Health Canada
Santé Canada

Impact Evaluation of the Health Transition Fund

Final Report

Presented to

Health Canada
Departmental Audit and Evaluation Committee

November 2005

Canada

Action Plan to the Health Transition Fund
(HTF)
Impact Evaluation Report

The Health Transition Fund supported 140 projects across Canada between 1997 and 2001 to test and evaluate innovative ways to deliver health care services. The Fund, with $150 million in federal funding, was a collaborative effort among federal, provincial and territorial governments designed to provide support to projects that would generate evidence that governments, health care providers, researchers and others could use to make informed decisions that would lead to a more integrated health care system.

The final impact evaluation of the HTF was conducted in 2004, by a consultant contracted by the Departmental Program Evaluation Division (DPED).

As the HTF was time-limited, the program no longer exists. Responsibility to respond to the HTF Impact Evaluation rests with the Director, Primary and Continuing Health Care Division.

Based on the findings of the evaluation, the consultant developed recommendations using a staged approach. The primary recommendation - **Establish an ongoing Health Transition Fund** - is followed by subsequent, or secondary recommendations which are only relevant if the first recommendation is acted upon.

Given that the HTF is over, recommendations could not be made in terms of ongoing improvement of that specific fund. However, Health Canada continues to establish and support other programs, with similar objectives to the HTF, which provide funding to provincial/territorial governments and other stakeholders to improve the Canadian health care system.

Therefore, this action plan focuses on suggestions for applying the recommendations to new programs and activities post-HTF. In particular, examples are provided regarding how the $800 million Primary Health Care Transition Fund (PHCTF), which was established in September 2000, is applying many of the recommendations.

Report Recommendations **(adapted from Final Report)**	**Response**
Stage 1 **1. Establish an ongoing Health Transition Fund** There is strong support for a fund such as the HTF that encourages innovation in health care, mobilizes decision-makers at all levels and fosters partnerships across stakeholder groups. Health Canada has an opportunity to become a leader in innovation. A first tangible step in this regard could be a feasibility study examining this potential.	Prior to the completion of the HTF, the 5-year, $800M Primary Health Care Transition Fund (PHCTF) was established to support the efforts of provinces and territories, and other stakeholders to improve the way primary health care services are delivered across Canada. Primary health care being one of the four priority areas of the HTF. In 2003, the $16B Health Reform Fund was established to support provinces/territories in the improvement of services in the areas of home care, primary health care and catastrophic drugs - 3 priority areas addressed by the HTF. In 2004, Health Canada announced the establishment of the Aboriginal Health Transition Fund which will support innovative ways to improve health services for Aboriginal people. Further, efforts are underway to provide continued funding to PHCTF's Official Language Minority Communities (OLMC) initiatives under a separate funding avenue.

Report Recommendations **(adapted from Final Report)**	**Response**
Stage 2 - Assuming Stage 1 is achieved **2.1 Examine the feasibility of bench-marking** Bench-marking builds upon points of reference to examine ways of achieving better levels of performance. It quantifies performance gaps and uncovers potential best or promising practices showing what can be achieved and serving to motivate higher levels of performance. There are currently no benchmarks for large-scale investments such as the HTF. More thinking is required along these lines which could include a discussion paper with input from other funding agencies in and beyond Canada.	Developing targets and bench-marking is a key topic at most First Minister's Meetings (FMMs). First Ministers agreed to provide clear reporting on the health system at both the 2000 and 2003 FMMs. Governments are struggling to develop targets and bench-marking in many areas such as wait times. In terms of the PHCTF program evaluation, a baseline strategy has been developed in the absence of external comparators, to establish a point of reference from which to measure performance change. The PHCTF is supporting a National Evaluation Strategy which is developing indicators to measure performance and change within the primary health care system.

Report Recommendations (adapted from Final Report)	Response
2.2 Establish templates to standardize and support quality project management Development of tools to support and help standardize the various components of project design and delivery. Health Canada can play a supportive role in the health care system by supporting/developing core competencies and guidelines in the areas of: • knowledge transfer • sustain ability • evaluation • research design • partnership formation • change management • project management	Certainly the development of guidelines and tools to support and help standardize the various components of project design and delivery would be useful and could be something for Health Canada to consider. Since the HTF, the federal government has enhanced its attention to the management of contribution programs. For example, Health Canada has created the Centre of Expertise on Grants and Contributions which has developed many tools to assist with the financial management of grants and contributions, primarily for Health Canada staff, but they do have resources for recipients. In 2000, Treasury Board Secretariat (TBS) refined its Transfer Payment Policy and is in the process of renewing the policy again. TBS developed a management accountability framework in 2003 establishing standards for management within the federal government. Within the PHCTF, staff have assisted groups with the proposal development and management of their initiatives, and as the PHCTF begins to focus on synthesis and dissemination activities, there are plans to develop tools to assist funded initiatives in initiative-specific dissemination. In addition to the government, information on some of the topics identified in the recommendation already exists in certain areas, such as the Canadian Health Services Research Foundation, which has

Report Recommendations **(adapted from Final Report)**	**Response**
2.3 Lessons learned It would be instructive for future decision-making purposes to document the process and activities that the HTF program used to enable the success of the program. Lessons learned and challenges faced on a range of different issues would contribute greatly to expanding the knowledge base for similar programs. Predictors of impact and uptake could be more closely examined to fully understand and develop the capacity for new knowledge to be applied in other contexts.	Documentation of the HTF interim evaluation report and the impact evaluation report contains a great deal of information regarding the processes and activities of the HTF staff, including many lessons learned and challenges which may be instructive to future contribution programs. As the HTF is now over, there is little benefit of developing any further documentation. However, it may be worthwhile for future contribution programs to develop such a document while the program is still operational.
2.4 Further dissemination Despite all the knowledge transfer activities that occurred, there is still much that could be exchanged. Rather than focus on extensive knowledge transfer strategies, a targeted intensive approach highlighting several successes could even now be introduced to further the uptake and impact derived from innovations generated by the HTF.	There is ongoing dissemination of HTF information through the comprehensive website that continues to exist. The PHCTF plans to use both extensive knowledge strategies as well as intensive approaches to knowledge transfer has part of it’s overall dissemination plan. It is recommended that all contribution programs develop detailed dissemination strategies which use both intensive and extensive approaches to knowledge transfer.

Health Canada Santé Canada

IMPACT EVALUATION OF THE HEALTH TRANSITION FUND

FINAL REPORT

October 2004

Submitted by

Workflow Integrity Network

Departmental Performance Measurement and Evaluation Directorate
Chief Financial Officer Branch

Canada

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EXECUTIVE SUMMARY

The Departmental Program Evaluation Division of Health Canada issued an RFP to evaluate the impact of the Health Transition Fund. It was intended that the evaluation would determine whether the HTF had achieved what had been expected. The results are of interest to decision-makers in government, health organizations front line workers, researchers and the general public - in part - because the HTF had far reaching effects on all these stakeholders.

The Health Transition Fund (HTF) supported 141 projects across Canada between 1997 and 2001 to test and evaluate innovative ways to deliver health care services. The $150 million dollar fund was a collaborative effort among federal, provincial and territorial governments designed to provide projects support that would generate evidence that governments, health care providers, researchers and others could use to make informed decisions that would lead to a more integrated health care system. The overall objective of the HTF was to:

> *"Encourage and support evidence-based decision-making in health care reforms, primarily by supporting pilot and evaluation projects in innovative methods for the delivery of home care, pharmacare, primary health care and integrated service delivery"*.

From the Logic Model designed for the HTF, the *immediate* expected outcomes of the HTF were that 1) the increase of information and knowledge about the design and delivery of health services would lead to evidence-based decision-making, which 2) would stimulate new research or innovation. The *intermediate* outcome was that this would lead to improved design and delivery of health care services. The *longer-term* outcome of the HTF was to maintain and improve the health of Canadians.

This evaluation used the Logic Model and the questions designed by Health Canada to determine the impact of the HTF program on health care in Canada according to the guiding objectives as listed below:

1) Determine the extent of encouragement of and support for evidence-based decision making in health care reform and development of new information and knowledge
2) Assess the synthesis and dissemination of HTF information
3) Assess the relevance and quality of HTF information
4) Assess the utilization of HTF information in health system reform
5) Assess the impact of HTF information on health system reform
6) Determine the lessons learned, long term impacts and alternatives

Assessing the nature and extent of ‘impact' needs to recognize the causal link between activities in projects, and indeed, the program itself, and the short-term, intermediate and long-term outcomes.

For this impact evaluation we used a post-test study design using multiple methods. The methodological triangulation enhances the validity of the findings.

Several methodologies were used:

- ❑ Document Review – Secretariat documents, synthesis papers, website data and all project reports)
- ❑ Two Surveys – Project Investigators (n=50) and Developers and Decision-makers (n=11)
- ❑ Key Informant Interviews – HTF staff, Decision-makers, Project Investigators, Synthesis authors (n=30)
- ❑ Vignettes of Projects (30 one-page descriptions of a range of projects that highlight the breadth and depth of the HTF)
- ❑ E-Delphi – perceptions from key informants comprised of decision-makers, project investigators and synthesis authors on the findings from the evaluation (n=18)

Research Findings

The data suggest that all three levels of outcomes were achieved by the HTF program. The caveat, however, is that the nature and extent of this impact is, in part, context dependent, varying according to the specific projects and program focus in question. What is more certain is that the HTF at the program level was a strong successful catalyst for the respective expected outcomes to be achieved. Most significantly, even now the full impact has likely still not been realized.

Without question, the immediate outcomes were achieved. Using the six-fold classification of the Impact Hierarchy (i.e., transmission, cognition, reference, effort, influence and application) as the basis for analysis, the knowledge was transmitted to the users through a range of transfer mechanisms. Ninety-one percent of survey respondents observed that their HTF project produced new knowledge, while 88% stated the knowledge was useful and relevant to the target audience. The survey data show that 73% felt that the knowledge was transferred to users, while another 95% stated it was read and understood by decision-makers (cognition). Ninety-one percent stated that the HTF was cited or referred to in some way by decision-makers. A high proportion of survey respondents noted that the HTF was influential in both policy (83%) and service delivery and practice (81%) decisions, while 65% stated it was the direct cause for changes in policy and 65% noted it was the direct cause for changes in practice. Finally, 71% of respondents observed that the HTF project knowledge was used directly by consumers of health care.

These findings are supported by additional survey data. There was use of HTF knowledge by individuals in the funded organizations (65%), individuals in other organizations (69%), and by decision-makers at the regional (64%), provincial/territorial (63%) and national levels (40%). In other words, there was clear use of HTF generated knowledge at the micro, meso and macro levels.

Although the sample size was small, the trends are positive and further validated by the data generated through the complementary methods used. In addition, the transmission and cognition levels of the Impact Hierarchy were evident in the survey data from the workshops held across the country. The numerous quotes from a range of different sources, the outcomes achieved by the respective projects, and the products generated, all create the mosaic of an effective federally-based program that was a substantive catalyst for new knowledge generation, and subsequent uptake.

The triangulated data also support the fact that the second immediate outcome – evidence-based decision-making leading to new research or innovation – was achieved, and in all likelihood still being achieved at this current time. Eighty-two percent of survey respondents stated that the HTF project encouraged a culture of evidence-based decision-making in health services, while 92% noted that it filled a gap in research. In fact, 52% felt that their respective projects produced the desired reform options that were intended.

The HTF program then, encouraged and supported evidence-based decision- making in health care reform and the development of new information and knowledge. The HTF also filled a gap in research and analysis for the health care services. The impact of the HTF in these regards occurred at the micro, meso, and macro levels, with the net effect being an improved knowledge base for health care delivery across the country.

Pivotal to these outcomes being achieved is effective knowledge transfer (KT). The data described above indicated that a range of KT activities and tools were established; the HTF program itself was instrumental in this development, and to many observers it broke new ground with the extent to which KT was embedded into both the program's activities and those of the projects. Survey data showed that papers have been published or submitted, media events took place newspaper articles were written, presentations at conferences and local communities occurred, and many requests were made for training materials, manuals, software, guidelines and so on.

When assessing the synthesis and dissemination of HTF information, therefore, it must be acknowledged that the vehicles for such were predominantly focused on extensive KT, with emphasis on the breadth of dissemination. While assessing the relevance and quality of HTF information, 88% percent of survey respondents meanwhile, felt that information from the HTF projects reached and was *relevant* to their target audience, and 82% felt the information was of high *quality*.

The transfer of knowledge occurred at the program and project levels. As the results section documented, the HTF program developed a number of dissemination vehicles that were designed to reach a range of audiences. For the most part, this was extensive KT, with little intensive targeted KT occurring.

In summary, the KT strategies were effective in reaching the various appropriate 'target' populations. What is less apparent, however, is the question of whether the strategies themselves were targeted as effectively as they could have been. In other words, a more intensive strategy aimed specifically at some stakeholders as discussed earlier in this report may have led to greater uptake. While we recognize that the HTF program had finite resources to further develop KT activities, we do not know what the "expected" reach *could or should* have been. Indeed, with all the data generated from this report we have no benchmarks for determining what the expected knowledge uptake and "impact" should have been. In many ways, there may now be the basis for thinking more prospectively on benchmarking issues.

The intermediate outcome expected from the HTF was the improved design and delivery of health care services. For many projects, as shown with many of the outcomes and vignettes in the Appendix, there have been improvements already in the design and delivery of health care services. Interview and survey data further support this finding.

Seventy percent of survey respondents believed the projects had improved care in their own community area, and 63% felt it had improved care in their provincial jurisdiction. A further 43% felt that it had improved care in other provinces or at the national level (with 29% of respondents uncertain as to whether this had occurred). Sixty-five percent of respondents felt that the HTF project had resulted in improved health for individual consumers, and 78% believed it had improved the way health professionals and others provide care. Finally, 71% of project investigators felt that the project enhanced the learning, education and training of health professionals. Subsequently it can be assumed that this would then translate into improved health outcomes for Canadians. Again, although there was a small sample size, the trends are positive at all levels of the Impact Hierarchy.

The long-term outcome of the HTF was to maintain and improve the health of Canadians. This has already been identified in the vignettes, through interviews with project investigators and through the survey data. For example, 65% of survey respondents noted that the HTF project was the direct cause for changes in practice, while 71% of respondents observed that the HTF project knowledge was used directly by consumers of health care. Similarly, the fact that 52% of respondents felt that their respective projects produced the desired reform options, suggests that this should have lead to improved health outcomes.

The causal connections are equally important in this regard. The HTF ‘program theory' as expressed in its logic model shows that the attainment of the immediate and intermediate outcomes will lead to achievement of the longer- term outcome. The data from this evaluation support this trend. Although we cannot say definitively that this occurred with every HTF project, we can say that the causal connections are clearly evident through all strands of the methods used in this study. Specific data are observed, for example, in the survey responses discussed above in the immediate outcomes section. Thus with causality we can confidently state, that although the sample size is less than required for statistical significance, the trends in the data augue well for further health benefits to Canadians to accrue from the investment in the HTF. Again, this statement is supported by the qualitative data gathered from a range of different stakeholders.

The data in this impact evaluation suggest that at a *Macro*-program level there were many contributions. The HTF:

- Supported partnerships and funding previously un-funded
- Supported multi-sector initiatives
- Supported previously un-funded applied research initiatives
- Supported new and innovative ways that never would have been tried without this fund
- Informed subsequent work with Health Accords that may indirectly influence health care
- Created a conducive, effective, and interactive environment for government at the F/P/T level
- It was a serious attempt to improve health care by innovation
- Generated evidence to support or refute ways to provide care
- Provided the resources to test some new things
- Enhanced the knowledge base of health and health care in Canada.

At the *Meso* organizational level the HTF:

- Created a culture of innovation and rethinking
- Created partnerships
- Placed a focus on developing evidence-based decision-making
- Tested new ideas to find out what works, what does not and why, and what really happens in certain models
- Served as a pilot for many innovative and creative solutions

- Emphasized the importance of pursuing strategies in knowledge transfer activities
- Provided a forum for partners to engage in high priority work
- Encouraged people to focus on developing a more sustainable system for the delivery of health care
- Generated many examples of explicit and implicit integration of service delivery
- The demonstration model approach was flexible and allowed for testing.
- Furthered reform initiatives
- The focus on evaluation and dissemination as requirements.

At an individual, *Micro* level the HTF:

- Instilled or enhanced a spirit of enquiry
- Provided a catalyst for career development
- Enabled providers, decision-makers and researchers an opportunity to test new ideas
- Gave opportunities for change that did not previously exist
- Created the foundation for long term partnerships
- Created or enhanced an interest in the use of evidence.

Not insignificantly, the HTF also:

- Improved care for patients/clients
- Improved the quality of life for family caregivers.

There were many lessons learned and exchanged from the evidence generated in the project reports, the work of the HTF Secretariat, and the processes of conducting the projects. There was considerable development of ideas, processes and experiences of project participants that have, and will lead to new ways of doing things – the HTF logic being that this development will enhance the capacity for individuals and organizations to initiate and make successful innovations in their own local context.

There were several limitations to the study. First it should be acknowledged that self-report measures, such as the survey data, may be skewed in favour of the respondent's respective projects. That said, it was recognized that the data would be aggregated for analysis and we hope that investigators were respectful of the process for this evaluation.

Second, we had immense difficulty contacting project investigators. This is primarily because of the length of time that has passed since the HTF projects were completed. We explain these problems in detail in the appendix, but it meant that our sample size was insufficient to make statistically meaningful conclusions. Rather, we have identified trends in the data that we would like to think would have remained constant if there were greater number of respondents.

Third, we have in many ways only been able to touch upon some of the impacts achieved by the HTF initiative. This evaluation has been at the "30,000 ft level" and we would expect that insightful key learnings are quite possible in follow-up post-project reviews across the country at the much lower, project specific altitude. With more time and resources we would have been able to uncover greater levels of detail with the projects themselves to exhibit how the impacts have been felt in the respect project contexts.

Based on the findings of this evaluation several recommendations are made.

1. Establish an ongoing Health Transition Fund

The qualitative component of this evaluation strongly indicated an interest in the HTF concept. The data are positive in most respects – that there has indeed, been many impacts from the HTF. Moreover, there is strong support for a fund that encourages innovation and recognition that the HTF program did, and could, play an ongoing role in that regard. As such, Health Canada becomes a Leader in innovation with the HTF as a catalyst. There is a recognized interest and need for supporting innovation in health care in Canada. The experience and success of the Secretariat created an environment that was able to mobilize decision-makers at all levels and fostered partnerships across stakeholder groups and the country. Health Canada now has the track record of the HTF and an ideal opportunity to strengthen its position in supporting health care reform across the country.

A first tangible step in this regard is a feasibility study examining this potential, building upon the insights and experiences of the HTF program. Key elements to examine include, for example:

1. Selection process
2. Role and function of key stakeholders
3. Duration of funding support
4. Knowledge Transfer on Implementation processes and Outcomes
5. Intensive and extensive knowledge transfer
6. Mentorship and ongoing support in core operational areas

7. Flexibility of funding and timelines
8. Development of an ongoing Community of Practice for fund recipients
9. Timing of program and project evaluations, including the core focus of these

Future initiatives could include establishing funding for organizations attempting to apply innovations at the local level, the formation of an F/P/T committee that focuses specifically on innovation, and ongoing commitments to knowledge broker the exchange of innovation activities across the country through web applications, communities of practice, teleclasses, targeted workshops with key stakeholders, funding conferences and exchange programs across and Canada and internationally and so on.

2. Examine the feasibility of Benchmarking

Benchmarking builds upon are points of reference, to examine ways of achieving better levels of performance. It is one thing to simply compare data on various indicators or markers, it is another thing to be able to implement strategies to change or address these benchmarks. Benchmarking quantifies performance gaps and uncovers potential best or promising practices. It shows what can be achieved (e.g., in other organizations or jurisdictions), and can serve to motivate higher levels of performance. Baseline data establishes the internal measures of performance and can be used in a variety of ways by different stakeholders. Baseline measures can be used for comparison to set a standard for benchmarking.

The survey data suggests that the impacts from the HTF were wide and varied. The data, however, raise the question about expectations. What would we expect to achieve with regard to the number of papers and presentations presented, the percent who agreed that impact occurred in the way care is provided and so on? Similarly, how do output measures link with expected and actual impacts, and at what levels? The point is that we do not have any benchmarks for large-scale investments such as the HTF. There needs to be more thinking along these lines – which could include a discussion paper with input from other funding agencies in and beyond Canada.

3. Establish templates to standardize and support quality project management

There were many concerns expressed regarding the capacity of organizations to complete their projects effectively, conduct evaluation, be experienced with research design issues and so on. Tools to support and help standardize the various components of project design and delivery would assist project and increase the potential performance monitoring and comparable results.

Another component of this process may be receptivity to change and innovation in organizations. There is considerable merit in expanding upon this to enhance the capacity of organizations to fully realize the potential of the innovation change initiative they develop. Outcomes may be compromised if key features are not in place as an innovation evolves from idea and theory, to trial and practice, and wider application.

Health Canada can play a supportive role in the health care system by supporting/developing core competencies and guidelines in the following areas:

- Knowledge transfer
- Sustainability
- Evaluation
- Research Design
- Partnership formation
- Change Management
- Project Management

4. Lessons Learned

It would be instructive for future decision-making purposes to document the process and activities that the HTF program used to enable the success of the program. Lessons learned and challenges faced on a range of different issues would contribute greatly to expanding the knowledge base for similar programs – some of which perhaps, could be based in smaller areas – such as the provinces and territories, First Nations, Regional Health Authorities and so on. Again, knowledge of outcomes is one very meaningful goal but the processes by which this occurred will greatly increase the likelihood that generalizability and uptake of the program itself will succeed in other contexts.

Predictors of Impact and Uptake could be more closely examined to fully understand and develop the capacity for new knowledge to be applied in other contexts. What works best and why? Understanding these elements will enhance the ability of federal initiatives to improve health care at the meso and micro levels. Health Canada can play a supportive role in the health care system by developing a core competency in this area and thereby increase knowledge and understanding of success factors pertinent to projects similar to the HTF.

5. Further dissemination

Despite all the knowledge transfer activities that occurred, there is still much that could be exchanged. Rather than focus on extensive KT strategies a targeted intensive approach highlighting several successes could even now be introduced to further the uptake and impact derived from innovations generated by the HTF. This strategy would utilize the potential for the second stage of knowledge transfer for HTF projects.

Given the weight of evidence provided here we feel that the overall impact from the HTF has been **diverse**, **significant**, **cumulative** and, in many cases, **sustaining**. There is an enduring positive legacy from the HTF initiative.

The successes of the many projects can be attributed in part, to the structure created and operationalized by the Secretariat. Consistently we heard in this evaluation of the positive role that the program had played. Indeed, it should be acknowledged that the successes of the projects, despite the documented challenges, reflect and reinforce the HTF program theory and logic. The program itself was innovative and a catalyst for enduring change that improves the health of Canadians.

IMPACT EVALUATION OF THE HEALTH TRANSITION FUND

FINAL REPORT

INTRODUCTION

The Departmental Program Evaluation Division of Health Canada issued an RFP to evaluate the impact of the Health Transition Fund. Workflow Integrity Network was awarded the contract to conduct the evaluation. This is the Final Report that documents the findings of the evaluation.

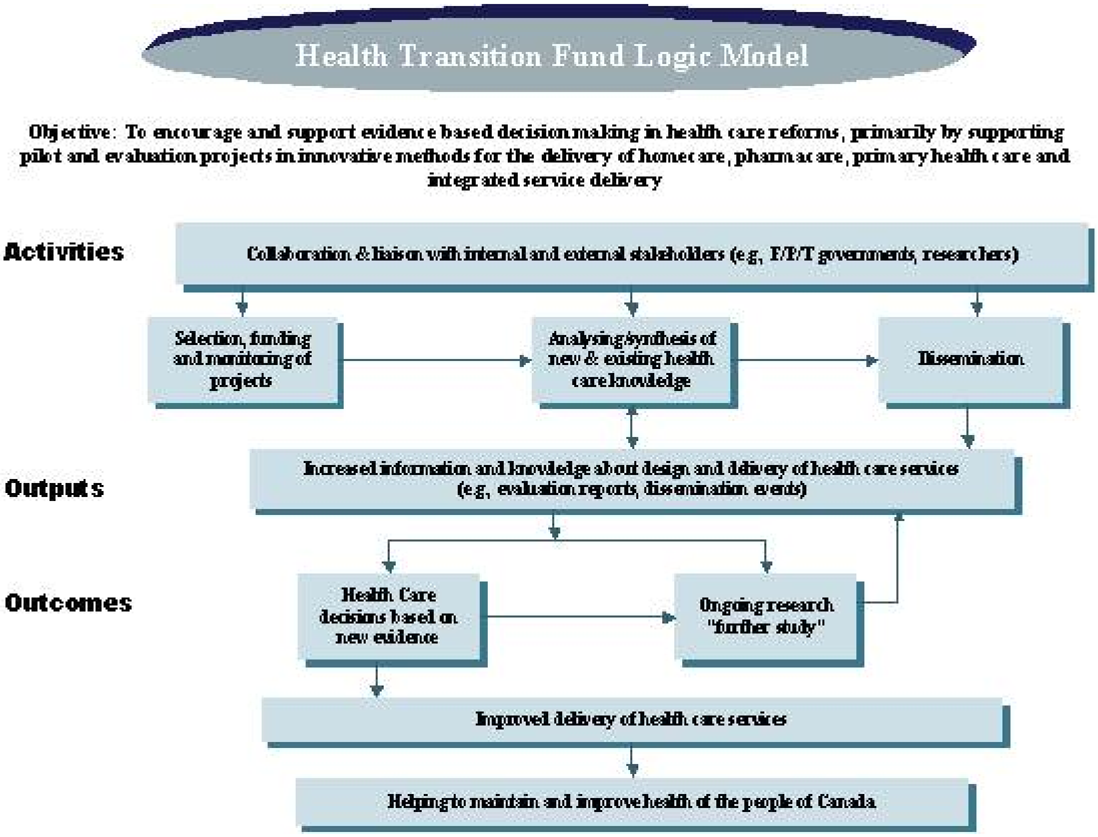
The Health Transition Fund (HTF) supported 141 projects across Canada between 1997 and 2001 to test and evaluate innovative ways to deliver health care services. The $150 million dollar fund was a collaborative effort among federal, provincial and territorial governments designed to provide projects support that would generate evidence that governments, health care providers, researchers and others could use to make informed decisions that would lead to a more integrated health care system. The overall objective of the HTF was to:

> *"Encourage and support evidence-based decision-making in health care reforms, primarily by supporting pilot and evaluation projects in innovative methods for the delivery of home care, pharmacare, primary health care and integrated service delivery".*

The *immediate* expected outcomes of the HTF were that 1) the increase of information and knowledge about the design and delivery of health services would lead to evidence-based decision-making, which 2) would stimulate new research or innovation. The *intermediate* outcome was that this would lead to improved design and delivery of health care services. The *longer-term* outcome of the HTF was to maintain and improve the health of Canadians (HTF Evaluation Framework, 2003). We return to these expected outcomes later in the report.

The HTF program is summarized in the logic model shown below (Figure 1).

Figure 1



The HTF supported innovation through pilot projects. The following table shows the distribution of the projects by priority theme areas and associated percent of funding allocated.

Table 1
Health Transition Fund Themes

Theme	# of Projects	Percent of Funding
Integrated Service Delivery	55	43.0%
Primary Care	38	40.0%
Home Care	30	12.0%
Pharmacare	18	5.0%
Total	**141**	**100%**

The priority areas were selected by all governments for three reasons:

- They reflected the broad priorities of a range of parties involved in health care at the federal, provincial and territorial levels.
- Changes in these areas are occurring across Canada.
- Policy and program work was already underway in these areas, and this work needed better evidence to support it.

As the federal government observed, "*In essence, the four areas were already relevant to governments, administrators and those who develop health policy*". Other areas soon emerged as defined areas in their own right when submissions for funding were made. These included aboriginal health, children's health, seniors' health, rural/tele-health, and mental health.

Although the funds were provided by the federal government, the structure and operations of the HTF reflected the collaborative inter-relationships among the federal, provincial and territorial governments. There were 13 governments involved initially, which grew to 14 in April 1999, when Nunavut was formed. Guidance came from a Federal/Provincial/Territorial Working Group that was established as the focus for intergovernmental collaboration on the HTF. The Working Group consisted of a representative from Health Canada and one from each of the provincial/territorial Ministries of Health.

The HTF was managed by the Health Transition Fund Secretariat in Health Canada. The Executive Director of the HTF Secretariat and one P/T representative were co-chairs of the Working Group. The Working Group designed the HTF Fund and its key program elements, as well as participating in the selection of projects and dissemination of the findings.

The HTF was introduced in a time of fiscal constraints and considerable health care restructuring across the country. But by the time the HTF projects were completed, large investments in health care had occurred. As Lewis (2002) notes, "*Beginning in 1997-98, governments began to reinvest significantly in health care services. Increases on the order of 5 to 8 per cent, and in some cases 10 per cent annually were commonplace*". Then, in 2000, the First Ministers agreed to a federal government commitment of $23.5 billion over a four-year period.

The $150 million allocated to the HTF was divided into two parts:

- $120 million to provincial/territorial projects (allocated to provinces and territories on a per capita basis); and,
- $30 million to national initiatives which included national projects, regional workshops, three national conferences in 1998 (on home care, pharmacare and the health infostructure), national synthesis and dissemination activities, and programs administration (i.e., operations of the HTF secretariat).

To be considered for funding, the national project proposals had to meet the following criteria:

- ❑ Pertain to one of the four priority areas;
- ❑ Have national relevance and significance;
- ❑ Explore a model likely to offer pragmatic, effective and efficient reform options;
- ❑ Not duplicate projects or efforts already funded by the federal government;
- ❑ Be consistent with the principles of the Canada Health Act with respect to insured services;
- ❑ Be of importance to provincial/territorial health systems;
- ❑ Address health inequities;
- ❑ Demonstrate capacity to complete the project;
- ❑ Support improvements in the health and well-being of the population;
- ❑ Include a plan to evaluate the project;
- ❑ And include a plan to disseminate results.

Source: **http://www.hc-sc.gc.ca/htf-fass/english/mid-term_e.htm#N_1_**

Proposal criteria and approaches for allocating funding for projects based in the provinces, however, were variable across the country. As noted on the HTF website:

> *Decisions about provincial/territorial projects were made by the province or territory in question and the Government of Canada. Provinces and territories had discretion in terms of how they would decide what proposals to submit. However, all proposals had to meet the selection criteria agreed to nationally by the FPT Working Group on the HTF. In general, provincial/territorial projects focused primarily on issues or models that were of particular relevance to the health system of a province, territory or region, and they generally took place exclusively within that jurisdiction.*

Given there is a certain degree of risk associated with pilot projects, if they did not achieve their desired results they were not necessarily considered as failures. The HTF secretariat emphasized to proponents that in the case of projects which did not ‘work out’, learning *why* they had fallen short was also highly useful information to health system decision-makers. Indeed, Lewis (2002) in his synthesis of the HTF projects, cites projects BC402 and NA369 as instructive on this point.

The amount of HTF funding for individual projects ranged from $6,000 to $18 million dollars. The diverse range in funding allocation reflects considerable differences in the scale and scope of the respective projects – from small community-based initiatives to large multi-site multi-year projects involving teams of researchers and decision-makers from across the country. For most projects the HTF was the sole funding source, but in some projects additional funding sources were available.

Although projects were clustered under one priority theme area, in reality they were often highly inter-related across several themes. This is evident in the synthesis documents that expand beyond the four priority areas to include aboriginal health, children's health, seniors' health mental health and rural/ telehealth. The inter-relationships are highlighted especially in the projects identified under Integrated Service Delivery.

The purpose of this evaluation was to use the logic model and the following questions developed by Health Canada to determine the impact of the HTF program on health care in Canada. The guiding objectives for the evaluation were as follows:

1) Determine the extent of encouragement of and support for evidence-based decision making in health care reform and development of new information and knowledge
2) Assess the synthesis and dissemination of HTF information
3) Assess the relevance and quality of HTF information
4) Assess the utilization of HTF information in health system reform
5) Assess the impact of HTF information on health system reform
6) Determine the Lessons learned, long term impacts and alternatives

We return to these objectives in the Discussion section of this report.

The intent of the evaluation has been to examine the impact of the HTF program. As such we have examined role and function at the program level, recognizing also that the nature and extent of success for the program is reflected, in part, by the successes and challenges identified at the project level. Thus an impact evaluation of the program must examine the outcomes achieved by the projects themselves in order to say something meaningful about the program as a whole. Conversely, the successes of the projects are in part a function of the HTF structure , the inter-relationships with the secretariat and the various knowledge transfer strategies employed at the program level. This evaluation, therefore, adopts a blended approach to examine the impact of the HTF program overall. This is reflected in the analytical framework model provided in Section 2.

The following section outlines the methodology used. Section 3 then provides the conceptual context for the impact evaluation. This is followed by Section 4, which presents the findings from the empirical work. The legacy of the HTF is examined in Section 5. The report then provides a discussion of the findings in Section 6. The concluding sections 7 and 8 provide recommendations and summarize the essence of the study.

METHODOLOGY

Assessing the nature and extent of ‘impact’ needs to recognize the causal link between activities in projects, and indeed, the program itself, and the short-term, intermediate and long-term outcomes. This was shown early on by Health Canada; for example, from the HTF website: “*The time-limited nature of the HTF does make it difficult to assess how some initiatives have affected health. It is true that, depending on the type of projects, health benefits or negative effects cannot be measured until 5, 10 or even 20 years later*”.

For this impact evaluation we used a post-test study design using multiple methods. The methodological triangulation enhances the validity of the findings (Denzin and Lincoln, 1994; Fielding and Fielding, 1986; Field and Morse, 1985; Goodman et al,1996; Morse, 1989; Patton, 1990; Stake, 1995; Yin, 1994). The benefits of the approach were four-fold. The approach:

- Meant more effective use of resources in a tight time frame,
- Provided data that had both breadth and depth,
- Provided tangible quantitative and qualitative measures of the impact of the HTF, and
- Enabled further insight on predictors for knowledge transfer and uptake for future government funded innovations in health care.

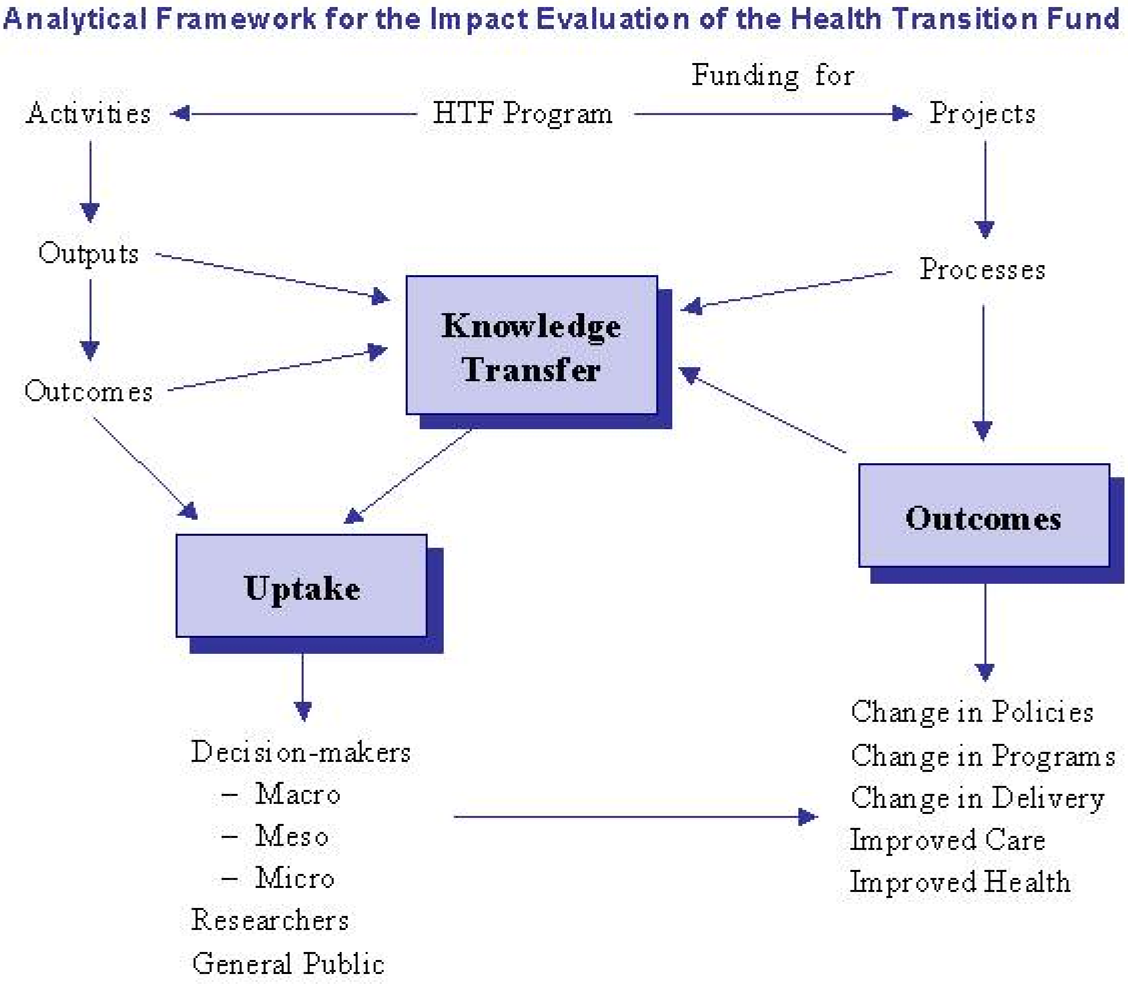
Several methodologies were used: These were:

- Document Review – Secretariat documents, synthesis papers, website data and all project reports)
- Two Surveys – Project Investigators (n=50) and Developers and Decision-makers (n=11)
- Key Informant Interviews – HTF staff, Decision-makers, Project Investigators, Synthesis authors (n=30)
- Vignettes of Projects (30 one-page descriptions of a range of projects that highlight the breadth and depth of the HTF)
- E-Delphi – perceptions from key informants comprised of decision-makers, project investigators and synthesis authors on the findings from the evaluation (n=18)

Full elaboration on the methodologies used and the enormous challenges faced trying to locate and contact respondents are provided in the Appendix.

The analytical framework we used for the evaluation is shown in Figure 2.

Figure 2



In its simplest form, the HTF provided funding to test innovation in health care. The projects were required to engage in evaluation and knowledge transfer activities and the program itself supported dissemination of the project work. Outcomes could emerge in a range of health care delivery contexts, for different stakeholders at varying decision-making levels and across a diverse range of geographical areas.

The empirical data presented in this report reflect predominantly the *perceptions* of those interviewed and surveyed. There are many direct quotes used to highlight the essence of a number of consistent themes that emerged in the evaluation. To respect anonymity and the spirit in which the information was provided (with the source of the quotes written in *italics*), the identity of the respondent is not provided except to state whether it was a project investigator (PI) or a decision-maker (DM) (our *'catch-all'* phrase for the other interview participants).

CONCEPTUAL CONTEXT

Innovation in health care requires not only a commitment to fund a new idea or replication of other practices from elsewhere, but also a commitment to some degree of organizational change. This 'change' can take many forms. It is typically planned or emergent (spontaneous), or episodic, which is the 'radical' replacement of one practice or approach over another, or continuous, which is ongoing, evolving and cumulative (Weick and Quinn, 1999). Similarly, change can be developmental (incremental), or transitional and transformational into a new desired state (Ackerman, 1997; Iles and Sutherland, 2002). Although many organizations may not be able to embrace continuous change, HTF funding could have been the catalyst for individuals to develop and build upon new ideas, and take advantage of opportunities to effect innovative change (Orlikowski, 1996).

The nature and extent of 'impact' is predicated on the development of new knowledge and the transfer of that knowledge. The diffusion of positive change in the provision of health care will only occur if there is effective transfer. Overall, as Haines and Jones (1994:1489) succinctly put it, the challenge is to "*promote the uptake of innovations that have been shown to be effective, to delay the spread of those that have not yet been shown to be effective, and to prevent the uptake of ineffective innovations*". In this context, not only are positive outcomes desired, but so too are the lessons learned from 'noble failures' (Lewis, 2002).

The findings of the HTF projects will have different meanings for different stakeholders (Sheldon et al, 1998). Policymakers, for example, may view a new clinical practice as enabling a new approach to health system design, while a professional association may consider developing a new clinical guideline.

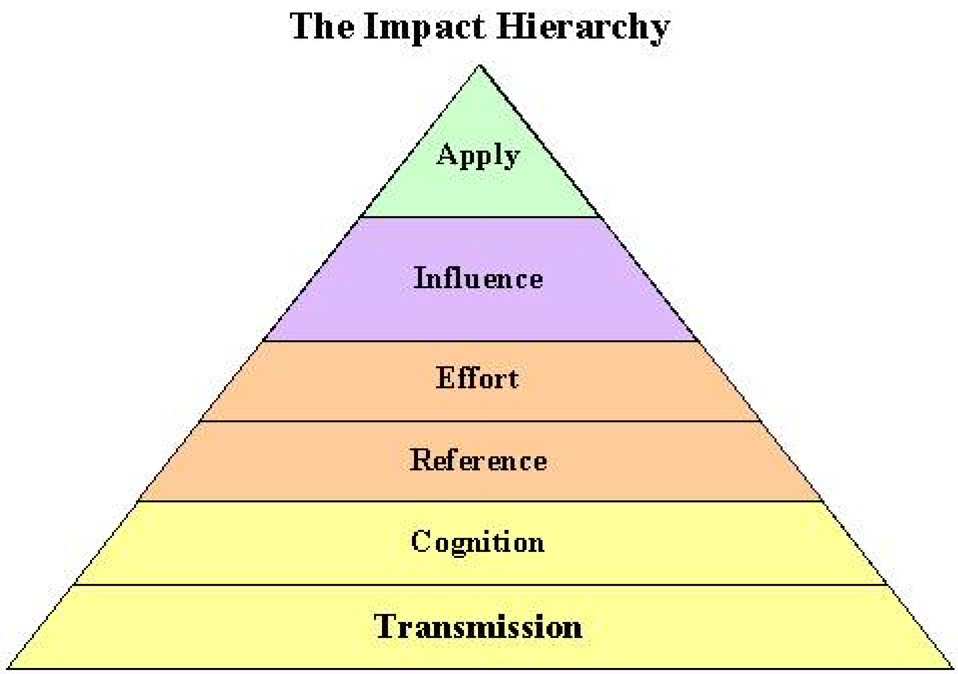
Levels of Impact

'Impact' may vary according to the stakeholder perspective chosen. Adapting Landry et al (1998) we note there are six sequential levels of 'impact'. The Impact Hierarchy is shown in Figure 3. We posit that direct application (Level 6) is the least common form of use, especially in the short-term during and immediately following the completion of an innovative project, and that transmission is the predominant short-term stage. We explore this further in the later sections.

Levels of Impact

1 – **Transmission** – the knowledge is transmitted to the users.
2 – **Cognition** – the knowledge is read and understood by decision-makers.
3 – **Reference** – the knowledge is cited in some way by the decision-makers.
4 – **Effort** – measures were taken to adopt the knowledge in some capacity.
5 – **Influence** – the knowledge influenced the decisions made.
6 – **Application** – the knowledge led to changes in practice and/or policy.

Figure 3



In addition, the literature identifies three main categories of knowledge use:

- Instrumental use – knowledge directly used for decision-making (Level 6 above).
- Conceptual use – where new knowledge enhances understanding, and contributes to new theories, ideas and interpretations of the subject matter.
- Symbolic use – Knowledge is used to legitimate and justify the views of decision-makers.

We embed the conceptual framework shown above with the analytical framework (Figure 2) to evaluate the impact of the HTF. Not only does this approach acknowledge the nature and extent of transmission of new knowledge, it is consistent with the logic model developed for the Health Transition Fund (Figure 1).

