts to define needs, objectives, and service gaps and then integrated existing service networks and raised the level of awareness of teenage parent issues among regional service providers. During the project, new information resources were prepared and disseminated. The project highlighted a lack of continuity in services for teenage parents and the need for a systematic approach to meeting their needs in the employment, legal, social, and education sectors. The project saw a 10 per cent increase in participants staying in school, increased teenage parent access to services, and increased networking among service providers.

(QC123) Development and Implementation of a Cost System for Home Care and Home Services in Connection with the Demonstration Project for an Integrated Services Network in the Bois-Francs, with Coordination of Services Through Case Management

Recipient: Université Laval

Contribution: $199,290

This project developed a system of cost analysis to evaluate the results of coordinating services to the frail elderly in the Bois-Francs region of Quebec. (See QC403 for an evaluation of this project as it relates to implementation and patient outcomes.) Costs were calculated for home health care and services to the elderly and to the public health and social services network. The economic analysis of costs assumed by the elderly themselves and by their families was not available. The results show that overall costs to the public system are comparable over time between the two regions that were tested, though there were differences in the services used. The researchers conclude that the coordinated services initiative is economically viable because it brings significant benefits to patients without requiring increased expenditure from the public system. Furthermore, they suggest that their model for imputing costs could be used to evaluate other integrated services projects for other client groups.

(QC301) Populational and Organizational Impact of Introducing an Integrated Approach to Asthma Control in the Territory Served by the Hôtel-Dieu Hospital in Saint-Jérôme

Recipient: Régie régionale de la santé et des services sociaux des Laurentides

Contribution: $37,000

This pilot project set up an integrated approach to controlling asthma. It offered training to practitioners to increase their knowledge about asthma, build links among practitioners, and promote the referral of patients to the *Centre d'enseignement sur l'asthme* (CEA, an asthma teaching centre). The CEA aimed to improve patients' self-management of their disease. In general, patients and practitioners were satisfied with the activities of the project. The integrative aspects of the project were less successful. The study found that although the target audience may be found in the emergency department, this is not the best place to motivate patients for education in self-management.

(QC401) A Network of Basic Integrated Services: Developing It, Publicizing It, and Measuring the Perception that the Population and the Workers Have of It

Recipient: Régie régionale de la santé et des services sociaux du Bas Saint-Laurent

Contribution: $92,265

This project studied the way primary care services have been integrated in two largely rural *Municipalités régionales de comté* (MRC, regional county munici-palities) in the Bas-Saint-Laurent region of Quebec. Researchers looked at factors that facilitated or constrained the integration process and examined the effects of the process on the perceptions of the population and of staff involved in service delivery. Because integration was time-consuming, particularly in an MRC that was taking the time to involve the public and practitioners, results are somewhat inconclusive. The report notes that attitudes of confidence and satisfaction both among the staff and among the public are linked to the level of education attained. In an area where many people have a low level of education, this finding highlights the importance of using communication methods adapted to low literacy levels in order to promote the acceptance of any change in service delivery.

(QC402) Impact of Methods for Integration of Emerging Services in the Laurentians Public Health Region in Quebec

Recipient: Régie régionale de la santé et des services sociaux des Laurentides

Contribution: $310,975

The *Régie régionale* of the Laurentians health region of Quebec restructured its health and social services, as required under the province's recent reforms. This study evaluates the results of this region's approach to providing more services outside of institutional settings (*le virage ambulatoire*) and to increasing the integration of services. The evaluation is complicated by the division of the region into five subregions, each with its own approach, based on its distinct geographic, demographic, and socio-economic characteristics. The authors find some association between the characteristics of the subregions and the extent to which the integration of services has been achieved. They conclude that the *Régie régionale*'s

initiative has been successful in starting an important process of change in the desired direction and recommend that the *Régie* continue to respect the diversity of the sub-regions, noting that what succeeds in one may not be appropriate for another. The authors make other specific recommendations concerning factors that will promote changes in practice, including making financial incentives consistent with the integration of services. They also recommend measures that will continue to ensure that services respond to the needs of a diverse population.