Health Canada recognized that there is a 'lag effect' for the final uptake of new knowledge beyond the funding term of the HTF projects. It may also be difficult to determine how various projects actually do contribute to effecting changes in policy and/or practice; it may be more the cumulative effect of multiple studies that eventually lead to the utilization of research findings. Delays in the implementation of research findings, however, may delay treatment or interventions that could improve the health of individuals (Haines and Jones, 1994).

Knowledge utilization depends much more on the user's context and the behaviour of the knowledge developers than the nature of the knowledge being produced. Other variables such as the role of professional associations and the synergistic relationship amongst people with common attributes (e.g., attitudes, values, experience) enhance communication between the producers and users of new knowledge (Haines and Jones, 1994). The impact of research knowledge depends on its ability to change beliefs or assumptions of the respective audiences (Lomas, 1990). With the uptake of innovations prioritization is necessary (Sheldon et al, 1998), as is the timing (e.g., of reviews of new technologies or screening interventions - Lomas, 1991). Sustainability of the innovation should focus much less on continued pilot funding and considerably more on expected outcomes and other organizational benefits (Anderson, 2003).

Levels of decision-making

Typically, changes to health care have resulted in, or been due to, resource allocation decisions made at several different levels. These are most often referred to as macro, meso and micro-scale levels. There is a matrix of decision-makers that function within the Impact Hirearchy shown above. Thus we have decision-makers at the micro (individual), meso (organizational) and macro levels (i.e., provincial/territorial and federal governments), each of who could potentially use the new knowledge in some way. Or elect not to use it, in which case other countervailing pressures may be at play that could relate to the knowledge itself, or the context in which the decision-maker functions.

The context in which the HTF was created corresponded with a time when decision makers were faced with establishing priorities for the use of health care resources. The fund injected new resources and encouraged innovation. The implicit assumption was a reallocation of resources based on evidence generated from new approaches that would be more responsive to the needs of those requiring health care.

At the macro level governments determine how many resources should be committed to health care compared to other sectors, such as education or employment. Allocative decisions at one level within health care affect the functioning of the other levels, with 'meso' referring to the level of the organization.

At the micro-level providers deliver services to individuals. These health professionals are central to the resource allocation issue as they make the daily resource allocation decisions that have substantial cost implications for decision-makers further up the hierarchy and the health system as a whole. At the same time, they are restricted in their decisions by the macro and meso allocations determined at higher levels. Increasingly, front-line providers are balancing resource issues with advocacy for the respective patient or client needs.

The challenge for health professionals and health policy decision-makers is to develop mechanisms and approaches that distinguish levels of need and allow for a distribution *or redistribution* of resources that can respond most effectively to these changing needs. Innovation plays a critical role in realigning the supply of resources to meet the changing needs. Innovation does not reside solely (arguably if at all), within the research of academia. Rather, it is a function of the creativity, passion, and engagement of a diverse range of stakeholders who are in one way or another committed to improving health and health care.

Innovation implies a certain level of risk and must be balanced by the necessities of accountability and timelines. Most often, it requires opportunities for funding that can enable new ways of thinking to be transformed into innovative "*project theory*", which can then be implemented in the real world. The HTF provided the enabling funding for new ideas to be tried while still requiring the maintenance of lines of accountability.

The HTF sought to maximize the funding it committed through evaluation – thereby enhancing the evidence-based decision-making capacities of the projects – and also through the requirement to disseminate the findings. Collectively, there was an enormous amount of knowledge generation on many levels. Both the results of the HTF and the way in which those results were achieved, are of value to decision-makers at the macro, meso and micro levels, and will continue to be as more changes to the health system emerge from the incubating HTF projects.

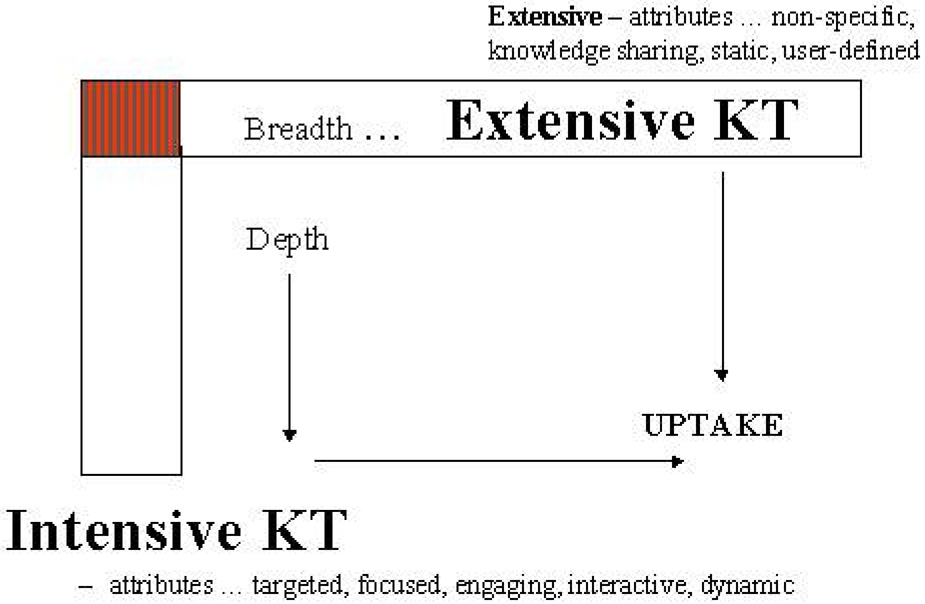
Knowledge Transfer

There are many closely inter-related components associated with knowledge transfer (KT). These include the extent to which awareness building is necessary and the approaches that can or should be used to create and respond to a receptive audience for the knowledge generated. Awareness building is not the same as KT but equally it is important that awareness is raised about the HTF projects to instil interest in the first place. Arguably it could be considered as the first phase of KT, with its precise timing relative to actual KT variable depending on the *context*, *content* and the *processes* used. The process of KT and the content of the 'message' can also be tailored and framed within the context of the specifically targeted stakeholders.

In theory, as awareness increases, the receptive audience is reached, and new ones emerge, depending on the various strategies employed. Decision-makers thus become more informed about the HTF projects, with the implicit assumption that they can apply the knowledge (that is available). The generators of the knowledge assume the users are indeed, receptive, and that uptake is possible, although the actual KT activities will influence the nature and extent of that receptivity.

Knowledge transfer associated with the HTF can be considered as occurring as two distinct and sometimes simultaneous processes. Both *Extensive* and *Intensive* KT strategies can be used in the belief that they will influence the uptake of knowledge. *Extensive KT* refers to those activities that are essentially static – the information is general in nature and designed for wide dissemination. The primary purpose is to get information "out there" to as many stakeholders as possible. This static information is left to the user to find the pieces relevant to their needs. The intent is to have breadth of dissemination for the assumed receptive users. This is best reflected in the 'first stage' of the Impact Hierarchy where extensive KT was the strategy used by the HTF program , and the focus of many of the KT strategies used by the projects. *Intensive KT* on the other hand is tailored to the specific and relevant needs of intended users, and will be reflected by the *context*, *content* and the *processes* used The information is targeted and framed in ways that will increase the likelihood of uptake for the specific audience or stakeholders to which it is directed. Multiple strategies may target a diverse range of stakeholders. Extensive and Intensive KT approaches are summarized below in Figure 4.

Figure 4



RESEARCH FINDINGS

The HTF Program

Fundamental to the introduction of the HTF was the desire to fund innovation in health care.

> *"Great emphasis has been placed on the belief that the HTF should be funding projects who's success is far from certain, and who's principal characteristic is that they are innovative so that they may create a pool of knowledge in the designated areas"*
> (Interim Evaluation Technical Report #3)

The HTF was a catalyst for change. The review of HTF documents identified many positive effects of the HTF at both the program and project levels. These included, for example:

- ❑ Creation of positive relationships between the federal, provincial and territorial governments
- ❑ Enabled individuals and organizations to try new ways of delivering care
- ❑ Brought an evidence-based decision-making ethos into health organizations
- ❑ Instilled and/ or enhanced a sprit of enquiry into health organizations
- ❑ Heightened the need and commitment to knowledge transfer
- ❑ Heightened the need and commitment for evaluation
- ❑ Enabled the formation of partnerships between, and among, decision-makers, front-line providers governments, and researchers.
- ❑ Provided a momentum for change in health care at all levels.
- ❑ Enhanced the professional careers of those engaged in the HTF initiative.

In essence, the HTF provided opportunities for improving health and health care in Canada. "*The idea…was to stimulate creative thinking about how to change culture and practice of the system to make it more responsive, effective, and efficient. The premise was that building up an inventory of evidence-based innovation and evaluation would smooth that transition*" (Lewis, 2002:3).

Similarly, from the literature review of the Interim Evaluation (technical report #3)… "*Continued evolution of the health care system is essential if it is to be sustainable and responsive to the health needs of Canadians. The challenge for the HTF is to provide evidence that will help determine which approaches for continued reform and improvement of the health system actually work and are feasible for implementation*"

It is important to consider that the success of the ‘theory’ of the HTF depended on the extent to which its implementation – in the broad programmatic and specific project sense, succeeded or failed. It may well have been, a priori, that the HTF could have failed because of a number of factors related to the interaction of actors processes, and structures that limited its ability to realize its full potential. It appears, however, that although these factors did affect the HTF, in the grand scheme of things the benefits far outweighed the hurdles encountered.

Secretariat

At the program level the Secretariat engaged in a number of activities, including working with F/P/T committees, the provinces themselves, securing and allocating funding, developing review and evaluative criteria, and the administrative functions of managing 141 projects over a multi-year period. In addition, the secretariat engaged in a number of knowledge transfer activities, recognizing that dissemination of the projects was central to the broad goal of the HTF.

The documents review indicated that the HTF benefited from a highly committed and skillful staff, and strong leadership. The HTF was considered well run and this is attributed to the work and leadership of the Secretariat. The majority of stakeholders interviewed in the interim evaluation were very satisfied with the Secretariat.

Although the Secretariat did develop and engage in knowledge transfer activities it was also felt by stakeholders that it could have developed a number of other knowledge transfer activities. This, however, has to be balanced by the reality that the Secretariat had fixed human and financial resources to do such work given the other responsibilities that the Secretariat had. In fact, staff had to devote more time to administration and less to supporting and developing dissemination activities and assisting the projects with evaluation and research design.

Asides from the workshops, the interim evaluation of the HTF reported that more could have been done to disseminate the findings. For example, not just the preparation of reports but also other forms of communication such as videos, manuals and so on. Two key factors that were felt as limiting the effectiveness of the knowledge transfer activities were the weaknesses in the dissemination plans by the projects themselves, and little awareness of the HTF Secretariat’s role in dissemination of the HTF results by the projects.

The interim evaluation suggested that the Secretariat should also be commended for its ability to work with the provinces and territories. There were bilateral decisions on the projects funded between the respective jurisdiction and the federal government, and multilateral decisions on the national projects. All levels had an opportunity to review projects to identify any gaps, duplications and areas for possible partnerships. As one interviewee in the Interim Evaluation observed, "*The HTF has become a benchmark for F/P/T relations and cooperation*".

One of the overarching successes was the development of the HTF in the first place. It helped create enduring and effective relationships between the federal, provincial and territorial governments. The HTF was able to fund projects relatively quickly, and proved to be effective in allocating $150 million dollars to seed or evaluate innovations. A prevailing view from government officials interviewed was that the HTF came at a key time to ensure the country focused on key theme areas, coming on the heels of the National Health Forum. In that context it could almost be considered as a *next stage of health system renewal*, which was a good move forward from the Health Forum – trying to generate evidence that was based on work that the provinces, territories, and federal government could all use. The HTF was a new kind of mechanism for advancing health system renewal that had not really been tried before.

The formation of the 2000 Health Accord came on the heels of HTF. The HTF provided a springboard that assisted the creation of the Accord. And because the HTF focused on testing and supporting ideas it got people's attention. The provinces had choices to continue to support the ideas or lay things out in a more serious way.

The HTF was an impetus for the provincial and federal governments to begin talking about health system reform as well as more concrete types of initiatives, and it provided the foundation for the Primary Health Care Transition Fund initiative.

> *"The most positive experience was seeing the success of the federal government working with the provinces and territories – this was a first for us and it was very exciting. The funding was appropriately directed into the hands of those actually providing the service. The decisions were made together. We all worked together and agreed to make our findings relevant. We had the desire to find things that worked for everyone. The federal team was positive, willing to listen, and keen to do what makes sense"* (DM).

> *"There are a lot of frustrations when you look at the F/P/T world, but this project was something concrete, tangible – where we had to work together on something that everyone considered very important"* (DM).

> *"[The HTF] gave us all experience in working collaboratively – that doesn't happen very often – it was a very big benefit – even though that wasn't one of the objectives of HTF it was an important contribution"* (DM).

> *"The HTF did set the stage for system change and was the foundation for the PHCTF. Leading up from the health accord, we tracked back some of the various initiatives prior to the Accord and have always related back to the HTF since it was an important gathering of information and understanding and a time when people really started to look at change in health care"* (DM)

> *"At the working level, HTF worked very well – there was great cooperation at the bureaucratic level – if we could have kept the politics out of it and continued for a few more years there would have been all sorts of great outcomes"* (DM).

> *"The structure was excellent and I appreciated the fact that the provinces and territories were able to help shape the national projects. Each jurisdiction was also able to help shape local initiatives. There was a strong role for provincial and territorial governments to set a structure and role for the projects that were practical, applied and useful* " (DM).

> "*Yes, [the HTF] gave us great direction as to what we needed to supply them [HTF] with in terms of information and how to proceed with developing our model of care. We all felt very supported by them and the overall system of reporting was really excellent, especially for those of us not previously involved in this type of research"* (PI).

> *"The biggest thing to come out of this was the opportunity to develop relationships not otherwise possible between the federal, provincial and territorial governments"* (DM).

> *"I can't say definitively that it actually improved health care, but supported it by re-orienting primary health care initiatives. Some HTF dollars [were] used in a serious way to start laying down the foundation of provinces deciding how they want to deliver primary Health Care – it was one thing that helped to continue the momentum of having the supporting health system reform in this country"* (DM).

These comments, however, were counter-balanced with concerns expressed by several interviewees. These included the:

- ❑ Degree of rigour used for reviewing project proposals
- ❑ Limited timeframes in which projects had to be completed
- ❑ Quality of some of the projects
- ❑ Political machinations that compromised the HTF
- ❑ Nature and extent of knowledge transfer (that in theory, turns into uptake)
- ❑ Limited attention to sustainability.

With such a large sum of money being allocated, accountabilities are necessary and appropriate. When there is $150 million being allocated from the federal government it seems only reasonable that value for money should be reflected in some way. Interviewees felt that the project proposals needed to provide evidence that the investigators "*had clearly thought it through*".

Interviewees felt that more rigour could have gone into the allocation of funding to the projects. One investigator observed that; "*the level of the review process should have been commensurate with the funding required*". In other words, there was a perception that large amounts of funding were allocated to projects on the basis of very little evidence to justify the large sums, and even less evidence to support the notion that they were indeed innovations. In some instances large amounts of money were allocated with equal, if not less, review than those for smaller funding levels. And as one interviewee noted "*it was relatively quick and easy money*". Another interviewee observed that this was more likely a function of the short timeframe available to allocate the funding, which is unfortunate, for as one respondent noted, "*the more time you think it through up front, the more likely it will succeed in the end*".

What originally began as a 3-year program ended up being a 5-year program. Even then, to many interviewees, the timeframes were too short and requirements considerable, given the evolving nature of the *demonstration* projects. The major problem identified was that the HTF was too slow getting off the ground.

> "*Our biggest problem here were barriers in start-up due to waiting for the Federal health minister to make the announcement – it was very difficult to get approval for the funding to be announced and we couldn't get started until that happened– nothing rolled until the media was there so they could get lots of publicity*" (DM).
>
> *"I think there were some negative aspects right at the front end of the HTF process – this kind of process would have been better at starting people off with solid research support, peer review, mentoring, etc. And then at the tail end – to address problems discovered at the end of projects, sometimes unexpected, and then work to resolve these without just finishing as a failure – they really needed to address barriers discovered – would have been so much richer in the end"* (DM).

There could have been a higher profile of the HTF initiative. One interviewee felt that the announcement made by the Minister was not given a high enough profile, and the press release was simply included as part of another announcement. The major press release should have happened at the National Conference but as that never happened, it was buried in the other announcement. Other interviewees meanwhile, felt that the HTF was being "*sunsetted*" perhaps earlier than would have been desirable because of the new infusion and interest in developing the Primary Health Care Transition Fund.

As several PIs observed, reflecting the views also of many other interviewees, there was a very common perception of uncertainty as to whether *scientific knowledge or politics* played the dominant role in the allocation of funding.

> *"I do have worries about the potential that this HTF project had for wasting funds on projects that may not have been that relevant or important. The process for choosing what projects were funded had to be flawed. There was no clear information shared regarding how projects were chosen and what criteria was used – for example, were the choices really made using evidence-based criteria"* (PI)?
>
> *"I really think HTF was a political agenda that didn't contribute much of anything to advancing scientific understanding"* (PI).
>
> *"The HTF was spending money too fast on unproven initiatives"* (DM). *"It was not the right process to decide what should be funded – there was no focus on the strategic things that I think were really important"* (DM).
>
> "*There were major delays – we couldn't announce projects until all the political manoeuvring was completed – it was all about the political profile instead of getting the job done*" (PI)

Selection Process

The selection process for the various projects was considered appropriate, and good that it was not as scientifically rigorous as other funding opportunities. The reporting requirements were also considered to be less demanding than other programs. There were concerns expressed by respondents about time delays and lack of responsiveness and information from the HTF Secretariat but this, external consultants noted, is common to many government programs (Technical Report #1). In the second technical report (#2) of the HTF Interim Evaluation stakeholders interviewed felt that the process of project selection was appropriate and used a 'continuous learning approach' over the two rounds of funding.

Some stakeholders in the interim evaluation felt that the process could have been more efficient and effective through a better call for proposals, more specific research themes, a more rigorous proposal review process, and a systematic approach to verify the results. As one respondent commented, the process was "*time consuming, complex and inefficient*".
The documents reviewed indicated the program at the federal level was well administered and effective in developing positive ongoing relationships with the provinces and the territories. The Secretariat was efficient and effective with administering the funds and effectively

implemented a number of important knowledge transfer activities (including the commissioning of the synthesis series). In fact, the Secretariat could have done much more had there been the resources available).

Knowledge Transfer

> “*Critical to the uptake and use of the results of the HTF will be confidence in the information and evidence generated*”
>
> *“In summary … the success of the overall program is seen to depend greatly on the plan that will be put in place to disseminate its findings”‘* (Interim Evaluation)

An integral component of the HTF initiative was the transfer of knowledge. Indeed, technical report #1 (2000) for the Interim evaluation noted that Health Experts interviewed about the HTF observed *“it is not just dissemination that is required, if the HTF is to contribute to health system reform. The Secretariat recognizes that if the information generated is not used, there will not be an adequate return on the investment in the HTF”.*

The HTF itself recognized the importance of knowledge transfer in its own general promotion materials. It writes that one of the lessons learned in the development of the HTF is that “*communication, consultation and consensus building are critical to the success of individual projects and in introducing change leading to reform*”. These are lessons learned that can already have direct application to the Primary Health Care Transition Fund.

The knowledge strategy used was multi-dimensional, involving informal and formal modes of communication at the program, provincial/territorial and project levels. The projects themselves transferred knowledge about their development, implementation and outcomes through a variety of dissemination vehicles. But at the national level, as evidenced in the document review, there were a number of activities designed and implemented to maximize the reach of the HTF beyond the projects.

National Synthesis and Dissemination Strategy

The Secretariat developed a National Synthesis and Dissemination Strategy. The HTF Program’s underlying guiding principles:

- Required that HTF recipients were responsible for producing and disseminating project-specific results to appropriate target audiences. Evaluation and dissemination plans were mandatory (and funded) elements of project proposals. Other activities were designed to provide even ‘richer’ knowledge transfer by HTF recipients.

- Focused on lessons learned, analytical material, and results of multiple projects at an aggregate level. Only in exceptional situations did the HTF program support disseminating project-specific results.
- Concentrated on knowledge transfer of results of national or regional interest, rather than locally-based project results.
- Media-related activities focused on the syntheses, and special events) rather than on specific projects.
- Focused on making information available in a 'layered' approach – at a range of different levels to assist a range of different stakeholder needs. Targeted distribution plans and advertising were also used.
- Focused or highlighted results to keep information 'realistic and manageable'. (e.g., the 10 synthesis documents commissioned across the various theme areas).
- Used 'direct and tailored' communications between those working on the projects and decision-makers. This was through workshops, briefings, conference presentations and so on. There was extensive use of face-to-face briefings or presentations. The more targeted they are the more likely they are to be successful.
- Recognized that uptake is ongoing process involving decision-makers and building evidence and capacity for accessing this evidence when needed.
- Maximized electronic dissemination to enable the broad access and layering of information.

The HTF website: **http://www.hc-sc.gc.ca/htf-fass/english/** provides project summaries, news releases, fact sheets, contact information and final reports, and program information and evaluations.

There were many outputs to emerge from the planned synthesis and dissemination activities. These included the following synthesis outputs:

- An update document on the HTF and its projects, based on the interim Reports.
- One-to two-page executive summaries of final reports (project fact sheets)
- Final reports of HTF projects (posted on the HTF website)
- Ten-to twenty-page synthesis documents for each of the four priority areas and an overall synthesis report
- Additional syntheses (i.e., on Aboriginal health, rural health/telehealth, seniors' health, children's health, mental health)
- News releases and fact sheets (this was not done systematically but there was some activity (i.e. news release for the release of HTF synthesis documents)

The outputs of the dissemination strategy were:

- ❑ A well-developed, searchable Web site
- ❑ A listserv/e-mail notification service
- ❑ Distribution of hard copy materials (e.g., synthesis documents were mailed out in hard copy to a broad range of stakeholders, as was a sample package of fact sheets)
- ❑ Media strategy. There was some ad hoc activity, but nothing done systematically.
- ❑ National, invitational conference to share information on HTF findings and to wrap up the activities of the HTF. This was planned originally but dropped due to workload considerations when the Primary Health Care Transition Fund was created.
- ❑ Coordination with planners of existing conferences to include sessions on
- ❑ HTF project results in their conferences. This was planned but not done systematically.
- ❑ Coordination with HTF proponents, provinces, territories, and other organizations about the release of findings. This was planned but not done systematically.
- ❑ Dissemination of project findings to the F/P/T Advisory Committees and the Conference of Deputy Ministers. This was done but at a relatively low level.
- ❑ Working sessions for decision makers and researchers to share findings and ideas in the four priority areas, and possibly in additional areas (optional). This was done through five regional workshops.
- ❑ Production and wide distribution of a CD ROM with HTF related documentation, including project executive summaries and syntheses. This was not done but the documentation is available on the HTF website.

Conferences & Workshops

The HTF funded three national conferences in early 1998 and a workshop in March 1999. The conferences, on pharmacare, health info-structure and home care, brought together a large number of diverse stakeholders together to discuss common issues and potential paths forward for reform initiatives. Through a combination of keynote presentations from experts and a range of decision-makers, and a series of break-out discussions, these workshops created a point of departure with a certain level of momentum to move changes forward.

An HTF invitational Workshop on System-wide Primary Care and Primary Health Care Projects was held in Edmonton in March 1999. There were approximately 50 participants, including stakeholders from six HTF system-wide primary care/primary health care projects. The main objective of the workshop was to share experiences related to the projects' evaluation activities, and to engage in discussions with decision makers and experts from across the country. Specifically it was hoped that exchanges of lessons learned would occur as well as the further development of relationships and future collaborations. Participants emphasized the importance of evaluation in the transfer of knowledge and subsequent uptake.

They also stressed the need for mechanisms to enhance the inter-relationship between researchers and decision-makers. The proceedings, for example, noted: "*For bridging research outcomes and the policy decision-making process, participants indicated that results should be made easily accessible through some sort of indexing database, and should be presented in a user-friendly language which provides the context under which the results were achieved*".

Five regional workshops were held across Canada in 2001 with a range of stakeholders. (Toronto, Montreal, Winnipeg, Vancouver and Moncton). The purpose of the workshops was to 'share the learning from the HTF projects. These workshops transmitted the knowledge of the HTF to a wide audience. It is beyond the scope of this review, however, to fully determine the extent to which the workshops themselves had contributed to longer term impacts through changes in policies, programs or practices; the effect of the knowledge transfer is likely cumulative.

The following table summarizes some key findings from the workshops for which evaluation data were available:

Table 2
HTF Workshop Survey Responses

	Moncton	**Winnipeg**
Number of participants	N= 137	N=108
Evaluation survey respondents	N=33	N=31
Overall how do you rate the workshop?	Excellent 30% Good 58% Fair 9% Poor 3%	Excellent 27% Good 68% Fair 5%
Did you learn anything from the projects that were presented that was new to you?	Yes 89% No 11%	Yes 90% No 3% NA 7%
Did you learn anything from the projects that were presented that will be useful to you?	Yes 89% No 3% NA 8%	Yes 87% NA 13%
From your point of view … overall was the information interesting and useful?	Yes 82% No 3% NA 15%	Yes 90% NA 10%

The transmission and cognition stages of the Impact Hierarchy are evident in these survey data. An overriding impression from the qualitative responses in the workshops, however, was that *more details* from the projects and *more time for discussion* would have been beneficial to the workshop participants.

The workshops provided by the program were good examples of where both intensive and extensive KT could take place. The workshops provided an ideal opportunity to find out what was going on – even though the information was of a general nature there were still opportunities for networking and further discussions with HTF projects and HTF staff. It would be enlightening to know the extent to which these workshops indirectly or directly led to the uptake of new knowledge in some shape or form (which unfortunately was beyond the scope of this project).

A number of the stakeholders interviewed as part of the Interim Evaluation felt that decision-makers were unaware of the findings coming out of the HTF projects. Others, however, noted that the findings were being used in briefing materials for ministries.

The HTF mid-term report (May 2000) notes the importance of evaluation, knowledge transfer and generalizability:

> *"In particular, it has been necessary to devote a considerable amount of effort to clarifying the ideas of "transferability" and "generalizability". This is a key element of the HTF – how lessons learned in one place can help others in another. Therefore, continuous education and explanation will become even more important as we near the end of the HTF program, as efforts increase to consolidate, analyze and share results and lessons across Canada.*
>
> *Related to "transferability", given the complexity of many of the projects, and also their innovative nature, it is becoming ever more apparent to us that the evaluation of the processes undertaken in projects is key, both for moving a project beyond a pilot stage, and for transferring the knowledge to others".*

Finally, a comment from an interviewee who participated in the Interim Evaluation reminds us of a broader accountability: "*Care must be taken in ensuring that the general public is made aware of the findings".* Indeed, while there are numerous accessible reports available on the HTF website, we cannot assume that the general public is a) sufficiently aware of the HTF projects and overall initiative and b) whether they would even know to access the website for further information.

Synthesis Documents

The synthesis documents provide valuable critical insight to the respective thematic areas covered by the HTF. They are important knowledge transfer documents in their own right and provide the basis for subsequent follow-up by interested parties (e.g., decision-makers). They are important mechanisms for instrumental, conceptual, and symbolic use. That, however, is their point of departure. They transfer knowledge to potential users but do not convey the details required to effect policy or practice changes. That was not their intent. As examples of extensive KT; they serve to communicate the overall thrust of the projects and can be seen as potential catalysts for subsequent uptake.

The underlying theme of the synthesis documents is that decision-makers have a wealth of new knowledge from which to build and improve the health system. The challenges are how best to use the evidence, how quickly changes can be made, and how to make strategic priorities. Presumably, if innovative projects are to be sustained, then resources for this either comes from new funding or a realignment of decision-making priorities with relatively scarce health care resources.

In many respects this was one of the challenges facing the synthesis authors. Each of the ten synthesis series documents summarizes the various clusters of projects, discusses significant findings and addresses the implications of the projects for policy and practice. This excellent series provides a wealth of insight from prominent and respected analysts of health care in Canada.

As each of the synthesis authors show, there are a wide range of implications for policy and practice emanating from the projects. It is beyond the scope of this document review to detail all the observations made by the authors; that is best done by reading the series documents themselves. There were, however, critical commentaries on what '*could*' happen in the policy and practice contexts.

Some common and familiar themes prevailed: There is still a need for greater levels of integration and coordination, almost regardless of which part of the health system you are referring to. Federal-provincial relationships need to be enhanced to initiate or effect changes required in health care reform across the country. Human resource issues continue, including recruitment and retention, the need for improved working conditions, the need for better decision supports and the capacity of the human capital to work effectively and efficiently with new technologies. Physicians are still 'key agents' in the health care system, and any changes planned must address their needs and various incentive structures. Information technology is a tremendous enabler but there is still much to be done to realize its full potential. In several documents an incremental approach to 'change' is advocated, recognizing that it takes time for structures, processes and people to take on new ways of doing things. While there was some degree of 'risk' in the projects, that risk must by necessity diminish, if not disappear, if changes are to be diffused through programs, policies, and practices at the macro, meso and micro levels.

For *seniors health* the HTF projects reinforced and extended recommendations from the National Forum on Health, emphasizing the need for healthy aging, improved home care programs across the country, greater levels of integration and coordination, and the importance of examining the needs of seniors from ethnically, racially and spatially diverse settings.

In *primary care*, there was reaffirmation of the benefits or primary care reform, evidenced in fact by the introduction of the next HTF that is currently focusing on a number of primary care initiatives across the country, some of which are expanded applications of the projects developed under the HTF. Indeed, the synthesis authors Mable and Marriott (2002) write:

> *"The first-hand experience gained through the HTF projects offers new insights and reinforces long-standing knowledge about aspects of primary health care; the benefits of group practices and multidisciplinary teams; the untapped potential of nurses; and the linkages between determinants, health promotion and disease, and injury prevention. The challenge facing decision-makers is to maximize the potential of these experiences. There is a need for more understanding and support from governments and other stakeholders to facilitate primary health care reform"*

The *children's health* synthesis paper emphasized the need to integrate and coordinate care and services for children, with closer ties between research and practice, and government and community-based organizations. The synthesis paper on *Integrated Delivery* made the fundamental and simple but often overlooked point that 'integration' [read change also] requires commitment and champions. Indeed, the capacity of an organization or system to successfully embrace change will depend very much on these two key variables, regardless of the respective HTF theme.

The synthesis author on the Home Care projects reiterates the prevailing consistent consensus that home care continues to be *underfunded, undervalued and overstressed.* Shapiro (2002) points out, however, that the HTF projects provided important new knowledge that can be applied by decision-makers in many ways. Shapiro writes: "*the key to further progress now rests with the willingness and interest of funders in continuing to provide adequate and assured funding for implementing and evaluating innovations in home care and with senior decision-makers willingness to revise policies and programs*".

Rural Health related projects reflected the observation expressed in other areas that "*some of the discoveries are well known, and others offer new insights*" (Pong, 2002). In this vein, numerous recommendations are made with regard to rural health; the need to address the chronic maldistribution of health human resources, the potential for tele-health, and the need for an integrated rural health strategy that incorporates a some of the broader determinants of health.

The synthesis paper on *Aboriginal Health* highlighted the importance of the multidimensional nature of the health challenges for aboriginal communities. The projects emphasized that grassroots organizations play a pivotal role in developing health initiatives in aboriginal communities. Concomitantly, a recurring theme in many of the aboriginal focused projects was *"the importance of personal contact, along with that of culturally and linguistically appropriate forms of communication in promoting aboriginal use of the system*".

The interconnectedness of things pertaining to health care was further evidenced in the synthesis paper on *pharmaceutical issues*. Differences and diversity highlight the various HTF projects; differences in prescribing patterns and standards of drug insurance, issues with accessing data and regional and national issues surrounding drug regulations as well as the interface with the pharmaceutical industry itself. The HTF projects further reinforce that improved communication and collaboration among health professionals is a necessary pre-condition for an improved health care system, as is commitment, time and resources to see changes take shape and evolve through the system.

Finally, the synthesis paper on mental health crystallized many of the other synthesis papers as it moved into a discussion of how to initiate real change when evidence continues to mount of proven new ways of providing care to those with mental health problems. Goldner (2002) observes:

> *"Many of these HTF projects have provided a rare and invaluable opportunity to study the activation of new mental health practices in the "real world". The complex processes entailed in implementing such innovations are infrequently considered – yet an improved understanding of the processes that foster or obstruct system change is essential to the success of these initiatives. Taken together, the 24 projects* ***have provided a rich store of knowledge to inform future efforts to implement new service models and facilitate system change*** *" [emphasis added]*

This last sentence is instructive. Overall, our document review suggested that there has been an accumulation of information that is rich with insight on implementation and desirable outcomes of innovative projects. Some projects are truly innovative, while others are innovative in the sense that they test ways of doing things already tried in other countries that can be applied to the Canadian context. There are always lessons learned – even at the most limited and localized level – by those involved in the respective projects. Thus an ethos of enquiry is instilled and potentially can be continued in many other ways in an organization.

To quote Goldner (2002) once more, *"If such innovations in mental health services [*although read any part of the health system*] can measurably improve the quality of care received and the quality of life of the recipients – why does it seem so difficult to effect substantial change to the system"?* (Italics in original).

This is a fundamental question. It is also a springboard to examine the extent to which this "rich store" of HTF knowledge can and will be applied. It is one thing to provide the evidence; it is quite another to see it translated into meaningful change.

There are many recommendations made throughout the synthesis papers. They are signposts for decision-makers to use as they navigate potential policy, program, and practice change. Perhaps the most disappointing omission, through no fault of anyone, is the absence of tangible concrete activities – implementation plans to effect changes at respective levels.

The synthesis reports were considered useful and relevant by several interviewees. There were many requests for these reports – a very high demand, and very positive feedback from those who received them. Initial mail-outs were made to large organizations such as national and provincial nursing associations, pharmacist associations, medical schools, universities, and so on, all of whom came back requesting multiple copies.

Even though some Interviewees felt that the synthesis documents were well distributed and uptake quite good, one decision-maker, reflecting, in fact, many voices in the health care community, observed that: "*There needs to be more made of them [*synthesis documents] *…there has not been a wide publicizing of them*".

To some, the synthesis documents played a vital role in contributing to impacts, as indicated in the following quotes:

> *"The synthesis reports of HTF projects themselves are widely referred to* [Level 3 of the hierarchy] – *I still refer to them often, … in fact, I keep them close at hand in my reference file and find myself often reaching for them"* (DM).
>
> "We particularly appreciated the summary papers, since they helped make everything as available and accessible as possible. They were very well done" (DM).

There were, however, a number of concerns expressed about the synthesis reports – key KT tools in their own right. Examples of these views included the following:

> *"The synthesis documents were poorly communicated and the question has been raised as to whether they were a waste of money. There are still opportunities to do something about that. They were written for a broader public not just for the academic world but they did not go anywhere"* (DM).

> *"I think that a lot of the projects I reviewed, weren't finished – there was not enough time, not enough participants as subjects of the research to allow completion of the research to be valid"* (DM).

> *"The perception out there is that the HTF Reports were initiated by the 'feds' – the perception was that it was money for work and there was no engagement with provincial policy makers to carry on with the work started after the HTF funding ended"* (PI).

> *"I really don't think even the synthesis reports were very valuable as they weren't perceived to be real research, but political documents"* (PI).

Project Perspectives on Knowledge Transfer

The knowledge was transferred at different times through the duration of the HTF and beyond. We know that '*impact*' takes many forms at different levels in the knowledge use hierarchy and at different levels of decision-making. We also know that the knowledge gained "in the field" informs the research community. What we know much less about is the extent to which the use of knowledge evolves into uptake and change. It is either a) directly responsible for changes (instrumental use), or b) change occurs through a process of cumulative causation (symbolic and conceptual) as the knowledge moves from transmission and cognition and influence to effect practice or policy changes (and most likely, through more than one decision-maker).

Some interviewees felt that the knowledge transfer function was effective. One principal investigator, for example, commented:

> *"There was a lot of interest in seeing what others had tried; we've had lots of calls from others who want information on how we implemented our program and we've been happy to freely share our tools and what we learned; we've also looked at quite a few other projects to see how things were done there; there's a lot of useful, practical work that can be implemented and knowing what others did really helps; what we found really works are those projects with really practical ideas and tools that feed into existing programs (e.g., common definitions, wait list project)"* (PI).

From the very beginning, the HTF structure encouraged idea generation and partnership formation. The two in concert provide a powerful catalyst for seeding innovation and promoting knowledge transfer. As one respondent commented, *"I think at the front end the HTF was an effective model for knowledge transfer since it brought researchers together to share ideas and generate projects"* (DM).

The co-development of projects by researchers, evaluators and decision-makers potentially enabled targeted and specific knowledge transfer. Even if they were not fully defined at conception, the commitment of HTF funding enabled the formulation of the ideas into activities, with a common purpose or outcomes in collective sight. These outcomes may have changed or evolved over time but this should be viewed positively as the ideas intersected with the realities of the health care environment, which is never static. It would seem unreasonable to assume all projects could maintain their tight focus on outcomes, especially if one of the fundamental purposes of the HTF was to fund innovation that always has an element of uncertainty and risk.

Although a number of dissemination vehicles were used by the HTF program and there were requirements for the HTF projects to develop and implement dissemination plans, interviewees were adamant that the HTF program could have done more to disseminate the findings of the projects.

> *"I think what was missing was a very good mechanism for sharing information in terms of the success stories from across the country. This really didn't happen as far as I can tell. And that's disappointing since we all could learn so much from these other projects and apply them to our own provincial systems"* (DM).
>
> *"More could have been done to get the word out during the project and after the HTF ended"* (DM).
>
> *"We were supposed to have a national conference but that didn't happen and we're not sure why, except that there were deadlines looming and the focus had to be on wrapping up the project"* (DM).
>
> *"Yes, a final national conference would have brought a higher level of awareness" (DM).*
>
> *"There were delays getting out reports, fact sheets, which is unfortunate since I think that would negatively impact on the knowledge transfer"* (DM).
>
> *"Many of the projects were not that far along when they were reviewed for synthesis"* (DM).

> *"If there was any deficit in knowledge transfer, it was because there wasn't any follow-up to carry on with most of the projects"* (DM).

One suggestion raised by interviewees was to create a more supportive KT environment by requiring that the provinces be more engaged and committed to undertaking this function. This could be through various means but basically the partnership with the provinces could, in any future HTF, be an explicit dissemination process included to benefit both the projects themselves and the broader health care community.

There was, however, considerable KT that did occur simply by virtue of the projects being put in place – with partnerships formed, different stakeholders involved and a common sense of purpose identified, which included KT.

> *"The HTF initiative allowed us to work closely with service providers, government officials and academics at multiple levels – a very unique approach"* (PI).

The requirement to disseminate the work was the last obligatory step of doing the projects. Not many projects, it was felt, went beyond modest dissemination (i.e., reports, presentations etc). While these are important they are not innovative per se, which is unfortunate as one of the fundamental desires of the HTF was to see uptake based on the work of the projects. KT is a pivotal function and in retrospect much more could have been done to ensure the timely and relevant dissemination of the work, which requires new ways of transferring the knowledge to maximize the potential for uptake.

> *"Many people were very enthusiastic and telling everyone about their project and were really selling it, but before they finished and didn't have the evidence to support this – I think in many ways this was really irresponsible and really worries me a lot"* (DM).
>
> *"I was really concerned about those people running around promoting their ideas without the concrete proof that it was valid"* (DM).

It must be remembered, however, that the role and perception of KT have evolved considerably over the past few years. It was considered to be novel at the time (1997) that part of the funding requirements included dissemination and evaluation. The requirements helped to instil a knowledge transfer (and evaluative) mindset from the beginning, which can assist in program definition and clarity of implementation.

It is too easy to be harsh with casting views on KT in 2004 on HTF projects of the late 1990s; arguably the HTF was almost ahead of its time to insist on the KT to be occurring in the first place. When the HTF started, "*the whole state of the art of KT was not well developed*".One federal government official observed that the projects "*exceeded our expectations regarding dissemination*".

One of the challenges with evaluating the impact of KT is to gauge the anticipated time over which it could be expected a change will occur – that the knowledge is translated, but is there uptake, and what kind, over what time period, and does that effect a discernible shift in the way care is provided? It was consistently observed by interviewees that the time frame of the projects themselves was often too short to effect such a change. In one project, for example, physicians were asked to use a tool for identifying at-risk pregnant women in the hope that this would raise issues that could be addressed by the physicians themselves or other parts of the health and social service sectors. But such behavioural change takes time and will inevitably be uneven among physicians. In this particular case there is now an assessment code in the fee-for-service schedule, which is a clear impact of a positive change. Incisively, the PI noted that transferring knowledge was only one part of the full exchange – the more significant factor was that the new knowledge could *change the behaviour* of the physicians to provide a more appropriate approach to care and support for patients being seen. As the PI observed "*it was very intensive trying to change behaviour in such a short time frame*". It is not only much harder to discern in terms of full impact, it may take much longer than the duration of the HTF project to reveal, and the question of direct causality may be challenging. The knowledge meanwhile is also being transferred as part of a nursing curriculum, but again the extent to which the knowledge then translates into changed behaviour is difficult to casually connect with the intervention, especially over a longer time frame.

In an Ontario-based project, the funding provided the means to support assessment tools being developed. These tools, developed by InterRai with support of the HTF, have since been mandated for use by provincial governments (e.g., RAI-HC for home and community-based care in Ontario, and also the Mental Health instrument in the state of Michigan). CIHI meanwhile, has established reporting systems on the Mental Health instrument, and on the RAI-HC. The tools are comprehensive assessments that trigger various risk indicators and identify different care options. Through CIHI the project also facilitated development of the National Home Care Quality Indicators now being used nationally and internationally. As the PI of the project noted: "*This HTF grant was a turning point for implementation of the tools we were able to develop – we could never have gotten this far without the HTF support*". Thus the development of the tools was supported by the HTF, with the logic that KT would occur as the acceptance of the tools – sometimes diffused and other times quite directive and explicit – would occur over time in many jurisdictions. KT occurred at the micro level (e.g., case managers, nurses and other health professionals), meso level (e.g., organizations providing home care) and macro level (where such tools have been mandated to be used within provinces). Data from the assessments were also used to shape policy (see, for example, their application in the Romanow report).

There are many examples of KT from the projects. The enduring question, however, is how much time *does* and *should* KT take for its subsequent uptake? The more specific answer to considering the HTF and KT is that the HTF was a catalyst for change, and this change occurred at many levels, through multiple ways, and over different durations.

It is easy and enticing to focus KT activities solely on success stories. But it is equally important to report on lessons learned from the processes of conducting the projects. Some projects did not achieve their outcomes but the work they did is still instructive for future initiatives. The knowledge gained needs to be accessible and known to ensure that similar work will not repeat the same mistakes or will be able to create a design with less uncertainty. It can often be that the 'theory' behind the project was sound, but there were difficulties and challenges when operationalizing the theory in the real world. As these interviewees observed about the *noble failures*:

> "[They] *heighten the awareness for others about the potholes and road blocks [that may occur] along the way*" (DM).
>
> *"It's the lessons learned that are invaluable"* (DM).

One interviewee noted that the website was user-friendly and there was plenty of use of email where people could request information. People, it was observed, wrote in to the website quite a lot initially but then its use decreased. There was an area on the HTF website where people could subscribe to new information and the HTF could send out emails advising people that new information had been posted. A clearinghouse for information was developed and there were a great many requests for more copies of the synthesis reports. If the overall HTF initiative had a higher profile through the press, felt interviewees, possibly more people would have gained knowledge of it.

One of the leading examples of KT is the 'System of Integrated Services for the Frail Elderly' (SIPA) project from Quebec. It has continued to receive attention from around the world – the team leaders have published widely and spoken at *hundreds of conferences*. The SIPA model materials are in 6 languages (English, French, German, Spanish, Russian, Japanese). In addition, there have been numerous discussions with international health authorities such as American Health Maintenance Organizations (HMOs), other health care organizations and various funding bodies. SIPA investigators recently hosted a very large meeting of health care stakeholders in Quebec to discuss their results and plan for future implementation. The Quebec government is currently making reforms in the province and in the city of Montreal – it is planning to use this work in new protocols for Quebec health care. The SIPA project, in fact, has become the reference point (or lightning rod) for whether people are for or against this type of approach to care – that is, the per capita funding model.

> *"I think people will now use this as a yardstick on how things should be done in the future. Many projects made people think a lot about how to care for frail elderly"* (DM).

The figures below show the extent to which project investigators were able to transfer the knowledge of their respective projects. Over 90% of the 50 project investigator survey respondents stated they had published or submitted papers from the HTF project, while 61% had made presentations and poster sessions at conferences between 1 and 5 times. Forty-two percent had been involved in media events or newspaper articles. Twenty-one percent had made presentations in the local community on over 11 occasions, while almost 30% had requests for products of the project at least 11 times. Indeed, over 16% had requests for information on more than 20 occasions.

Figure 5a

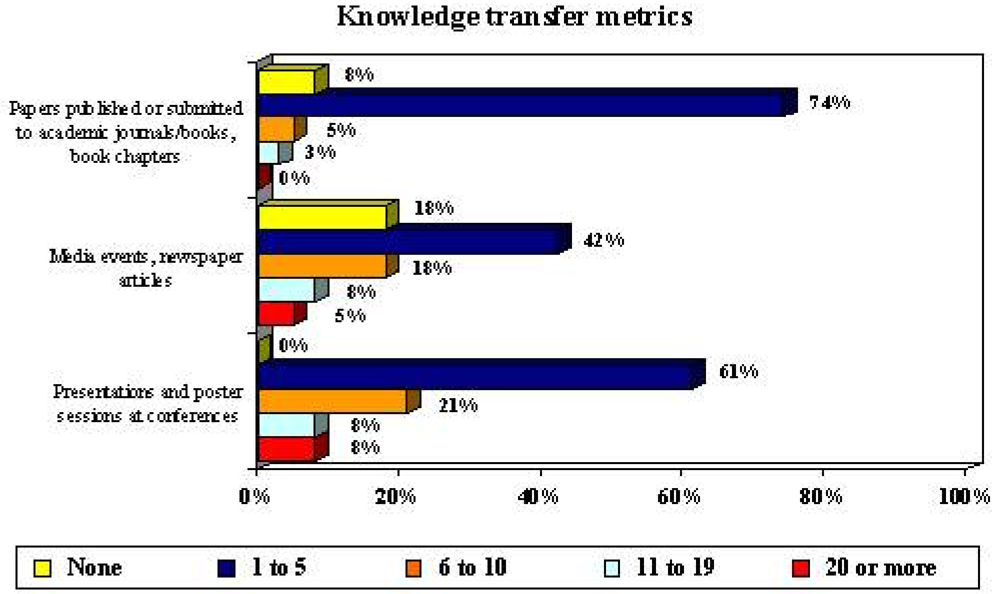
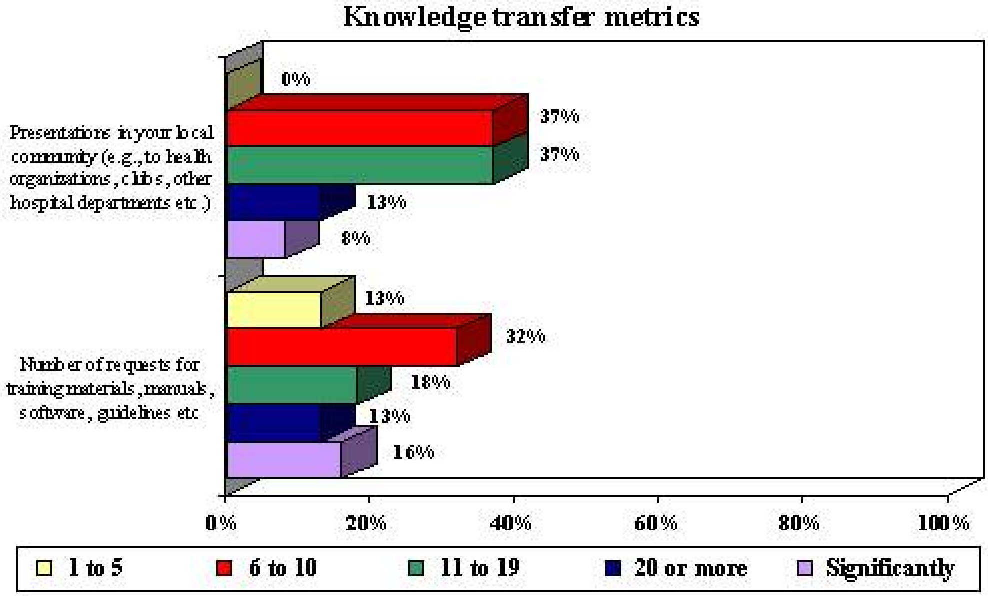


Figure 5b



Could the HTF program have done more to transfer knowledge about the projects and the program more generally? You can always say '*yes, more can be done'* but there were many dissemination activities completed. In addition to the more formalized workshops, conferences and so on there were numerous presentations made by HTF program staff in a range of venues with a range of stakeholders. This promoted not only the HTF initiative but also evidence-based research, and encouraged those who had not been previously involved, to begin. "*The ongoing discussions between HTF and stakeholders were very important*" (DM).

KT was unlikely to stop at the end of the HTF funding. There was a need for "*endurance*", in that a sustained body of knowledge and accompanying mechanisms needed to be developed in order to pass knowledge on from one individual[s] to the next. As these quotes from decision-makers noted:

> "*We really need the development of specific research transfer mechanisms*" (DM).
>
> *"There is the need for an enduring accumulation of knowledge"* (DM).

Given the breadth and depth of knowledge developed from the HTF projects, it would be unfortunate if this was not transferred after the completion of the projects. Although, for the most part, the knowledge transfer activities were viewed positively by interviewees, it was also clear from several individuals that more should have been done, and in a more coordinated, targeted manner. As this quote suggests, some interviewees felt that a clearer strategy for supporting KT would have been beneficial.

> *"As far as the HTF on the whole, I have concerns that the HTF project was uncoordinated and may fail to reach the desired target. I really don't see evidence that it did"* (PI).

This is a conundrum. It will be a challenge to sustain an enduring accumulation of knowledge if there is no one, or no entity, to commit resources to do so. In some respects it can be considered short sighted, especially if future HTF initiatives are being considered. If they are, then potential funding recipients of that new initiative run the risk of duplicating effort or repeating errors and not heeding the lessons learned from the 141 HTF projects (asides from any other innovations in health care within Canada and beyond). While appearing to be a cost in the short-term, consideration of this through a funding stream to support predominantly intensive, targeted and ongoing knowledge transfer beyond the end date of the HTF can in fact be regarded as an investment in the longer term.

> "*What we really need to do is look at knowledge transfer as not being a static thing but something that can go on for years, not just concurrent with publishing new research reports. A body of knowledge that is enduring would be more helpful"* (DM).

> *"I think it would be really useful for the HTF (or someone?) to convene a stakeholders' meeting in the near future (some projects have been completed for 5 years now) to ask all the key people about the impact after the timeframe of a few years"* (PI).

Finally, the timing of KT for receptor groups needs to be considered when maximizing an approach to KT at the program and project level. Although the results of projects may not always be targeted to government personnel, the initial receptor group in government now is often not the same one that was there when the projects began or were even completed. It is now a few years later so the people that were involved at the ministry level are no longer there and therefore may not be able to pass along that information. Again, a KT approach that provides an enduring accumulation of knowledge and recognizes the changing nature of the receptor groups, will heighten the ability for the HTF to influence decision-making.

In summary, it is clear from the interviews and surveys that although KT did occur, we do not have any normative assessment or benchmarks to determine whether enough was done at the right time to maximize KT to decision-makers at all three levels (micro, meso, macro) and other important stakeholders, such as the users of health care (patients and clients) and the creators and developers of research.

Achieving Outcomes

In determining cross-cutting themes of the 141 HTF funded projects, it was clearly evident that there were multiple themes and sub-themes within many of the projects. In some cases, when reviewing some projects with multiple themes it was difficult to identify the prominent theme since the investigation or evaluation was so intertwined. We have, however, attempted to select themes based on the most prevalent impacts for the purpose of reporting on the self-identified outcomes by the projects themselves, and also to demonstrate the variety, depth and breadth of projects within that category. While we have identified the number of projects within each category, it is important to note that some projects have been counted more than once, if there was evidence of more than one theme in the project activity reported.

The following sub-sections are presented according to the themes that we identified in our review of all the projects and their respective outcomes. These summaries of the cross-cutting themes are important to document for this impact evaluation because they show the breadth and depth of impacts that occurred in the specific HTF projects. It is clear from the clusters and the specific outcomes stated, that 'impact' has been **diverse, significant, cumulative** and, in many cases, **sustaining**.

We begin the themes by focusing on outcomes that emerged within the umbrella of population health. We then work through successive clusters that relate more directly to access to care, enablers of care, integration and coordination, new ways of practice and quality and cost issues. In each theme a brief commentary on issues that emerged is provided. These are important because, in part, issue identification is impact in and of itself, and although it is important to highlight positive outcomes it is equally important to learn from the work of the various projects. The reader can anticipate some issues and outcomes. Others are clearly 'new' lessons that can be applied in different jurisdictional and organizational contexts. A full list of all the outcomes documented is provided in the Appendix.

Population Health/Community Oriented (29 projects)

These projects focused on population or community health issues such as breast-feeding, immunizations, children and women's health issues, use of pesticides, etc. Critical success factors included intersectoral collaboration between towns, their stakeholder organizations and health authorities, a sense of team support with shared leadership and consensus decision-making plus a respect for unique family situations and rapport with the families. Precise impacts on health status were difficult to assess, but evidence was provided on increased awareness of the determinants of health, knowledge of health/child development norms and resources, decreased use of the health system (physician and hospital emergency department visits), increased knowledge and use of community resources and healthier lifestyle practices (dietary habits/food preparation, weight control, physical activity, addictions, increased self-esteem), increased operational coordination and increased access to services.

Health Promotion/Illness Prevention (12 projects)

These projects focused on improving an individual's health and well being and preventing illness. Interventions included education and counseling regarding eating disorders, activity and housing in aging, cardiovascular care, HIV, pregnancy and STD prevention, smoking and alcohol consumption, prescription drugs misuse, asthmatics at risk and agriculture health and safety.

Access: a) To Services; b) To Information (25 projects)

Many projects included some aspect of access as part of their activities and described strategies to increase access by making improvements or identifying barriers. One validated a method of prioritizing access to appropriate and effective medical services on the basis of need and potential to benefit. Included in this theme area are those projects that were investigating access issues as their primary focus. This includes those projects that focused on access to a single service such as a home care physiotherapy service (Enhanced Rural Rehabilitation Project), to service in general (From Chaos to Order: Making Sense of Waiting Lists in Canada), or to a specialized service such as hospital emergency department or community health center services (Evaluation of Enhanced Services at CUPS Community Health Centre). Other projects focused on increased access to service for populations that are harder to serve due to culture, such as First Nations communities (Health for All: Métis Settlements and Lakeland Regional Health Authority), geography such as rural/remote areas (Remote Primary Health Care System Pilot Project) or language (Community Health: Four Models of Community Health Delivery in the Francophone and Acadian Communities). Also included in this category are those projects that focused on access to information such as those reporting on innovations in technology (e.g. Telehealth applications – National First Nations Telehealth Research Project) or use of technology to improve access to client care (e.g. Mental Health Online: A Case for Information Management). Where linkages with existing provincial telehealth networks were established, the projects had a very high rate of success. Some projects identified short-term benefits as a direct result of earlier intervention (Healthy Babies, Health Children Program). In many projects, the greatest predictor of success was stability of staff and staff turnover, the greatest challenge.

Human Resources/Provider Education (15 projects)

Projects in this category either highlighted system or individual provider issues experienced. Some outlined pressures as a result of the lack of certain resources in a particular setting/region or efficiencies gained by innovative approaches to address human resource issues. Also included in this category are projects where the main focus of activity was the introduction of innovative approaches for educating or utilizing health providers. Recommendations for developing expanded/extended professional roles included establishing standard requirements for entering educational programs; increasing clinical components of programs; providing access to continuing education to promote the necessary competencies; and clearly defining standards and core competencies. An educational component was of critical importance in many of the projects that have been described in other key theme areas and in particular, where there was practice change or implementation of new practice models. These projects are reviewed in their respective categories and are not repeated in this key theme area. Many projects also identified that the constraints of human resources and time limited the projects' outcomes. These projects are described within the category that is their primary focus of activity.

Decision Support (9 projects)

These projects identified or evaluated strategies that promoted or assisted care planning and resource utilization planning. Activities involved development and dissemination of clinical practice guidelines (CPGs), protocols, Internet-based decision tools and education regarding evidence-based or 'best' practice. A variety of stakeholders were involved including physicians, pharmacists, nurses and all health care providers involved in delivering care as well as one regulatory professional college. In some projects, clients and members of the community were also involved in planning and development. Success factors for development and uptake include the involvement of frontline providers, solid evidence of benefit and a cooperative development process that included all stakeholders, especially physicians. Examples of projects include: Evaluation of the impact of a policy change in coverage for respiratory drugs; A Safety Questionnaire for Dementia; A Screening and Assessment for Family Caregivers; Development of a Stringent Method for Validating Guidelines; a Protocol for Systematic Detection of Female Victims of Domestic Violence; Development of 10 Clinical Practice Guidelines to Facilitate the Nurse Practitioner's Role and Promote Continuity of Care; a CPG on Palliative Sedation; a CPG on Congestive Heart Failure; National Evaluation of 193 Drug-Related Clinical Practice Guidelines.

Information Technology: a) Tools b) Systems (15 projects)

These projects identified specific tools or systems newly developed for gathering and/or disseminating information or the pilot of standardized and validated existing tools to assist care providers in comprehensive client assessment, care planning and care delivery (e.g. SACPAT, RAI-HC, CCAP, ISAR, Information Guides for Clients and Providers in the Field of Cancer).

Integration of Care/Service Delivery (49 projects)

These projects demonstrated collaborative approaches, improvements in communication patterns and team building efforts such as strategies for recruiting family doctors, the mechanics of establishing a multidisciplinary practice, and bridging the gap between primary care providers and community health staff. The projects evaluated service delivery models in a wide variety of settings (e.g. Community Health Centres, CLSCs, Regional Health Authorities, Métis Settlements, satellite clinics, hospitals) for a wide spectrum of care (e.g. palliative, congestive heart failure, diabetes, stroke, mental health, autism, pre/post natal care) and involved a wide variety of participants and stakeholders (e.g. case managers, physicians, nurse practitioners, home support supervisors and workers, community and hospital service providers, pharmacists, provincial/regional governments, health, educational and social service organizations, parent associations, First Nations Elders). Activities that facilitated the integration process included team building activities, educational sessions, common resource materials and linkages with community organizations/leaders, methods by which change information was disseminated and being able to arrive at a consensus on approach and service mix.

Continuity of Care (9 projects)

These projects showed a variety of improved approaches to ensure consistency of care and providers along the complete continuum from first contact to admission to long-term care or death. Projects also identified the most common blockages to care continuity. Critical factors in ensuring a smooth transition of care responsibility between settings and providers were identified, such as the care providers' solid knowledge of community resources to ensure appropriate referrals and the use of standardized assessment tools that can articulate with each other to ensure care continuity and comparability of data across sectors.

Social Support (14 projects)

Projects in this category demonstrated improved support for those whose social situation was a determinant of health. Areas of intervention showed the diversity and complexity of a challenging population such as those who were survivors of torture and trauma, teen parents, female victims of domestic violence, youth in difficulty, women in the farm economy, low income families, victims of child abuse/neglect, repeat offenders. Intersectoral cooperation was a critical success factor in may projects.

Changes in Practice a) General (40 projects)

New and innovative methods of planning and delivering care were highlighted for a variety of care providers (e.g. physicians, service providers, care team, nurse practitioners, pharmacists). Some examples included new models for Primary Care, Home-Based Palliative Care, Community Outreach in Pediatrics/Psychiatry and Education Program, Shared Mental Health Care in Primary Care Practice, Home-Based Psychiatric Nursing Care, Cluster Care, a Frail Seniors Service Delivery Model, Enhanced Case Management Project, Tele-Home Care and a Community-Administered Asthma Care Protocol, Enhanced Rural Rehabilitation Project. Also included were projects that precipitated changes in practice through implementation and uptake of condition-specific guidelines (e.g. Clinical Practice Guideline [CPG] on Palliative Sedation) or changes in provider roles (e.g. creation of a Primary Health Care Development Leader position). Critical success factors included gradual phase-in so that care could continue while providers changed delivery methods, provision of appropriate education, training and technical support and adequate resourcing for the infrastructure to provide the support plus effective linkages between the community and a variety of other governmental and non-governmental groups.

Changes in Practice: b) Drug Use/Client and Prescriber Education (11 projects)

As evident by the core theme categories, there were projects that had direct application to drug prescribing and initiatives to increase the knowledge base of the practitioners who prescribe. Specifically targeted were the prescription of benzodiazepines (sleeping and anxiety management), thiazides (hypertension), B2 agonists and inhaled steroids (asthmatic management) and antibiotics (infection).

Cost-Effectiveness (16 projects)

These projects sought to demonstrate cost-savings on an individual or system level as a result of the project's intervention. Although there were many projects that reported the inclusion of econometric methodology, few had costing as the study's primary focus. The most visible examples of 'cost effectiveness' projects were within the National Cost Effectiveness in Home Care suite. Those that did examine cost focused on cost comparison of home versus institutional care (hospital in-patient, ALC and emergency services, residential, long term care). Overall, there were not intensive, rigorous economic evaluations, although the projects still indicated many elements where it would appear cost savings were being made, or could be in the longer term.

Quality of Care (4 projects)

These projects demonstrated how quality of care was improved through focused interventions or through evaluation of clients' perceptions of care received. Although only three projects specifically focused on evaluating quality of care, many projects included quality of care as an integral part of their activities but did not report specifically on this feature.

Capacity Building

The leveraging of HTF dollars proved valuable to many projects that were able to expand the funding base for their innovations. More importantly, observed the interviewees, the projects were able to substantiate the need for on-going funding after completion of the project through the evidence that was generated showing improved efficiencies, health outcomes and so on. Projects were continued and in some cases expanded beyond the initial area in which they were being developed.

Financial capacity building did occur for some …"*but there was a lot of In-kind. It certainly led to capacity building in small organizations and exposed them to thinking critically and analytically*" (PI). Capacity building was enhanced by effective, and in some, "*phenomenal*" project management.

> *"Just the fact that the fund existed drew so many people out of the woodwork and got people thinking … this is an element of capacity building that we haven't really considered"* (DM).
>
> *"I do know that there are initiatives all over the country that are putting pressure on regional health authorities and governments and some are considering building funding into existing structures as a result of the outcomes of HTF. I can't give you specific examples of this, but from my work in policy development, I know it's happening"* (DM).

Overall, interview participants felt that there were many positive impacts from the HTF. The impacts were multi-dimensional, and were felt at many decision-making levels and at all geographical and jurisdictional scales. There were essentially two types of innovations – the "*breathtaking ideas that no-one has thought of*", and the "*ideas taken from other places"* – adapted to fit into the local contexts.

Utility of HTF Projects

We asked project investigators about the extent to which the knowledge generated from the projects was used. The three figures below illustrate the nature and extent of the knowledge use. One quarter of respondents felt that there was significant direct use of HTF knowledge by consumers of health care. Ninety-one percent of respondents felt that decision-makers read and understood the knowledge generated from their respective HTF project.

Fifty percent of project investigators believed that the knowledge was cited or referred to quite a lot or significantly, while 42% felt that the HTF knowledge was *influential* in policy decisions. Forty-six percent of respondents meanwhile believed that the knowledge was *influential* in decision-making at the service delivery and practice levels. Fifty-two percent of respondents also noted, however, that the HTF knowledge was the direct cause for changes in policy, while 63% felt that it was the direct cause for changes in service delivery and practice.

Figure 6A

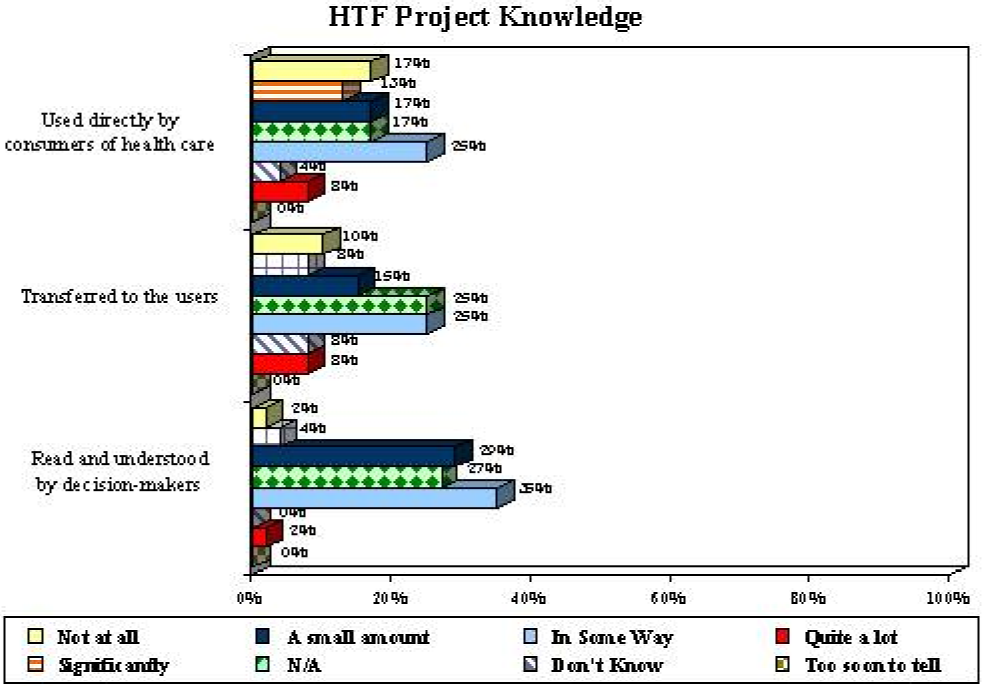


Figure 6b

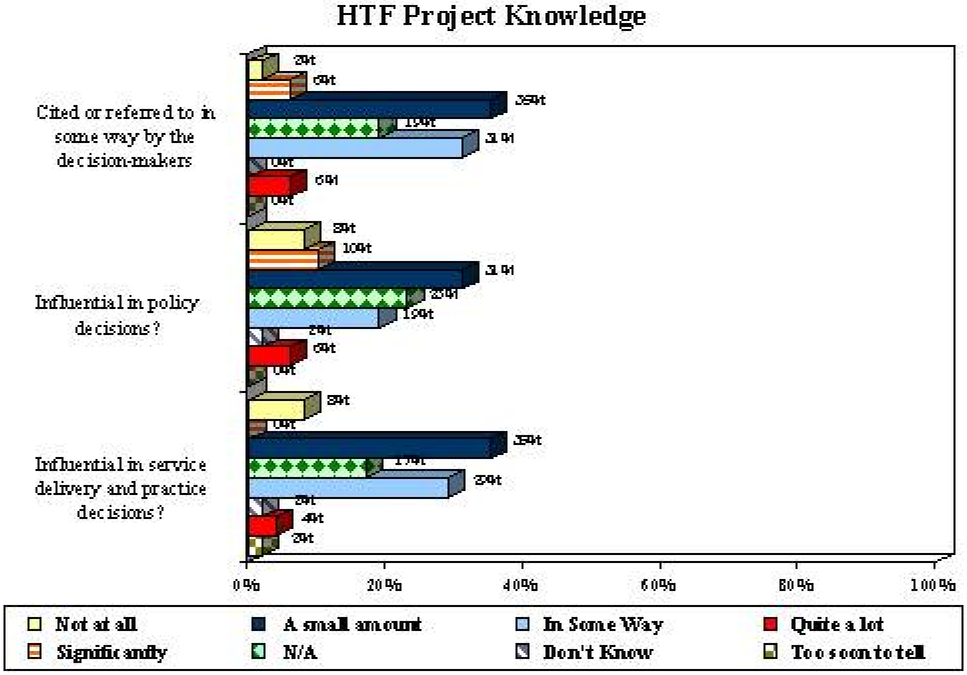
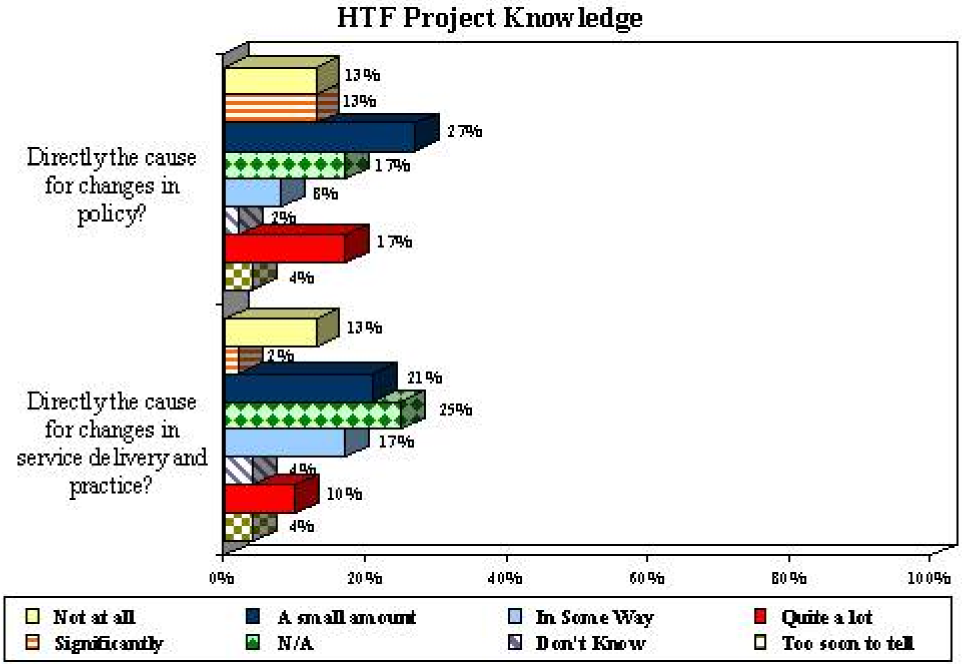


Figure 6c



Resources Developed

There were many *outputs* to emerge from the HTF projects. From a review of all the resources documented in the fact sheets of the projects we identified the following clusters of resources:

- ☐ **Policy Documents** – Resources to assist in development and documentation of systems structures, operational procedures, program development and partnerships.
- ☐ **Assessment Tools** – Instruments (validated or non-validated; developed or pre-existing) for assessing needs, risks and/or health status of clients, caregivers, specific medical conditions or the community.
- ☐ **Program Planning and Evaluation** – Resources to assist planners, administrators, managers and front-line providers with designing, planning and implementing new programs, approaches and/or models of service delivery or to investigate population health status. Tools for evaluating outcomes and impact of new programs or approaches.
- ☐ **Provider Education Material** – Tools to assist with training or continuing education of providers (professional and support) for specific diseases/conditions, persons or approaches. Educational Resources used in Training of Providers to Teach Clients/Caregivers.
- ☐ **Client or Patient Education Material** – Tools to assist with education of clients/caregivers to assist in increasing their knowledge and understanding of intervention, condition/disease process and improve health management (illness prevention/health promotion).
- ☐ **Data Collection & Reporting** – Tools to assist with collecting and reporting program data or technology support for moving paper-based information to electronic format.
- ☐ **Decision Support** – Tools to assist providers (professionals) in determining the specific approach required for a particular condition or intervention, resulting in a standardized approach across providers and settings. Usually evidence-based.

From an impact perspective they imply potential use beyond the duration of the project itself in response to addressing the expected outcomes of the project over the long term. They are tangible examples of the work of the projects and represent local, if not provincial and national, legacies of the HTF role in health care.

Improved Care

In our survey of project investigators we also asked whether the HTF projects led to improvements in the way health care is provided. The responses clearly reflect that project investigators believed improvements occurred at a variety of different levels. Sixty-nine percent felt that the project had improved health care in their own organization, while 64% felt it had improved care in other organizations.

Similarly, 70% believed the project had improved care in their own community area, and 63% felt it had improved care in their provincial jurisdiction. A further 43% felt that it had improved care in other provinces or at the national level (with 29% of respondents uncertain as to whether this had occurred).

Sixty-five percent of respondents felt that the HTF project had resulted in improved health for individual consumers, and 78% believed it had improved the way health professionals and others provide care. Finally, 71% of principal investigators felt that the project enhanced the learning, education and training of health professionals.

While we do not have the granular data that examines the details to which influence and improvements have occurred, the data are consistent in reporting that there were many and varied impacts, with many of these considered as significant.

Figure 7a HTF project-based improvements

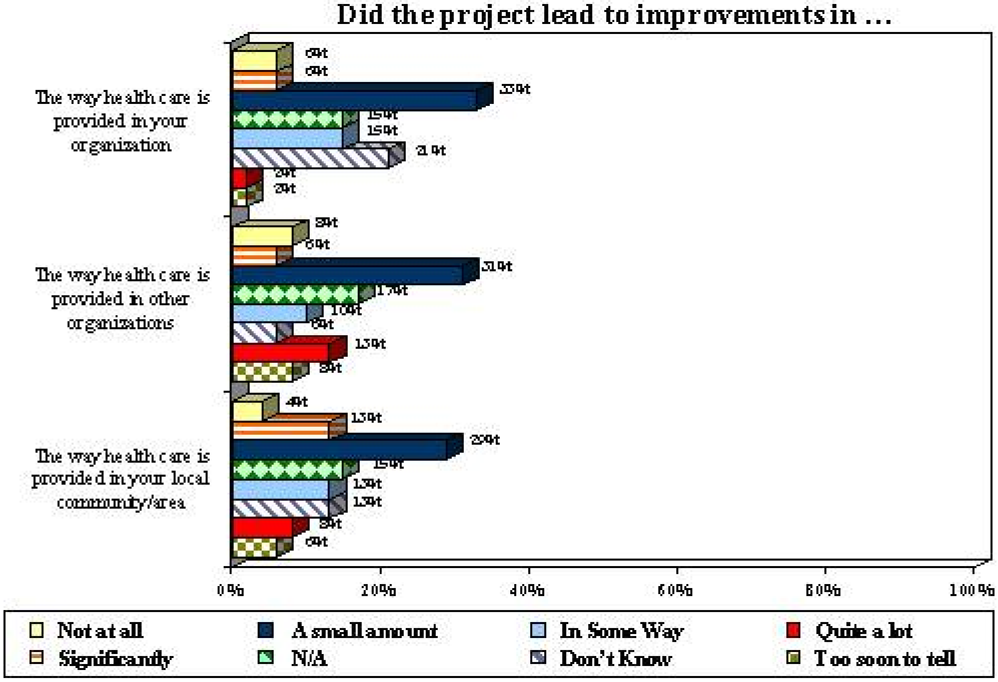


Figure 7b: HTF project-based improvements

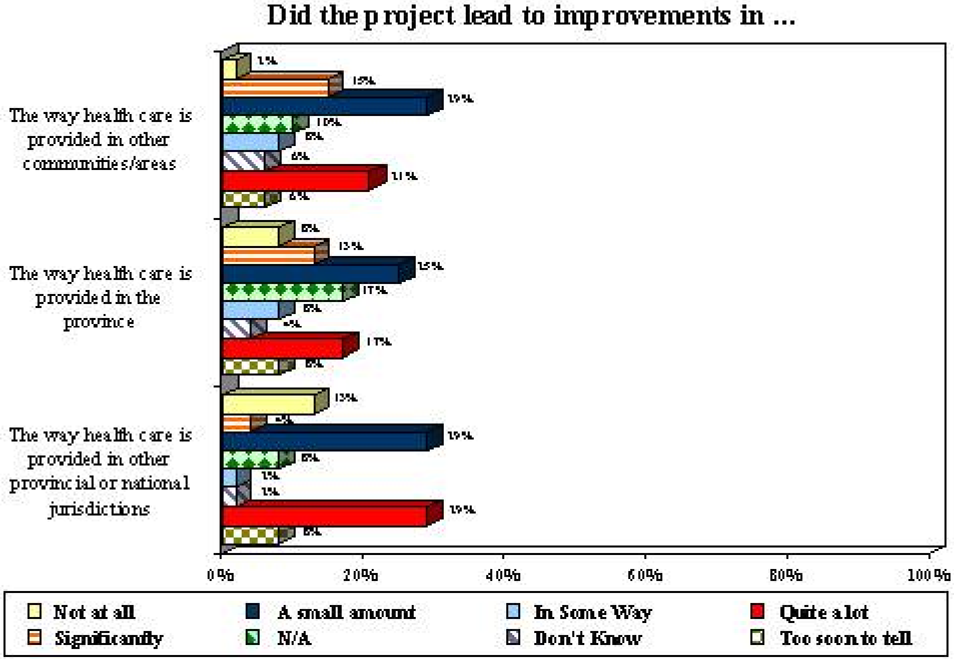
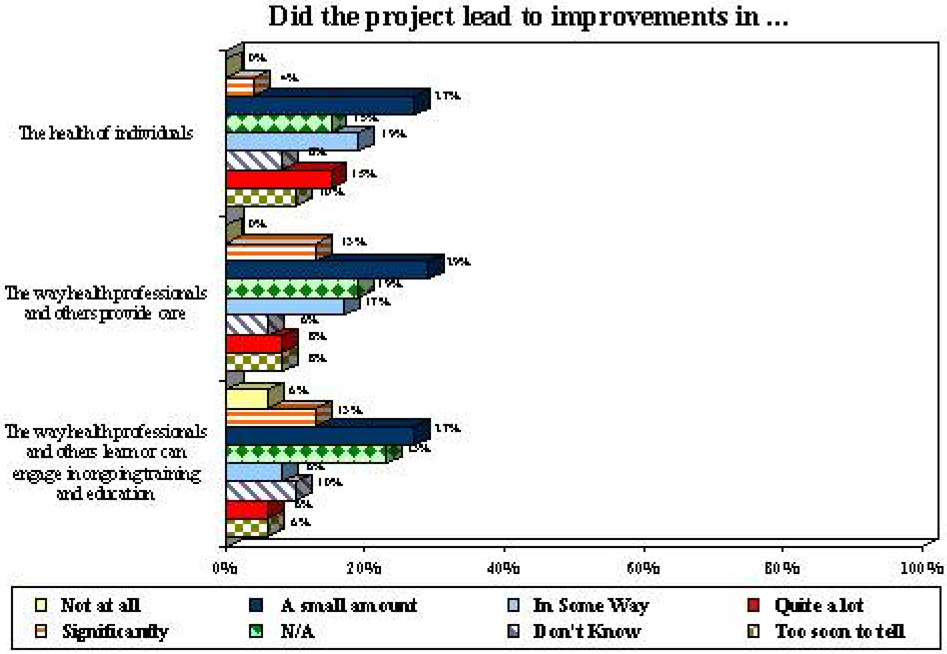


Figure 7c HTF project-based improvements



Level of Use

The figures above are further supported by the survey data that report on the levels at which the HTF knowledge was used. Sixty-five percent of respondents felt that the project knowledge was used in their own organization, while 69% felt it was used in other organizations.

Sixty-nine percent believed that the HTF knowledge changed the way supports and services were provided in their own organization and 64% believed it did this in other organizations.

It was felt that decision-makers at the meso and macro levels used the knowledge, with 64% noting use at the regional level, 63% at the provincial level and 40% at the national level.

Figure 8a Level at which HTF knowledge was used

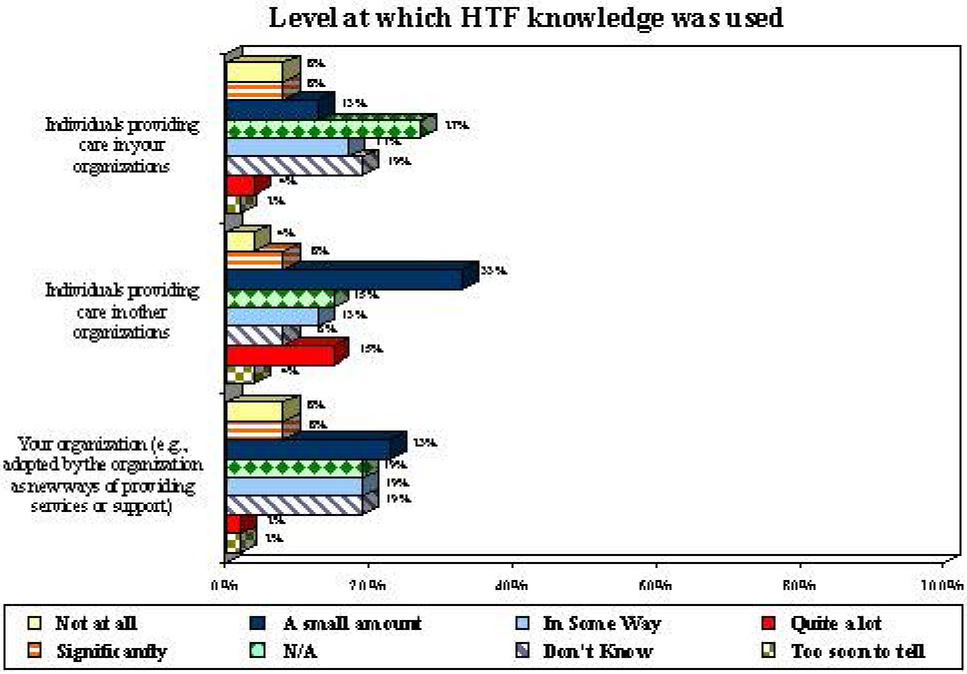


Figure 8b Level at which HTF knowledge was used

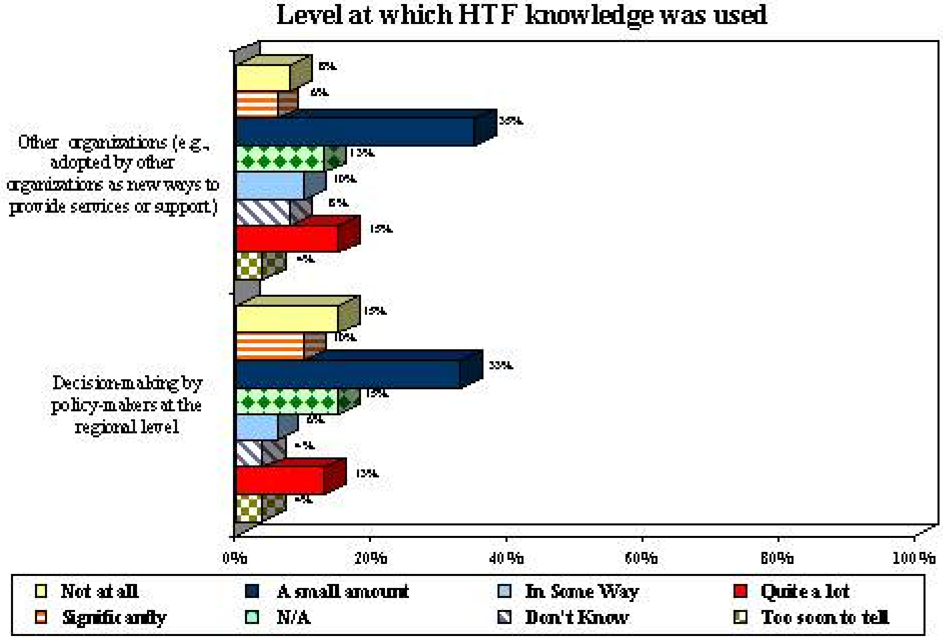
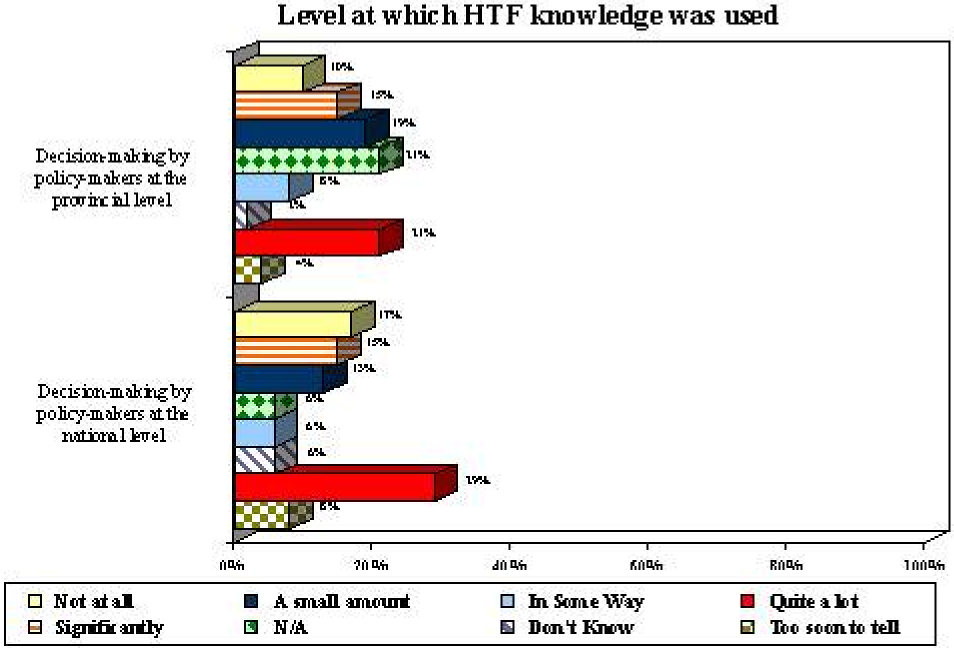


Figure 8c Level at which HTF knowledge was used



Ethos of Evidence-Based Decision-Making

> *"The project, overall, helped cultivate the testing of ideas, rather than just assuming something was working. It encouraged ongoing evaluation of programs and methods"* (DM).

Several interview participants observed that the HTF helped to create and support an evidence-based ethos in health organizations in two ways; 1) the project itself was guided by an evidence-based decision-making (EBDM) ethos through the collection of data, compiling results, and making decisions based on those results, and 2) the projects supported the idea of evidence-based research more broadly and helped to move that agenda ahead in Canada.

> *'The HTF was really about developing evidence and evidence being used to influence policy. I think it wasn't so much about developing a specific tool – that's done by the clinicians … the HTF wasn't about clinical advice, but about how to use things on the ground. It was more about implantation of practice change"* (PI).

One interviewee, although supportive of the EBDM ethos, felt that this was just a "*one-shot culture*". Their concern was that if the desire is to create, develop, enhance and maintain an EBDM ethos, this requires ongoing support. "*Otherwise a great deal of energy goes into developing new ways of doing things that don't continue or a lot of energy has to be spent fundraising*" (PI). This 'support' could be in a variety of forms, including funding, organizational commitment to knowledge brokering and the use of evidence, dedicated time of staff for evidence related activities, partnering for EBDM, increased interest and development of research agendas and so on. An important ingredient in such development is to build upon the momentum gained from the HTF.

> *"It seems to me that an almost "critical mass" has finally come together around health system research. The HTF contributed greatly to that happening"* (DM).

One decision-maker was less emphatic about the extent to which the HTF contributed to EBDM, noting that the project "*supported it, rather than encouraged it by making evidence available*". People, he felt, did not necessarily have to be convinced of its utility but rather the HTF played a facilitating role.

The EBDM ethos is itself '*evidenced*' by this project investigator. *"Before [the] HTF it was up to the planners and experienced researchers to do this kind of work not grass roots people like me. It was quite an incredible experience – there was exceptional trust and support for us to do this – we got funding, partnerships, support to foster really good 'hands on' relevant research. What we developed has been absolutely practical for what we need to be doing right now".* The PI noted that prior to the HTF, small projects needed to be part of larger initiatives in order to qualify for research-oriented funding. The HTF, however, enabled straightforward ideas to be developed and spearheaded by "*inexperienced people*" who were actually delivering the services to be developed and tested.