(QC403) Mechanism for Coordination of Geronto-Geriatric Services in Bois-Francs

Recipient: Université Laval

Contribution: $250,700

This project evaluated a model of coordinated care for the frail elderly that was developed in 1997 in the Bois-Francs region of Quebec. Services to the elderly were coordinated by using one point of entry, case management, and personalized service plans ranging from health promotion to palliative care. A system of electronic clinical files was designed to facilitate interdisciplinary communication. The evaluation showed that the program succeeded in reaching the frail elderly, and that the *intervenant-pivot* (key practitioner) fulfilled the intended role of case manager. The computerized sharing of information was less successfully implemented because not everyone in the network was adequately equipped. The evaluation of patient outcomes showed a tendency for patients to stay longer in their homes in the Bois-Francs region than in the control region; family caregivers also reported a reduced burden for the first two years of the evaluation. No effect could be shown on the use of the emergency department, on hospitalization, or on medication usage. The companion project (QC-123) looks at the relative costs of the coordinated services and a control region; it concludes that costs were no higher for what appear to be generally improved outcomes for patients and their families.

(QC405) Outcomes: Screening and Intervention

Recipient: St. Mary's Hospital Centre

Contribution: $301,302

This study examines how hospital emergency departments might play an integral role in a continuum of care for seniors and prevent some of the adverse outcomes following the emergency visit, which is typically viewed as a short period of transition. A screening tool was developed to identify seniors aged 65 and over who were most likely to experience functional decline immediately after their emergency department visit. It was used at four Montréal hospitals and involved a panel of geriatricians and a team of academic consultants providing technical input and statistical and economic analysis. Of the high-risk patients identified, an average of two new or uncompensated problems were detected in categories such as physical problems, activities of daily living, behavioural problems, and social problems. Patients received follow-up one month and four months afterward. The process was found to be quick and easy to administer in the emergency department setting. The study found that the intervention significantly reduced the rate of functional decline, and researchers emphasize the pivotal role of the emergency department in the interface between the hospital and community services.

(QC406) Towards a Continuum in Care and Services for Terminally Ill Adult Users

Recipient: CLSC Notre-Dame de Grâce / Montréal-Ouest

Contribution: $3,363,692

This project's goal was to determine the optimum conditions for the integrated organization of palliative services between home and hospital for the terminally ill and their families. The project targeted users served by local community health centres, and evaluated the organizational model's ability to contribute to a better organization of services, some available 24 hours a day, 7 days a week, including on-call nursing, pharmaceutical services, home care services adapted to individual needs, and a dedicated phone line. Researchers found the program was able to reach a greater proportion of cancer patients (from 35% to 30% over the course of the project). For other diseases, the penetration rates were smaller but still showed some progress. Over 50% of the project's patients died

at home, much higher than elsewhere in Quebec. Most patients were referred to services close to death. Challenges involved recruiting nursing personnel, dealing with a multitude of hospitals, and remaining flexible to meet the fluctuating needs of the clientele.

(QC407) Delivery of Integrated Care for Persons with Severe and Persistent Mental Disorders in Their Home Environment

Recipient: Douglas Hospital Research Centre

Contribution: $174,311

Since September 1997, the Douglas Hospital, a psychiatric hospital in Montréal, has had a team of workers using the ACT (assertive community treatment) model, developed in the United States to treat in their own milieu patients who are suffering from severe mental health problems and who are difficult to treat in conventional settings. This project added to the ACT model a dimension of combating substance abuse in this population. Integrating the services helped address the needs of people who would otherwise be excluded from drug and alcohol treatment because of their mental health problems and excluded from mental health programs because of their substance abuse. The researchers conclude that it is possible to transfer the ACT model from the United States to Canada, despite differences in their health systems. The evaluation of the project demonstrates a significant effect on quality of life for patients, although the project did not succeed in significantly reducing substance abuse. Overall, cost savings were approximately $4,000 per year per patient.

(QC408) Integrated and Multisectoral Community Support for Persons with Severe and Persistent Mental Health Problems: Habitations nouveau départ

Recipient: Les habitations nouveau départ

Contribution: $900,000

This project evaluated the effectiveness of a project called Habitations Nouveau Départ (HND), an initiative designed to assist people with mental health problems address their housing and social integration needs. Clients were assigned to receive services in three ways: through Habitations Nouveau Départ, through community outreach from the Pierre-Janet Hospital, or through a combination of the two. The groups were then compared to see whether the HND

program was more effective than the support offered through the hospital. Effectiveness was measured by the effects on the participants' mental health and by their use of other community services. The report concludes that support for adequate housing is an important part of the services offered to people with mental health problems.