The EBDM cultural change is a significant impact in itself, as in many cases, it requires a different way of thinking by decision-makers, managers, front-line workers and the clients/patients themselves. The change permeates the care delivery environment with no sense of a temporal end-point, again a challenge when examining the overall impact of the HTF. As this PI observed:

> "*The whole focus of the project was to go from a time-oriented basis for care to a needs oriented service, focusing on the client and their care needs – it's very significant in how we operate – significant in the way the culture sees care being given. It involved a major culture shift for sure and we have had to keep working on that, to convince agencies that this is the best way to deliver services. We've had to advocate for this approach with clients also, as they are suspicious when their 'worker' no longer stays with them for a full hour for bathing, as was the case previously. We have found in our work with advocating for this approach with clients, that this approach also assists to empower clients to work with providers and not slip into the 'do for' mentality*" (PI).

Ninety-one percent of survey respondents either strongly agreed or agreed that the projects produced new information and knowledge. Eighty-two percent stated that the project encouraged a culture of evidence-based decision-making (see Figure 9a below).

Contribution to Research

There was widespread agreement amongst interviewees that the HTF played a valuable role contributing to the research base in Canada, in part because organizations were able to access funding at a national level for initiatives that the traditional funding agencies would not typically fund (although this is less the case now in 2004 with the formation of the Canadian Health Services Research Foundation).

> "*[The HTF] allowed people to identify specific populations and their specific needs to work on and then develop projects to meet those needs so the projects didn't have to be large and global – it supports the notion that we all need to work on the individual parts of the system, the little pieces, to allow it to move forward and improve. It allowed us to be really specific about what our issues were and what we could do that was realistic to make things better – it helped us to break things down into manageable pieces*" (PI).

> *"The HTF filled the gap by looking at large, multi sector, multi jurisdictional studies – it was the combination of dollars, a broad scope and the applied nature of the research that made this initiative so unique"* (PI).
>
> *"The main challenge for me as a researcher is to get larger scale funding to support multi-sector, multi-jurisdiction initiatives; this just hadn't happened before the HTF"* (PI).

One investigator commented that with the completion of the project (and its funding), its continuation has been made all the more difficult, as now not only is the project – or rather the focus on the outcomes initially conceived – still being addressed, the team must also spend considerable time trying to meet potential funders to secure small amounts of local funding levels – "*it's extremely hard to accomplish much when you're constantly looking for money to fund projects*". This re-emphasizes the point made earlier regarding the support for EBDM; it is one thing to provide one-time support for initiatives, but should more be done during the funding period itself and beyond to sustain momentum following the completion of funding? Without developing "supportive change enablers" for individuals and organizations, it is possible that the overarching goals of the HTF will never fully be met, and potential to effect change lost.

A decision-maker commented that the HTF projects were promoted by regional events, which "*really got people thinking about innovative ideas"*. Again, as has been the ongoing theme in our Impact Evaluation research, "*A lot of these activities couldn't take place without funding through the HTF to provide impetus to encourage projects*". Moreover, this impetus was felt most dramatically at the local scale and created opportunities for individuals to undertake research that may not have been possible otherwise:

> *"The gap in research was probably that the inexperienced, smaller researcher had a chance to do something and received the support required to do it"* (DM).
>
> *"If we hadn't had the HTF, these projects here in [province] would never have happened, that's for sure – we …don't have the resources to do things like this without a lot of support"* (DM).

In regards to pharmacare related projects, one decision-maker observed that the applied studies provided an opportunity for new knowledge to be gathered that had been necessary but as yet not conducted by researchers. The projects provided a counter-balance to the numerous industry-funded studies that, regardless of their objectivity, are typically viewed as partisan. Some areas of pharmaceuticals had been poorly researched up until the HTF projects (e.g., insurance coverage). The HTF projects added evidence of quality management where previously most research had been done by industry. In other words, the HTF was able to promote independent, unbiased research, which is essential in a sector such as pharmaceuticals. Many useful reports were produced, including, for example, the overview of F/P/T Drug Use databases (which has since been used as background for a conference).

Further evidence that the HTF contributed to research in Canada (and beyond) is the fact that 92% of survey respondents stated that their respective projects filled a gap in research (Figure 9a).

Timely and Relevant New Knowledge

Despite some interviewees concerns regarding the quality of the research, there were still many successes in the contribution of timely and relevant new knowledge. For example, in home care:

> "*In just over 5 years we now have a national Home Care reporting system by CIHI – the turning point for this development taking shape was the award of the HTF grant*" (PI).

Because the agenda for the participants themselves shaped the projects in each region, there was assurance that what was being done was relevant and important.

> "[They were] *well linked and the process was well structured. As a result, we got the information we wanted to know about – that worked well and that fit well with what we were already doing*" (DM).
>
> *Because of the way the HTF team worked with the provinces and territories, we all got a very big say in what happened locally. As a result, the information forthcoming was of interest, is relevant, and fits within the existing health care system*" (DM).

There is also an enduring element to being useful and relevant. There were many tools, manuals, policies and procedures developed and these, if made widely known, can save others considerable start-up time to get similar projects going. Moreover, its "*so great when people ask for information ... it's great that it can be given without cost – the information is out there for public use – I think that's a really excellent way of spending public money*" (DM).

The enduring nature of relevancy is exemplified in one project’s development. By the time it had finished it had begun a process that others could incorporate into practice. Thus the longer-term enduring component is the implicit, expected but unstructured KT of a ‘*2nd Phase’* of the Impact Hierarchy whereby findings and processes are used as the innovations are further refined and diffused over time across jurisdictions and organizations.

It is also reassuring that 88% of project respondents felt the information generated by the respective HTF projects was relevant and useful for the target audience. Although over 80% felt the new knowledge was of high quality, it is perhaps of some concern that almost 20% of respondents were “not sure” (Figure 9b).

Figure 9a: HTF Project Contributions

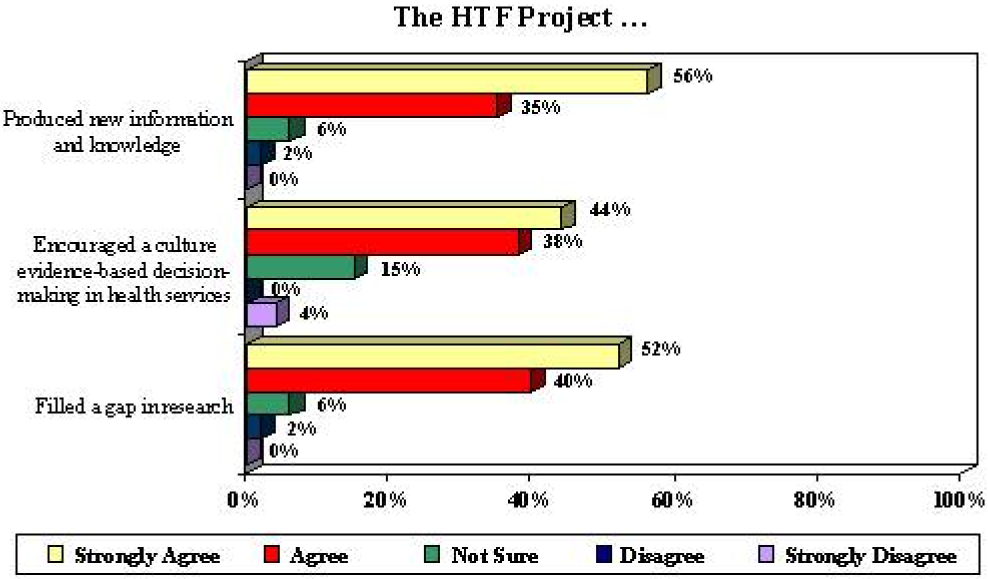
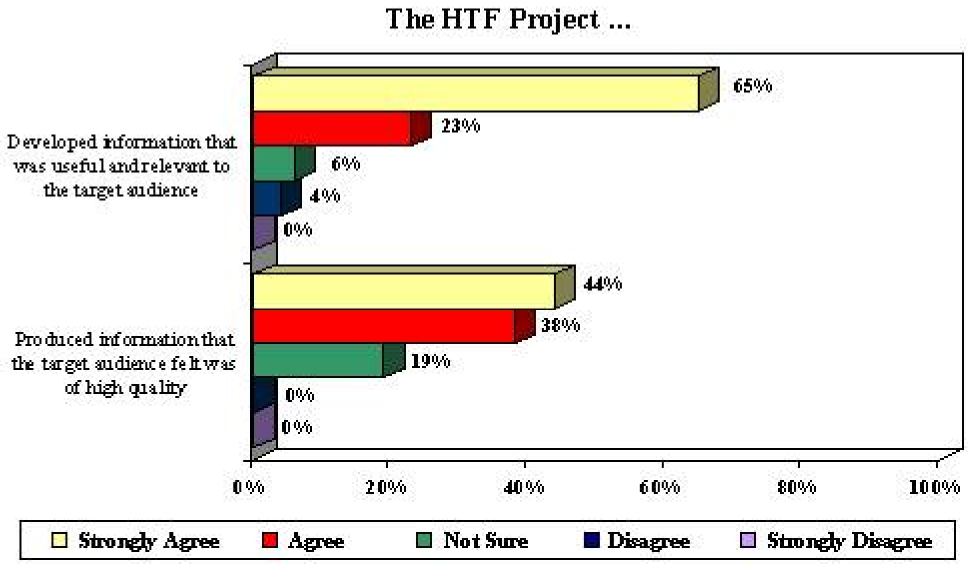
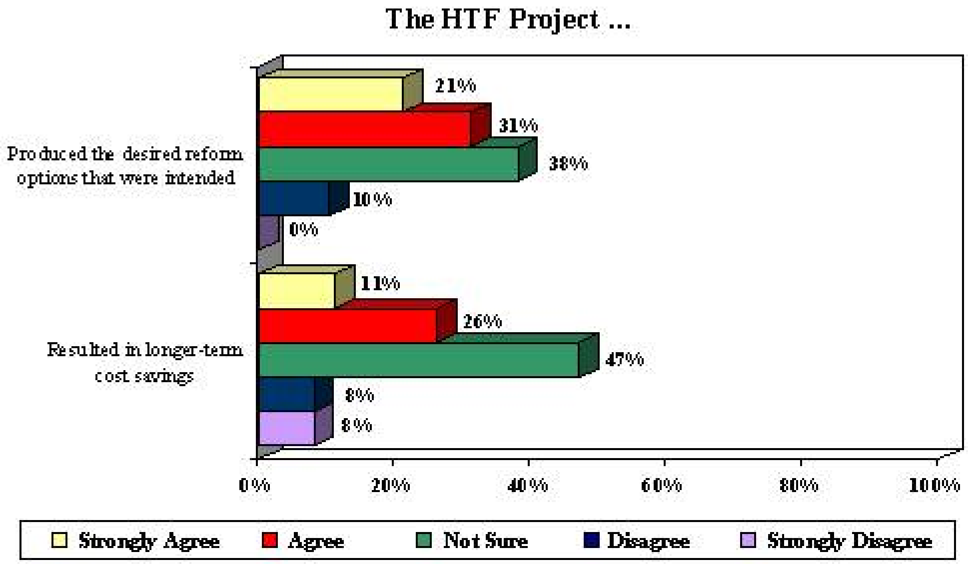


Figure 9b: HTF Project Contributions



Although 52% of survey respondents felt that the HTF projects produced the reforms that were intended, 38% were 'not sure' and a further 10% said that they did not achieve what had been intended (see below).

Figure 9c: HTF Project Contributions



Implicit, and in some cases, explicit, was the belief that the HTF projects would lead to monetary savings for the health system. Although 37% of project investigators agreed that long-term savings could be achieved, 47% were uncertain and 16% disagreed (Figure 9c).

> *"[The] HTF really wasn't about cost savings but rather system reform and what needs to be done to improve it"* (DM).

Most interviewees, however, felt there were savings made possible through the innovative approaches put in place. Several examples were given to illustrate how costs could be reduced, all of which seemed self-evident. But they also recognized that there were not full detailed cost analyses conducted to empirically substantiate the nature and extent of the savings that a) accrued during the project's time or b) determined the extent of savings that could be projected over the longer term. There were projects, for example, such as the several home care projects under the cost-effectiveness umbrella – that indicated considerable savings could be made by shifting certain services into home and community-based care (e.g., through the inappropriate use of acute care or tertiary care).

Some expected outcomes are more discernible over a longer term and it is only then when these can be achieved that we would be able to gauge the degree to which savings to the system were possible. Individual projects may have been able to show savings to a certain extent, but on the whole, we cannot say that the entire HTF initiative has resulted in cost-savings and certainly we could not put a dollar figure on that, as the evidence is not sufficient in detail and rigour to support this claim.

In some cases it was suggested that cost shifting occurred, or will continue to occur, with more care being provided in the home setting; the reason being more and more responsibility (and cost) is actually being shifted to the family caregiver, so the home care service is seen to be more cost-effective since the person uses less formal resources.

In fact what is perhaps more evident in the projects is the changing resource allocation amongst competing health care services and programs. Consistent informed EBDM is essential if there is rationing of scarce resources (as has been the case in the context of home care). Many of the projects have created new knowledge for more informed priority decision-making for scarce health care resources. Valid and reliable assessment tools have been developed, for example, that target who should get services first and the people who should be lowest priority.

Sustainability

> *"They spent a lot of energy going out to people, helped people talk to each other, pushed the envelop of where to take the results, [and] got researchers talking to each other and to people in the community. …I guess the main problem was that they really didn't know the right questions to ask as far as where to go next, to keep the momentum going and make sure what was gained in the projects didn't just end up on a shelf somewhere gathering dust"* (PI).

Almost all interviewees agreed that sustainability was more than just receiving sustained funding. Interviewees identified many different ways in which the various innovations were sustained beyond the completion of HTF funding. While these often had a funding dimension to them, the other ways that HTF projects were continued included sustaining the outcomes, changes in behaviours, sustaining and increasing the numbers of partnerships, sustaining new cultures and the ethos of EBDM, and the sustainability of the innovative projects or outcomes themselves into "*mainstream service delivery*". The funding itself was a catalyst for change – an opportunity to do things differently. The funding did not imply that new money would always be required over the long term – although it was a critical factor in enabling decisions to be made as to how to fund the sustainment of the outcomes over the long term.

> *"It is now part of the culture of the [organizations] in our region and our interdisciplinary teams that this is the way service will be delivered. We've gone from an idea to an expectation that this is the normal way we will be providing service to people living in high density areas"* (DM).
>
> *"So this goes from being a project or trial to a normal service delivery model. I think for sure that's the best example of sustainability I could give you. We had a definite culture change within our system, new partnerships, new ways of practising, funding to sustain ongoing approach, certainly new values on the part of [the workers] and [patients], and improved health outcomes. It was a real success story"* (DM).
>
> *"There is no question that the work that we demonstrated has been shown to be sustainable since it's now been implemented at a higher level across jurisdictions"* (PI).
>
> *"Our research project led to the decision to mandate assessment instruments in many territories – I'm sure it wouldn't have happened otherwise, without the HTF support"* (PI).

In addition we can also see the sustainability of 'improved health care enablers'. The broad-based adoption of instruments and assessment tools is an excellent example of improved health care enablers. The logic behind their development is that they will better align care with client/patient needs, and provide consistent data upon which to make and adjust resource allocation decisions, not just for an HTF project's duration but also over the longer term. There can be considerable merit in investing in development of such tools knowing that the longer term sustainability of the formal care system will be enhanced. Similarly, one project investigator noted that their intervention that was based on educating physicians has since been given a formal assessment code for billing purposes. In this case, the *enabler* has created a formalized mechanism that recognizes the existing delivery and funding model, thus in theory creating the casual mechanism for ongoing changes in practice assuming that the knowledge transferred is effective in changing physician behaviour over the longer term well beyond the funding duration of the HTF project.

> *"This project is not likely to create specific policy changes but rather it has endeavoured to change a standard of prenatal care. The initiative has had an impact on physician practice and will facilitate behaviour among physicians, through increasing knowledge, developing skills and changing attitude. This is much bigger than changing any one policy and will promote sustainability"(PI).*

Not all projects were sustained, however. One PI commented that the pressures of the project activities coupled with the short timeframe meant that it faced numerous interruptions – "*our study was interrupted before we could do everything we could have done*". Similar concerns were expressed by other interviewees. They noted that the relatively short and one-time funding nature of the HTF did not create a capacity for continued sustainability. As these decision-makers observed:

> "*One criticism I hear is that the one-time funding characteristic of HTF took away from the long-term sustainability aspect …it didn't allow organizations to build plans for the future"* (DM).

> *"I think there were raised expectations from communities …then disappointment that what they had couldn't be continued"* (DM).

> *"Sustainability, this has been a problem with some of the HTF projects. Some have legs, but for others it would be naive to think that some of the more innovative projects could be sustainable. Just because it is good does not mean that it will survive"* (DM).

Planning for the future, however, was never part of the overall HTF mandate. If anything, it was the responsibility of the projects themselves, and in some cases, the respective regional or provincial jurisdictions in which the project evolved. Although one interviewee noted that the project would continue as it "*makes sense, it works, people like it, and we think that it is more cost effective*" other respondents clearly saw that this is not always sufficient – that what is also required is a receptive environment in which there is a constellation of receptive context, content and process factors that create a need and a desire for continuation of the innovation.

While the recent literature on sustaining innovation identifies a number of enablers that can support sustainment, ultimately the decision to sustain will reflect the perceived needs of the health care system as understood by decision-makers at various policy-making levels. Thus:

> *"The long-term sustainability rests with the Health Care system itself that has to decide whether they will implement the results of the project or not"* (DM).
>
> "*We gave potential of sustainability but we're powerless without the support of the province and the regional health authorities*" (PI).
>
> *"Looking at all projects across the board, some don't merit sustainability – This is an interesting question – why some boards take some ideas and put them into practice and some don't – it sometimes has nothing to do with the merit of the project or it's demonstrated outcome … sometimes it's a political or social agenda"* (DM).
>
> *"…there were some projects that were started and then had to end due to lack of sustainability. Who carries the impact of programs that are proven successful but without a plan to sustain them? I think we have to think seriously about the impact of such 'boutique' programs"* (DM).
>
> *"There were raised expectations – the negative effect is that there was no follow through with many of the projects – the impact when a project is not continued is that there is a lot of broken trust of consumers who may have received innovative care that can't continue and of those involved in delivering it who are disappointed that a better way of doing something isn't being funded"* (DM).

The Primary Health Care Transition Fund (PHCTF) was cited by several respondents as another excellent example of sustainability, albeit at a larger scale. The HTF was viewed as the "*stepping stone*" the federal government needed to try out this model of care. Interviewees felt that the PHCTF would never have been developed without the experience and the perceived successes of the HTF. It was also suggested that the projects would have benefited from being better able to negotiate change by having change management supports provided in some shape or form.

Several interviewees commented that it would be worthwhile to sustain an HTF-type body as an ongoing funding and research support organization. This could support ongoing innovation for continuing applied research in a range of jurisdictions and health sectors. The HTF could address a different area – funding for innovations and/or applied research that engage users, providers and decision-makers at all levels, and the research community. Not only has the infusion of HTF funding and commitment led to ongoing sustained innovations at the *micro* and *meso* decision-making service delivery level it has been a catalyst for large-scale innovation at the *macro* decision-making level.

The data collected from survey respondents reinforced the notion that sustainability occurred in the HTF well beyond simply continuing with the project structure or ongoing funding support. Thirty-eight percent of survey respondents believed that the HTF project led to a cultural change within their organization, and a further 23% said this occurred in a partial or modified form. Only 19% stated that no cultural change occurred (see Figure 10a below)

With regard to partnership formation, extensive networks and partnerships were established for the HTF projects, many of which have continued to develop beyond the HTF funding. For example, there were many references to HTF partnerships in the proposal submissions to the more recent Primary Health Care Transition Fund – with the HTF projects being used as the basis for bid submissions. The funding also supported research that was undertaken by multiple organizations. The National Home Care quality indicators initiative, for example, was able to draw-in people from 6 provinces. There is now a national consortium of researchers that supports the development of assessment instruments nationally. In another instance Cape Breton is now partnering with 5 First Nations communities in one region. This will lead to network formation among First Nations – which it is believed, is the first time this has happened in Canada. And so this can be a potential model for other regions provincially and nationally.

Partnerships were developed between decision makers, multidisciplinary teams who formed networks between themselves to provide better, more coordinated care and to share ideas and approaches, between providers and decision-makers, associations and professional bodies, researchers and providers, and in some case clients/patients and decision-makers and health professionals. An excellent example of this is the Western Canada Wait List Project that brought together multiple researchers and governing bodies, and it has been sustained.

Numerous references were made to the contribution of the HTF to partnership formation and its benefits:

> "*Our project definitely encouraged this type of connection as all parts of the system had to work together, whereas before, we each worked in our own organization and kept quite separate*" (PI).

> "*I've since run into many research networking groups in many parts of Canada that have begun as a result of the HTF initiative – this project encouraged partnerships and integrated approaches that required people in different organizations and sectors to start talking to each other who hadn't done that before*" (PI).

> "*The outcome was that it grew some research organizations that didn't previously exist – they networked and were funded to do so initially as pilot projects and then the need for that body of researchers/planners continued and was established as a permanent network*" (DM).

> "*We developed strong working relationships with [provider agencies] …since then we have sustained a very close relationship with our care providers … that's been a very positive outcome of HTF*" (PI).

> "*The HTF facilitated the crossing of academia and policy into the research world*" (PI).

Sixty percent of survey respondents, meanwhile, noted that the partnerships were sustained beyond the completion of the HTF funding, while a further 10% felt this occurred in a modified form (See Figure 10a below).

Another aspect of sustainability is the continued employment of project staff (Figure 10a). Almost half of the survey respondents noted that key project personnel remained employed following the project completion (and another 4% said their personnel were employed at completion but in a different way to that in the HTF project).

Both decision-makers and project investigators gave numerous examples where individuals associated with the HTF were able to develop their careers during and beyond the project's completion. These included front-line workers, decision-makers, students conducting higher levels of research and researchers developing and/or enhancing their academic careers. The following quotes from the interviews reflect the diversity of the impacts felt at the very individual (micro) level:

> "*This was definitely one of the best things I've ever done in my professional career – it's one of the ways I was able to sustain myself as a civil servant in a system that has so many things that need fixing – I was able to see that things can improve, that I can have an impact on the lives of others and make a real impact on the system as a whole*" (DM).

"Many people went on to bigger careers as a result of the project. We have quite a few examples of graduate students that were involved in the project – one recently awarded her PhD. Another person finished her Ph D and secured a new position in a respected agency" (DM).

"There are many projects that were funded under HTF that are now getting funds through the PHCTF. The same people continue to be involved in projects on an ongoing basis" (DM).

"[The] HTF definitely promoted their initiatives and their careers are now more visible to the general public and to funders" (DM).

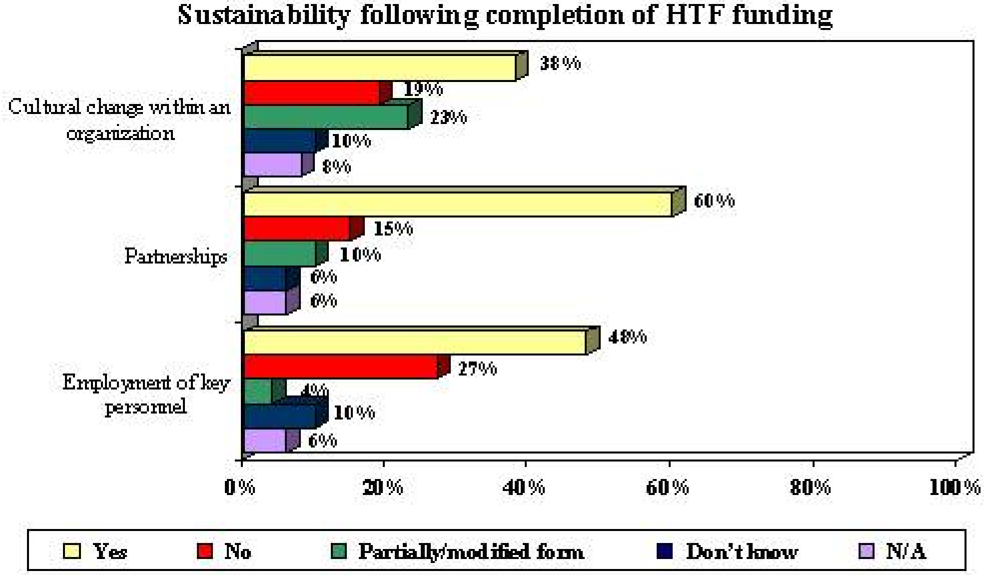
"Professors who participated in implementation of our project –were all taken to another level where they have an impact and now have a lot more recognition and influence" (PI).

The HTF *"allowed us as nurses and case managers, directors and administrators to develop our skills in research, to implement, design, carry out a research project and then to present it on a provincial, national and international stage"* (PI).

"People were hired as project managers and they made something of it. People were passionate at the end. They learned a lot, gained a higher profile and met a broader range of people. Project managers were well recognized by researchers and practitioners" (DM).

"For me personally, being allowed to experience research in a 'hands-on' way where I could take what was a passion in my head, and seeing a need that needed to be done, proceed to moving from creative thought to practical reality and a sustainable model. It was very, very exciting and fulfilling" (PI).

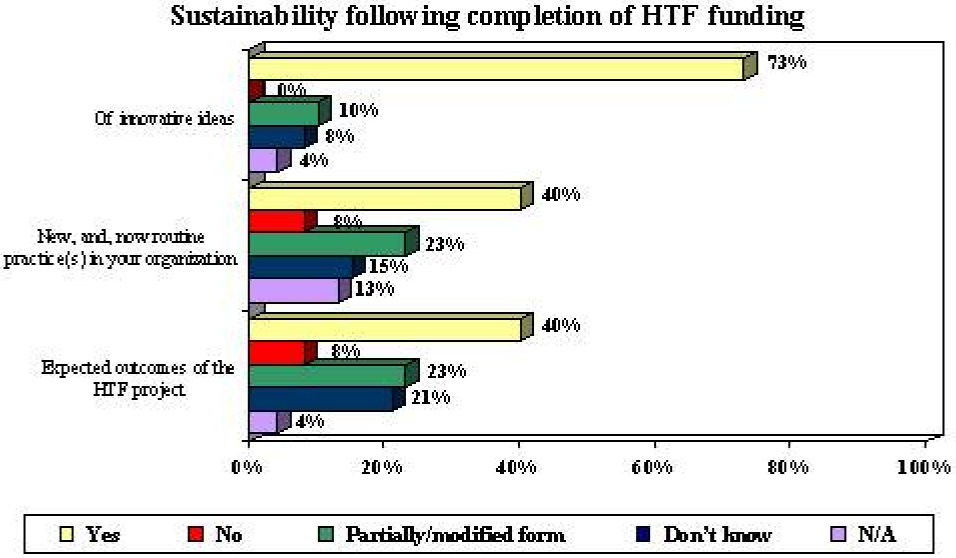
Figure 10a


Sustainability following completion of HTF funding

A central and encouraging finding of the survey was that 73% of respondents felt that the innovative ideas were sustained at the completion of HTF funding, while another 10% felt this occurred in a partial or modified form. Equally significant is that 84% observed that there was sustained interest in developing innovative ideas to improve health and health care (see Figure 10b). Sixty-three percent of respondents felt that the new HTF practices had become routine in their organization in some way.

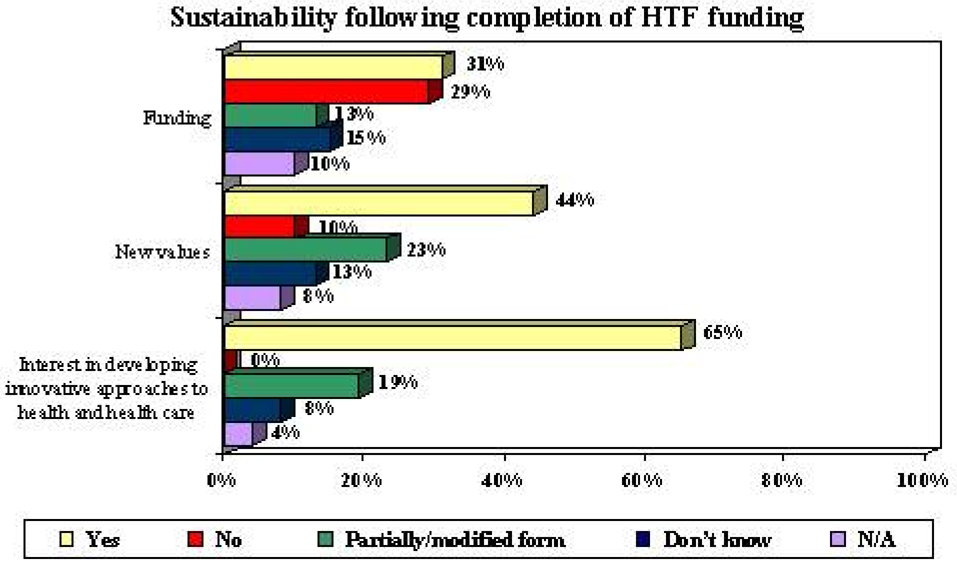
With regard to the expected outcomes of the HTF projects, only 40% of survey respondents felt these had been achieved, with another 23% feeling they were achieved but in a modified form. At first blush these figures may seem low, but only 8% felt the outcomes were not achieved. What is perhaps of more concern is that 21% felt they simply did not know, which may relate to either the initiative being subsumed in some way inside an organization, the outcomes still not being achieved, or possibly the project wound up when the funding was completed.

Figure 10b



Only 44% noted that funding had continued following the HTF project, with another 13% stating it had continued but in a modified form. Almost 30% noted that funding did not continue. In contrast, over 65% of respondents said that new values associated with the HTF project had been sustained beyond the project's completion.

Figure 10b

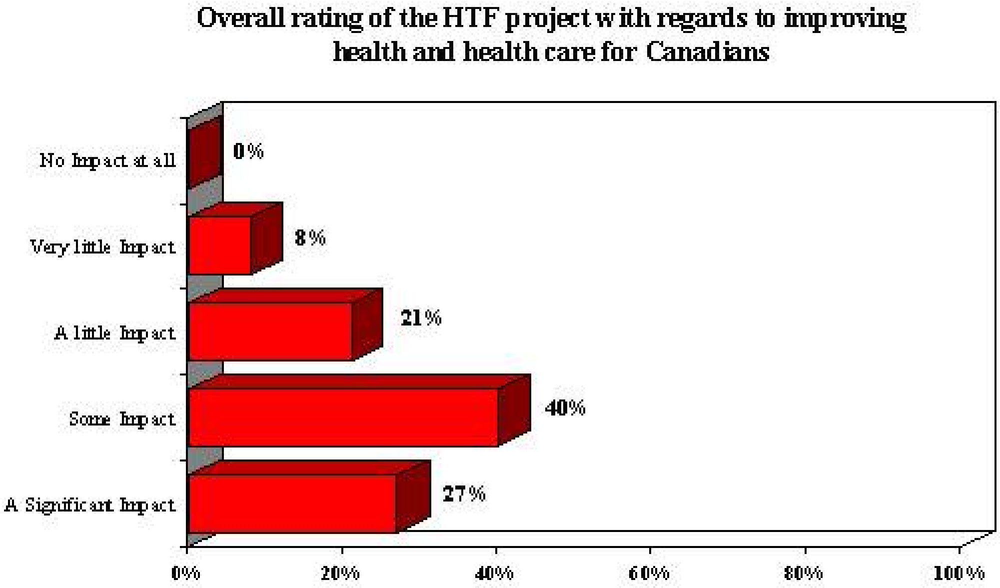


Overall Perception of the HTF

Overall the HTF created new knowledge and evidence that provide a better understanding of how we can apply resources effectively and be informed about resource implications of different models of care. The expectation is that from all the evidence collected from the HTF projects, we have a sense of which directions to take to expand the extent of savings while maintaining or improving health outcomes.

All survey respondents agreed that the HTF projects had a degree of impact on health and health care in Canada. As Figure 11 shows, 27% felt there had been a significant impact, while another 40% felt there was "*some*" impact.

Figure 11



Interviewees consistently felt that the HTF had a positive impact on health and health care in Canada. Quite simply "*it enabled people to try ideas out*". Concomitant with that is the prevailing comment from project investigators, noted by decision-makers, that: "*we would not have been able to do this without HTF funding*". Other quotes reflect the widely held views:

> *"Yes, it definitely created information for generating change. It definitely influenced policy decisions"* (DM).

> *"I think the impact was quite significant due to the fact that there was a lot of creative work done by a lot of people and a lot of creative energy applied. People at all levels were allowed to be involved in the research project – that was very positive and significant for everyone involved"* (DM).
>
> *"The HTF has influenced policy that has been since built upon evidence of studies rather than directly changing policy"* (DM).
>
> *"The lessons learned from the projects were influential in determining policy direction in primary care"* (DM).
>
> *"I have a synthesis paper regarding pharmacare right in my working file and I refer to it regularly – HTF projects did impact on academic thoughts on many of these issues"* (DM).

The HTF impact included direct use by consumers of health care, specific references to HTF work by decision-makers, and influences and direct attribution for changes in service delivery, practice and policy decision-making.

Sometimes 'impact' was seen as *influence*. The actual tangible impact is less evident but the project – its processes and outcomes – can be seen in many diffused and less diffused forms.

> *"Even the fact that HTF was able to link with the Romanow commission – able to keep the idea of evidence alive – was a real plus"* (DM).

Cluster Care in British Columbia, for example, was a model of home support delivery applicable regionally. The *language* developed as part of the project has since been used in a regional home support review done by other stakeholders in the sector. The influence of the HTF project 'thinking' was very evident, and, now, more explicitly, is the foundation for much activity on service delivery models in British Columbia.

As a further example of influence, an *HTF-like fund* is being considered at the provincial level. This in itself reflects a significant impact of the HTF, as it must be considered by decision-makers in the respective province as a successful model that can be replicated on a smaller scale, and presumably, for it to have the same effect.

Significantly, impact through the *use of evidence* was raised as a pivotal basis for decision-making, although the quality of that evidence was less certain.

> *"We began to appreciate research based practice for the first time in our service delivery – we began to study, to look at the evidence – we knew we should be doing this already, but have so few examples in community health care that it was discouraging. This initiative allowed us to build more evidence in this unique area"* (PI).
>
> *"I think this was the major impact – giving people an opportunity to do investigative research and evaluation that wouldn't otherwise have had the chance. In that way, it certainly encouraged evidence-based decision-making as these people hadn't been exposed to doing research previously, and now were beginning to really think about how they provided service in a different way, and starting to realize that their programs needed to be evaluated ongoing"* (DM).

There was recognition from many interviewees that not enough time has passed to see the full impact of the initiative. Moreover, to realize the full value, "impact" is in part a function that requires an effective knowledge transfer strategy at the micro, meso and macro levels. As one interviewee observed "*there has not been sufficient information out there*".

Several interviewees observed that the HTF led to improvements in the delivery of health care. The RAI-Health Informatics Project based in Waterloo, Ontario, for example, was able to develop an assessment tool that was validated, standardized, and ensure reliability and clinical relevancy of data collected. The project influenced service provision and practice decisions by improving standards of assessment approaches across the province of Ontario and nationally (such as the Home Care Quality Indicators that can be incorporated into quality improvement strategies for community service providers). The project investigated the clinical characteristics of residents in long term care, the types of interventions provided, and staffing levels in LTC facilities. The study was often referred to in Toronto Star editorials around the time it was released.

Since the HTF ended, the RAI-Health Informatics Project has worked to develop a mechanism for 5 different levels of care to set the priority for admission to long term care facilities (i.e., RAI-MAPLE). HTF project data were used to rank people into these priority levels. *"Our work was made possible, and we were successful in developing further instruments for assessment, as a direct outcome of HTF project funding – we had the forethought to collect the data upfront that can now be used ongoing for development and decision-making, both currently and in the* future" (PI).

The PI of a preventive care project made the very important point that although the numbers of patients that received the intervention – the improved care – may not have been as high as was hoped for in the short time frame of the project, even if just one patient received the intervention then the funding provided and the work done was *worth it* because that person would have avoided serious negative and long term health effects. The other point is that users of health care across the country are so removed from the HTF that it's very unlikely they will even know that the HTF has had a bearing on the nature and extent of the care they received from the system.

Pilot projects in Ontario meanwhile, were effective at bringing about improvements in services for fragile children, and primary health care initiatives. These have since been expanded upon as the Ontario Ministry of Health and Long Term Care now has new programs that have been implemented.

The Western Canada Wait List Project generated new knowledge as well as tools for the ongoing improvement in the delivery of care. A number of the tools have been adopted (knowledge transferred) by others organizations, for example, the Surgical Care Network in Saskatchewan is the best example of HTF influence on Provincial government. The Winnipeg Regional Health Authority also has the surgical tool, the Children's Mental Health and the Hip and Knee tools. In Alberta meanwhile they are using the Mental Health tool, the Children's tool and Hip and Knee. The Province has its own access standards for wait list and is using the Hip and Knee, the MRI and Children's Mental Health. The project has influenced policy in British Columbia, and the Provincial Health Service Association is looking at a Province wide approach. Its influence, however, has been "*sporadic*" in Ontario and Quebec.

A primary care project demonstrated improved health care for a specific target group and is now working really well (it is moving to implementation in 5 First Nation communities). The project is being sustained by using Health Canada funding through the Primary Health Care Transition Fund. It is a direct continuation of the HTF pilot.

> "*I think all of the Primary Health Care projects – all the 301 numbers – were definitely successful in improving health care – I heard a lot about them and they all seemed to be showing evidence of improved health care*" (DM).

A clear example of impact through the use of protocols was cited from the Ontario Stroke Strategy project. There is effective and timely administration of tPA with the introduction of a redirect protocol for ambulances to a facility that can administer tPA (a "clot buster"). There has to be a CT Scan and it has to be read by an expert within 3 hours of onset. Two clinics are now able to give tPA to 20% of clients (compared to1-3% in the US). "*The HTF pilot helped to get the right people together to get people to the hospital in time*". There is also an Emergency room Protocol, as anyone who has a TIA is more likely to have a stroke. It ensures that the patient is referred to a Secondary Prevention Clinic. This leads to understanding the underlying cause. There are now 18 Regional Stroke Centres and 17+(1+1) Secondary Prevention Clinics. The Ontario Ministry of Health and Long Term Care funds these clinics each year.

In some cases more effective care was facilitated through the development of tools, protocols and guidelines. As one respondent commented:

> *"[The workers] have much more autonomy – staff are very carefully selected – these are self-directed workers who manage responsibly and think quickly – good problem solvers, [who] know when to ask for direction, really good people skills, high levels of confidence, well-developed working skills, [who] know that they need to work through the change process. And the workers really like this style of working. They are much more involved in the clients' care, involved for a longer period of time, there's more continuity of care and they feel like they're really making a difference"* (PI).

Interviewees emphasized the point that assessing 'impact' will be a function of the starting point used to *frame the perception*. One PI, for example, observed that as evidence generated by the project deemed it to be effective, the decision-makers approved its ongoing funding. Moreover, it was also deemed successful by clients and families who experienced improvements in health through their ability to remain longer in the community. Defining "success" then, may be contingent on the respective stakeholders point of view, especially if there is limited funding available. Similarly, as another interviewee noted, "*People will pick out what is most useful to them in their practice – for example – those that were more practical with tools and approaches that could be easily implemented*" (PI).

There was general agreement that a *new culture for demonstration projects* in Canada is needed. Although there may be funding available for evaluation there are few opportunities to innovate with operational programs. As these PIs noted:

> "*In Canada, we often have money to test and evaluate innovative practices such as those supported by the HTF, but we don't have a culture of doing demonstration projects – we can say to the government that we do terrific work but it's a one-shot deal. They'll fund us to develop the approaches but not to implement them*" (PI).
>
> "*It's very discouraging when we do a really good job and finish the demonstration part and then have to see if it can be continued by raising our own financing for it*" (PI).

One option that emerged from the round of interviews is, in the future, have a funding mechanism that would allow the continuation of the demonstration projects for enough time to ensure they can be properly evaluated. Then at least there can be enough evidence upon which to base decisions regarding their continuation or not. Another option would be to have a perpetual HTF program where organizations can submit ideas for demonstration projects (e.g., up to 3-years funding, with a possible 3-year renewable grant). This would perpetuate and foster ongoing innovation and evidence-based decision-making, and encourage collaboration and integration in the system.

Reflection, Interpretation and Validation

Our final data collection phase was an E-Delphi process that engaged the participation of key informants who reviewed the findings previously discussed here and provided critical input and interpretation. The E-Delphi participants (n=18) included decision-makers, synthesis authors, project investigators and HTF staff. They were given a 12-page 'primer' on the results of the evaluation presented in this report and asked a series of questions. The key informants therefore combined both their own HTF experience with their review of the objective empirical data.

All but 3 of the key informants felt that there had indeed been influences and direct impacts experienced at the macro, meso and micro levels. The three expressed that it may be difficult to fully confirm impact due to the sample size in the survey. The survey, however, was only one component of the evaluation.

When integrating the different methodologies and data sources used, the key informants were able to identify four major themes under which there were significant findings from the evaluation.

The HTF Program

The program had the attention of those in positions of power and operated in a reasonably efficient and effective manner, given the constraints of timelines, the requirement to work with the provinces, and the reality of bureaucratic challenges inherent in the federal government. The program had a high tolerance/flexibility for allowing proponents/projects to move from wherever they were at in the delivery of care to where they wanted to be and supported innovation through a wide variety of interesting projects that had varying degrees of long-term impact and sustainability. Unfortunately, they noted, waiting too long after the program finished to evaluate the impact, severely affects this current evaluation's findings. Final impact evaluations of programs, they felt, should be completed earlier. There was recognition, however, that a certain amount of time delay after project completion was required to better reflect the longer term impacts of time-limited innovation projects.

The HTF program created a "h*igh degree of enthusiastic experimentation in a relatively short time frame"*. And as previously observed *"the key achievement of the HTF was that it existed in the first place and, given its constraints, operated in a reasonable manner. It is possible and desirable to use the funding of research as a vehicle to spread the word about the importance of evidence-based decision-making"*.

One E-Delphi participant commented that Canada is "worse-off" now for not having an HTF in place. They wrote: *"We, as Canadians, do not currently have any major formalized mechanism to develop and test innovative ideas regarding the delivery of health services. The* *current HTF focuses on implementation, not experimentation, and only focuses on primary care to the exclusion of other major components of the system such as hospitals, drugs, continuing/ community care, and mental health. Thus, while there are ongoing debates about federal funding, there is little discussion about how to deliver services in more effective ways".*

Further emphasizing the point raised in earlier data collection phases, the E-Delphi participants identified one of the key successes of the HTF program being the ability for different levels of government to work together in a collaborative spirit. The following quotes reflect the consistent views expressed and the nature of that success.

> *"From the very first day of this initiative, the federal and provincial/territorial governments collaborated in a frank and transparent way, which was exemplary and rare. It showed it could be done. It enabled the sharing of "what worked" and "what didn't work", which served the HTF and jurisdictions well.*
>
> *As a government participant, this truly was one of the few "very productive and positive" FPT initiatives I have taken part in over the past 15 years, in terms of the working relationships and the true teamwork to determine what needed to happen and how it should happen. This for me was one of the most note-worthy achievements of the HTF.*
>
> *One key thing that gave this initiative particular strength and relevance for the provinces and territories was the direct participation of provinces and territories in shaping what happened in each of our jurisdictions (and with the big national projects intended to help inform health reform overall). This meant that projects could be selected that complemented in a practical manner what a province or territory felt it needed to know about, and that meshed with the health system of that jurisdiction. This ability to make sure the projects were considered to be practical and relevant was very important to the overall acceptability and credibility of the HTF among provinces and territories.*
>
> *When there is a spirit and willingness to cooperate and work as "partners" federal and provincial and territorial governments can work together to provide evidence and evaluation to support health system reforms and transitions*
>
> *The key factor that gives this initiative particular strength and relevance for provincial and territorial governments was their direct participation in shaping what happened in each jurisdiction … this is the key insight!!*

> *The HTF helped popularise the term "evidence-based decision-making" among governments and the public. It helped to embed evaluation into project activities. At the same time, this also presents a potential issue for real innovation, if potential new ideas are not within the thinking or inclination of the current government. No way to find out if the provincial level does the screening of 'acceptable projects.' Raises the question of the true HTF goal – to spur innovation, or to provide provincial governments more money for things they think should be done in areas they already control.*
>
> *There is a need to experiment/innovate in the health care system on a small scale to provide the evidence necessary to support major change/reform. Policy advisors and decision-makers require HTF-type programs to evaluate experimentation and innovation.*

Knowledge/Resources Generated

A vast amount of knowledge was generated across a diverse number of theme areas (e.g., primary health care, pharmacare, home care) including findings about the actual cost effectiveness, and the effectiveness of care, for various types of care provision, care settings, and care management practices – in terms of what went well or according to expectations, and what did not. The range of resources developed, if made available/accessible, implies potential use well beyond the duration of the project itself. Academic output was high in volume although the quality was not assessed (e.g., publications, abstracts, presentations).