(QC409) Establishment of Regional Network of Clinics for Prevention of Heart Disease

Recipient: Complexe hospitalier de la Sagamie

Contribution: $638,000

This pilot project was designed to create a network of rehabilitation and secondary prevention services for patients suffering from cardiovascular illnesses. Services were provided locally, in communities in six sectors located in the Saguenay–Lac-Saint-Jean health region. These services promoted healthy lifestyle choices as a means to risk management. The first eight months of the project were devoted to mobilizing the communities and developing an organizational and operational structure. All the institutions that were to house a clinic signed a formal agreement before the operational phase; this framework was essential to the management and success of the project. Patients were referred by their doctors at the hospital and received individual and group counselling about lifestyle issues. The evaluation of the preventive program found some effects on blood lipid levels and activity levels. No analysis was undertaken of possible cost savings to the health system; the evaluation concentrated on the planning and implementation process and described various facilitating factors and barriers that were encountered. The report recommends increasing ties with doctors to improve the rate at which patients are referred to the network.

(QC410) Transformation of Community Organizations' Practices in Connection with the Reorganization of the Health and Social Services Network

Recipient: Université du Québec à Montréal

Contribution: $253,946

A major reorganization of Quebec's health and social service network more than 10 years ago defined a new role for community organizations. This study relates to health in its wider sense (population health deter-

minants, promotion, and prevention) by describing the current practices in community organizations in three sectors: families, youth, and women. Using case studies and a widely distributed questionnaire, the researchers looked at aspects such as programs, governance, partnerships, financing, and evaluation. They then examined the impact of changes in the health and social services system (regionalization, participative decision-making, a continuum of services, complementarity) on community organizations. They conclude that community organizations have an increasing role in Quebec society and that the changes they have undergone are at least partially due to the role they play in the newly reorganized services. The researchers recommend more stable funding to support this new role; they emphasize, as well, the need to maintain autonomy of action in recognition of the specific expertise and particular approach that characterizes community organizations.

(QC422) Evaluation of Regional Ambulatory Care Programs and of the Laval Ambulatory Hospital Centre

Recipient: Régie régionale de la santé et des services sociaux de Laval

Contribution: $519,789

This project created an ambulatory hospital centre for short-term health services in the Laval Health Region with the goal of relieving pressure to create more hospital beds; planning started in late 1995. Thirteen health program planning committees were set up, and the centre (in essence, a day hospital and front-line triage unit), was opened in 1999. The goal was to evaluate accessibility and the use of services, the economic impact on the health system, clients' opinions of services, and distribution effects. The authors suggest that tensions regarding the administration and delivery of the services led to the dissolution of the model. They note that the major challenge proved to be the blurred boundaries between the primary, secondary, and tertiary care levels.

(QC426) Oncology Network Demonstration Project

Recipient: Université Laval

Contribution: $1,565,522

This demonstration project was designed to address problems that have been identified in the care of cancer patients, such as a lack of communication

among practitioners responsible for different aspects of care and a lack of standardization, both in the way health information is communicated and in the way it is analyzed. The *Dossier réseau informatisé en oncologie du Québec* (DRIOQ, or Quebec computerized oncology network of patient records) was designed to address these problems, but since the first patients were not recruited to the project until March 2001, data about its feasibility are not available. The report discusses the process undertaken in the project, principally the strategies of change management. The difficulties encountered were technical, interpersonal and interorganizational; the researchers note that in this kind of partnership, private businesses need to understand the complexity of the health care system and the public sector needs private-sector expertise. The Quebec Ministry of Health and Social Services has shown its support by funding the project until October 2001.

(QC427) Autocontrol: Use of a Self-Control Method for an Effective Change of Practice Applied to the Rationalization of the Use of Diagnostic Tests

Recipient: Centre de recherche clinique du centre universitaire de santé de l'estrie (CUSE)

Contribution: $131,425

Called "Autocontrol," this program's aim was to reduce the overuse of routine tests by physicians in a general surgery unit in a Sherbrooke hospital. Noting that the literature suggests that 10 to 30 per cent of routine laboratory tests are unnecessary, this project focused on five tests done most frequently on general surgery patients. It used the hospital database to perform a number of analyses on all the occurrences and outcomes of the tests for fiscal 1996-97. They found that some tests were irrelevant and did not alter management of the patient. As a result, automatic screens and lab "profiles" were discontinued in favour of more precise testing that related to the particular diagnostic group. Tests that were often linked together were uncoupled, and new protocols for testing were rewritten on the unit. The unlinking of potassium and sodium tests with full blood counts could save $90,000 for the individual hospital and, extrapolated, could save $900,000 for all of Quebec. This project showed how information available in the hospital database can be mined to improve practice patterns and cost-effectiveness.