E-Delphi participants also strongly recommended that there should be a timely release of findings/information throughout the life of an HTF initiative instead of waiting to the end of the initiative to share information. There were, however, divergent views expressed regarding the role and function of internal or external evaluation. Both approaches have advantages and disadvantages depending on the particular stakeholder viewpoint in which the discussion is framed, and the overall intended purpose of the evaluation (e.g., accountability, use of evidence for subsequent uptake of new knowledge, capacity building for organizations, recognition of limited resources for this function and so on).

> *The data obtained from some of the self-evaluations may not be generalizable but they can help to illuminate the strengths, opportunities for change and limitations and upon which further research can be considered. To take this one step further, innovation and/or alternatives are all around us but we have to be willing to step outside of our comfort zone to work in different ways to enhance the efficiency and effectiveness of the health system.*
>
> *"Helped create champions and give them a higher profile and role within their organizations in order to move health reform forward."*

> *"Outcomes included ground level practice changes and improvements, a range of improvements in access and in care/support directly to populations in need and confirmation of the poor state of data…"*
>
> *"The process demonstrated social accountability in that individuals in the communities developed skills in participatory evaluation/research methods and the capacity within the communities was enhanced."*
>
> *"If we are going to engage individuals, communities, organizations and systems, we need to be willing to be a part of a long term process which for the most part is not usual in evaluation and/or research."*
>
> *"Innovation is an on-going process – an evolution rather than a revolution in heath care across the country. To that end, HTF was only meant to be a "snap-shot" of what was occurring across Canada. The most significant finding of the evaluation is that while a program like HTF can provide evidence and help identify the nature and scope of health system reform occurring health reform takes time. More thought needs to be given to identifying "champions" who can monitor knowledge dissemination and up-take and promote its use by program managers, policy advisors and decision-makers.*

Partnership Formation

A critical success factor for the HTF program was the formation of partnerships among the providers of care, decision-makers and researchers. The projects established dozens of partnerships themselves and there were stronger ties established at the inter-governmental level and though the FPT committee formation (note: the survey data showed that 70% of projects were continuing with their partnerships in some form). Partnerships imply knowledge exchange and causally the prevailing wisdom is that knowledge exchange can lead to greater insights into how best to provide care.

A culture of collaboration based on functional synergistic relationships at varying decision-making levels and stakeholder perspectives emerged from the HTF. Again, this contributes to ongoing knowledge exchange, creates an environment that encourages innovation, and instils a spirit of enquiry. By promoting and enabling partnership formation the HTF program was a catalyst for developing a spirit of enquiry at different decision-making levels and across the country.

> *"The building of functional relationships; engaging people in trying things out through "real life" experimentation creating change agents. These seem to me to be the hallmark of successful applied health system research, and I think they reflect well on what the HTF was originally set up to do."*

> *"It is extremely difficult to judge impact on health, on policy and on practice in such a short period of time. Perhaps the most important impact is that of beginning to create a culture bringing together decision makers, managers, clinicians and researchers around the fact that it is possible to test and evaluate innovation."*

Relationships at whatever level are critical to building success with and within health care systems and organizations. If there is the engagement of individuals, communities, organizations and systems, there must be recognition that there needs to be a willingness to be a part of a long term process.

Impact on Health Services

Some projects caused change in policy program design and improved care or patient outcomes at various levels. Even though it is difficult to confirm impact or sustainability due to the sample size limiting the scope, several E-Delphi participants stated that there was a high degree of lasting change created by the HTF. They felt that HTF knowledge changed the way supports and services were provided and that health care had indeed been improved. Dissemination strategies, both at the project and at the program level, were effective due to extensive partnering and knowledge sharing.

These perspectives from the E-Delphi are insightful because they show a clear linkage between the HTF program itself, the ‘products’ of the projects and the impacts, all of which are consistent with the program theory embedded in the HTF logic model. Also, it is important to emphasize that the E-Delphi participants themselves were very involved in various aspects of the HTF. The breadth and depth of their insights, and their experience with the Canadian health care system provides a substantive validation for understanding the nature and extent of impact of the HTF. We return to their insights in the next section on the HTF legacy.

THE HTF LEGACY

The HTF was unique in Canadian health care, coming at a time when there had been few resources available. Our E-Delphi key informants were asked what they considered were the major contributions of the HTF program. Five broad inter-related areas emerged.

Major Contributions

1. Innovation

There was agreement that the major contribution of the HTF was the committed funding and a formalized mechanism to develop and test innovative ideas in a wide variety of areas regarding the delivery of health services that otherwise would never have been possible because they were too difficult to look at in the '*usual*' course of health systems. The result was a high level of enthusiastic experimentation in a relatively short time frame that allowed for engagement beyond research to permit "real life" experimentation. This enabled the sharing of "what worked" and "what didn't work", and gave the opportunity for *re-thinking* by bringing together decision makers, managers, clinicians and researchers around the fact that it is possible to test and evaluate innovation through demonstration projects that are evaluated. As this key informant noted: "*The HTF allowed for experimentation in an environment where typically the status quo is vehemently protected and supported flexibility in a system that is notoriously rigid".* The desire to focus on innovation continues, as evidenced by the survey data regarding sustainability.

2. Focus on Evidence

The HTF research was used as a vehicle to spread the word about the importance of evidence-based decision-making; it helped to popularize the term "*evidence-based decision-making*" among governments and the public. The early focus on evaluation in the overall HTF initiative, prior to approval of P/T and national initiatives, was unusual and very beneficial to capturing the lessons learned and evidence from the HTF. The process demonstrated social accountability as individuals and communities developed skills in participatory evaluation/ research methods; the communities were thus able to develop capacity building in this area. The HTF also enhanced broader evidence-based decision-making with evaluation and dissemination integrated within the process. With capacity building occurring there is the desire and ability to continue the focus on the use of evidence in decision-making

3. Resource Development and Use

Many HTF projects re-emphasized the continuing need for development or refinement of guidelines, decision support tools and standards. Key learnings were disseminated widely in some provinces and informed decision-making and change. Numerous resources were developed that are available to providers and clients with specific knowledge developed for decision makers (policy documents) and for those with specific needs for information regarding health concerns (e.g., education materials for providers, clients/caregivers, academic institutions, etc.). Generalized information about the reasons for success and failure of pilot projects was also identified as part of their evaluations. The enduring nature of resource development and use strongly suggests they are integral to conceptions of long term legacy emanating from the HTF at very real policy and practice levels across the country.

4. Impact on Health Services

The HTF demonstrated that skilled, committed staff with exemplary leadership is key to the success of the program. The HTF helped put a national face on health care reform and supported creative approaches to reform, enabling new ideas to emerge. It came on the heels of the Health Forum and was an essential stepping-stone to future Health Accords by helping to keep the momentum going on reform activities that may indirectly influence health. The HTF supported projects that touched on most, if not all, aspects of system delivery and was a gauge of what issues were important to those working in the field. By directly involving practitioners and program managers in research, the HTF helped to identify and create champions, giving them a higher profile and role within their organizations in order to move health reform forward. This involvement provided opportunities to influence decision-makers, change policies and programs, and improve the process, access and the quality of care in the delivery of health services. Projects confirmed the reasonable and appropriate priorities for health services research as selected by the joint F/P/T effort. Outcomes included 'ground level' practice changes and improvements, a range of improvements in access and in care/support directly to populations in need, and the confirmation of the relatively poor state of data/systems across the country, to spur improvement of information, practices and health systems. In short, the legacy is based on the ongoing innovations from the HTF projects as well as the structural and process oriented foundations laid down by Health Canada, the HTF working group, the secretariat and others at the HTF program level.

5. Relationship Building

A key factor that gave the HTF program particular strength and relevance for the provinces and territories was their direct participation in shaping what happened in each jurisdiction. This meant that projects could be selected to complement in a practical manner what a province or territory felt it needed to know, and that meshed with the health system of that particular jurisdiction – a factor that was very important to the overall acceptability and credibility of the HTF among provinces and territories. Linkages were developed across disciplines and sectors (F/P/T governments, researchers, stakeholders and others) for the duration of the program. Until the HTF there were few opportunities for such collaboration. An important legacy of the HTF was this *'community of colleagues'* or 'change-agents' at local, provincial/territorial and national levels, who formed the foundation for long-term partnerships and sustainability. What emerged were the benefits of the elements and dynamics of integration within and across health systems in terms of the working relationships and the true teamwork to determine what needed to happen and how it should happen. The HTF derived relationships provide the foundation for further knowledge generation, more informed decision-making and sharing, and make possible other developments that build on various partners expertise, context and relationships.

Although these key informant observations may have been expected in many respects, it should be recognized that the HTF could have taken many different turns over its tenure in the health system given the range of involvement from stakeholders and the political interest and changing contexts. Indeed, as one key informant noted: *"I hope that these significant findings aren't understated in their own right. Even if some of the findings merely support what one would intuitively have expected, they are legitimate, important and useful conclusions to have drawn in a system whose strength does not typically lie in linking information to decision-making at all levels".*

Lessons Learned Regarding the Challenges of the HTF

The E-Delphi process identified several key lessons learned from the experience of the HTF program that can also reflect its legacy in terms of what to consider with any similar HTF-type initiatives.

Limited Time Frames

The most frequently identified challenge was the sometimes unrealistically tight time frame for developing research partnerships, preparing and submitting project proposals to the HTF, starting the selected projects, completing the required data collection and analyses and evaluating and disseminating the new knowledge and outcomes, many of which are longer term or require behaviour change in order to be able to produce credible results. Consequently the quality of some proposals was affected. Some projects were not able to demonstrate sustained change or long-term impact because their duration was so limited since a considerable portion of "implementation" time was necessarily being devoted to start-up and then to wind-down and evaluation. As well, the timing of roll up information from projects through a coordinator (and sometimes through others) to reviewers was tight.

Health Canada's inability [and frustration] to get into place, timely ministerial approval for specific contribution agreements with the provinces and territories affected the momentum, commitment and enthusiasm on the part of the proponent project organizations. The timeframe to implement projects was more truncated, and champions often felt frustrated and unsupported by both Health Canada and their respective provincial ministry. Despite the considerable successes made possible by the HTF secretariat and its staff, less was achieved than could ultimately have been if the process had been more efficient. Similar to other federal contribution agreement-based funding programs, the HTF was affected by the initial relatively short timeline for the initiative itself (3 years).

> *"The timeframe to prepare and submit project proposals to the HTF was unrealistically tight and consequently the quality of some proposals suffered as a result. However, many jurisdictions worked with their proponents, who had the germ of a good idea, to overcome the shortfalls and gaps in the initial proposals.*
>
> *Timelines are always a challenge, and one problem with "time-limited project based funding", particularly those aiming to make a difference in prevention, promotion, or other aspects of population health, is that the full results and change related to a project may not happen or become apparent within the time allowed for a project".*

Rigor of Review, Methodology and Limited Resources

Comments from the E-Delphi participants focused primarily on critiquing project evaluation methods, stating that better peer reviews were needed to rigorously a) evaluate the operational side of the project, b) the methodology for evaluation and c) to ensure good quality research can be completed within the allocated time frame. Of concern was the perceived lack of accountability of the projects due to their self-evaluation. Another frequently stated concern was the issue of limited resources (financial and human) for knowledge transfer activities that needed further coordination since the application and results of some of these innovations may not fully emerge for several years, Other methodological challenges included the approach used by the HTF for submission and review of projects for funding approval, the lack of a formal mechanism for renewal or for cessation of a program, assurance of sufficiently clear priorities and budgets to assure that the projects selected had a sufficient time line and resources to really test the innovation proposed, difficulty in contacting individuals associated with the HTF after 4-5 years, difficulty maintaining momentum when there is no ongoing funding for innovation, and the seemingly poor quality of some projects partly due to involvement of providers, policy makers, etc. (other than "researchers") and partly due to the need to get the projects up and running. Concerns were also raised regarding the wide diversity of issue areas covered, which although good, does present a challenge. Did the HTF spread itself too thin, for example, in supporting such a breadth of projects? This leads to the question of trade-offs between allowing flexibility to support innovation and creativity through many projects over the health system and applying more rigor to the project review process and having a tighter focus. Consideration is also required regarding the balancing of risk when funding innovation. Specific comments from the E-Delphi participants included:

> *"Most of the projects would never have passed an academic peer review, not because they were not worthwhile, but because of the shortcomings of the existing peer review process. There needs to be a process, and time, to bring community administrators and analysts up to a higher level so that they can better understand the research and analysis process and can move toward more sophisticated levels of evidence-based management. This process was clearly started by the HTF and valuable lessons were learned at the community level. Thus, ongoing funding for innovation could have the consequence of lifting all boats as clinicians and administrators learn to work with analysts and to see, at first hand, the value good quality analysis can bring to an organization.*

Although a more rigorous review of projects would probably generate a more consistent quality of projects, it would also take more time, and may (depending on how it would be implemented) potentially make the process too difficult or cumbersome for some smaller and less "sophisticated" organizations and partnerships to realistically take part. As *"some of the smaller and/or less sophisticated projects generated some very practical results and useful information",* it would be undesirable if they were not engaged in any subsequent HTF-like initiative.

Despite these many concerns the E-Delphi participants were almost unanimous in acknowledging that there was definitely a peer review of projects and submissions. The projects were reviewed by the F/P/T committee comprised of people responsible for program delivery. Such persons *"are the appropriate peers*" to review proposals for community based health services initiatives. Program people and researchers experienced in the realities of conducting community based research are the appropriate peers for the evaluation components of proposals. Three participants, nevertheless, felt there should have been a more rigorous review of projects (e.g., peer review) that would generate a more consistent quality in the projects.

The two perspectives on reviews are not necessarily incompatible. The first is about the makeup of the peer group (F/P/T government/program people), and the second focuses more on the rigor of a peer review process. A 'peer group' comprised only of government/program people can be problematic by nature, and potentially biased. A more representative group including expertise in research, and specific thematic areas of project focus (e.g., primary care, home care, children's health mental health, First Nations and so on) – could be a preferred option. The group could also include organization/administration/ management, reporting/ dissemination, monitoring and evaluation expertise, etc. to assist applicants frame their interests to most effectively position the projects toward successful outcomes. The group, or a related group, could also serve as mentors or advisors to assist projects in areas where support is needed. An E-Delphi participant noted that one option for improving the quality of the proposals and subsequent projects might include, for example, a methodology " hotline". Small provinces/ territories, and small health districts often do not have evaluation experts in geographic proximity. This, they note, could *"also do what certain international groups do in giving 'seals of approval' to certain research units or individuals so that decision makers can go to them if they have contracts they need to quickly have completed"* [or require advice on development of proposals, research and evaluation design and so on].

Difficulties Implementing New Models

It was noted that the HTF had "projects" rather than "commitments" to new approaches to health care, and this compromised the ability to truly "transition" as a result. As much of the nature of a successful *transition* – in health care or anything else – involves relationships (development, confidence-building, nurturing, shared learning) a 2-3 year window for design, implementation and wrap up merely allowed for a snap-shot of a process that needed to be much longer term to have credibility as a new model of care.

Developing New Partnerships

Partnerships and relationships take time, first to put in place the infrastructure to support the program and then to establish an F/P/T process to review and select projects and then to transfer the new knowledge to policy-makers and decision makers. Start-up cost and time lines to build relationships and establish infrastructure must be taken into account. Health professionals and administrators must learn to work with analysts and to see, at first hand, the value that good quality analysis can bring to organizations. Although development of partnerships at all levels was identified as a key achievement, it was also felt that linkages back to decision makers (provincial program, F/P/T Committees) need to be further strengthened.

Recommendations for Future 'HTF-Like Initiatives

The E-Delphi participants identified several recommendations for any future HTF-like programs. All except one participant recommended that another HTF program should be established.

Sustainability

If such an initiative were to be made available again sustainability needs to be a critical component and integrated into the process. Make organizations, communities and/or First Nations that are to be involved, part of the decision-making about what the project to be undertaken looks like, asks, and answers; and how the information will be shared with the people and with the various systems. This should involve the Regional Offices of Health Canada. As with the HTF, ensure joint F/P/T decision-making that fosters strong partnerships. This top down, bottom up strategy is critical to sustainability. One participant wrote:

> *"Manage expectations - both at the Fund and at the Project level. Don't set up either the funder or the proponent to seek out and reward only the "big and dramatic" changes in aspects of health service planning, management, delivery or outcome. Change is and should be incremental, and really solid early steps on a longer path that is well mapped will be lasting change that is safely navigated. The HTF by its nature tended to encourage and reward lurches rather than well-considered steps, and proponents likely felt compelled to oblige. That is why we have so many projects that were highly ambitious but not sustainable. More ground could have been maintained if the gains were more modest, albeit with less fanfare, but with likelihood of becoming "institutionalized". In the "trenches", it's the little steps that win out in the end. And we are in the trenches, make no mistake".*

Time Frame

Use a 5-year time frame: 1st year to plan and organize the program; 2nd to 4th to operate the pilot projects; and one year to transfer the knowledge and inform policy/decisions makers. Allocate more time to develop and carry out projects and to evaluate their outcomes. Ensure the time frame is appropriate to the scope of the project. Speed up the process leading to ministerial approval when Health Canada announces future "HTF-like" initiatives. Ensure contribution agreements are signed off and announced by the federal Minister in a timely manner. Health Canada needs to be ready to extend the funding timeline in order to not significantly affect implementation.

Knowledge Transfer & Uptake

Develop better methods for knowledge transfer across jurisdictions. Have a strong synthesis and dissemination strategy that is consistent. Recognize that the uptake of knowledge takes a long time and is still happening five years later. Provide more resources after projects and syntheses are completed to foster knowledge transfer, analysis, etc. Bring leaders of similar projects together so they can share experience, help identify common themes, etc. Make a more significant and enduring investment in knowledge transfer to ensure a broader impact. Ensure that the key messages of research are reflected in federal policy and in federal government commissioned inquiry reports. There is a responsibility to ensure people know or have access to the information and that those who prepare it are aware when final products are disseminated.

These participants identified key elements to consider:

> *"The information gained from such projects is only beneficial when people know about it. Thus, dissemination cannot be addressed as a 'side bar' or secondary aspect of projects, particularly when publicly funded – there's an even greater responsibility to ensure people know or have access to the information - and that those who prepare it are aware where final products are disseminated".*
>
> *I would suggest pulling out the work of individuals who have documented best practices in this area. Also the work around behavioural change and successful educational interventions is useful.*

There should be a newsletter to inform people of what is going on. Researchers should be encouraged to seek media coverage for interesting and newsworthy findings. There should be conferences every few years to present findings to policy makers (assuming it is an ongoing HTF) and at some regular interval there should be synthesis reports. Perhaps these reports can form the content of the conferences.

The development of a web based resource that profiles each initiative, provides a synthesis of learnings, links to relevant (and reviewed) sites and accommodates postings and interaction between proponents on such matters as evaluation, etc. would be ideal. It would create a sense of community, add value to the work of all projects and support a broader reporting/accountability culture at all levels. This should be built into the infrastructure of any future fund. The potential human resource demands of actually staffing this resource should not be underestimated.

> *More public announcements about the HTF initiative*
>
> *Create a partnership between a policy analyst/decision-maker and the project manager to ensure there is on-going transfer of knowledge throughout the life of the project rather than at the end of the project alone.*

Methodology

Evaluate the program sooner, while people are still accessible and have not moved on to other positions. Develop the overall evaluation plan prior to the initiative, both with individual projects and with the initiative as a whole. Start sooner on the final impact evaluation plan. Establish an effective method to identify gaps in knowledge, and avoid general priority areas like "integrated service delivery" and substitute more specific ones. Develop a more focused initiative (one or two themes only) with a few, larger projects (that would have a more rigorous review process commensurate with the funding available) and a stronger evaluation component to effectively answer what works and what does not work. Provide more support in identifying/assessing cost-related factors, to provide more meaningful information in this area.

A Permanent HTF Program

> *"This was definitely a positive initiative and we need to create this culture of thinking in an innovative manner even if the innovation proposed does not necessarily immediately fit in".*

Make the HTF a permanent program, perhaps linked to other funding agencies in some capacity, with an ongoing budget that allows for both operations, and evaluation. Establish the ongoing program to develop, test, and evaluate innovative ideas that could lead to greater efficiency and effectiveness of programs and/or policies, for the full range of health services from population health to tertiary hospital services and everything in between.

Manage expectations with the initiative, both at the Program and Project level. Avoid setting up either the funder or the proponent to seek out and reward only the "big and dramatic" changes in aspects of health service planning, management, delivery or outcome. Change is most typically incremental, and really solid early foundational steps on a longer path that is well mapped will be lasting change that is safely navigated.

> *"It is clear that approval processes within Health Canada take longer than anticipated (as they do, to be honest, at the provincial and territorial level). Therefore, Health Canada needs to proactively address this likelihood with new programs and to be ready to extend the funding timeline in order to not significantly impact implementation. Based on past experience, it must be assumed that it will take longer to solicit, review and improve initiatives for funding and therefore an appropriate and realistic timeframe for the program should be planned for".*

DISCUSSION

Our analysis and discussion of the findings is presented according to the evaluation framework and questions prepared by Health Canada for examining the impact of the Health Transition Fund.

To recap, the overall objective of the HTF was to:

> *"Encourage and support evidence-based decision-making in health care reforms, primarily by supporting pilot and evaluation projects in innovative methods for the delivery of home care, pharmacare, primary health care and integrated service delivery".*

The *immediate* expected outcomes of the HTF were that 1) the increase of information and knowledge about the design and delivery of health services would lead to evidence-based decision-making, and this would 2) stimulate new research or innovation. The *intermediate* outcome was that this would lead to improved design and delivery of health care services. The *longer-term outcome* of the HTF was to maintain and improve the health of Canadians (HTF Evaluation Framework, 2003). There is thus the causal connection between knowledge generation and transfer, and use of evidence in decision-making to improve health and health care and therefore, the improved health of Canadians.

The objectives for this Impact Evaluation meanwhile, were:

1) Determine the extent of encouragement of and support for evidence-based decision making in health care reform and development of new information and knowledge

2) Assess the synthesis and dissemination of HTF information

3) Assess the relevance and quality of HTF information

4) Assess the utilization of HTF information in health system reform

5) Assess the impact of HTF information on health system reform

6) Determine the Lessons learned, long term impacts and alternatives

The first four of these objectives are wrapped more directly around the immediate and intermediate outcomes. The last two take into account a broader vision of the longer-term effect of the HTF and the place it has in the Canadian health care system.

The data from this Impact Evaluation suggest that all three levels of outcomes were achieved by the HTF program. The caveat, however, is that the nature and extent of this impact is, in part, context dependent, varying according to the specific projects and program focus in question. What is more certain is that the HTF at the program level was a strong successful catalyst for the respective expected outcomes to be achieved. Most significantly, even now the full impact has likely still not been realized.

Immediate Outcomes

Without question, the immediate outcomes – to increase information and knowledge about the design and delivery of health services that would lead to evidence-based decision-making, and develop new research or innovation – have been achieved. These are supported in the data previously described in the document reviews, interviews and surveys, and further emphasized in the responses provided by the E-Delphi participants.

Using the six-fold classification of the Impact Hierarchy (i.e., transmission, cognition, reference, effort, influence and application) as the basis for analysis, the knowledge was transmitted to the users through a range of transfer mechanisms. Ninety-one percent of survey respondents observed that their HTF project produced new knowledge, while 88% stated the knowledge was useful and relevant to the target audience. The survey data show that 73% felt that the knowledge was transferred to users, while another 95% stated it was read and understood by decision-makers (cognition). Ninety-one percent stated that the HTF was cited or referred to in some way by decision-makers. A high proportion of survey respondents noted that the HTF was influential in both policy (83%) and service delivery and practice (81%) decisions, while 65% stated it was the direct cause for changes in policy and 65% noted it was the direct cause for changes in practice. Finally, 71% of respondents observed that the HTF project knowledge was used directly by consumers of health care.

These findings are supported by additional survey data. There was use of HTF knowledge by individuals in the funded organizations (65%), individuals in other organizations (69%), and by decision-makers at the regional (64%), provincial/territorial (63%) and national levels (40%). In other words, there was clear use of HTF generated knowledge at the micro, meso and macro levels.

Although the sample size was small, the trends are positive at all levels of the Impact Hierarchy and further validated by the data generated through the complementary methods used. In addition, the transmission and cognition levels of the Impact Hierarchy were evident in the survey data from the workshops held across the country. The numerous quotes from a range of different sources, the outcomes achieved by the respective projects, and the products generated, all create the mosaic of an effective federally-based program that was a substantive catalyst for new knowledge generation, and subsequent uptake .

The triangulated data also support the fact that the second immediate outcome – evidence-based decision-making leading to new research or innovation – was achieved, and in all likelihood still being achieved at this current time. Eighty-two percent of survey respondents stated that the HTF project encouraged a culture of evidence-based decision-making in health services, while 92% noted that it filled a gap in research. In fact, 52% felt that their respective projects produced the desired reform options that were intended.

The HTF program then, encouraged and supported evidence-based decision-making in health care reform and the development of new information and knowledge. The HTF also filled a gap in research and analysis for the health care services. The impact of the HTF in these regards occurred at the micro, meso, and macro levels, with the net effect being an improved knowledge base for health care delivery across the country.

Pivotal to these outcomes being achieved is effective knowledge transfer. The data described above indicated that a range of KT activities and tools were established; the HTF program itself was instrumental in this development, and to many observers it broke new ground with the extent to which KT was embedded into both the program's activities and those of the projects. Survey data showed that papers have been published or submitted, media events took place newspaper articles were written, presentations at conferences and local communities occurred, and many requests were made for training materials, manuals, software, guidelines and so on.

When assessing the synthesis and dissemination of HTF information, therefore, it must be acknowledged that the vehicles for such were predominantly focused on extensive KT, with emphasis on the breadth of dissemination. While.assessing the relevance and quality of HTF information, 88% percent of survey respondents meanwhile, felt that information from the HTF projects reached and was *relevant* to their target audience, and 82% felt the information was of high *quality*.

The transfer of knowledge occurred at the program and project levels. As the results section documented, the HTF program developed a number of dissemination vehicles that were designed to reach a range of audiences. For the most part, this was extensive KT, with little intensive targeted KT occurring.

In summary, the KT strategies were effective in reaching the various appropriate 'target' populations. What is less apparent, however, is the question of whether the strategies themselves were targeted as effectively as they could have been. In other words, a more intensive strategy aimed specifically at some stakeholders as discussed earlier in this report may have led to greater uptake. While we recognize that the HTF program had finite resources to further develop KT activities, we do not know what the "expected" reach *could or should have been*. Indeed, with all the data generated from this report we have no benchmarks for determining what the expected knowledge uptake and "impact" should have been. In many ways, there may now be the basis for thinking more prospectively on benchmarking issues.

Intermediate Outcome

The intermediate outcome expected from the HTF was the improved design and delivery of health care services. For many projects, as shown with many of the outcomes and vignettes in the Appendix, there have been improvements already in the design and delivery of health care services. Interview and survey data further support this finding.

Seventy percent of survey respondents believed the projects had improved care in their own community area, and 63% felt it had improved care in their provincial jurisdiction. A further 43% felt that it had improved care in other provinces or at the national level (with 29% of respondents uncertain as to whether this had occurred). Sixty-five percent of respondents felt that the HTF project had resulted in improved health for individual consumers, and 78% believed it had improved the way health professionals and others provide care. Finally, 71% of project investigators felt that the project enhanced the learning, education and training of health professionals. Subsequently it can be assumed that this would then translate into improved health outcomes for Canadians. Again, although there was a small sample size, the trends are positive at all levels of the Impact Hierarchy.

Long Term Outcomes

The long-term outcome of the HTF was to maintain and improve the health of Canadians. This has already been identified in the vignettes, through interviews with project investigators and through the survey data. For example, 65% of survey respondents noted that the HTF project was the direct cause for changes in practice, while 71% of respondents observed that the HTF project knowledge was used directly by consumers of health care. Similarly, the fact that 52% of respondents felt that their respective projects produced the desired reform options, suggests that this should have lead to improved health outcomes.

The causal connections are equally important in this regard. The HTF 'program theory' as expressed in its logic model shows that the attainment of the immediate and intermediate outcomes will lead to achievement of the longer- term outcome. The data from this evaluation support this trend. Although we cannot say definitively that this occurred with every HTF project, we can say that the causal connections are clearly evident through all strands of the methods used in this study. Specific data are observed, for example, in the survey responses discussed above in the immediate outcomes section. Thus with causality we can confidently state, that while not statistically significant, the trends in the data augue well for further health benefits to Canadians to accrue from the investment in the HTF. Again, this statement is supported by the qualitative data gathered from a range of different stakeholders.

There were also many lessons learned from the HTF experience. In addition to lessons learned that we documented in the vignettes, as part of our methodology we intentionally set out to collect '*lessons*' through the E-Delphi process with key informants experienced with the HTF. As previously discussed, these informants were provided with a synthesis of the findings, so that the lessons they observed are rooted not only in their experience but also the objective empirical data.

To recap, the key lessons learned as expressed by the E-Delphi participants in the results section of this report were:

- ☐ Limited Time Frames – which confounded the nature and extent of outcome attainment with projects
- ☐ Rigor of HTF Process and Methodology
- ☐ Limited Resources at the HTF Program level
- ☐ Difficulties Implementing New Models
- ☐ Developing New Partnerships takes time

The E-Delphi participants built upon these lessons when asked about specific recommendations. Of importance with one exception all participants believed another HTF-like program could play an extremely fruitful role in the ongoing evolution of the Canadian health care system. As the previous section described, they identified four key areas to develop for any future HTF-like program:

- ☐ Sustainability
- ☐ Timeframes
- ☐ Knowledge transfer
- ☐ Methodology

What is significant with this is that the key informants felt that the successes of the HTF program, despite various concerns raised, were such that another investment in a similar program was both desirable and important.

A final question emanating from the 6th evaluation objective from Health Canada was a discussion of potential "*alternative mechanisms to deliver the identified outcomes in terms of increased cost-effectiveness and cost efficiency*". This is a much more difficult question to address for 3 reasons. First, there is simply no way of comparing a "what if" scenario with the work that emanated from the HTF program. We can speculate on other options that may have been possible but to do justice to the question we would have to examine the capacity for provinces and territories to find the funding, what review processes they would put in place, the cost effectiveness of sub-national programs, and so on. We would then need to examine the cost effectiveness of the HTF program to be able to do any sense of a comparison. The exercise would be unwieldy and ultimately unproductive. Second, it is doubtful that other mechanisms could be put in place that could cover the breadth and depth of knowledge transfer, stakeholder engagement, imbedded evaluation and focus on a blend of innovation and pragmatic interventions at various micro, meso and macro levels. Third, the issue of "cost" was not a predominant focus of the HTF projects. And of those projects that did examine cost in some way most did not rigorously conduct cost effectiveness studies. In other words we do not have a clear, even perhaps foggy, conception of cost effectiveness of the HTF program other than many suggestions and anecdotes from the projects themselves. And with regard to the HTF program, it was evident in this study that more could have been done had the resources been there to the end (however defined), and if energies remained solely focused on the HTF mandate. One of the concerns expressed by stakeholders in this study, for example, was the desire for greater input by the HTF program to further the knowledge transfer process – which could have been within the timelines for the program but also well beyond. Another point is that innovation, by definition implies some degree of risk – some innovations may work and others not. While various projects may be seen as short-term costs, it should follow that the collective wisdom from all the innovations will be seen as investments in the long term. Finally, to reiterate a significant point raised by Steven Lewis (2002) the total sum expended was minimal compared to even the hourly outlay for health care in Canada. He writes:

> *"While $150 million is a substantial sum, it is barely registers in comparison to the system the HTF was designed to influence. At a total cost of $95 billion a year, the system consumes nearly $11 million an hour. The HTF has spent over a three-year period, meaning that its annual budget was about what the system consumes between noon and 5pm ever day".* Steven Lewis, Supporting an Evidence Based Future in Canadian Health Care (A Summary of all the Synthesis Series)

A number of themes emerged from the study that cut across this current commentary on expected outcomes and evaluation objectives.

Decision-making, as we have already articulated, occurs at the macro, meso and micro levels. The logic of the HTF is that decision-makers at these levels have new knowledge – evidence-based – to support changes in the way health care is provided. This requires a) knowledge of the evidence in the first place, which requires effective dissemination, b) the capacity to understand the evidence (understanding the quality of the evidence), c) the ability to use the evidence to change practice and policy (which will be context dependent), and d) the willingness to do so. In addition, if innovative approaches are deemed successful (for what could be many reasons), there should be mechanisms in place for longer-term sustainability of the outcomes that were achieved.

In this remaining part of this discussion, therefore, we examine the findings around three key recurring themes of this evaluation: Impact, Knowledge Transfer and Sustainability.

Impact

Through several different data sources – document review, interviews, vignettes, and surveys it is evident that the HTF projects achieved numerous outcomes. There was a wide range of quality, detail and depth of information provided in the project reports (not withstanding that not all appendices were available electronically). While it was not necessary to prepare project reports that are over 400 pages long, it is still important to provide sufficient detail so that the project accurately reflects activities and achievements, and can convey the evidence for others to determine whether subsequent uptake in other organizational and jurisdictional contexts is justified. Some reports clearly 'just met' the requirements that had been determined by the HTF while others provided details that allow readers to understand what had been achieved, how and by whom. Some projects had a clear academic focus while others were more pragmatically situated at the front-line of health care delivery. For future reference, some authors spent time supporting why they had not been able to achieve what they had set out to do.

The data in this impact evaluation suggest that at a *Macro*-program level there were many contributions. The HTF:

- Supported partnerships and funding previously un-funded
- Supported multi-sector initiatives
- Supported previously un-funded applied research initiatives
- Supported new and innovative ways that never would have been tried without this fund
- Informed subsequent work with Health Accords that may indirectly influence health care
- Created a conducive, effective, and interactive environment for government at the F/P/T level
- It was a serious attempt to improve health care by innovation
- Generated evidence to support or refute ways to provide care
- Provided the resources to test some new things
- Enhanced the knowledge base of health and health care in Canada.

At the *Meso* organizational level the HTF:

- Created a culture of innovation and rethinking
- Created partnerships
- Placed a focus on developing evidence-based decision-making
- Tested new ideas to find out what works, what does not and why, and what really happens in certain models
- Served as a pilot for many innovative and creative solutions
- Emphasized the importance of pursuing strategies in knowledge transfer activities
- Provided a forum for partners to engage in high priority work
- Encouraged people to focus on developing a more sustainable system for the delivery of health care
- Generated many examples of explicit and implicit integration of service delivery
- The demonstration model approach was flexible and allowed for testing.
- Furthered reform initiatives
- The focus on evaluation and dissemination as requirements.

At an individual, *Micro* level the HTF:

- Instilled or enhanced a spirit of enquiry
- Provided a catalyst for career development
- Enabled providers, decision-makers and researchers an opportunity to test new ideas
- Gave opportunities for change that did not previously exist
- Created the foundation for long term partnerships
- Created or enhanced an interest in the use of evidence.

Not insignificantly, the HTF also:

- Improved care for patients/clients
- Improved the quality of life for family caregivers.

There were many lessons learned and exchanged from the evidence generated in the project reports, the work of the HTF Secretariat, and the processes of conducting the projects. There was considerable development of ideas, processes and experiences of project participants that have, and will lead to new ways of doing things – the HTF logic being that this development will enhance the capacity for individuals and organizations to initiate and make successful innovations in their own local context.

But in many cases the lessons learned may not be that 'new' to many people, although they may be ground-breaking for the projects themselves. This may reflect the inadequacy of previous knowledge transfer methods or indeed, no methods at all. It may also point to the need for subsequent HTF program-like strategies to provide supportive structures and processes to ensure the same mistakes are not made over and over again simply because individuals with little experience have not been given the opportunity to learn from others who have gone down similar roads.

Identification and explanation of critical success factors of innovative projects would be valuable for ongoing capacity building for the system as a whole. How then can the lessons learned be transferred into meaningful action-oriented strategies by the funders and future innovation initiatives? More often than not it is the perception that the *outcomes* should be transferred as opposed to the *processes* by which the outcomes were achieved?

Similarly, it may be because the processes were inadequate that the outcomes were not achieved. Knowing what factors contribute to inadequate processes or poor implementation, is also vital to further knowledge development in the health sector. This again leads to further considerations of creating and sustaining supportive infrastructures for HTF types of initiatives.

Steven Lewis (2002) noted in his overall synthesis of the HTF that funding for the HTF was very modest given the overall costs of health care in Canada. To this we can add that based on the data from this evaluation there has been a considerable impact already achieved by the HTF, in terms of individuals whose health has been improved, more effective and efficient delivery of care, increasing capacity for the systems of care to continue improving through better understanding of population needs, and better use of data, information technology and evidence. Moreover, we have seen in the many project reports reviewed that small changes in local contexts can have big impacts on the lives and professional work environments of Canadians; The HTF has been an effective catalyst for positive change at a range of different macro, meso and micro levels.

The data strongly indicate that the impacts of the HTF have had breadth in reach across the country, and depth in the scope of influence on decision-making and how health care is provided. There were concerns expressed about the process by which the HTF came into being, how the funding was allocated, and the pressures placed on projects to finish within shorter than desirable time frames. There were concerns that more could have been done to improve the nature and extent of knowledge transfer. There were concerns about the variability of projects in terms of their quality and completion. All these must be seen within the context of the emergence of the HTF. It is always easier to criticize than to create. While serious attention should be given to the concerns raised, especially if future HTF-like initiatives are proposed, what is equally significant from the multiple data sources in this study is that decision-makers *and* project investigators all provided considerable input affirming that the impacts were positive, real and significant.

The key question is to determine just how positive, real and significant? And what then is the benchmark for determining whether the overall 'composite' impact – the aggregation of the many variables at different decision-making levels and different types of impacts – what *would or should be expected* for this type of program?

There are numerous *impact exemplars* identified in this overall impact evaluation (see for example, the Vignette and the Document Review reports). The point to take from these is to reaffirm that impacts were clearly evident, many and varied. While we cannot say, "*there were sufficient observable impacts to justify the HTF investment*" (although in comparative terms it is tempting to suggest that the financial investment has paid off considerably), we can point to a rich tapestry of change woven from countless interactions of stakeholders at various organizational and jurisdictional levels to create direct and indirect effects on patients, providers and decision-makers. Impacts were at times immediate, other times diffuse, while others yet still to be fully understood or even known. 'Impact' has a temporal dimension that will always affect its assessment.

Knowledge Transfer

While at the macro level the HTF Program itself created several dissemination vehicles, the projects were able to communicate their work in a number of different ways. This was borne out in the survey data, and supported by the qualitative data from the interviews and document review. Moreover, the interest expressed in the many 'products' developed by the projects suggests that not only were the projects known, but there was interest to use the findings of the projects in other contexts. From an evaluative perspective, while these products may be seen as outputs of the HTF as a whole, they are also outcomes, as the knowledge sharing is in keeping with the overall goal of the HTF.

The extent of knowledge transfer is in part predicated on the incentives for the transfer. For example, in the academic environment, the 'currency' for an individual is publications and presentations at scientific meetings. The HTF appears effective in this regard. In the local community, newspaper articles and media events are common forms of knowledge transfer. Again, based on the data, it appears that this occurred also.

What is less known, is the uptake of these knowledge-sharing processes. What is even less known is the extent to which the numbers identified in the data are what *should be expected.* Again, there are no benchmarking data for such initiatives.

In fairness to the projects, as several participants in this study observed, it is important to note that the period of time between completing the projects and submitting the reports was short. In those projects that were attempting to influence at provincial or national levels it is clear that it will take time for this to be achieved. There is not the more immediate gratification that can occur when working in a local environment where many of the players can effect change partly through being part of the innovation. Knowledge transfer and subsequent uptake, in fact, have a very real and significant temporal component.

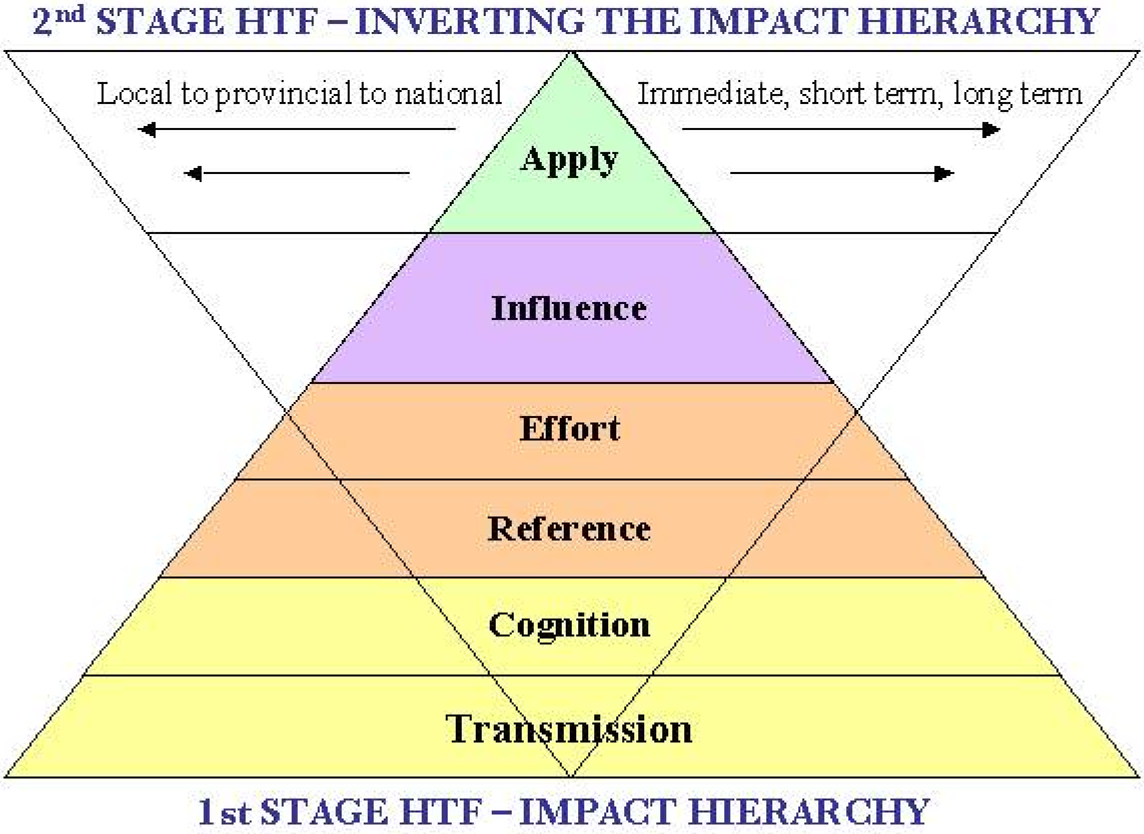
A Second Phase of the Impact Hierarchy

When the temporal dimension is considered, the transfer of knowledge can also be considered at a 'second stage of the HTF'. Quite simply, over time, there is a shift in the proportion of knowledge use in the respective levels on the Impact Hierarchy. With extensive knowledge transfer dominating the earlier phase, in the second phase the proportion of use over time for actual application becomes the more prevalent form of use. Here, there can be a renewed, accelerated knowledge transfer activity with the infusion of additional funding support to broker the knowledge at a later time point. Thus an investment at a later date by Health Canada (and possibly the provinces and territories) after the completion of the projects could reinforce and fulfill the commitment to the original mandate for the HTF (which also assumes political willingness and resource availability).

So in this context the HTF can be seen as a *first phase* – that although impact is not immediately generalizable or encompassing vast jurisdictions or regions, it sets the scene for a subsequent *second phase - knowledge diffusion* - as the local impact is transferred beyond the local context at a 'second phase' with greater understanding of outcomes achieved and the processes used, and more new effective and enduring transfer strategies – which may be continuations of *extensive knowledge transfer* but also include or focus on more *intensive knowledge transfer* – face-to-face interaction, more direct testimonies from project participants, consumers, decision-makers and so on.

A second phase of the Impact Hierarchy has implications for knowledge transfer. Here, the focus at a later point in the overall program can be on more direct intensive knowledge transfer beyond the local, and less on extensive knowledge transfer (which was the focus of the first stage) with the belief that targeted KT will enhance the capacity for further uptake of the findings – the application stage of the Impact Hierarchy. KT is strategic and targeted to other areas and stakeholders. The *process* of KT and the *content* of the 'message' – is tailored and framed within the *context* of the specifically targeted stakeholders (e.g., a policy-oriented approach to policy-makers that recognizes the level of decision-making for the respective policy-makers, or practice-oriented for front-line workers in, for example, a national health professional body such as the Canadian Nursing Association).

Figure 12: Second Stage of the Impact Hierarchy



The diagram above also reflects the noticeable and distinct lag effect for the 'final' uptake of new knowledge beyond the funding term of the HTF projects (if in fact 'final' can ever be fully determined). See, for example, the following quote:

> *"The new model of primary care had only been fully operational for nine months at the time of preparing this report. As noted, the data concerning its impact on efficiency and effectiveness of various parts of the health care system appears to point to a very compelling trend of improved efficiency and effectiveness of health services throughout the continuum and in several programs and improved patient care.* ***It is stressed, however, that continued examination of the performance of this model over a longer period time line is clearly warranted to confirm these results and to justify any investment that is made to support it****."* (emphasis added)

A key consideration, however, is who will be targeting the KT? If there are clear gains from utilization of the HTF generated knowledge who will take the lead to effect this uptake? Should any one individual or organization be held accountable for this level of knowledge transfer? Who will take responsibility? It is after all, *active* as opposed to *passive* knowledge transfer, which is much more resource intensive. But if it is not done, has the full potential for maximizing the impact of the HTF been realized?

As the findings have different meanings for different stakeholders the full 'impact' will be contingent on the frame of reference of the particular stakeholder or stakeholder group concerned. For example, a new clinical guideline may be beneficial to patients but it may be more time consuming for a provider and more costly for an organization or government. The understanding of the project context must accommodate the fact that knowledge utilization often depends much more on the user's context and the behaviour of the knowledge developers than the nature of the knowledge being produced.

The projects reported on their successes/failures and or lessons learned. As readers we must rely on the weight of evidence as provided in the documentation. Evidence and scientific method play a fundamental role in shaping our understanding and willingness to believe in the utility and generalizability of the respective projects. In the absence of such evidence, or if the evidence is of poor quality, we need to be sufficiently cautious when considering the extent to which positive impacts have occurred, the extent to which their perceived outcomes should be sustained, and the extent to which they can be generalized.

Another consideration is that at this level we may not have a good understanding of *how* changes occurred as a result of the findings. While we may be able to see outcomes in many different contexts – *macro, meso* and *micro*, it may be much more difficult to identify the causal path for the changes to have occurred. A clinical practice guideline, for example, may be introduced as a change in practice, but was the change based on new policy direction from the provincial government, an expressed commitment to improve practice by a health authority or perhaps just a desire to use a more evidence-based approach to care by a team of health professionals in a small rural setting? While we can say something about the '*what*' of changes that have occurred due to the HTF, it would be equally instructive, perhaps in another study, to identify '*how*' they occurred. This would be valuable for subsequent HTF-like initiatives where supports could be put in place to assist decision-makers at all levels in *making changes* in the way health care is delivered. This could almost be seen as a strategy that integrated first and second stage knowledge transfer by providing the tools and means for effective and intensive KT.

The wide range of 'impacts' and the different decision-making levels that are involved reinforce the fact that KT, uptake and subsequent use are complex and multi-faceted. For example, changes put in place may be more a function of *cumulative causation as opposed to a direct cause effect* that changes care delivery or policy. It may be difficult to determine how various projects actually do contribute to effecting changes in policy and/or practice; it may be more the cumulative effect of multiple studies, presentations, media events, roundtable discussions and so on that eventually lead to the uptake and utilization of research findings. Equally significant can be the justifiable expectation that the findings have had some degree of uptake and are sustained beyond time frame of the funding allocated for the innovation in the respective organizations.

Processes and outcomes from the HTF innovations, if given the appropriate knowledge transfer supports, will likely have even wider spread implications for health care in Canada. Indeed, it may well be that changes from small investments can make big differences, perhaps greater impact than larger scale initiatives if the quality of the innovation is high, and there are effective extensive and intensive knowledge transfer activities.

Sustainability

Sustainability is a key issue in an initiative like the HTF that can easily be overlooked. If not carefully and strategically thought through, even if an innovative project is successful it may be discontinued. While we recognize that not all projects will be sustained, it is still reasonable to assume that if they were considered important enough in the first place to receive funding, and the expected outcomes were achieved, why would decision-makers not want the outcomes to be sustained in some form? It is for that reason that sustainability should be considered very early on in pilot or demonstration projects. As one project observed, "*This model of primary care will fail if funders and policy-makers do not make the necessary investment to ensure that the model continues*".

What is equally significant from the findings is that sustainability can refer to many attributes of innovation beyond simply the sustainability of funding. Indeed, sustainability of the outcomes may itself be a function of multiple factors, including the sustainability of the evidence-based ethos, the interest in innovation, partnerships, culture, and so on. Sustainability is also a function of many variables that reflect the receptivity for change of a given organization. A supportive sustainability framework for decision-makers could also be enhanced by change theory. The most validated and empirically grounded theory on change is that of Pettigrew, Ferlie and McKee (1992). Following an analysis of change in the National Health Survey in the UK, they identified eight factors that affect the 'receptivity contexts' for change. The eight were:

- ☐ Simplicity and clarity of goals and priorities
- ☐ Quality and coherence of policy
- ☐ Key people leading change
- ☐ Managerial-clinical relations

- Cooperative inter-organization networks
- Supportive organizational culture
- Change agenda and its locale
- Environmental Pressure.

An expansion of these eight factors would be a valuable resource for future change initiatives, both at the project level and also at the broader macro scale. It could well be that greater understanding of the receptivity factors can have a bearing on the nature an extent of impact from subsequent HTF initiatives.

Balancing Risk, Innovation and Timelines

It should also be remembered that the projects were immensely varied in terms of location, scope, funding provided, additional resources available, organizational commitment and capacity and so on. With some projects it could be argued there was a high risk factor, while for others innovation was more incremental than radical. The key point is that organizations were given an opportunity to try new things and to evaluate. This, as heard continuously, was an innovation in itself. It also brought into light the potential for such opportunities to be provided on a more regular basis that could be systematic while still embracing the elements of risk and innovation. Despite the repeated concerns of timelines, these still need to be in place, so long as there is some degree of flexibility to recognize that project theory and practice clash in the real world environment of health care.

An Enduring Accumulation of Knowledge

What we now have from the HTF experience is an enduring accumulation of knowledge. The challenge is to use this knowledge on an ongoing basis and to make it readily available for the health care community. Although the HTF is no longer formally in place, there are still many lessons that can be taken form the projects provided knowledge of these projects is there. Some could argue in fact that there are no reasons why KT of the projects even now could not continue. But it will be a challenge to sustain an enduring accumulation of knowledge if there is no one, or no entity, to commit resources to do so.

The Role of Recommendations

There were many projects that identified recommendations to be considered. But what do ‘recommendations’ actually do? What about implementation follow through with recommendations? Recommendations, especially those that we have already seen before, seem empty and flat without action plans to encapsulate the realities of making changes in policies, program and practices. Decision-makers may be hugely supportive of some recommendations if they can be given ‘how to’s’ for successes that could be enacted quickly, with these then providing the catalyst for subsequent changes. While we cannot be too presumptive in this regard perhaps tools to support such actions could be provided in future initiatives like the HTF.

The range of projects also highlighted the variability of their quality and raised questions regarding the weight of evidence. As encouraging as it was for the projects to conduct their own evaluations, reviews of these raised concerns about the quality of the evidence used to support whether and to what extent outcomes had been achieved. This is a critical point when considering the degree to which project findings can or should be disseminated. It is one thing not to effectively disseminate project findings that have the weight of quality evidence to support the results, and quite another to effectively disseminate findings that may be incorrect or misleading because the quality of the evaluative research is uncertain. It may be necessary in subsequent initiatives to provide a review process of the findings by individuals with expertise in research and evaluation design and also consider the possibility of research mentors to be associated with the respective projects.

Uptake of Resources Developed

Another point to consider is that although there were many products identified and many requests made, we do not have the strength of evidence ourselves to fully determine whether this resulted in uptake in other organizations and jurisdictions. Unfortunately that was beyond the scope of this study, but it may be worth exploring in subsequent impact studies of this nature. For example, if copies of assessment tools were requested, these requests could be followed up to determine whether the transfer led to changes in the way other providers assessed patients. This could be a series of case studies that trace the processes by which these transfer lead to larger impacts beyond the local context of the innovation. Indeed, there is some merit in following up on some of the HTF projects to build a compendium of case studies that could be instructive when considering impact and uptake of the Primary Health Care Transition Fund.

Summary

The data strongly suggest the HTF created and/or enhanced a spirit of enquiry beyond the traditional research world. The program has reinforced the desire and need for evidence and evaluation and has engaged individuals and organizations in knowledge transfer activities to build upon ideas. Significantly, the HTF requirement for evaluation and KT was innovative in itself when the program was first introduced, as now, in 2004, these are much more dominant as criteria for funding in many major funding agencies.

We conclude this section of the report with direct quotes from interviewees. Quotes have been used extensively in this report because they provide a window into the meaning of the HTF from those who were involved, and provide a bridge between this large-scale impact evaluation after the initiative's completion and the contribution of the HTF as experienced at a very real individual level.

> *"It allowed individuals in all areas of the health field (staff, workers, managers, directors, professionals, support workers, all sorts of individuals) to be a part of creative, innovative projects and to experience research activities and to work towards goals they helped to set"* (DM).
>
> *"I think our experience was really positive because HTF was broad enough in its vision with sufficient funding to allow creativity and small initiatives – i.e. we didn't have to have to be a PhD in a research consulting company – we were trusted as individuals with creative ideas who could try out those ideas to see what would really work"* (PI).
>
> *"There are lessons to be learned. This opportunity needs to come back so it can be used as a vehicle for this type of work which allows for the development of new programs and initiatives – perhaps every 5-7 years to encourage applied research"* (PI).
>
> *"People were absorbed and have an appetite sort this type of opportunity"* (DM).
>
> *"For us, in our project, it's taken a lot of effort to sustain our activity – a lot of the work was a result of passion and volunteerism on the part of everyone who participated. After a few years, that begins to fade, but I'm happy to have done this interview with you today and talked about the project, since it's really energized me once again. You really need to have that continued enthusiasm to keep up the momentum for new initiatives. It's so easy to just go back to the old way of doing things"* (PI).

RECOMMENDATIONS

Based on the findings of this evaluation recommendations can be considered according to a staged approach, in that the primary recommendation is supported by the secondary recommendations. In other words, if the first recommendation is acted upon, then the subsequent recommendations need to be considered. However, with out action to address recommendations one the following recommendations are irrelevant. The most important recommendation is that there should be another HTF program, and that this should be ongoing.

STAGE 1

1. Establish an ongoing Health Transition Fund

The qualitative component of this evaluation strongly indicated an interest in the HTF concept. The data are positive in most respects – that there has indeed, been many impacts from the HTF. Moreover, there is strong support for a fund that encourages innovation and recognition that the HTF program did, and could, play an ongoing role in that regard. As such, Health Canada becomes a Leader in innovation with the HTF as a catalyst. There is a recognized interest and need for supporting innovation in health care in Canada. The experience and success of the Secretariat created an environment that was able to mobilize decision-makers at all levels and fostered partnerships across stakeholder groups and the country. Health Canada now has the track record of the HTF and an ideal opportunity to strengthen its position in supporting health care reform across the country.

A first tangible step in this regard is a feasibility study examining this potential, building upon the insights and experiences of the HTF program. Key elements to examine include, for example:

1. Selection process
2. Role and function of key stakeholders
3. Duration of funding support
4. Knowledge Transfer on Implementation processes and Outcomes
5. Intensive and extensive knowledge transfer

6. Mentorship and ongoing support in core operational areas

7. Flexibility of funding and timelines

8. Development of an ongoing Community of Practice for fund recipients

9. Timing of program and project evaluations, including the core focus of these

Future initiatives could include establishing funding for organizations attempting to apply innovations at the local level, the formation of an F/P/T committee that focuses specifically on innovation, and ongoing commitments to knowledge broker the exchange of innovation activities across the country through web applications, communities of practice, teleclasses, targeted workshops with key stakeholders, funding conferences and exchange programs across and Canada and internationally and so on.

STAGE 2

Given that senario (outlined above) that a fund similar to the HTF is established to fund local innovative projects, the effectiveness of knowledge brokering of the results of these initiatives would be enhanced if benchmarks were established.

2.1. Examine the feasibility of Benchmarking

Benchmarking builds upon are points of reference, to examine ways of achieving better levels of performance. It is one thing to simply compare data on various indicators or markers, it is another thing to be able to implement strategies to change or address these benchmarks. Benchmarking quantifies performance gaps and uncovers potential best or promising practices. It shows what can be achieved (e.g., in other organizations or jurisdictions), and can serve to motivate higher levels of performance. Baseline data establishes the internal measures of performance and can be used in a variety of ways by different stakeholders. Baseline measures can be used for comparison to set a standard for benchmarking.

The survey data suggests that the impacts from the HTF were wide and varied. The data, however, raise the question about expectations. What would we expect to achieve with regard to the number of papers and presentations presented, the percent who agreed that impact occurred in the way care is provided and so on? Similarly, how do output measures link with expected and actual impacts, and at what levels? The point is that we do not have any benchmarks for large-scale investments such as the HTF. There needs to be more thinking along these lines – which could include a discussion paper with input from other funding agencies in and beyond Canada.

2.2 Establish templates to standardize and support quality project management

There were many concerns expressed regarding the capacity of organizations to complete their projects effectively, conduct evaluation, be experienced with research design issues and so on. Tools to support and help standardize the various components of project design and delivery would assist project and increase the potential performance monitoring and comparable results.

Another component of this process may be receptivity to change and innovation in organizations. There is considerable merit in expanding upon this to enhance the capacity of organizations to fully realize the potential of the innovation change initiative they develop. Outcomes may be compromised if key features are not in place as an innovation evolves from idea and theory, to trial and practice, and wider application.

Health Canada can play a supportive role in the health care system by supporting/developing core competencies and guidelines in the following areas:

- Knowledge transfer
- Sustainability
- Evaluation
- Research Design
- Partnership formation
- Change Management
- Project Management

2.3 Lessons Learned

It would be instructive for future decision-making purposes to document the process and activities that the HTF program used to enable the success of the program. Lessons learned and challenges faced on a range of different issues would contribute greatly to expanding the knowledge base for similar programs – some of which perhaps, could be based in smaller areas – such as the provinces and territories, First Nations, Regional Health Authorities and so on. Again, knowledge of outcomes is one very meaningful goal but the processes by which this occurred will greatly increase the likelihood that generalizability and uptake of the program itself will succeed in other contexts.

Predictors of Impact and Uptake could be more closely examined to fully understand and develop the capacity for new knowledge to be applied in other contexts. What works best and why? Understanding these elements will enhance the ability of federal initiatives to improve health care at the meso and micro levels. Health Canada can play a supportive role in the health care system by developing a core competency in this area and thereby increase knowledge and understanding of success factors pertinent to projects similar to the HTF.

2.4 Further dissemination

Despite all the knowledge transfer activities that occurred, there is still much that could be exchanged. Rather than focus on extensive KT strategies a targeted intensive approach highlighting several successes could even now be introduced to further the uptake and impact derived from innovations generated by the HTF. This strategy would utilize the potential for the second stage of knowledge transfer for HTF projects.

APPENDIX A

Project Themes and Example Vignettes

Population Health/Community Oriented (29 projects)

Example #	Project #	Theme	Title
1	NA404	Integration of Care/ Service Delivery	A System of Integrated Services for the Frail Elderly (SIPA) –– Capitation Simulation
2	NA305	Integration of Care/ Service Delivery	A Tri-Partite Approach to Developing a New Model of Primary Care for Eskasoni First Nation
3	ON428	Integration of Care/ Service Delivery	Coordinated Stroke Strategy
4	NS421	Integration of Care/ Service Delivery	Improving Identification, Early Intervention and Outcomes for People with Mental Illness in the Community: A Model for Primary Care Service Integration
5	NA489	Access	From Chaos to Order: Making Sense of Waiting Lists in Canada
		a) To Services	
6	BC425	Access	Mental Health Online: A Case for Information Management
		b) To Information	
7	NA342	Human Resources/ Provider Education	Improving the Effectiveness Of Primary Health Care Through Nurse Practitioner/Family Physician Structured Collaborative Practice
8	NB102	Human Resources/ Provider Education	Implementation and Evaluation of Selected Strategies of the Rehabilitation Services Plan in New Brunswick
9	BC122	Changes In Practice	Cluster Care Pilot Program
		Service Provision	
10	ON221	Changes in Practice	Randomized Trial Evaluating Expanded Role Pharmacists for Seniors Covered by a Provincial Drug Plan in Ontario

Example #	Project #	Theme	Title
		b) Drug Use	
11	NA203	Decision Support	National Evaluation of Clinical Practice Guidelines (CPGs)
12	QC427	Decision Support	Self-Regulation: A Method of Rationalizing The Use of Diagnostic Tests
13	NA402	Information Technology a) Systems	National First Nations Telehealth Research Project
14	MB121 &	Information Technology b) Tools	Information System Pilot for Home Care in Winnipeg
	MB122		
15	SK327	Social Support	Survivor Services Program: An Integrated Service Delivery Model with Female Survivors of Child Sexual Abuse
16	PE321	Population Health/ Community Oriented	Enhancement of an Integrated Model on Prenatal Assessment and Care on PEI
17	AB301-12	Population Health/ Community Oriented	Evaluation of the Healthy Okotoks Project
18	QC428	Quality of Care	Quality of Outpatient Geriatric Psychiatric Consultation
19	SK121	Quality of Care	Palliative Care Services Review
20	YT421 and	Continuity of Care	Continuing Care Adult Day Program and Improving the Effectiveness and Efficiency of Program Delivery for Aged, Disabled and Chronically Ill Individuals
	NT401		
21	NF301	Continuity of Care	Primary Health Care Enhancement Project

Example #	Project #	Theme	Title
22	BC201-4,-6,-8	Health Promotion/ Illness Prevention	Community-Based Asthma Self-Management Programs
23	NA246	Cost-Effectiveness	Evaluation of Provincial Procedures for Drug Listing –– Specifically Focused on Approaches to Cost-effectiveness
24	BC421 and	Cost-Effectiveness	Evaluation of the Alternate Level of Care Management Initiative (Carelinks) and
	NA0101-1 to 14		Cost-Effectiveness of Home Care
25	NA369	Lessons Learned	Socio Economic Differences in the Use of Health Care: Why are There Non-Financial Barriers to ““Medically Necessary”” Services?
26	AB301-22	Lessons Learned	Primary Health Care Project for Elnora Area
27	QC322	Lessons Learned	A System for Optimizing the Planning and Delivery of Front-Line Care –– Medical Practice of the Future –– Phase II
28	BC402 and QC303	Lessons Learned	Evaluation of Clinical Paths for Congestive Heart Failure Spanning the Continuum of Care and
			Development and Application of Guidelines for Optimizing Medical Practice
29	AB301-19	Lessons Learned	Evaluation of the Usefulness of Telehealth in Providing Enhanced Primary Health Services to the Northern, Geographically Remote Communities of Trout Lake, Peerless Lake and Red Earth Creek
30	QC421	Lessons Learned	From Innovation to Change –– Lessons Learned from Quebec Projects Supported by the Health Transition Fund (HTF)

Outcomes self-identified by the projects:

- The key to motivating individuals to continue working towards a healthier lifestyle over the long term was involvement in a program combined with support from family and friends.
- An individualized approach helps people personalize mass-market messages about diet and exercise.
- Support from family physicians was important to ensure a continued referral base plus medical supervision/support.
- When establishing new organizations, constant attention to the organization's original vision and mission was important to sustain commitment, determine direction and clarify ambiguities.
- When introducing changes to the health care system, the internal culture of the organizations involved must also support a constant process of learning and revising.
- Significant declines in the proportion of premature and low birth weight babies and decreased prevalence of developmental disorders.
- Community Health Boards became more informed about the concept of population health.
- Successful community capacity-building depends on: adequate funding for training, infrastructure and support; skilled educated and motivated leaders and planners; integrated information systems to link communities with research resources; effective linkages between the community and other governmental and non-governmental groups.
- Views of those receiving services must be taken into account when planning services.
- The role of local community services centres was viewed as central to any new "Healthy Communities" health care services.

Issues

Community engagement:

- Motivating community action was a labour intensive process.
- Uneven community involvement in implementing new approaches.

Identifying needs:

- It was difficult to identify the needs of underserved and disenfranchised individuals in the community, however in one study, it was identified that Inuit have the highest suicide rate, the lowest life expectancy, and highest birth rate of all Aboriginal peoples in Canada – and Aboriginal health status itself falls far below national standards.

Creating Awareness:

- Considerable advance time was needed to develop partnerships, provide public education and awareness that were key to the program's implementation.

- ❑ Both nationally and regionally, there are significant gaps in data on the health status of the Inuit population; where data are available, they underscore the marked differences in health status between the Inuit and Canadians in general.
- ❑ Lack of awareness of the community-based program was a major barrier to use of its services. However, an increased awareness of services can also suddenly increase the number of referrals to the service resulting in delays in response due to incapacity to handle the increased numbers of people requesting service.

Integrating health care providers:

- ❑ Challenges included difficulty in integrating physicians with the rest of the team, lack of clarity in roles and the nature of collaboration (e.g. nurse practitioners),
- ❑ Although practitioners supported new approaches, they often lacked sufficient time to adequately fulfill the program objectives.
- ❑ Communication between physicians and clinics, heath centers and other community health services was problematic.
- ❑ Concerns over confidentiality raised barriers in developing seamless client care between providers from different agencies.

Introduction to Vignettes

In order that the reader might clearly understand and experience in a small way, the vast depth and breadth of the HTF initiative, 30 vignettes were created. These are stories of the successes, challenges and in some cases, failures that show the impact of the projects on the individual locally, on organizations regionally, and on health care systems provincially and nationally. Criteria for selection of projects to be written as vignettes was agreed upon as:

- ❑ Evidence of an impact that suggests that one or some of the broader HTF expected outcomes has been achieved.
- ❑ Evidence of improved health outcomes for patients/clients
- ❑ Changes made to the way care is provided
- ❑ Changes made to policy (organization, regional, provincial and/or national level) directly attributed to the HTF project
- ❑ Sustainability
- ❑ Production of materials developed by the HTF project (e.g., training materials, manuals, equipment, implementation guidelines, software, etc)
- ❑ Clear causal connection between HTF and knowledge uptake in other organizations and/or jurisdictions (transferability)

Other factors influencing the choice of projects for vignettes included projects mentioned by key informant interviewees as being most memorable, those that demonstrated each of the emerging cross-cutting themes that were identified upon reviewing documentation of all the projects, those that represented a variety of provinces and territories, a variety of health and cultural issues and a variety of disciplines or approaches. A mix of large, national, multi-sectoral, interprovincial projects and small, single site, sole investigator projects was sought to demonstrate the range.

The vignettes were developed to ‘put a face’ on the HTF initiative and demonstrate the unique impact of the projects by creating fictitious individuals to help the story unfold. Any resemblance to real individuals who may have taken part in any of the projects is purely coincidental. At attempt was made to accurately reflect the outcomes of the projects and not to enhance these outcomes as a result of individual interpretation. The ‘stories’ were developed through review of the Internet-based HTF Fact Sheets and Research Reports for the projects, the synthesis documents and in some cases, through speaking directly with the principal investigator of the project. The project participants themselves did not review the completed vignettes. Six vignettes were also created to reflect the insurmountable challenges sometimes faced by some of the projects and the subsequent lessons learned. The corresponding vignette examples have been inserted in this appendix following the descriptions of each theme area.

Example 1 Population Health/Community Oriented
PE321 Enhancement of an Integrated Model on Prenatal Assessment and Care on PEI (Parallel studies: SK322, SK323)

Lisa is a nineteen-year-old who left school well before graduating and whose family lives a great distance away. She is feeling isolated and apprehensive about the pending birth of her first child and becoming a new mother since she has decided to live on her own due to abuse from her spouse. During her last prenatal check-up, her physician was concerned about her health since she knew that psychosocial risks such as stress, physical abuse, lack of social support, smoking, and drug and alcohol abuse during pregnancy can greatly affect the health of a mother, an unborn child and the family. Lisa was determined to stop smoking and using alcohol while pregnant, but without the support of friends and family, she was finding this very difficult. Lisa’s physician was able to quickly identify Lisa as a high-risk mother because she had just attended an education session on how to conduct enhanced routine assessments to detect psychosocial risks during pregnancy.

Lisa’s physician along with 78 of 80 PEI family physicians and obstetricians participated in an HTF funded project to introduce a new assessment that would promote interventions during pregnancy to prevent risks to the newborn, the mother, and the family. The assessment was built on an existing prenatal psychosocial assessment, the Antenatal Psychosocial Health Assessment from the University of Toronto. Physicians and others were trained in how to use the new Prenatal Psychosocial Assessment (PPA) to detect the presence of psychosocial risk factors in their prenatal patients and to identify other issues such as parenting/discipline issues, lack of finances, psychiatric disturbances, couple relationship issues, etc. The physicians were also provided with a directory to help them refer patients to appropriate services required. Referrals were made to community services that agreed to inform the referring physicians about their clients' outcome. Typical interventions included counseling on breastfeeding, mental health, nutrition, lifestyle, stress, psychiatric concerns, relationships and smoking cessation. The issues addressed reflected a community/population health approach but could also influence health promotion/illness prevention through early intervention in the areas of mental health/psychiatric concerns, stress reduction and substance abuse.

The education and intervention program was evaluated following a three-month period by collecting quantitative and qualitative data through a focus group, interviews, surveys and file reviews. The primary sources of these data were physicians, public health nurses, staff from the referral network and members of the project's Advisory Committee. Although there was little change detected in the number of referrals or in the ease of access to clients due to the limited time frame between implementation and evaluation, physicians reported that they were very satisfied with the education sessions since they helped them to become more aware of services, and communication between doctors and patients improved. Some of the facilitators related to the success of the project included the flexibility allowed, the small size of the province for travel, approval of physician billing, endorsement by the College of Family Physicians and Medical Society, physician champions, and the effort made to make a personal contact with physicians.

This project produced tools and materials for assessing psycho social risk factors of prenatal clients in the province of PEI, including the PPA Tool, a Referral/Communication Form (for health care providers), a PPA Reference Guide, a Prenatal Resource Directory, and a PPA Training Video. As a result, psycho social assessments are now a routine part of prenatal care in all regions of the province of PEI. The longer-term anticipated outcomes include reduced psycho social risk, improved health and well being of mothers and infants, and less demand on PEI's health care system.

The project has produced highly sustainable results much bigger than changing any one policy because it has had an impact on physician practice and can facilitate behaviour change among physicians by increasing their knowledge, developing skills, and changing attitudes. PPAs have a high level of support from physicians, which suggests strongly that they will use it increasingly and routinely in the long term. Because PPAs are based on strong principles of health promotion and illness prevention, they are highly applicable to other populations. Overall, the high level of support for the enhanced version of prenatal assessment and care almost guarantees its long-term use, ensuring the health and well being of mothers like Lisa and their infants.

Example 2 Population Health/Community Oriented
AB301-12 Evaluation of the Healthy Okotoks Project

Anne, a breast cancer survivor noticed the increasing frequency in which pesticides were being used in her neighbourhood. Joan, a young mother, was concerned that the paint on the park's playground equipment was lead-based. Rob, a local family physician noticed the increasing frequency in which infants in the community were being born with fetal alcohol syndrome. Bill, a local merchant was finding more graffiti on the walls of his corner store and experiencing an increased number of petty thefts. These concerned citizens decided to take an active role in bringing about improvement in their community's health and well being by joining the Healthy Okotoks Coalition (HOC), a community program in Alberta that was formed to spearhead a local development process. This initiative encouraged citizen engagement and strengthened local capacity to address concerns regarding determinants of health such as social, cultural, and economic status. As members of the Coalition, Anne, Joan, Rob and Bill all helped to mobilize their community to organize various activities related to health promotion and the prevention of illness and injury, many of which were geared to children and youth.

Funding from the HTF was utilized to evaluate this project by developing a set of outcomes and process measurement tools and by identifying barriers. The study found that the HOC achieved 24 community changes that it believed had increased opportunities for healthy living, including a community garden, a skateboard park, increased awareness of fetal alcohol syndrome, new animal bylaws, seniors and transportation issues, involvement of youth in community councils, removal of lead paint from playground equipment, more responsible use of pesticides and a youth curfew. However, HOC found it difficult to identify the needs of underserved and disenfranchised individuals in the community. As a result, it was unable to extend itself into the community to the degree the membership felt was necessary and desirable to be truly representative of community needs. It is recognized that some primary health care initiatives may not reach all members of a community – especially those who are less engaged with it. It is therefore important to take active steps to integrate the perspectives of marginalized groups into any such grassroots efforts.

The project used a variety of outcome measurement tools to gauge the effectiveness of HOC. A mixed research design using both qualitative and quantitative research methods was applied as activities were evaluated through in-depth personal interviews, observations of discussions at HOC meetings, and document reviews. Meeting minutes were used to determine objectives, activities, outcomes, and process measures. Two distinct evaluation phases included a phase that was devoted to exploring, describing, and evaluating the process of creating a healthy community, and a phase that concentrated on developing a template for tracking coalition processes and outcomes, and surveying coalition members satisfaction.

The HOC was unique in the sense that it was the only healthy communities initiative of its kind in the region. This project provides a framework for tracking the planning, implementation and evaluation of future "Healthy Communities" projects in other jurisdictions. The most effective projects are those that are supported by municipal and regional health authorities, directed by the community, and thoroughly reflect its values. Because HOC members like Anne, Joan, Rob and Bill were driven by a shared vision of what makes a community healthy, this diverse group of individuals was able to develop and work on activities together. Implications for health promotion practice and future research include, but are not limited to, development of a greater understanding of organizational processes, assessment and evaluation tools, and healthy public policy, all in the community health promotion context. Both research into the processes involved in the development of healthy public policy, and the skills required to influence and advocate for healthy public policy at the community level will assist practitioners in facilitating and enabling individuals and communities to advocate for policies that provide a supportive environment required to influence the factors that affect both an individual's and a community's health.

Health Promotion/Illness Prevention (12 projects)

Outcomes self-identified by the projects:

- Community participants in prevention and intervention education felt confident in their ability to apply learning regarding less familiar health issues.
- **Target clientele controlled risk factors, increased physical activity, reduced fat consumption, were re-hospitalized less frequently.**
- **Timely interventions can help older people resume daily activities required for independent living more quickly.**
- **The way in which information was disseminated played a key role in change management, both for health care providers and the general population.**
- **Local populations were involved in establishing underlying principles and identifying criteria for allocating resources; in some cases, the range of basic services was standardized throughout a region.**
- **Prevention models were easily integrated into existing services.**
- **Seniors in poorest health and most at risk of losing their independence or dying were most likely to benefit from preventive home care services.**
- **As a result of the success of the project, demand for service increased; to meet this increasing demand while maintaining high quality services, 'best practices' were adopted and some functions transferred from physicians to nurse-educators.**
- **Recipients of Family Health Benefits for low-income families (insured medications, eye glasses, preventative health services) tended to use more preventative health services than non-recipient low-income families. This suggests that removing the cost of drugs may result in better health management for low-income families.**
- Community linkages were strengthened around the issue of prescription drug misuse; the program created a new dialogue in the community

Factors contributing to the misuse of prescription drugs were social issues, easy access, and home environments.

Issues

Education

- Lack of time and resources required to integrate learning into practice.
- **Difficult to recruit education providers to workshops even when scheduled on professional development days.**
- **Difficulty reaching physicians and influencing their practices in favour of increased integration of prevention and encouraging them to refer.**
- **Difficulty achieving a consensus on the correct mix between illness/injury prevention activities and health promotion activities.**

Delivery

- Developing a management philosophy based on constant improvement of the quality of the interventions was a challenge.
- **Prevention projects that attempted to utilize emergency departments to identify those at risk had difficulties due to volume of clients, severity of cases, unpredictability of needs, high staff turnover and the department's general incompatibility with prevention activities.**
- **Length of time between referral and first appointment**.

General Public

- The cost of eyeglasses significantly deters low-income families from taking advantage of free eye examinations.
- Although many activities were well received, community resistance limited their success; this reflected the deep-seated roots of the problem.

Example BC201-4, -6, and -8: Health Promotion/Illness Prevention Community-Based Asthma Self-Management Programs

(Parallel Studies: **QC301, QC305**)

The treatment of asthma in Canada costs over half a billion dollars per year as the prevalence of asthma continues to increase at an alarming rate, despite more effective drugs and a better medical understanding of the disease. Ken is an asthma sufferer whose care is often provided on an emergency basis so he may not get the drug he requires, or may take an unnecessary drug. This has had a serious impact on Ken's quality of life, and also places a strain on health care resources. Studies have shown that people who are well informed about their condition, and who are supported by a written care plan and overseen by primary health care practitioners can best manage their asthma. Specifically, people like Ken who was diagnosed with asthma at the age of ten, need to learn what causes asthma, what triggers it, how to avoid setting it off, and how to monitor their breathing and other symptoms. The HTF funded a number of studies in British Columbia and Quebec that were designed to evaluate and improve asthma drug therapy, prescribing practices, education programs and monitoring services.

A prospective, randomized, controlled trial (BC201-4) was one of several substudies of the British Columbia Pharmacare's Health Transition Fund Project that focused on asthma care. Community pharmacists specially trained in an eight-step program for monitoring and managing asthma and traditional pharmacists monitored and managed the drug therapy of 350 persons with asthma to evaluate the impact and health outcomes using patient self-reports, pharmacist reports, and government databases.

Another project (BC201-6) evaluated the effectiveness of a community-based asthma education program (two-hour public education meetings in 14 communities plus three personal 45-minute sessions with certified health professionals who specialized in asthma care) and measured the outcomes, including the number of hospitalizations, emergency visits, and physician visits. People with asthma were randomized into education groups to learn self-monitoring, the role of medications, signs of poor asthma control, etc. A third project (BC201-8) sought to improve the health of asthma patients by giving them better pharmaceutical care delivered by pharmacists trained and certified in asthma care. Positive outcomes in the studies included a better understanding of medication management (50 per cent less inhaled beta-agonists), improvement in lung function, emotional state and overall quality of life, fewer symptoms, fewer limitations on activity, a decrease in days absent due to asthma flare-ups and decreased asthma-related hospital and physician visits. Economic analysis in the third study showed a 57 per cent reduction in related major health costs.

The projects recommended that all patients with asthma be encouraged to obtain education regardless of the severity of their condition and that asthma educators be recognized as part of the health care team. It may be necessary for provincial governments and the medical association to collaborate in raising physician awareness about the benefits of community-based patient education since some physicians did not support a patient self-management approach.

The demonstration of very real gains in patient health outcomes, along with impressive overall savings to the health care system in these asthma care studies may justify a change in reimbursement mechanisms for pharmacists, to compensate them for more intensive and time-consuming patient interventions. Ken and his pharmacist were very satisfied with this new approach, but his pharmacist had concerns about the demands on his time and resources and the fact that some patients failed to follow through with his recommendations. It may also be worthwhile to explore an incentive system for persons with asthma such as reimbursement for inhaled medications only after education from a qualified professional has been received. Similar alternative models of health promotion/illness prevention care could be developed for other chronic health conditions such as diabetes, eating disorders, congestive heart failure and a variety of pulmonary diseases.

Access: a) To Services; b) To Information (25 projects)

Outcomes self-identified by the projects

- People made reasonable choices about where to seek health care.
- Emergency services are not being used for convenience or instead of family physicians.
- Access to information is critical for the day-to-day management of some conditions (e.g. management of mental health) as well as for strategic planning, evaluation, research/development and accountability.
- The key to facilitating data sharing is a standardized set of data elements and definitions.
- Access to information was seen to improve the health of specific groups through their improved knowledge of services, triage, and better coordination of care.
- Access to quality care was dramatically increased through the introduction/development of new roles and shared responsibilities or the introduction of new technologies; stronger relationships with external health and education providers developed.
- Access to care for First Nations individuals greatly increased when a First Nations person served as liaison and the care provider had good knowledge of the community and had already established a relationship of trust with community members.
- Factors identified for the development of health care delivery in French were: stable financing; strong professional leadership; native French-speaking health professionals; centralization of health care services in a single location; favourable provincial policies; federal support.
- Increased use of the Internet to find health-related information by both care providers and those receiving care.
- Critical factors influencing access to health care were: the timing and location of programs; cost to clients; length of waiting times; a multidisciplinary approach; partnerships; physician involvement.
- Access was greatly improved when hospitals, physicians and the community take a more coordinated approach.
- Creative use of technology increased access in a human resources shortage environment (e.g. teletriage for after-hours access to care).
- High-risk individuals and families were connected to the appropriate community resources earlier, thus lowering their level of risk.
- Using a community-based focus was a significant factor in facilitating access to care.
- Using a vehicle to take primary care directly to those people dispersed over rural or remote areas was an effective way to overcome access problems.
- Interactive video platforms were found to be the most reliable and easy to use when delivering telehealth services.

- Successful implementation of technological solutions depends on: staff stability, community buy-in, strong relationships with remote providers and provincial telehealth systems, effective technology and supports, cost and efficiency.
- Providers, when setting priority for service, were able to discriminate between differing levels of patient urgency and ability to benefit from service; extensive consultation and testing of tools developed found them to be valid and practical; clinicians, administrators, and the public accept that better management of waiting lists is possible and appropriate.
- Specialized consultation services using interpreters, culture brokers, and experts in cultural psychiatry can significantly improve the quality of Mental Health services delivered to ethnocultural communities, immigrants, refugees, and Aboriginal people.
- A success factor was the project's development from a foundation of existing service networks; this approach enabled the leaders to build on the participation of doctors and other professionals, and to create an atmosphere conducive to innovation and cooperation; the creation of a management committee also helped to centre activities.

Issues

Unevenness of access

- Limited accessibility of comprehensive rehabilitation services, especially out-patients services; waiting lists or no service at all.
- Researchers identified significant differences across jurisdictions regarding eligibility for and access to services.
- Most provinces, except Ontario lack culturally appropriate home care services for off-reserve First Nations people (language barriers, jurisdictional confusion, no First Nations liaison, lack of communication between worker and clients, lack of sensitivity to cultural appropriateness, some racism and discrimination).
- Provision of health care services to francophones in minority situations remains vulnerable; federal government support is crucial to its continuation.

In conventional mental health care settings, language barriers and cultural complexities can impede adequate assessment and treatment of psychiatric disorders.

Service Delivery

- Information sharing tends to rely on informal communication patterns (e.g. networking) rather than through a structure process and is therefore haphazard.
- The continued requirement for physician referral compromises the efficiency of the referral process and timely access to care.
- Inequities in resource allocation among health regions limits access in some areas.

- Insufficient human resources to deliver the necessary services; because the duties of coordinating telehealth were simply added to the nurses' existing patient care workloads, the increased burden slowed the full implementation of the technology; telehealth decreased efficiency in terms of workload by increasing pressures on human resources at the local (isolated) community level; costs of certain allied health services also increased.
- Communities experienced occasional technical problems; technical support from the suppliers and compatibility of technology were critical factors for success; the federal government should examine this issue and establish standards to prevent companies selling and installing these technologies from engaging in monopolistic practices.
- The "front-end" costs associated with telehealth are significant resulting in increased service delivery (and associated costs) in the local community; such technology is a major expense for the health care system; maximizing investments requires close cooperation between industry, the academic sector, and health stakeholders to keep costs down and ensure that the technology is developed on the basis of health needs; funding is required for institutional infrastructure such as equipment, telecommunications, and telehealth management structures; support is needed for integrated service networks and evaluation.
- Use of technology to deliver services presented challenges with regard to privacy and information security, professional responsibility, technical and clinical standards, and physician remuneration; policies must be developed to address these issues, in order to maximize the benefit of this and similar models.
- Implementation would have been facilitated by greater involvement of existing service networks in the planning; management, coordination, and evaluation of the services; the development of expertise in professional practice; the organization of health services, technology, change management, and evaluation; and payment methods.
- There is insufficient cultural training in most professional programs, and little or no training in working with interpreters and culture brokers.

Example 1 Access b) To Services
NA489 From Chaos to Order: Making Sense of Waiting Lists in Canada

Currently, waiting lists for medical care in many parts of Canada are not standardized, coordinated, or managed in any comprehensive way. People awaiting surgery, diagnostic testing, specialist consultation or treatment are generally unaware of how waiting lists are managed and in fact, may not even know they are on a waiting list for service. Those who are aware may perceive the wait to be due to a lack of resources rather than lack of waitlist management. Jack is a 54-year-old construction worker who has been unable to work for the past 6 months due to severe arthritic knee pain and a severely restricted range of motion that makes it difficult for him to sleep, walk, climb stairs or drive his heavy construction machinery. Jack has been waiting more than a year for knee joint replacement surgery. The

Western Canada Waiting List Project (WCWL) was developed to improve the fairness of the health care system so that Canadians like Jack could receive appropriate and effective medical services by prioritizing access to these services in a standardized and transparent manner, on the basis of need (urgency) and potential to benefit. The project involved a consortium of four provincial health ministries, seven regional health authorities, four medical associations, and four health research centers to develop valid, reliable, practical, and clinically transparent measures of priority setting for access to selected wait-listed health services (cataract surgery, hip and knee replacements, general surgery, MRI scanning, and children's mental health). In this new method of determining who should get services first, Jack's referring physician was able to use the tools developed by the project to identify the relative urgency of Jack's need for knee surgery.

Development and testing of the priority tools occurred through input from five clinical panels plus empirical reliability and validity work. The potential for implementing the tools was assessed through interviews with 66 key informants in seven regional health authorities. A public opinion survey was conducted through seven focus groups in various Western urban areas. Standard definitions of waiting times, methods of establishing acceptable waiting times for elective services, and the logic and ethical imperative of cross-procedural waiting list prioritization were also addressed.

Clinicians found the priority-criteria tools to be valid and valuable, particularly in the areas of general surgery and hip and knee replacement while administrators and the public accepted that better management of waiting lists is possible and appropriate. Regional health authorities supported the methods of assigning people to waiting lists and recommended that implementation of the WCWL waitlist prioritization tools by health authorities should occur in a carefully monitored and evaluated environment. The ideal assessment would include validity, reliability, feasibility, acceptability, and benefits to people requiring health care interventions. Furthermore, these findings should be communicated broadly. Recommended next steps include implementation and evaluation of the tools in real-world settings; development of standard measures and definitions for maximum waiting times that correspond to patient urgency; identification of implementation options and management strategies within and across specialties; plus identification of supportive information system requirements.

While the WCWL project has not 'solved' the problem of waiting lists and times, having a standardized, reliable means of assigning priority for accessing services is an important step towards improved health care management in Canada and elsewhere. With perseverance, adequate resources and the support of a committed partnership, this approach could easily be extended to other procedures and interventions in many services or jurisdictions where waiting times and access to care are problematic.