(QC428) Evaluation of Geriatric Psychiatry Outpatient Consultation for Elderly Depressed Patients: Perspectives of the Patient and Family, Referring Physician, and Consultant

Recipient: St. Mary's Hospital Centre

Contribution: $35,013

This study, carried out in the geriatric clinic of a Montréal hospital, provides information concerning what happens when a primary care physician refers a patient for a consultation with a geriatric psychiatrist. The current emphasis in Quebec on community-based health care (*le virage ambulatoire*) calls for hospital resources to play a consulting role; however, the researchers' literature search found no effective model of this interaction for geriatric patients. The geriatric consultation process included the views of the patient and family, the referring physician, and the consulting psychiatrist. Although most patients and primary care physicians were satisfied, there was only moderate agreement among primary care physicians and consultants as to the type of consultation requested, the reason for consultation, and the responsibility for further treatment. The report highlights some of the problems encountered in the consultation process and suggests simple ways to improve communication and thus improve patient care.

(QC430) Info-Santé CLSC: Pilot Project for Telephone Intervention in the Area of Mental Health

Recipient: Centre hospitalier Pierre-Janet, Hull, Québec

Contribution: $225,143

This project resulted in the development of 28 protocols to assist nurses answering a telephone help-line (Info-santé) to respond to callers with mental health concerns. The protocols addressed a variety of problems for a diverse clientele. Nurses received two days of training, and both the training and the protocols were well received. However, although nurses were able to answer most health-related questions, they felt ill-equipped in regard to mental health because their training was found to be too general and did not cover the specific problems they encountered. The researchers note that two days of training is insufficient and that it should be followed by supervision over three months to allow nurses to integrate theory into their practice. Both the protocols

(in English and French) and the training are available to other CLSCs. The authors note that a telephone call to a nurse costs about one fifth of the cost of a visit to the emergency department.

(QC431) Capitation Project in the Haut Saint-Laurent RCM

Recipient: Régie régionale de la santé et des services sociaux de la Montérégie

Contribution: $3,171,031

This extensive project was designed to integrate primary services in a rural *Municipalité régionale de comté* (MRC, a regional county municipality) in the Haut-Saint-Laurent region of Quebec. The purpose was to provide efficient, quality primary health care that was accessible to all of the region's 25,000 residents. Responsibility for coordination on a territorial basis was given to a planning forum under medical leadership. Changes included doctors being remunerated for time spent on organizational and management activities, nurses being hired to work in medical centres, and services being restructured across the MRC to increase *complementarité* (lack of duplication) among the different institutions and organizations. In addition, a communication system for transmitting clinical information between practitioners and institutions was developed, and seven databases were integrated into one. The preliminary results indicate an improvement in continuity; a lack of duplication among institutions, enabling more patients to be cared for in their region; and less use of hospital resources. Researchers note that information in the data bank will contribute to the efficient allocation of resources, in part by allowing managers to track individuals' use of services. Stable funding is currently being sought to continue the project.

(QC434) Putting in Place an Integrated System for Persons with Severe and Persistent Mental Problems

Recipient: Régie régionale de la santé et des services sociaux de Nunavik, Kuujjuaq, Québec

Contribution: $488,238

This pilot project tackled growing psychosocial problems and high suicide rates in Nunavik by housing, supporting, and employing people suffering from severe and chronic mental health problems who

might otherwise be sent to Montréal. The project's integrated approach built on pre-implementation work: preparing communities, spelling out objectives and procedures, and clarifying accountability. During the nine months of the centre's operation, 12 clients were served and achieved greater independence. The majority managed to deal effectively with their addictions problems; only one client was hospitalized during the program. As a result of this project, there is now a new resource in Inukjuak, and the study concludes that the materials developed by the project might be useful in other isolated communities.

(SK121) Palliative Care Services Review

Recipient: Moose Jaw–Thunder Creek Health District

Contribution: $8,870

This study responded to a growing local need to integrate home care, acute care, and long-term care into a comprehensive palliative care program. During two months in 1999, researchers identified resource and service deficiencies by interviewing a sample of clients and service providers and surveying other staff and community stakeholders. They found there was a need for an interdisciplinary approach to develop any new policies and systems. They also identified a considerable communications gap and dissatisfaction with available information provided to the public, staff, and physicians.