Since completion of the HTF project, WCWL has received substantial additional funding and is undertaking a second phase. It has become a partnership of 20 organizations (medical associations, ministries of health, regional health authorities, health research centers), all committed to influencing the way waiting lists are structured and managed. Implementation of the tools has advanced in a number of Western Canadian provinces and in other countries. The role of the WCWL project in this area is to develop a framework for evaluation that would be included in any implementation plan, assist in conducting the evaluation, and serve as a focal point for reform in improving access to elective health care. In this way, Canadians like Jack will have a better understanding of how waiting lists are managed and be able to access services in a manner that is fair and standardized.

Example 2 Access b) To Information
BC425 Mental Health Online: A Case for Information Management

Although information sharing across health care sectors in Canada is generally a well-established practice, it often relies on informal communication between colleagues. Although informal networking can work well within programs, sharing of information between programs or across sectors can be problematic. Access to specialized information that is condition-specific can also be a challenge in some communities. Access to data is critically important in areas such as day-to-day management of the system; strategic planning and evaluation; research and development; and accountability. Effective management of individual client care and the health system in general relies on access to information and an information management system that is accurate, responsive, easily transferable and readily accessible. This information management encompasses the information itself, the management of process, the dissemination of information, and the management of technology. (See Examples 7 and 18 for Information Technology project descriptions.)

Since structured procedures for communicating health information are only beginning to emerge, some projects were funded by the HTF to specifically assess the status of health information management while other projects included information access as one component or outcome of their investigations. Many valuable resources have emerged in the areas of new technologies, patient and provider education materials and communication tools. For example, access to information was an important aspect of care for Jason’s parents who found the Internet a very useful tool to facilitate communication and increase access to specialized information on his autism (PE421). Jill, a teen parent, found that the enhanced access to information and resources in a new social support program helped her to overcome her feelings of social isolation (PE422). A system-wide admission and discharge department in Saskatchewan found that their new computer system improved the accuracy, accessibility, timeliness, and coordination of the shared client information (SK424). An Alberta study produced a standardized template that allowed easy access to relevant information to improve communication between community providers and a cancer centre (AB301-4). In some studies, the lack of access to reliable and standardized information was problematic. One study investigating use of a particular drug by seniors in 7 provinces (NA221), found that because data sets varied so widely in terms of content, accessibility, timeliness, and linkages, a different approach was necessary for each province.

A project in British Columbia's mental health system provided an in-depth, broad-based look at the multitude of issues surrounding information management in the mental health context, a sector that has unique requirements for information access and transmission. The study examined how the current state of information management in the mental health sector supported clinical management of patients, system management, policy-making, and research activities. It also examined criminal justice issues, issues of confidentiality and potential breaches of privacy.

The study found that exchanging information among various users as well as between the client and family improved services to those with mental health concerns. The key to facilitating data sharing was a standardized set of data elements and definitions. However, there was no general agreement on what data should be shared, or with whom. In the field of mental health, stigmatizing and discrimination because of mental illness are still widespread with potentially harmful consequences, so issues of privacy, confidentiality, and security were important considerations. Many provinces and territories have passed laws that address privacy of personal health information, but legislation is not uniform across all jurisdictions. Efforts to share or transfer information across provinces and territories can be problematic. This study recommended the active involvement of people affected by mental illness as well as those outside the health care system who interact with mentally ill people (e.g. police), in planning and developing information management systems. Because the regionalization of health care increases the risk of fragmentation, activity that is coordinated and system-wide is required. Effective information management has great potential to improve the health care system as a whole as well as clients' individual health status. Lessons learned in these studies can greatly facilitate the sharing of information between providers, to clients and caregivers and across sectors. The methods and tools developed can be used to increase access to client-specific and educational information, thus improving the quality of health care for individuals and the system locally, regionally and nationally.

Human Resources/Provider Education (15 projects)

Outcomes self-identified by the projects:

- An information-technologies-supported training program resulted in increased collaboration between various parties and disciplines that improved community nursing and medical practices.
- Collaboration enabled the development of short training programs such as distance-training to certify nurses to deliver care in isolated communities.
- Even when underpaid and overworked, frontline staff indicated high levels of job satisfaction because of the rewarding nature of the work and the sense that they were making a positive contribution to the community.
- Funding physicians through contracts rather than by fee-for-service enabled them to practice in innovative ways; they often provided consultations over the phone and frequently dealt with multiple issues (sometimes up to 8 in a single session).
- Education and guided practice sessions enabled providers to work more effectively with less stress.
- Many projects indicated they relied heavily on the use of peers as trainers.
- Many projects identified the need to ensure adequate staffing and resources to deal with the increase in demand for services as a result of successful projects.
- Use of the Internet was effective for educating providers regarding client conditions.
- One region was able to full a long-vacant position of full-time physiotherapist by introducing a new practice model of physiotherapy assistants to enhance limited rehabilitation services in the district.
- Benefits of expanded professional roles included greater patient access to primary care in rural and remote settings, increased availability of comprehensive health services, improved quality of care, increased collaboration that translated into more comprehensive services, such as prevention and health promotion.
- Providers in an expanded role capacity worked independently according to their professional scopes of practice and interdependently, both providing care and referrals to one another, and making decisions synergistically.
- The project's distance education component attracted the interest of health professionals and led to the establishment of a long-distance continuing-education program, delivered by the continuing-education centre of the University Faculty of Medicine.
- Staff was more aware of mental health issues as a result of the protocols and training.
- As a result of the training, providers rated themselves as improved in their knowledge, and in their ability to deal with mental health problems, the training and protocols made it easier to retain nursing personnel.

Issues

Workload and working conditions

- Home care staff felt they were poorly paid and were often asked to perform highly unpleasant chores.
- Some physicians/psychiatrists were unable to take the clinical lead in projects due to insufficient time and little or no financial incentive.
- System changes (e.g. single –window approach in CLSCs) resulted in providers showing symptoms of burn-out and were at risk of compromising their own health plus the quality of care they provided due to permanently overloaded caseloads.
- Some pharmacists declined participation in projects due to workload/work environment issues.
- Some workshop participants indicated that they lacked the time and resources to integrate their learning into their practices.
- A high turnover among in-home intervention workers, largely related to remuneration meant less support for clients/caregivers and complications during implementation of new programs.
- Too large caseloads affected the quality and level of care received by clients; where workloads were heavy, innovation remained more theoretical than real.

Expanded Roles

- Barriers to the full acceptance by physicians of providers in an expanded role capacity included a negative impact on fee-for-service income, and current restrictions on their authority in areas such as prescribing.
- Barriers to implementation of expanded roles included lack of training in collaborative practices in current education programs, lack of clarity regarding medico-legal issues associated with interdisciplinary decision-making.

Recruitment/retention

- Severe under-funding of organizations resulted in difficulties in recruiting and retaining qualified personnel due to low staff salaries and benefits.
- Clinical educators were unavailable to implement teaching programs for clients.
- One province identified insufficient human resources hampered coordinated service delivery and limited the availability of rehabilitation services resulting in long waiting lists.
- The need for intensive and ongoing training of providers was sometimes underestimated at the project proposal stage.
- Critical shortages of nurses and doctors exist in all six Inuit regions; there is an urgent need for other professional, technical, and para-professional staff in the health and social services sector.; all communities had basic front-line nursing services but the nursing

shortage put services in some smaller communities in jeopardy; most professional services are still provided by non-Inuit people; it is a priority in all regions to increase the participation of the Inuit in delivering health services to their own communities, and to involve them in making decisions.

- ☐ Merely solving the severe problem of staff shortages of nurses and physicians will not, on its own, radically change the health status of the Inuit; social and economic problems (such as violence, alcohol abuse, shortages of housing, low education, and lack of jobs) continue to adversely affect Inuit health.

Example 1 Human Resources/Provider Education
NA342 Improving the Effectiveness of Primary Health Care Through Nurse Practitioner/Family Physician Structured Collaborative Practice (Parallel Studies: AB301-7, NS301, NF301, NA321)

Increasingly scarce resources have resulted in pressure to reduce costs and find new models for delivering primary health care. Dr. Jones is a family physician (FP) sharing a patient base with nurse practitioner (NP) Nancy. They worked together in a project that promoted a structured, collaborative practice in an efficient and effective arrangement for providing more comprehensive and appropriate primary health care to their patients. The NP/FP structured collaborative practice involved the development of a working relationship based upon seven essential elements that served as a framework for recognizing the shared and separate experience, knowledge and skills of both Dr. Jones and Nancy: 1) Co-operation; 2) Assertiveness; 3) Responsibility/Accountability; 4) Autonomy; 5) Communications; 6) Co-ordination; and 7) Mutual Trust and Respect. The main goals of the project were to develop, implement, and evaluate both an educational intervention to improve structured collaborations between NPs and FPs, and a training module for family medicine residents and student nurse practitioners on how to work together in such practice as well as to determine the usefulness of telehealth technology for program implementation, monitoring and training.

After completing a learning module, Dr. Jones and Nancy participated in designing, pilot testing, and selecting actions that could be undertaken to strengthen their own collaboration. The project found that changes occurred once an effort had been made to structure the collaboration. Nancy and the other participating NPs in the project assumed more responsibility for curative, rehabilitative and supportive care services and took on more complex care of patients. New, agreed-upon guidelines regarding roles for NPs like Nancy were successfully adapted, and in-house referrals to family physicians increased. Nancy and Dr. Jones worked independently according to their professional scopes of practice; interdependently, both providing care and referrals to one another, making decisions synergistically; and supporting each other's work through consultation and referral. This new way of practising reflected an increase in physician and nurse practitioner confidence in the

NP role and competence. Their collaborative model of practice promoted effective utilization of Mary's NP skills and allowed both she and Dr. Jones to more effectively apply their skills to the most appropriate people in need of their care.

The evaluation methods of the project involved a detailed monitoring of program implementation and progress as well as surveys and interviews of providers, patient surveys, patient encounter forms, key informant surveys, and a questionnaire and interview of students.

As the supply of NPs in Canada is not extensive, the interface where NP's and FPs meet is determined largely by the NP's geographical location. In Canada this usually means a community supported structure such as an aboriginal health access centre or a community health centre. Meaningful consultation regarding a change in comprehensive primary health care practice needs to involve these structures plus as broad a cross section of the community as possible in the early stages of program development. A collaborative model could be applied wherever NPs and FPs like Nancy and Dr. Jones work together, and in any interdisciplinary team setting. This project pointed to factors needed to support and sustain structured collaborative practice in primary health care delivery, including removal of barriers such as the traditional fee-for-service funding model; lack of training in collaborative practices in education programs; lack of clarity regarding medico-legal issues associated with interdisciplinary decision making; and lack of solid partnerships with parties involved with technology development and implementation. National, provincial and territorial professional bodies and health policy commissions have called for more effective utilization of NPs in primary care. Although full or optimal collaboration was not achieved in this study, there is every indication that NPs and FPs like Mary and Dr. Jones will begin to establish an increasing number of effective and efficient collaborative practices across Canada. A similar study in Alberta found that introducing NPs significantly increased access to care, avoided duplication and promoted continuity of care. Clinical Practice Guidelines for ten common conditions were developed to help facilitate the NP's role. Nursing and medical students in all jurisdictions will begin to routinely receive training in this model of care as part of their course curricula. This is an area of international concern and interest where Canada can demonstrate leadership.

Example 2 NB102 Human Resources/Provider Education Implementation and Evaluation of Selected Strategies of the Rehabilitation Services Plan in New Brunswick (Parallel Studies: NA1007, SK326)

When Gerry was discharged from his local hospital following his recovery from a spinal cord injury, he expected to be able to continue his rehabilitation program at his nursing home. He was disappointed to discover that there were waitlists for the essential services that he needed because of a lack of providers and funding for these services. Janet, his hospital-based

Physiotherapist, provided him with a home program, but she was concerned that his progress would be compromised if there were a gap in his therapy program while he waited. She knew there was a long wait list for community-based rehabilitation services such as occupational therapy, physiotherapy, speech pathology, and audiology, plus a lack of coordination for these services. Because of this, both she and Gerry enthusiastically supported a project that would bring about consolidation of community rehabilitation resources, identify referral sources, develop service delivery guidelines, distribute resources more equitably and increase funding for continuing education. Part of this strategy included a way of setting priority for services based on function, predicted outcome, and risk of delay rather than on age or diagnosis. These strategies ensured that Janet's most needy clients like Gerry, received the most appropriate, efficient and effective quality care at the most opportune time. This ultimately resulted in enhanced client outcomes plus optimized use of limited rehabilitation services such as those Janet provided.

Although components of the Rehabilitation Services Plan had already been implemented in Janet's New Brunswick community, there had never been an opportunity to evaluate the impact and outcome of this approach. Through the Health Transition Funding initiative, researchers collected data from rehabilitation managers, service providers (audiologists, occupational therapists, physiotherapists, speech-language pathologists), referral sources (physicians, public health nurses, nursing home administrators, teachers, Student Services coordinators, social workers, psychologists), and clients who actually received rehabilitation services. A series of self-administered surveys, focus groups, chart audits and documentation reviews were completed to monitor the implementation of the plan. While rehabilitation services in this province were typically underdeveloped, hospital-based and lacking in coordination, there were also many factors that contributed to the growing need for rehabilitation services including an aging population, advances in medical treatment and technology, a shift toward independent living, increased emphasis on prevention and early intervention, and the changing nature of the family and workforce. The Rehabilitation Services Plan implemented a service network for rehabilitation that addressed many of these factors.

As a result of this initiative, rehabilitation services have improved for Gerry and Janet in many ways: services are now seen as client-centred; clients are satisfied; clients in nursing homes and schools have access to a wider range of rehabilitation professionals; the referral process is easier; a new assessment process ensures that the neediest clients receive attention first; and hospital and community services are better coordinated. The regional rehabilitation centre has now taken a leading role in the province using the results from this study with a resulting more appropriate balance of treatment, education and consultation to achieve efficiency and appropriateness in delivering scarce rehabilitation resources. Remaining challenges include the need for sufficient human resources and funding for coordinated service delivery and continued training, inequities in resource allocation among health regions, and the continued requirement for doctors to refer clients for outpatient rehabilitation services that tends to compromise the efficiency of the referral process. This study has laid the foundation for further improvements to New Brunswick's rehabilitation services by providing a baseline against which to measure the impact of changes in rehabilitation service delivery. A study in Ontario investigated the impact of individualized physiotherapy and occupational therapy health promotion/rehabilitation intervention to help health providers identify older adults who would benefit from intervention aimed at arresting functional decline and optimizing independent living. A Health Promotion/Rehabilitation Community Care Intervention Manual and health promotion education material for older adults were developed. A Saskatchewan study addressed a human resources crisis by introducing physiotherapy assistants. Other jurisdictions experiencing rationing of limited rehabilitation services will learn from the findings of these studies. Strong leadership, research, new investments in rehabilitation professionals and alternative approaches will be necessary to nurture and build on the enhancements already underway.

Decision Support (9 projects)

Outcomes self-identified by the projects:

- ❑ The best drug-related CPGs are those that are recently developed, published and produced by industry rather than by organizations of health professionals.
- ❑ Internet-based decision-support tools helped care providers learn about the values and practices of other team members from other disciplines.
- ❑ Knowledge gained contributed to more integrated service provision, better patient outcomes and improved clinical decision-making (e.g. formalized and improved prescribing practice).
- ❑ Online information tools were useful in enhancing collaboration and in resolving disagreements between team members
- ❑ When guidelines were changed to enhance specific tasks for care providers, effectiveness was enhanced.
- ❑ In most projects there was a reduction in the average cost of caring for patients on clinical paths during and after hospital stays; therefore, there is promise that the use of CPGs will contribute to more rational and cost-effective use of health care resources.
- ❑ There was no shift of the economic burden from acute care to the community, caregivers or patients.
- ❑ A project identified indicators for placement in long term care: suitability of home environment; availability of community supports; complexity of care needs; and judgment of health care providers regarding the client's suitability for long term care.
- ❑ A project validated the usefulness of an assessment tool for safety of patients with dementia living at home.
- ❑ A project developed a screening tool to identify risks to the physical and mental health of caregivers that was able to gather precise information from caregivers on their concerns and distress levels and helped workers to identify caregivers' concerns and problems.
- ❑ Local implementation methods were used to positively influence medical practices by disseminating guidelines that were endorsed by all the medical organizations concerned.
- ❑ A sound process was developed for building and disseminating guidelines based on systematic analysis of the most recent scientific data.
- ❑ Process for guideline development proved valuable in rethinking issues such as service integration.
- ❑ Collaboration between participating organizations was important because no individual organization had the necessary resources to produce scientifically based guidelines.
- ❑ To support accurate and timely decision-making, information analysis tools should be integrated into practice management.
- ❑ Medical information resources and expertise are needed in order to link information technologies, and to improve communication between the various units and organizations.

- Educational strategies for medical students and relatively junior residents could improve the appropriateness of their practices in ordering routine tests for hospitalized patients; routine testing should be discouraged in favour of disease-specific protocols, and justification should be required for test requisitions; intra- and inter-professional critiquing was central to changes in diagnostic testing practices; these influenced the design of information systems.

Issues

- The issues centered on the capacity for uptake and the time required to devote to projects.
- Frontline practitioners initially found guidelines vague and asked for more explicit guidance.
- Team members were limited in the time they could devote to projects due to reasons of reimbursement, personal workload and staff shortages.
- Difficult to find people willing to motivate the team or take leadership.
- Turnover among project participants was a challenge to continuity.
- Geographic distances between working group members made it difficult to sustain a collaborative environment.
- Health professionals required support to integrate technology into their practice.
- Implementation of clinical paths was impeded by role conflicts between sites, lack of leadership, differing philosophies and cultures, complex patient conditions, lack of medical support and staff shortages that reduced the time available for educational activities.
- Limited resources meant that health care workers were sometimes unable to meet certain needs identified by their assessment.
- Uptake of clinical guidelines was difficult due to health professionals' sense of professional autonomy, the lack of a client-focused culture and the absence of clear structures for front-line care.
- One project found that few doctors availed themselves of the continuing medical education tool; understanding of their needs and potential obstacles must be improved.
- Concerns expressed regarding the compulsory nature of protocols.
- Some guidelines presented differing, sometimes contradictory recommendations that caused confusion for clinicians.

Example 1 Decision Support

NA203 National Evaluation of Clinical Practice Guidelines (CPGs)(Parallel Studies: BC402 – Evaluation of CPGs for CHF; QC303 - Screening for Prostate Cancer, Pharmacological Treatment for Stable Angina, Prescription of Medical Imaging, Use of Knee Arthroscopy; AB301-4 - CPG on Palliative Sedation)

In his busy, inner-city family practice, Dr. Marshall often had to make rapid choices regarding medication prescriptions for a multitude of conditions. He was quite accustomed to referring to standardized guidelines in his practice, when deciding on whether or not to order diagnostic tests such as x-rays or MRIs. However, when he referred to clinical practice guidelines (CPGs) for drug prescribing, he found that the recommendations presented were often differing and sometimes contradictory, because there has been considerable variability in the processes used by different CPG developers (e.g. health professional organizations, academics, industry-supported researchers, etc.).

That is why Dr. Marshall decided to participate in a project that evaluated the quality of Canadian clinical practice guidelines (CPGs) that deal with drug prescribing practices and reviewed strategies to implement valid and reliable CPGs in clinical settings. He knew that the published literature suggests that it is possible to improve prescription practices through the use of high-quality, evidence-based CPGs for pharmaceutical care and was supportive of an initiative that would systemically develop statements to help him make appropriate decisions about health care. He was hopeful that this initiative would help resolve some of the confusion he had experienced in his practice when attempting to use CPGs as decision-making tools in his practice.

There have been few formal attempts to gauge the quality of the more than 2,500 Canadian CPGs, and no way had been developed to oversee the use of the CPGs in clinical practice or to measure their impact on patient outcomes. In this project, doctors, pharmacists, methodologists, academics, government officials, health professionals and managers of drug benefit plans completed literature reviews, surveys, interviews and used a widely accepted evaluation tool to assess procedures for developing Canadian CPGs related to the use of prescription drugs. Strategies for CPG implementation were also reviewed. In all, a total of 193 drug-related CPGs were assessed for rigour, content, context, and application. The study found that only 19 per cent of the guidelines reviewed were recommended for use as they are; another 56 per cent were recommended for use with changes; 25 per cent were not recommended at all. Conditions for successfully implementing CPGs included solid evidence of benefit and a cooperative development process that included all stakeholders, particularly doctors.

This project revealed that many existing guidelines do not measure up. Improving the development of guidelines could promote confidence among clinicians like Dr. Marshall, who might then be encouraged to use verifiably sound CPGs in their practices. As well as improving clinical decision-making and patient outcomes, the routine use of high-quality CPGs could contribute to a more rational and cost-effective use of health care resources. More research is still needed to identify which CPG implementation strategies are likely to work in the diverse settings of Canadian medical practices. The researchers recommended a national forum to bring together public and private drug benefit managers that would provide further insight into CPG implementation, drug prescription practices, and priorities for future research and collaboration.

The study identified that the greatest concern with the use of prescription drug-related CPGs was related to their implementation, dissemination, and monitoring strategies since the average evaluation score in these three specific areas was only 5 percent. Public drug benefit programs across Canada are already evaluating and using a range of programs and initiatives that use CPGs to formalize prescribing practices. High-quality CPGs have the potential to improve the quality and cost-effectiveness of health care when disseminated effectively and appropriately across a variety of settings. They will prove beneficial in providing up to date, standardized information that can serve to inform not only individual practitioners like Dr. Marshall and provincial drug plans but also provide a foundation to support possible future development of a national approach to effective and economical prescription drug use by all Canadians.

Example 2 Decision Support
QC427 Self-Regulation: A Method of Rationalizing The Use of Diagnostic Tests

Recent studies suggest that diagnostic tests are sometimes performed unnecessarily, and that testing is frequently duplicated. This project, which took place at Sherbrooke University Hospital, Quebec, sought to improve resource use by introducing a method of self-regulation for health professionals, to determine what their diagnostic information needs are, and how best to meet them in a way that would bring about changes in diagnostic testing, eliminate duplication, and promote innovation.

While a junior hospital resident, Chris found he was ordering diagnostic tests routinely for his hospital patients but questioned whether this practice was based on empirical evidence. He suspected tests were being ordered needlessly and that significant savings could be realized by ordering only those tests that were necessary for his patient's presenting condition. He was also concerned that the tests he was ordering were also being ordered elsewhere in the system. Although he recognized that changing his practice and that of his colleagues would be difficult, he understood the importance of wisely utilizing resources and providing his patients with the best care possible. Chris was pleased to participate in a study that examined fundamental notions of practice change in a care unit, focusing on five of the tests ordered most frequently and routinely for hospital patients. The project developed an information-flow model, and integrated it at three levels: a care unit where Chris worked, the continuum of care between Chris' unit and others, and an inter-institutional professional organization. Chris and other investigators identified trends in requisitions for diagnostic tests for both routine and complex cases, and analyzed data from the hospital's information system on routine testing, as well as documentation of overuse of diagnostic tests to identify areas of concern and potential for improvement.

It was determined that a reduction in routine testing could result in savings of up to 30 percent per care unit. Chris discovered that most tests for hospitalized patients were requested by inexperienced medical students and relatively junior residents. The outcome of the project identified several key factors that could help to bring about a change in ordering practices: educational strategies needed to be developed for inexperienced students and residents like Chris to improve the appropriateness of their ordering practices; opportunities for intra- and inter-professional critiquing that would be central to changes in diagnostic testing practices; discouragement of routine testing in favour of disease-specific protocols; and requirement of justification for test requisitions. Although Chris and his colleagues realized that change of routine practice is complex and that more thought and effort would be required when routine ordering was discontinued, the end result would be better patient care and more responsible resource utilization.

Autocontrol, the model of practice developed for Chris and his colleagues, became a methodology for practice change that supported concurrent evaluation of administrative and clinical data. Medical information resources and expertise were needed in order to link information technologies, and to improve communication between the various units and organizations. The next step in the process of evidence-based decision-making was to support accurate and timely decisions by integrating information analysis tools into practice management.

This model for the practice of evidence-based decision-making regarding the ordering of diagnostic tests is transferable to any institution where health care practitioners are completing medical orders. It also provides insight into the kinds of information support needed to effect changes in any area of practice. Information systems will increasingly be vehicles to support practice analysis, enabling integration of evidence and feedback. It is important that practice change methodologies become incorporated into the education of health professionals like Chris and into the culture of the health system as a whole since there is a need to teach the principles of practice change starting early in the professional career so that continuous questioning of complex practice is enabled.

Information Technology: a) Tools b) Systems (15 projects)

Outcomes self-identified by the projects:

- Capacity for analysis and reporting valid, reliable data that can be used by all stakeholders (providers, administrators, planning and policy development authorities); one site felt that a significant amount of information on home care use and expenditures could be gained by linking administrative data with client assessment data.
- Reduced assessment time and increased resource availability due to automation of tools.
- Better services and health outcomes within existing budgets through the reallocation of resources due to improved technology.
- Accurately reflected needs of client and caregiver, thereby enhancing care and increasing fairness and objectivity regarding access to resources.
- Assisted health care planners in making the most rational and efficient use of community resources with the assurance that all local viable options for care were exhausted.
- Helped communities to better plan what services to offer.
- Potential for a high degree of predictability of future resource utilization.
- Potential to deliver health services to northern and remote communities; encouraged networking and communication between rural and urban health care providers and families and provided them with sources of reliable information on caring for targeted groups.
- Internet became a popular source for health-related information; video-conferencing technology became widely used for clinical consultations and medical education.
- Patients who were able to consult with a city-based specialist through technological links realized savings in travel costs.
- An effective collaborative framework was developed to link provincial health information with a national database under federal jurisdiction resulting in the formation of a network of expertise in academic centers; data linkages developed offer interprovincial comparisons, give research opportunities to study the effects of health determinants on use of health services and on health outcomes or the effects of health events and health care use on other factors (employment, income, psycho social status).
- Factors that influenced the success of initiatives were: the perception among health professionals that their roles complemented one another, rather than competed with each other; the competence of the technical partners; the official support of the Ministry of Health; the general view of the initiative as a constructive response to cost-effectiveness pressures, and one that served the needs of both patients and professionals while saving time, clarifying information, and improving patient care.

- Health care-related developments in information technology typically involve partnerships between the public and private sectors, bringing challenges that the different organizational cultures face when they interact: in this type of initiative, the public sector needs private-sector expertise – and the private sector needs to understand the complexities of the health care system.

Evidence of change and improvement within project life cycles

Issues

The issues identified focused on both the technical and social capacity for implementing the information technology

- Use of tools added to the already heavy workload of providers.
- Implementation was complicated by frequent staff turnover.
- Infrastructure challenges such as wiring deficiencies, space for hardware, need for portability were often unanticipated.
- Training was largely dependent on use of peers; service providers needed support and mentoring to become comfortable using the networked electronic resources.
- National standards for data coding are required to achieve uniformity and consistency across jurisdictions.
- Telecommunications issues such as hardware/software inadequacy and expense resulting in delays and frustrations; time spent on fixing and adjusting equipment was sometimes greater than time spent delivering services.
- Unresolved security and consent issues.
- High cost of satellite facilities and related communications equipment; absence of a mechanism to reimburse doctors for their telehealth consultations.
- Need for follow-up work in user training, technical support, technical capacity (such as multi-point video-conferencing arrangements), human resource requirements.
- Diversity in legislation, policies, and procedures for ensuring the privacy of personal health information and lack of policies and procedures to support data-sharing between provinces made it difficult to research and compare data on health services and population health in different provinces.
- Variations between provinces in information collected and coding data made the task of comparing health data difficult.
- The infrastructure of hardware and Internet connections required to support the electronic information resources sometimes was not yet in place for all providers, which posed some difficulties in accessing information.
- Physicians favoured traditional means of communication over computerized patient monitoring methods; from a clinical point of view, they did not consider the latter useful enough to warrant making them part of their standard practices.

Example 1 NA402 **Information Technology - Systems**
National First Nations Telehealth Research Project(Parallel Studies: **NA0128, NA0161, QC323, NA403, NA366, NA0161, QC305, AB301-19, ON121**)

Many First Nations and Inuit communities in Canada are isolated, have limited access to public health care services, and tend to be less healthy than the Canadian average. In recent years, several provinces and territories have developed various initiatives, but providing services on federally operated First Nations reserves falls outside their jurisdictions. Louise is a nursing provider who had long been worried about the quality of care she was providing to Jim, her mental health client since it was very difficult for him to access specialists without traveling great distances outside his community. She would like to have been able to provide all of her mental health clients with quality nursing care, but lacked the experience and expertise or up to date knowledge on nursing practice for this complex population. These are some of the reasons why telehealth projects were planned, implemented, and evaluated in five First Nations communities (one in each of the four western provinces, and one in Quebec) to use new technologies in delivering a range of services, including diabetes management; mental health; rehabilitation; dermatology; ear, nose, and throat care; and emergency medicine. The sites used various technologies such as real-time video-conferencing for consultation with specialists, a system to store data and forward it over the Internet, continuing education for health staff and administrators by telemedicine, and technology to allow people within the community to conduct virtual "visits" with their hospitalized family members. This meant significant improvements in access to services since people could now be treated right in their own communities through electronic connections with health experts. The new technology also increased educational opportunities for providers and isolated health staff that could now access training, information, and expertise in their particular fields of practice.

In order for First Nations and Inuit communities to be able to connect with each other and participate in joint initiatives, telehealth equipment had to be standardized and made inter-operable. Successful adoption of telehealth technologies varied among the communities. The greatest predictor of success was stability of staff and because of this, staff turnover proved to be the greatest challenge at all five study sites. Telehealth coordination required additional personnel with medical qualifications to facilitate communication with remote providers. This proved to be a challenge for Louise who was already experiencing the stress of being one of only two nursing staff in her resource-constrained community that was facing chronic nurse shortages. Because the duties of coordinating telehealth were simply added to Louise's existing patient care workload, the increased burden tended to slow the full implementation of the technology.

The new telehealth projects resulted in a reduction of people requiring transfers out of Louise's community to obtain specialized medical care. It meant that she could participate in continuing education courses to give her more confidence in treating Jim, without having to leave her community. The quality of care delivered via telehealth was equivalent to, or better than, local standards and resulted in increased confidence of providers like Louise as their feelings of professional isolation were reduced. In general, the interactive video platforms were found to be the most reliable and easy to use since training needs varied with the complexity of the new technologies introduced.

This project showed that telehealth can be successfully implemented in isolated First Nations communities and has a very high rate of success, especially where there are well-established linkages with existing provincial telehealth networks. It can result in better patient access to quality care and stronger relationships with external health and education providers. All communities felt that the telehealth initiative equipped local health personnel with welcome new competencies, significantly improved access to outside expertise, and improved the quality of patient care. The results are transferable to other remote communities, but successful implementation depends on staff stability, community buy-in, strong relationships with remote providers and provincial telehealth systems, and effective technology and supports.

Example 2 Information Technology b) Tools
MB121/122 Information System Pilot for Home Care in Winnipeg (Parallel Study: **ON421**)

Although home care plays an increasing role in the Canadian health care system, there has been little systematic study of this role, and very little activity in developing home care information systems for evaluation or monitoring. At a time of both shrinking health care resources and growing interest in community-based care, it is necessary to have reliable instruments to measure the quality, efficiency, and effectiveness of care in community and institutional settings. Systematic collection of data is needed to plan and deliver accessible, comprehensive, and integrated services that would prevent clients like Peggy from having to continually repeat the same health information whenever care settings change or new service providers are introduced. It could also ensure both the availability of her health status information to all members of the health care team and consistency in the level of care she received, no matter what the sector or jurisdiction. Two related projects in Manitoba piloted a computerized information system for home care, using two assessment tools: the SACPAT (screening, assessment, and care planning automated tool) developed by Manitoba Health to act as a provincial standard; and the RAI-HC (Resident Assessment Instrument – Home Care), a tool developed by a non-profit international consortium of researchers and clinicians that was already highly regarded for its reliability and validity. The objectives of these projects were to perform a comparative assessment of the two tools by testing the reliability and validity of SACPAT at some sites while evaluating the use the RAI-HC tool at others to determine which tool best met Manitoba Home Care's automated assessment needs.

The projects were not without their challenges at all stages since implementation of RAI-HC took place while two health authorities were merging and required the creation of a system infrastructure and hardware platform for over 300 users in 15 home care offices. Accelerated implementation and testing of the software developed to support the use of RAI-HC, was resource intensive as it involved reconfiguring test sites with deficient wiring and telecommunications connections, and training sessions for users that depended heavily on the use of peers as trainers. However, the automation significantly reduced the time required to perform assessments, which was expected to translate into increased resource availability.

A study in Ontario comprising four substudies, examined the various RAI instruments used on a pilot basis in acute and post-acute care, mental health, home care, and institutional care. Assessment instruments successfully introduced included those that supported integrated health information systems (IHIS), a valid, reliable, and clinically relevant set of Home Care Quality Indicators (HCQIs), a new case mix classification system for in-patient psychiatry (RAI-MH), and a state-of-the-art case-mix classification system for funding long-term and complex continuing care (RUG-III). The acute care tool required further study before being put to routine clinical use.

RAI instruments that can articulate with each other to ensure continuity of care and comparability of data across several sectors of the health care system were found to be both valid and reliable. The data provided all levels of analysis and reporting and the protocols generated by the assessment tools confirmed their ability to accurately reflect client needs. The projects provided critical insight into the feasibility of investing in systems for collecting data to provide more detailed information for policy and planning in Manitoba and Ontario that could be applied in any jurisdiction. Manitoba and Ontario have now chosen the RAI-HC as a common automated assessment tool for home care that can provide data for resource allocation, performance measurement, decision support, quality control, benchmarking, and strategic planning. RAI-HC is the first component in creating an electronic health record for a range of continuing care services. RAI tools for home care, mental health, long-term care, and post-acute care are sufficiently refined for use in normal clinical practice in Canada today to track health indicators and guide population health strategies. Routine use of RAI tools across multiple sectors can improve access to and quality of care for clients like Peggy, support service providers' evidence-based decision making, as well as establish more equitable funding systems. Policy-makers could gain access to a solid foundation of reliable evidence that may help them to determine the outcome of policy interventions, and evaluate the needs of entire populations rather than just specific sectors.

Integration of Care/Service Delivery (49 projects)

Outcomes self-identified by the projects:

- Improved access to care; convenience for clients; in some cases, a single point of access; decreased waiting times.
- High client, caregiver and provider satisfaction and confidence.
- Decreased burden of care for caregivers.
- An interdisciplinary approach for target clientele; increased options for systematic follow-up for these groups.
- The information-sharing system increased efficiency by improving the availability of information; decision-making processes centred on family physicians and structures were developed to facilitate their communication with other team members.
- Key activities to support implementation included training, physician participation in planning committees, remuneration for change-management activities.
- Greater communication and collaboration among disciplines and agencies; facilitation of and better understanding for team members' roles; activities were more successful when people worked beyond the boundaries of their own roles and organizations, and used project resources to address cross-cutting issues in health care.
- Reduced duplication of effort between providers and between institutions and programs; easier for providers to make referrals and better continuity of care; less fragmentation of services; better use of resources.
- Multidisciplinary programming and common standards for care; in some cases, development of clinical teams with specialized expertise; sharing of knowledge and skills; modified professional practices.
- Improved quality of care and enhanced effectiveness through development of clinical practice guidelines and integrated care plans.
- Reduced use of hospital resources (fewer hospitalizations/emergency room visits, shorter stays); fewer family physician visits; more referrals to home care; an increase in recourse to ambulatory services; decreased institutional use and better use of primary care settings.
- Improved client health outcomes and greater client participation in following recommended care; patients showed a greater motivation and ability to monitor and manage their condition; this may in turn reduce the length and number of follow-up visits required.
- Financial integration facilitated expansion of scope and level of community services plus cost savings in many projects.
- Integration of supervision and program management functions resulted in more structure, better supervision and training for providers which enhanced professionalism of services and improved self-esteem of workers.

- Recognition for more intensive case management for clients whose needs were complex.
- Distribution of costs between institution and community was modified; the importance of local strategies to mobilize community approaches became apparent since patients' environments play an important role in reinforcing lifestyle changes.
- Key to success was the nature of the innovations introduced, which were locally based and incremental; the quantity and quality of new services offered to patients was a major factor in influencing doctors' decisions to participate in projects.
- Projects demonstrated inter-professional and inter-institutional cooperation to improve management of a chronic disease; improved integration and cooperation is conducive to establishing more comprehensive services for the chronically ill.
- Support and involvement of local, regional, and supra-regional partners (public health authorities) and university partners is essential In order to implement integrated services and information systems.

Issues

- Lack of support for integration from senior levels/decision-makers; need for a governance structure to develop a strategic vision to support clinical integration.
- Critical need for leadership to initiate change and create/maintain the momentum.
- Need for an integrated information system and support for health professionals to integrate technology into their practice; acquiring and implementing technological tools was difficult and time-consuming.
- Continuity of new practice model for integration was often compromised by a constant turnover among project participants.
- Geographic distance between working group members made collaboration and planning difficult.
- Unavailable 24/7 access to referral services.
- Difficulty obtaining population health data; need to move to population-based funding of primary health care services, including physician services; recommended a funding formula to reimburse physicians for alternate practice models.
- In some cases, the short-term nature of the project meant that quantifiable impacts on health services and outcomes were not readily evident.
- The compensation policy (status quo) was beyond the mandate of the projects but was a major influence on the willingness and ability of health professionals to work in teams; if physicians are to participate in the consensus-building process, new mechanisms of representation (as well as financial incentives) must be developed.
- The diversity of the groups involved made it difficult to achieve broad-based understanding and acceptance of interdisciplinary approaches and primary health care principles; there was some confusion around the roles and responsibilities of some health care professionals.

- ❑ Need for changes in the education of health professionals, with enhanced opportunities for interdisciplinary and collaborative programming in both basic and continuing education.
- ❑ Need for government leadership in setting standards and providing funding to support the full range of primary health care services – especially disease prevention, health promotion, and supportive services.
- ❑ Blurred boundaries between care levels proved to be a major challenge, as did management fragmentation.

Example 1 Integration of Care/Service Delivery
NA404 A System of Integrated Services for the Frail Elderly (SIPA) - Capitation Simulation

Since Ethel turned 83, she had been experiencing episodes of weakness and confusion, making it very difficult for her to manage her medications or dress herself. Her shortness of breath due to her congestive heart failure and frequent falls resulted in several visits a month to her local hospital emergency room. She wanted to be able to continue living alone but feared that her capacity to do this was greatly limited, so was beginning to think seriously about her neighbour's suggestion that she move to a long-term care facility. Then Ethel heard about SIPA. This new model of care believed that a patient-focused, comprehensive system of medical and social care for frail elderly people like Ethel, focusing on prevention, rehabilitation and home services would decrease inappropriate and more expensive use of acute care hospitals and institutions. In this model of integrated care, Ethel received proactive intervention (risk management) to avoid adverse clinical effects and the increased costs of crisis intervention. She was able to receive services such as a 24-hour nursing phone line; nurses making house calls; support by a medical team (medical coordinator, a geriatrician and a general practitioner reached by telephone 24-hours-a-day); and access to a family doctor who agreed to participate, plus a Case Manager who had responsibility and accountability for her full range of services. Multidisciplinary teams coordinated all health and social services for Ethel, including health promotion, rehabilitation, pharmaceuticals, technical aids, acute and long-term care across the continuum. Their prioritized themes of specific interventions included nutrition, depression, senility, support persons' burdensome task, falls, medication, flu vaccination and cardiac arrest. Ethel's plan of care was developed using evidence-based interdisciplinary protocols. Full clinical and financial responsibility for Ethel's services rested entirely within this System of Integrated Services for the Frail Elderly (SIPA) program.

Intensive home care, rapid communication/response, use of day centres and assisted housing prevented or reduced Ethel's costly emergency visits and her long hospital stays. Her visiting nurse told her about available community resources and she began to make use of these. Her nurse also showed her that she didn't need to move to an institution just yet, so helped her avoid unnecessary, premature institutionalization. The SIPA project included not only elderly people eligible for nursing-home entry (as had been demonstrated in other Canadian and international projects), but also frail elderly people with disabilities like Ethel who needed help to remain in the community and who benefited from proactive intervention, prevention and rehabilitation. The project proved the feasibility and cost-effectiveness of an integrated system of organizing, financing, and delivering services to the frail elderly, in a way that would support their autonomy and their ability to choose appropriate solutions. As a result, those receiving care and their caregivers perceived a higher quality of service and enjoyed a greater sense of security.

SIPA presents a major challenge and change to the existing system of care. It demonstrates the potential to change the configuration of resource utilization and reduce inappropriate acute hospitalization while maintaining or improving quality and satisfaction in a cost-effective manner. It partially modifies the distribution of costs between institutional and community services, changes the configuration of service utilization and promotes a model of universal, single-payer, publicly managed financing and pre-payment with a per-capita budget (capitation). SIPA's process of analyzing care and services and the changes in practice and in case management attest to the applicability of this Integrated Services program. The success of this initiative is demonstrated in the fact that the Montreal Regional Health Board has decided to implement networks of integrated services for its frail elderly population based on the SIPA model. Before a major reform to the present system can be proposed, the issues raised as a result of this project need to be addressed. The next step, therefore, is to organize demonstration projects in other jurisdictions to develop the experience of integrated care in the Canadian context and to evaluate SIPA as an effective and cost-efficient model. The result would be the integration of all public financing for health and social services delivered, including funds currently distributed to home care organizations, acute care and rehab hospitals, LTC institutions, physicians and drugs. Then frail elderly people like Ethel need remember only one phone number the next time they fear they can't take their next breath. And the person they call will be someone they know and trust.

Example 2 Integration of Care/Service Delivery
NA305 A Tri-Partite Approach to Developing a New Model of Primary Care for Eskasoni First Nation

Although many primary care and community health services had long been available to Kim as a First Nations person, she was concerned about the lack of coordination and integration among these services. She and her family accessed many services but it seemed to her that no one knew what the other was doing and she found herself repeating information multiple times. She often had to leave her Cape Breton community to receive the care she required, or she went without. She was also concerned about her needs as a new mother, and the needs of her family and community where she saw many of her friends experiencing health concerns related to substance abuse, diabetes, heart disease, and respiratory illnesses.

It was of particular interest to Kim when her Nova Scotia community decided to implement a holistic model for delivering improved primary health care services, and improved the facilities for providing these services. It meant that Kim and her family would receive a collaborative, multidisciplinary approach to care that involved her physician, visiting nursing services, health education/nutrition and pharmacy services right in her community. It also would integrate this care with the community health programs she needed to access such as public health for immunizing her 4 yr. old and helping with her breastfeeding regime, home care for her frail, elderly mother, prenatal care before the birth of her new baby and services for her husband who has Type 2 Diabetes.

The project initiated in Kim's community involved: transferring health care administration from the federal government to the local band; changing physicians' services (solo, fee-for-service changed to a multi-doctor, multidisciplinary clinic); construction of a new health complex (housing services from within and visiting professionals from outside the community); utilizing physicians, hospitals, and prescription drugs in a better way; integrating doctor-based services with community health programs; and establishing links with the regional health centre. The model made improvements in the efficiency and effectiveness of programs delivered to Kim and the other residents in her community. She was pleased that her family, friends and neighbours could now access a greater range of primary health care services within their own community because of this expanded team of local health service providers, visiting services and Telemedicine-based specialty programs.

As a result of the changes made to the health care service delivery in her community, Kim now had increased access to various primary care services while waiting times decreased and she used her family physician and her regional hospital's outpatient/emergency department more appropriately. She noticed that the integration of her services had improved and there was new collaboration with another hospital in several key areas. There was considerable cost-savings as a result of the more rational use of services plus reduced costs in prescription drug use and medical transportation. Kim, her family and their health care providers were very satisfied with this new approach.

It should be noted, however, that while Kim's community was generally enthusiastic about this primary care project, they experienced "research fatigue" because of what was perceived to be endless and seemingly fruitless investigations, studies, questionnaires and related activity for other past projects. In this project, the researchers were well aware of this dynamic and at all times took special care to provide feedback to the community and ensure that their findings contributed to an improvement in the system that was being studied.