(SK330) Transition to an Integrated Primary Health Services Model

Recipient: University of Saskatchewan

Contribution: $318,726

This study set out to learn how to shift health delivery services in core communities from a conventional "bio-medical" model to one that emphasizes integrated services, prevention, acute care, home care, and pharmacare. A "high participation" pilot research project was implemented in downtown Regina and Saskatoon, where rates of chronic disease are climbing, emergency department use is high, and clients are often unresponsive to medical advice. People living in the target communities developed and administered a health-related survey, and this "transformative action research" methodology inspired a high level of response to the questionnaire: 94 per cent in Saskatoon and 57 per cent in Regina

(where modifications by the health district made the project less community-driven). As well, clients identified gaps and overlaps in services provided by the formal system and by non-profit agencies in Saskatoon and established a monthly health forum to raise awareness about community concerns. The study already has had some practical impact: urban authorities quickly made physical improvements (e.g., installing better street lighting), but it was too early to determine a shift to health prevention.

(SK401) An Evaluation of the Impact of Rural Health Service Restructuring and Integrated Service Delivery: A Public Opinion Survey

Recipient: Health Services Utilization and Research Commission

Contribution: $140,130

The restructuring of Saskatchewan's health care system since 1991 resulted in the elimination of acute care in many small rural hospitals and the integration of services under regional health boards. This public opinion survey asked a large sample of residents in the affected areas about how funding cuts had affected their access to health services, their health status, and their community's viability. Despite the fact that health status had not apparently been affected, the study found widespread dissatisfaction with the health care system and lingering resentment about the changes. Higher levels of satisfaction were associated with strong community leadership, the replacement of hospital acute care with acceptable alternatives, local support for innovative solutions, and effective communication with partners both in and outside the community. The study concludes, nonetheless, that information, community involvement, and transparent communication are necessary but *not* sufficient conditions to create support for changes in systems that have deep roots in a community. The authors note that such discrepancies between perceptions and realities hinder the effectiveness of policy changes and leave the debate mired in rhetoric and fallacies. They recommend more effective communication and consultation processes, particularly regarding informing the public of the real effects of the changes. Study SK422 complements this study; the two initiatives resulted in a common report.

(SK402) First Nations Health Liaison Workers

Recipient: Battlefords Health District

Contribution: $263,181

Two First Nations health liaison workers were hired in this 18-month pilot project to assist 250 people on and off-reserve in accessing appropriate health services from 44 relevant community agencies. The workers were part of a multidisciplinary team in the Battlefords Family Health Centre, a newly created primary health services demonstration site designed to emphasize community-based services and illness prevention. The study found that the health liaison workers were not clearly linked with any particular health service provider and were uncertain about lines of authority and accountability. Clients, however, responded positively in accessing primary health services; they had fewer missed appointments and experienced better follow-through in health care programs. The liaison workers, as paraprofessionals who could speak Cree (the predominant language) and who knew the community, were seen as advocates. The workers also helped service providers better understand the multifaceted nature of clients' health needs, thus encouraging a more "holistic" approach to health.

(SK422) An Evaluation of the Impact of Rural Health Service Restructuring and Integrated Service Delivery

Recipient: Health Services Utilization and Research Commission

Contribution: $140,130

The restructuring of Saskatchewan's health care system since 1991 resulted in the elimination of acute care in many small rural hospitals and the integration of services under regional health boards. Using 19 focus group discussions in 10 rural communities, this project evaluated community-level responses to the impact of the funding cuts. The project found that many rural communities struggled with changes to health care delivery and that they were largely concerned with how the process was handled, citing the lack of a long-range plan, a lack of guidance, and a lack of respect. Some communities appeared to have adapted to the changes, this was attributed to strong local leadership, effective communication, and information-sharing within the community and with outside agencies, as well as with the provision of

alternative services soon after the loss of acute care services. Study SK401 complements this study; the two initiatives resulted in a common report.

(SK424) Evaluation of a System-Wide Admission and Discharge Department

Recipient: Regina Health District

Contribution: $208,000

This study undertook to evaluate a System-Wide Admission and Discharge Department (SWADD) that had been formed in September 1997 to integrate and improve the procedures of the Regina Health District (RHD). Even though SWADD was still evolving and was not fully implemented at the time of evaluation, the researchers found improvements in the areas of service quality, access, and integration and noted the specific measures that were successful. They report that, although the guiding philosophy behind SWADD seems to have support, barriers remain to its full implementation. Moreover, the areas of health outcomes and cost-effectiveness did not show significant changes. The researchers point to certain factors that must be in place for SWADD to achieve its full potential, including leadership to establish a favourable organizational culture; a clear definition of goals, structures, components, and processes; improved communication and collaboration among service providers; realistic workloads for case managers; sufficient resources in the community; and public education about the appropriate use of various types of health care, an issue that is related to the importance of public perception in the acceptance of changes in health service delivery. The evaluation can assist the Regina Health District in making refinements in SWADD and guide other organizations wishing to implement a similar program.