Some outcomes from this project are specific to an on-reserve First Nations community, but many others – such as strategies for recruiting family doctors, the mechanics of establishing a multidisciplinary practice, and bridging the gap between primary care providers and community health staff – are broadly applicable to any Canadian community that wishes to implement a more cost effective, integrated model for delivering primary health care services.

Example 3 Integration of Care/Service Delivery
ON428 Coordinated Stroke Strategy

When Ted noticed a sudden numbness in his arm and began to experience trouble speaking, he remembered what he had recently heard on television describing the early warning signs of stroke. Because he recognized these signs, he immediately sought help at his local hospital emergency department and as a result, was spared the onset of a full-blown stroke through early intervention. Because the Heart and Stroke Foundation of Ontario had launched a Coordinated Stroke Strategy in Ted's region, he was able to receive optimal stroke care plus teaching regarding how to adopt a healthy lifestyle for stroke prevention. The Health Transition Fund supported this Coordinated Stroke Strategy initiative by funding the final year of a three-year evaluation in four regions in Ontario, the testing of two pilot stroke prevention clinics for high-risk individuals and the examination of the effectiveness of different methods of raising public awareness of the warning signs of stroke.

Four important developments in stroke best practices occurred during this initiative within all demonstration regions: mobilization of pre-hospital and emergency sectors for tPA delivery (the treatment that Ted received); an organized, evidence-based approach to stroke care including consolidation of care; clinical coordination and standardization of stroke care tools (standardized assessment tools, protocols, pathways, transport agreements) and practices across the continuum; and building future capacity for best practice stroke care across the continuum.

Evaluation included quantitative and qualitative data collected during interviews and surveys carried out in three waves, to yield regional and provincial profiles of progress. Three experimental test communities in Ontario and one control community were involved in the public awareness pilot project. The Central West Stroke Prevention Clinic Pilot focused on providing rapid access to early assessment, diagnostic testing and treatment for those at high risk for stroke in the Hamilton area. The South East Prevention Pilot focused on implementing evidence-based standards of care for people at risk for stroke to be used by providers of emergency department, primary and home care in South East Ontario. The findings of this innovative strategy for improving the quality, accessibility, and integration of critical stroke care showed how a secondary stroke prevention clinic can improve health by reducing risk factors for stroke patients while decreasing the need for high-cost stroke care. Successful introduction of the strategy was reliant on the close coordination of activities, and the development and maintenance of collaborative relationships among administrators, clinicians, and organizations at the local, regional, and provincial levels. Patients were satisfied with the services they received and their drastically reducing waiting times, while feedback from family physicians was favourable. Television proved to be a more effective medium than newspapers for raising public awareness about the warning signs of stroke.

There has been a striking shift in the way stroke is viewed by health care providers and the public. Clinicians have much greater hope that stroke does not have to be a debilitating illness for all sufferers, and that most stroke victims like Ted might be significantly less impaired due to new treatment approaches. The evaluation gives a picture of how a coordinated approach to stroke care leads to increased access to the best possible stroke care. The pilot prevention models are transferable to other jurisdictions as well as to other clinical conditions while the supporting regional stroke prevention protocol is also transferable to other jurisdictions. It is recognized that the clinic model must be flexible to allow for variations in the availability of human and financial resources. This project has widespread relevance since it makes a major contribution addressing the fourth highest cause of death in Canada, the leading cause of adult neurological disability, and a condition that poses a significant cost to the Canadian economy. This coordinated stroke strategy developed training manuals as well as a manual on acute stroke management for physicians and nurses that will facilitate the transfer of this approach regarding stroke care to other jurisdictions.

Example 4 NS421 — Integration of Care/Service Delivery: Improving Identification, Early Intervention and Outcomes for People with Mental Illnesses in the Community: A Model for Primary Care Service Integration

Studies have shown that models of primary health care that integrate workers and services improve availability, accessibility, and continuity of care, which in turn can improve patient outcomes. Shrinking health care resources, coupled with de-institutionalization, have increased pressure on the traditional mental health care system, which has often been criticized for being too inaccessible and ineffective. This project piloted a "Shared Care" model to meet the demand for new solutions to mental health service provision by facilitating early identification and intervention, providing easier access to appropriate services, and improving outcomes.

Terry had been visiting a physician at his local family medicine clinic but frequently found himself in hospital emergency because he was beginning to experience psychotic episodes and feared the stigma of visiting a psychiatrist. His usual anti-anxiety medications were no longer controlling his symptoms. The physician at the clinic suggested he should be referred to a psychiatrist, but Terry was having difficulty taking the bus or even keeping a scheduled appointment. What Terry needed was a comprehensive, integrated service that would address his mental health needs in a holistic manner right in his community. When the HTF funded a 'Shared Care' model for integrating community-based mental health services with primary care at three sites in Nova Scotia: an inner-city community health centre, an urban family medicine centre, a rural family practice, Terry began to receive the appropriate mental health services he required. As a result, his visits to emergency were reduced and he was able to walk to his appointments. At Terry's family medicine centre plus at two other sites, were three family physicians on salary (a fourth comparison site had fee-for-service physicians), a receptionist, a psychiatrist, and a mental health worker to help Terry with a life skills program. The interventions Terry received were generally short-term, and emphasized linking him with his family and appropriate community supports to help him with medication management and daily living activities. Terry also attended regular group therapy sessions. Staff at Terry's clinic received information about local resources and psycho-educational strategies to help them better serve their mental health clients like Terry.

The Shared Care project was evaluated regarding both the process used to implement the shared care model and its impact. Internal and external evaluators conducted surveys, focus groups, and used referral data, outpatient intake forms, patient health profiles and care plans. Results indicated that patients at the intervention sites received improved access to appropriate mental health services through decreased waiting times (by approximately 6 weeks), reduced visits to emergency, and more referrals for mental health consultations at their own site. There was a high rate of patient satisfaction and mental health outcomes were improved. Patients who were satisfied with the care received under the Model were more likely to return to their care provider and to remain in treatment. The shared care model facilitated a bio-psycho social approach to care, involving the whole family and a patient's community. Primary care providers such as Terry's family physician were better able to detect and manage mental health disorders, and reported increased confidence in dealing with mental health issues. It is significant that mental health workers also indicated greater satisfaction which can lead to not only better care of their patients but also healthier providers who are likely to take less sick time and remain motivated to practice health care.

The shared care approach encouraged collaborative relationships and improved communication between family physicians, psychiatrists and other mental health workers. Resources developed included information brochures to inform the communities of this new, integrated service. The shared care capacity to improve community access to mental health services could result in earlier diagnoses and better outcomes while treatment in a primary care setting could help to reduce the perceived stigma of mental illness for people like Terry, thereby promoting earlier and more effective intervention. This could increase health care costs in the short term but result in longer term cost savings by bringing about improvements in population health and productivity. The Model could be piloted in other areas of medicine or health care such as Oncology or Pediatrics and could be expanded to other locations in Canada.

Continuity of Care (9 projects)

Outcomes self-identified by the projects

- Development of Clinical Practice Guidelines (CPGs) helped clarify and facilitate roles; promoted quality of care; decreased average cost of caring; reduced hospital stays;
- Duplication was avoided and consistency of care promoted.
- A significant factor in continuity of care for some was a case manager who was responsible for people in a geographic area who would plan services and perform evaluations.
- There was an increased use of CLSC services.
- Computerized client records facilitated real-time clinical exchanges between stakeholders in different fields and institutions.
- Decreased institutionalization of seniors and maintenance of independence in the community or facilitated the choice for home death at end of life.
- Informal care providers had a better quality of life and physical health; there was reduced reliance on family caregivers.
- Factors playing an important role in the delivery of services included identification, response, and referral.
- Having 24-hour access to services made clients feel secure and gave them peace of mind; services were used appropriately.
- Both professionals and clients considered a single-window service, and the confidence that it inspired in clients, one of the project's greatest achievements.
- Frail persons or persons at risk of becoming frail who were not previously known to home care programs were identified; early identification of seniors who are frail or at risk of becoming frail is important, in order to anticipate and accelerate responses to their needs.
- The establishment of a management model revealed the importance of inter-organizational collaboration.
- Development of an integrated, continuity of care model allowed for the creation of closer links among clients, their families, community resources (including CLSCs and doctors in private practice), and institutions.

Issues

- Barriers to care continuity included: systems barriers relating to definitions of roles and responsibilities and the scheduling, availability and assignment of human resources; family/caregiver/client barriers relating to resistance to change, lack of education/ awareness of benefits; lack of caregiver capacity to provide support; geographic barriers relating to access to services, supports, equipment and supplies; inter-jurisdictional barriers when continuum of care involves another region; systems management and control, resources and constant system change.

- Concerns expressed: too early hospital discharge; insufficient home supports; uncoordinated services; lack of respite care; insufficient bereavement support; lack of physician involvement; lack of information on programs.
- Concerns were expressed by those receiving care about lack of continuity of providers (physicians, nurses).
- Individuals with similar needs receive varied levels of care in different sectors and jurisdictions.
- The needs of those dying and their families are continually and rapidly changing, requiring a flexible approach.
- Seniors with mental health problems remained a relatively under-served population.

Example 1 Continuity of Care
YT421 Continuing Care Adult Day Program
and
NT401 Improving the Effectiveness and Efficiency of Program Delivery for Aged, Disabled and Chronically Ill Individuals

One goal of the Yukon's health care system is to enable people to live in the community for as long as possible. Mrs. J. had been finding it increasingly difficult to manage her cognitively impaired husband's personal care since he underwent an amputation as a result of diabetic neuropathy. She wished to continue caring for him at home but feared he would soon be forced to move to a long term care facility since she lacked the strength and energy to meet his needs, even with home care services. When she heard about a new day program opening at a nearby long term care facility, she was eager to apply for respite care to support her decision to maintain her husband at home. Her community had identified an urgent need to provide day program supports for people like Mr. J since there was no alternative to residential care for people with physical and cognitive impairments to remain in their own homes as their care needs advanced.

This HTF-funded project developed and evaluated a community-based day program for culturally diverse people with significant physical and/or cognitive impairments by testing the feasibility of serving clients like Mr. J. in a non-residential setting. The challenge was to meet the diverse advanced care needs of different populations in the same program, as required by the budget of a small jurisdiction. To address this challenge, a program that focused on recreational and rehabilitation activities in a home-like environment was varied on a daily basis while partnerships with other organizations were developed to tailor activities to the needs of individual clients.

The program's effectiveness was evaluated by comparing data from before admission to data collected at the project's one-year evaluation point. In addition, clients, caregivers, and staff completed satisfaction surveys. There was a high level of client satisfaction, including appreciation from family caregivers for the respite the day program offered. Cost savings was achieved by delaying institutionalization and decreasing the number of home care hours provided by an average of forty percent. Social, personal, and health service supports were provided to both clients and their caregivers, enabling people with complex needs like Mr. J. to live in the community for longer periods, thereby preventing or delaying the need for institutionalization. A high level of success was achieved, resulting in longer-term funding being obtained to continue the program.

Another project in the Northwest Territories developed and implemented a Continuing Care Assessment Package (CCAP) to ensure more objective, standardized assessments, better planning for service delivery, housing, and other resource needs for clients requiring continuing care services. This project evaluated a "single point of access" approach to the continuing care system, and a uniform assessment process - factors that were identified as important in ensuring equitable, more efficient and effective service delivery. The use of the standardized tool helped direct clients to community-based services, smoothing the transition from hospital-based to community-based care by ensuring that clients had access to appropriate services as close to home as possible. This greatly eased clients' access to the continuing care sector, providing a cost-effective alternative to institutionalization by eliminating the confusion, inconsistency, overlap, and subjectivity involved in filling out multiple forms for different services and integrating community programs and services.

Small jurisdictions faced with meeting broad-ranging needs within budgetary constraints can benefit especially from the knowledge gained from these projects. Both point out the principal problems in implementing such continuing care programs in small jurisdictions are inadequate staffing and staff turnover. Since the loss of expertise has a serious effect on program implementation, one project recommended development of a written manual and continuing training plus supportive management to gain acceptance of new, standardized approaches to continuing care for ensuring fairer and more effective access.

As the Canadian population ages, health planners will be continually looking for ways to make better use of community resources such as home care and long-term care. Other population groups, such as clients from the mental health population or young adults with multiple disabilities in any jurisdiction, particularly small ones with limited resources, could benefit from this approach.

Example 2 Continuity of Care
NF301 Primary Health Care Enhancement Project

When attempting to affect change on a broad scale, the context in which projects are implemented can present challenges and sometimes barriers. Since some structural and process barriers cannot be removed, they may seriously impact a project's outcomes. For example, provider compensation and education policies are usually beyond the mandate of projects but can be a major influence on the willingness and ability of health professionals to embrace new practice approaches such as providing client/caregiver education, developing practice guidelines or working in interdisciplinary teams. Also, the diversity of the groups involved in many projects can sometimes make it difficult to achieve broad-based understanding and acceptance of interdisciplinary approaches and primary health care principles.

One project that experienced these challenges was a Newfoundland and Labrador primary health care initiative that took place at three rural sites over 3 years. As a physician with a large, remote rural practice, Dr. Ed had long felt overwhelmed by the unmet needs he saw in his community. He was relieved when he heard that a Primary Health Care Enhancement Project (PHCEP) would focus on three urgent rural health care issues: the recruitment and retention of health professionals to alleviate physician shortages and increase the use of health care teams; continuity of care and a more integrated system with a greater focus on community development; and movement toward a primary health care model with increased focus on the determinants of health. Recruitment and retention problems were addressed through the introduction of multidisciplinary medical services and teaching units at each site. Continuity of care was improved through the establishment of nurse practitioners. Strategies that influenced all three issues included the use of video conferencing equipment for clinical consultations, the dissemination of health information, and the creation of professional development opportunities.

Evaluation included a baseline information collection phase, an interim evaluation phase, development of case studies illustrating transferable lessons on implementing reform in rural areas and a parallel evaluation of the implementation of the nurse practitioner role in the province. Critical to the project's success was the fact that there was collaboration with key health and community services organizations, academic organizations, and community groups. Specific activities were tailored to the unique needs and priorities of Dr. Ed's plus two other individual rural sites, including interdisciplinary teaching and promotion of interdisciplinary teams, increased use of technology to improve communication and increase access to information and to continuing education for rural health professionals like Dr. Ed and his nurse, and promotion of population health strategies by encouraging interaction among health and community services partners.

Important lessons regarding delivery of primary health care were learned that could inform those in other jurisdictions about the process of implementing change on this scale. Activities were more successful when people worked beyond the boundaries of their own roles and organizations and used project resources to address crosscutting issues in health care. Innovations were locally based and incremental in nature. There were mechanisms to provide the public with ongoing information and a process for feedback on the rationale for the changes. As was the case in many of the HTF-funded initiatives, the short-term nature of the project meant that quantifiable impacts on health services and outcomes were not readily evident, but positive changes occurred at all sites regarding the workings of the health care system and its relationship to the community. This project underlined the fact that even further improvements to the delivery of primary health care could be achieved by: enhancing opportunities for interdisciplinary and collaborative programming in both basic and continuing education; moving to population-based funding of primary health care services, including the services of Dr. Ed and other physicians; ensuring joint planning and government leadership in setting standards and providing funding to support the full range of primary health care, particularly for disease prevention, health promotion, and supportive services. Primary health care reform must be community-driven and based upon evidence such as needs assessments, population health profiles, and community consultations. Strategies should be premised upon the community capacity to undertake the changes, the stability and right mix of resources, and a plan for incorporating the proposed changes into the ongoing management directions of sites.

Social Support (14 projects)

Outcomes self-identified by the projects

- ❑ Participants experienced improved physical and mental well-being (better sleep patterns, reduced anxiety, better focus and memory, fewer marital problems).
- ❑ Simultaneous operations of children's and adults' programs enhanced accessibility.
- ❑ Dependence of the participant on cultural workers inhibited their integration into Canadian culture.
- ❑ Role of the cultural worker may have confounded the validity of the data collected from clients.
- ❑ All levels of government and service providers became more aware of and more sensitive to clients' needs and issues.
- ❑ Enhanced access to information and resources helped overcome feelings of social isolation.
- ❑ Proportion of those using school-based employment services and legal information resources rose.
- ❑ Partnering of many community agencies enhanced the outcome (schools, community and recreational services, child care services); collaborative linkages were more likely to remain stable when focused on a common search for solutions with the main areas of cooperation being information sharing, coordination of roles, joint intervention and risk/ responsibility sharing.
- ❑ Women's unpaid work contributed greatly to their families' economic livelihood and volunteer activities and care-giving helped to keep families and communities together.
- ❑ An increased participation in community-based social support programs was realized if the services were offered in a safe facility, participants were provided with transit tickets and child care and their anonymity was guaranteed.
- ❑ Programming for some high-risk populations needed a significant development period to become well established and had relatively low uptake and low completion rates within the timeline of the project, which was not atypical.

Issues

- ❑ Suspension of some projects until legal and ethical implications can be reviewed.
- ❑ The uneven distribution of family physicians, specialists, counseling services forces many to travel at considerable personal expense for needed services.
- ❑ Concern of some providers regarding the compulsory nature of some protocols and confidentiality.
- ❑ Lack of money and the need to balance responsibilities were key stressors for young parents wishing to access services.

- ☐ Lack of childcare and lack of flexibility in the conventional high school curriculum were barriers to education.

Example SK327 — Social Support

Survivor Services Program: An Integrated Service Delivery Model with Female Survivors of Child Sexual Abuse

There is a growing movement toward complementary and alternative therapies, in part because organizations are assessing their potential benefits for clients who have not always been well served by the formal medical system. The positive response to these types of healing treatments by women who have survived sexual abuse in childhood, suggests that the traditional health care system may need to become more aware of the possibilities inherent in complementary and alternative therapies. This evaluative project was implemented to determine whether complementary therapies delivered in a community-based agency are beneficial to survivors of child sexual abuse.

As a child, Bonnie was removed from her family and forced to attend a residential school where she was physically and sexually abused. Although she is now in her mid-forties, as a survivor of child sexual abuse, she has suffered lasting repercussions, including depression, suicidal tendencies, flashbacks, eating and sleeping disorders, and a tendency to abuse substances and herself. Bonnie's counselor found that conventional medical interventions, such as drug therapy and electro-convulsive shock therapy, did not adequately help Bonnie to cope with the aftermath of her childhood sexual abuse. She was aware of various studies that have suggested that clients like Bonnie could benefit from holistic and empowering care if these services were offered in a safe, protected environment such as a healing centre or residential-care program that is integrated into the broader health care system. Thus, when a small non-profit, community-based healing centre in Saskatchewan applied to the HTF for support to evaluate the impact of three complementary healing therapies – Aroma-Massage, Reiki, and Psychodramatic Bodywork® – for female survivors of child sexual abuse who were16 and older, Bonnie's counselor asked that she be one of the 76 female survivors of child sexual abuse involved in the study.

After completing a course of treatment, Bonnie reported that receiving holistic therapy, through either Aroma-Massage or Reiki, made her feel less vulnerable, isolated, mistrustful, and guilty. She also ate and slept better, and felt less body pain. This effect was sustained, to a lesser degree, after two months. Other women who received alternative therapies found that participating in the Psychodramatic Bodywork® process was "life-altering," giving them a better self-image, improved relationships, and enhanced functioning. All participants were enthusiastic about continuing with the therapies and trying other forms of complementary treatment. They were also willing to use community-based services offered by a safe facility as long as they were provided with transit tickets and childcare, and their anonymity was guaranteed. Many study participants did not choose these interventions as an alternative to counseling, but wanted to enhance their healing with complementary holistic body therapy. Unanticipated outcomes of this project included: the development of a complementary care practitioner training course on child sexual abuse available province-wide; establishment of a non-profit healing cooperative in one community to provide safe, accessible healing for all; and workshops for psychology students and other researchers describing and outlining safe and appropriate methods of research with sensitive populations.

This research project demonstrates that community-based organizations have an important role to play in health care reform. The goal was to fill a gap in existing health, justice, education, and social services, by helping promote integrated service delivery for female survivors of child sexual abuse. Currently, many survivors like Bonnie, who are struggling with sexual abuse issues need a safe place to go and often need to admit themselves to psychiatric wards of local hospitals because there are no existing specialized 24-hour services designed to meet the needs of survivors. All those involved in providing services to victims of violence including government agencies, community services and professionals must ensure completeness, continuity, consistency and quality of service delivery by developing and establishing national standards for the provision of adequate services. This research contributes to the development and establishment of such standards that will ensure quality of service to adult survivors of child sexual abuse.

Changes in Practice a) General (40 projects)

Outcomes self-identified by the projects:

- ❑ Earlier, more accurate, more comprehensive diagnosis of difficulties; physicians more confidence in diagnosing and treating clients with more complex or unfamiliar conditions; shift from prescribing and fixing to enabling and facilitating.
- ❑ High levels of client satisfaction with their care and with health care system.
- ❑ Improved client outcomes (function, quality of life).
- ❑ Reduced waiting times and improved continuity of services.
- ❑ Clients and caregivers more knowledgeable about resources available to them, felt more connected to services and were more involved in their own treatment; the nurse discharge coordinator was a vital link between the ED and community resources.
- ❑ Increased understanding on the part of the care providers for the client's environment/ culture, issues faced and condition/disability.
- ❑ Increased knowledge, confidence and skills of team members who work more effectively and with less stress; increased job satisfaction; work more interesting.
- ❑ More appropriate referrals to outside agencies.
- ❑ By bridging the gap between hospital and community care, the nurse discharge coordinator helped to reduce unplanned return visits to hospital and emergency room or physicians.
- ❑ Fragmentation of care was avoided by optimizing access to, and integration of, services.
- ❑ Decrease in family's burden of care.
- ❑ Cost savings and greater efficiency (in one study, over $1 million per year).
- ❑ Use of technology to improve the accuracy, accessibility, timeliness and coordination of shared client information.
- ❑ Increased involvement of family and team members in care decisions.
- ❑ CPGs developed revealed inappropriate practice patterns, improved reporting formats, improved communication between various providers.
- ❑ Providers felt more confident to diagnose and manage unfamiliar conditions.
- ❑ Participation in practice change projects increased staff awareness of the principles of change management (developing project, ensuring staff involvement, supplying adequate training and tools, setting up a follow-up mechanism, assessing at end of each stage).
- ❑ Relatively straightforward projects that targeted a single disease or condition were the simplest to implement and demonstrated results fairly rapidly.
- ❑ With implementation of a nurse discharge coordinator, there was a significant increase in patient satisfaction with the clarity of information provided at discharge, including the preparation of both patient and family for discharge, suggestions on relieving symptoms, information about warning signs, and arrangements for transportation home.

Issues

The issues identified here were related to clarity of role and function among services providers, and the time, organizational and resource commitment to introduce changes in the way care is provided.

- Lack of funding and a reluctance to take risks.
- Services or activities developed without an appropriate focus on sustainable development will be vulnerable.
- Prolonged debates regarding roles.
- Public expectations that exceeded what the new model was able to offer.
- Opposition from physicians to expand hours of service and their perception that provision of medical services by others within the team was in direct competition to their own services.
- Although physicians' knowledge of effective treatment approaches (for diabetes) is increasing, this knowledge is not well integrated into their day-to-day practices; almost all physicians had used a clinical tool based on Canadian guidelines, and many reported changes in their practices as a result.
- Organizational structures and geographic catchment areas in some cases proved to be barriers to model development.
- Insufficient time and little financial incentive for physician/psychiatrist involvement; some fee schedules discourage home-based care.
- Human Resources and time required to develop and maintain new practice model; time frame for completing project which barely allowed time for the information gathering, decision-making, and mobilization efforts required to implement the initiatives.
- Where workloads were heavy, innovation remained more theoretical than real.
- Simple, straightforward projects, although easy to implement, produced limited results and failed to address fundamental structural issues in the health care system.
- Highly complex projects with broad-ranging implications were more difficult to implement but had greater potential in terms of change.
- Projects that demand substantial changes, are bound to come up against "zones of inertia" – managers are attached to their institutions, and care providers to their clinical styles; injecting more money does contribute to the ability to make changes, but it is not a guarantee of success.
- Efforts were hampered by changes in municipal government, budget cuts, and the amalgamation of municipalities during the lifetime of the project as a result of local elections; this disrupted the continuity of the activities to familiarize the communities with the initiative and its decision-support tools.
- In smaller communities, the same people are frequently called on to sit on a number of local committees and as a result, their capacity can rapidly become strained.

Example 1 Changes In Practice - New Practices of Service Provision
BC122 Cluster Care Pilot Program

Joe had worked as a home support worker for over 20 years to support chronically ill and disabled people living in the community by assisting them with personal care and household management activities. For some time now, he had been expressing concern that his time was being wasted and that the impact of his care provision was not of the quality he would like it to be. When Joe heard that the British Columbia agency that contracted his services was looking at a new way of organizing and delivering home support services using multi-disciplinary home attendant teams, rather than individual workers to serve "clusters" of clients at selected senior housing sites, he was excited to be able to participate in the development and implementation of this new model of care delivery.

Implementation of the new model involved a lead-time of six months to develop cohesive care teams and to educate clients and providers about this new approach. The target group was high-density residential buildings where many clients were already receiving a large number of home support service hours. The team (case manager and home support service provider/ supervisor) completed up-to-date assessments of clients to determine the actual care required and arrange the schedule of service that moved beyond the usual task oriented approach to a focus on maintaining clients' independence and quality of life. A single home support agency was utilized in each building and the new program was promoted with the building manager, residents, caregivers and home support staff. The same approach was used with all clients in the building except those receiving very high or very low intensity services (e.g. 24 hr per day or once monthly care). It was necessary to revise usual billing procedures, orientate home support staff on the change in care approach and completion of time sheets as well as address union issues. Weekly team meetings contributed greatly to ensuring consistency in approach, collaboration and for monitoring clients' progress or changes in condition.

The Cluster Care concept provided an economical, efficient and well-coordinated approach to delivering home support services to vulnerable communities and was very successful for many reasons. The model allowed Joe to base the services he provided, on the specific needs of his clients since he could be in constant contact with them to make direct judgments as to the intensity of care they required on a on a day to day basis. This meant that Joe's visits were typically shorter, but more frequent and more flexible since he was much more involved in his clients' immediate care. He was visible in the building and clients knew how to reach him when needed – his response was prompt in unexpected incidents and he was able to carefully monitor at-risk clients or identify potential new clients because he had a higher profile in the complex. He was involved for a longer period of time and there was improved continuity of care. He attended weekly team meetings with the health region case managers who emphasized initial and ongoing assessments to determine clients' changing needs. Soon after this new way of delivering service was implemented, Joe began to feel as if he were really making a difference in the health and quality of life of his clients. He also felt more confident due to the ongoing training he received to develop the additional skills he required.

Cluster Care demonstrated a model of integrated service delivery that provided home support services in an effective and efficient way by using multidisciplinary teams to enhance the health, well being, and quality of life of clients in the community. By basing services on the actual time required to meet client needs rather than in rigid blocks of time, it has the potential to improve the quality of services by increasing availability/access to the right care at the right time, improve the relationship between clients and care providers and provide a more cost effective service. As Canadians age, they are more likely to require services to assist them to remain at home, so the demand for home support services is expected to increase significantly over the next years. It will be important to consider implementing creative solutions to meeting the increased demands for services in the face of limited and rationed resources. The Cluster Care model is a very simple initiative that could be achieving significant cost savings to help meet increasing demands while at the same time, improving the quality and consistency of care delivered in communities across Canada with high-density frail elderly or chronically ill populations.

Changes in Practice: b) Drug Use/Client and Prescriber Education (11 projects)

Outcomes self-identified by the projects

☐ Physicians strongly supported education-based initiatives to improve prescribing practices but opposed any regulatory mechanism requiring it.
☐ One province’s online pharmaceutical database was effective in providing prescribing feedback for certain medical conditions.
☐ An internet-based reporting system for data collection proved to be efficient.
☐ Implementation of a “PharmaNet Alert System” was effective, supported by most pharmacists (even if there was workplace disruption) and resulted in people knowing the names of their medications, knowing how to handle missed doses, having the confidence that their medication regimes were appropriate and accepting of the privacy implications of alerting pharmacists to their prescription patterns.
☐ High quality educational materials that reflected clinical expertise and experience plus evidence from the literature and involvement of clinicians and patients were essential.
☐ Partnering with regional public health units was most effective when delivered alongside professional education through proven methods such as local media coverage and strategies tailored to the individual community.
☐ Development of a national repository of drug use data prototype promised to give the ability to make inter-jurisdictional comparisons that would be valuable for analyzing

pharmacare policies and their results; jurisdictions that were already familiar with analyzing national data on prescription drug use felt provincial expertise would be more valuable to them than centralized expertise.

- In the long term, the potential exists to link pharmaceutical data to other health data in order to determine how new or existing policy affects total health care costs.
- Removing the cost of drugs may result in better health management for low income families.
- Drug Information guides helped patients to understand issues involved in prescribing medications and had a significant impact on the type of counseling patients received in the treatment of sore throat and heartburn (more non-drug alternatives offered).
- Leaflets in pharmacies or physicians' offices and information posted on the Internet are useful ways to distribute user-friendly drug information.
- A Reference Pricing policy lowered provincial drug costs but the savings were partially offset by an increase in expenditures on ambulatory physician visits.
- Variations in the extent of public and private drug insurance coverage among Canadians do not appear to affect patterns of drug use among people of average socio-economic status; expansion of drug subsidies through a national pharmacare program would not encourage most Canadians to use more medications.
- A system for classifying anti-infectives and monitoring their use is key to ensuring their continued effectiveness.

- Measures to control costs of drugs include positive and negative lists, reference pricing, and practice guidelines.
- Direct To Consumer Advertising is a controversial area since many claims are made about benefits and risks but there is relatively little empirical research to back those claims.

Issues

The issues to emerge from the projects centered around the ability of practitioners to be able to learn from educators, technical and data access problems associated with databases and the extent to which interventions actually led to changes in prescribing patterns.

- Discrepancies between prescribing recommendations in educational material and professional guidelines from consensus conferences and specialists made it difficult for prescribers to decide how to apply the learning material.
- The complexity of an online pharmaceutical database system limited its immediate potential for improving prescribing practices.
- The busy pharmaceutical environment is not conducive to finding time to counsel persons regarding management of their medical condition.
- Many people found it difficult to get to the pharmacy.

- Difficulty recruiting people receiving care, physicians, pharmacists to participate in studies.
- Difficulty securing educators.
- Difficulty persuading physicians to act on the recommendations of educators.
- The goal of linking pharmaceutical data to other health data – although agreed to in principle – may never be feasible, for reasons of data compatibility, integrity, and the need to protect privacy.
- Some interventions were well accepted but had little or no impact on adherence or prescribing practices.
- Inconsistent level of preparation in the Canadian medical education system to respond to the need for a large-scale quality assurance interventions regarding drug prescribing.
- Government funding, and leadership by medical educators, may be needed to enhance Canada's capacity to optimize pharmaceutical use.
- Drug prices are a barrier to care for people of low income; by shifting costs from consumers to government, drug subsidies could encourage greater medication use by this segment of the population.
- Use of anti-infective drugs differs significantly between provinces due to the beliefs and practices of physicians, public demand for anti-infectives, and pharmacare reimbursement practices.
- Competition for pharmaceutical research and development funds will result in strengthening of patent laws, more rapid listing of products as insurable benefits, freer pricing of products.
- A more integrated and comprehensive process for setting pharmaceutical policy is needed including a focus on priority setting, greater transparency, stakeholder input, a consumer focus in formulary management, parameters to guide the listing of insured drugs, role of consumer cost-sharing, role of the medical profession in managing drug use, strategies for attracting investment in the drug industry, patent issues and post-market studies on drug effectiveness, safety and cost.

Example 2 ON221 Changes in Practice – Drug Use/Client and Prescriber Education Randomized Trial Evaluating Expanded Role Pharmacists for Seniors Covered by a Provincial Drug Plan in Ontario – (Parallel Study: **ON 223**)

Although seniors make up just 12 percent of the Canadian population, they receive between 20 and 40 percent of all prescribed drugs and this can result in a significant impact on health care budgets and private insurers. On average, seniors like seventy-year-old Faye take between three and five prescribed medications a year and this number is expected to increase substantially as Faye ages. Faye's risk of a drug-related problem also increases with the number of medications she takes and she is under the medical supervision of multiple physicians who do not regularly communicate care plans. Because of this, a model was developed for expanded-role pharmacists (ERPs) trained to provide cognitive, clinical, patient-based care to work with family physicians (FPs) to optimize the medication regimens of seniors.

This Seniors Medication Assessment Research Trial (SMART) project used a "cluster randomized control trial design" that involved Faye and almost 900 other senior patients, each using five or more medications, in 48 family practices in urban and rural Ontario. Pharmacists were twinned with family physicians in the intervention group, information-sharing policies were changed to give ERPs access to medical records and patient interviews, ERPs facilitated recommendations on identified drug-related problems, and FPs determined which recommendations would be implemented.

About 3 drug-related problems per person were identified in 88 per cent of the patients in Faye's intervention group. The two most common problems were not receiving a required drug, and taking a drug that was not needed. Physicians agreed to implement 84 per cent of the recommendations they received from pharmacists, and after five months, 57 per cent of those changes had been implemented successfully. Both FPs and ERPs recommended this new method of collaboration to colleagues. Faye's FP appreciated the support of her ERP in balancing her complex drug regimen. Faye's ERP felt better able to assess her full medication profile when he had access to her FP's medical chart, and was pleased with the strengthened relationship he had with her FP. Faye expressed a high level of satisfaction with the service provided by her ERP.

Another project (ON223) involved physicians, pharmacists, patients, health care decision-makers and other key stakeholders to develop and test an expanded role for pharmacists to improve drug therapy and reduce drug-related morbidity and costs. Potential expanded roles a pharmacist could play were identified: providing detailed drug information to doctors and patients; doing comprehensive medication assessments; checking prescribing guidelines; and making drug-related decisions as independent practitioners. All three groups generally supported the principles of collaborative practice and a more integral role for pharmacists but physicians had more conservative opinions than did patients and pharmacists about the roles that would be acceptable. They were less comfortable with the possibility of pharmacists having access to medical histories and charts since they were unsure of the level of training pharmacists receive, and the exact structure of the physician-pharmacist collaboration. Neither physicians nor patients strongly favoured the notion of the pharmacist as an independent practitioner and only one third of the patients supported a fee-for-service dispensing fee structure when the service included an expanded pharmacist role.

These models of FP and ERP collaboration for optimizing the drug therapy of seniors like Faye who require multiple medications were successful, effective and reproducible since pharmacist education programs across Canada include training on cognitive, clinical, patient-focused care. These HTF-funded projects have generated findings that could enable policy planners to better ensure patients receive optimal benefits from their drug therapy, with the most efficient use of scarce resources. This approach could influence how family physicians prescribe medication to their patients, and the quality of care they provide to them, without affecting health expenditures and could well decrease the overall cost. Because collaboration between these two groups of health care providers that have traditionally worked in relative isolation was improved, the model offers a viable reform strategy for primary care that could be implemented in any jurisdiction.

Cost-Effectiveness (16 projects)

Outcomes self-identified by the projects

- The majority of studies found that their interventions resulted in cost savings (range of 32 to 114%; several studies reported over $1 million/yr).
- Health outcomes were the same or better (increased satisfaction with care, increased function, improved healing rates, increased quality of life, higher level of participation in care, fewer hospital admissions/readmissions, earlier hospital discharge).
- Decreased burden of care for family.
- Formal care and informal care are complimentary, not substitutive.
- Community care was significantly less costly than residential care.
- Clients and informal caregivers contribute significantly to the care costs of community (50%) and long-term care facility (33%) clients.
- Some projects provided data that could be useful in changing organizational policy or practice with resulting significant savings on program costs; reports produced that improved ability to monitor and thus control costs.
- Ability to make national data available facilitated inter-jurisdictional comparisons that would be valuable for analyzing various federal, provincial, territorial policies.
- Some studies reported strategies for implementing higher intensity of intervention while maintaining costs.
- Provincial drug plans vary widely in their policies and procedures, including their approaches to approving drugs -- a process that has far-reaching implications for program costs.
- A National Scientific Review Committee should be struck to assess the comparative cost, safety and efficacy of prescription medications.

Issues

- Many studies reported a ‘systems disincentive’ to implementation of cost saving models of practice (e.g., physician/psychiatrist fee schedule that favoured institutional vs. community intervention).
- Human resources constraints and limited time for professionals to be involved seriously limited the development and implementation of the cost savings strategies.
- Some studies reported no difference in costs or outcomes as a result of small sample size.
- The short duration of evaluations limited the researchers’ ability to draw definitive conclusions about cost-effectiveness.

- ❑ It was difficult to evaluate the appropriateness of provincial decisions regarding cost effectiveness on listing new drugs because of inconsistencies of approach, both within and between provinces, and because the information supplied by the drug companies was generally incomplete and inconsistent.
- ❑ Many projects reported that current data collection practices precluded cost-effectiveness analysis.

Example 1 NA246 — Cost-Effectiveness: Evaluation of Provincial Procedures for Drug Listing - Specifically Focused on Approaches to Cost-effectiveness (Parallel Studies: NA201, NA235, NA 222, NA 227)

Most provincial governments subsidize the cost of prescription drugs for at least some of their populations (typically seniors and recipients of social assistance), and the burgeoning costs of these programs are a grave concern. Government funding of prescription drugs rose by 87 percent during the 1990s, far outpacing increases in other health sectors. Several projects were funded by the HTF to determine the feasibility and value of developing a consistent system for analyzing national data on drug use, costs, and outcomes in order to assist the managers of public drug plans in developing cost-containment policies and standardized approaches to drug listing. Clients like Sarah who rely on provincial plans to fund expensive medications were also concerned about the lack of transportability and transparency of their drug plans. Sarah was surprised to discover she could not access coverage for her rare skin disorder medication when she moved to a new province to live with her daughter. Provincial drug plans vary widely in their policies and procedures, including their approaches to approving drugs - a process that has far-reaching implications for program costs and client access to coverage.

This study was able to evaluate current processes for listing medications in five provincial formularies (Alberta, British Columbia, New Brunswick, Ontario, and Quebec), paying particular attention to the drug's cost-effectiveness as it applied to the process of acceptance of five new brand-name drugs in these provinces. The basic assumption was to provide medications with the greatest benefit and least risk at best cost. The evaluation was a cross-sectional observation survey of federal/provincial government and Canadian research-based pharmaceutical company representatives using four questionnaires in two categories: general objectives about organizational structures, procedures, expertise, accountability, monitoring methods and data; and drug-specific questions about the experience with the index drugs to identify the bases for the decisions to list, not list or de-list a medication.

Although all five provinces conducted a systematic scientific evaluation of new drugs before listing them, the approach to listing drugs on the provincial formularies was unscientific, not evidence-based, not transparent, and inconsistent across the provinces. Drug evaluations rely a great deal on economic data provided by manufacturers with only two of the five provinces conducting their own independent economic assessments, and then only rarely. Drug companies varied greatly in their methods of estimating the costs of their drugs. Rarely was information included on indirect costs, and on the drug's impact on patient quality of life. The provinces generally found that important data were missing from the product submissions including the efficacy and safety of the drug in comparison with alternatives, the cost-effectiveness of particular treatments, and the total cost to the provincial health care system.

Study NA246 showed that the current methods for evaluating the cost-effectiveness of drugs for listing in provincial formularies were not population evidence-based or consistent between provinces. The diversity between provinces – in terms of decision-making processes and personnel, degree of reliance on outside sources of information and analysis (manufacturers), evaluation criteria, and provincial priorities – meant that some drugs were listed in some provinces, but not in others. This may not be in the best interests of the Canadian public and affected people like Sarah who depended on provincial drug plans for their subsidized medications. The costs considered, tended to be estimates of the impact on the budget of the provincial drug plan rather than an overall evaluation of costs to the provincial health system and to patients. Clear assessment criteria and a National Scientific Review Committee to assess the comparative safety and efficacy of prescription medications to bring about a consumer focus in formulary management, and more post-market studies on drug effectiveness, safety, and cost would be beneficial. A standard submission package and greater transparency in provincial/territorial decision making would assist in making the “decision to list process” more acceptable to all involved. Projects NA201 and NA235 developed a database of national drug use practices and costs and compiled claims data into this database (the OPUS project). These projects provided examples of data analysis that insurers indicated could be useful in changing policy or practice, and that could result in significant savings on program costs while producing reports that improved insurers' ability to monitor and control costs.

Example 2 **BC421**	**Cost Effectiveness** **Evaluation of the Alternate Level of Care Management Initiative (Carelinks)** **and**
NA0101-1 to 14	**Cost-Effectiveness of Home Care** (Parallel Studies: **NA0132, QC123, SK124, NA201**)

Most provinces have recently highlighted fiscal problems pointing to escalating health care costs as a major contributor. HTF project sponsors envisioned several types of health care transition, one of which was a more cost-effective way to provide services. A large number of cost analysis studies in a multitude of settings that addressed a variety of conditions and life stages were funded by the HTF. Some studies examined the cost implications of providing integrated home care services, hospital alternate level of care, home IV antibiotic therapy and prescription drug costs while a large, multifaceted research program investigated the cost-effectiveness of home care services.

One province evaluated an early discharge program in two hospitals in a British Columbia Health Region that was designed to improve coordination by using community (rather than hospital) staff to improve the links between continuing care and hospital care. Clients like Mr. P. who suffered a hip fracture and no longer needed a bed in acute care, were discharged from hospital earlier and received appropriate care at home, in the community, or in long-term care facilities. This ‘Carelinks’ program was financed by a restructuring that included closing a 30-bed ward and eliminating some staff positions to redirect resources for services such as client coordinators, transitional care units, and enhanced community care resources. The diversion of resources to Carelinks was cost-effective with a savings of almost $1 million realized in the year following the restructuring and implementation of the program. Clients like Mr. P reported improved health status and increased satisfaction while physicians and staff were both positive and satisfied with the program. Another study evaluating hospital versus home care for the elderly (SK124) also found the cost of providing home care less than the cost of providing alternate level of care in hospital.

The National Evaluation of the Cost-Effectiveness of Home Care (NA101) consisted of 15 substudies that examined the cost of home care compared with that of institutional care. Six studies examined home care as a substitute for long-term care, and nine examined home care as a substitute for hospital or acute care services. The studies found that overall, home care was generally cheaper at all levels of care than care in institutions and provided at least an equivalent quality of care. The overall cost to a province for home care clients was less than the cost of facility care with greater savings realized at lower levels of care and for individuals whose type and level of care was stable over time. However, several studies found that informal costs for both community living and facility clients were considerable, with informal caregivers contributing approximately half of the care costs of community living clients and about one-third of the care costs of facility clients. A study that evaluated the cost benefit of a geriatric day hospital based on functional autonomy changes (NA0101-10) found a 114% cost benefit. The cost of home care for intravenous antibiotic treatment of individuals with cellulitis (NA0101-11) was cheaper than hospital care, even when multiple visits were made to emergency departments. The cost of home vs. hospital management of feeding difficulties in pre-term infants (NA0101-12) showed no difference in indirect family costs, hospital delivery costs, or total system costs but the group with home care had significantly higher rates of babies being exclusively breastfed and maternal satisfaction. A quick response program (QRP) in Saskatchewan (NA0101-14) confirmed that the costs of providing community-based services initiated by the QRP were lower than the costs of providing hospital care.

A comparison of hospital and home chemotherapy for children with cancer (NA0132) showed higher costs for staff, supplies and drugs for the home care group but reduction in expenses for associated travel, parking and childcare plus greatly improved quality of life for children and their families. A study that implemented a cost system for an integrated home care services network (QC123) found that overall public costs for clients receiving enhanced case management and psycho social services in the community were comparable to costs related to long-term care over time. All studies show that clients like Mr. P are more satisfied and have better quality of life when cared for in the community rather than in institutions whenever possible. This cumulative evidence points to the fact that post-acute home care and long-term community care are essential to improving the quality and responsiveness of services and to using resources wisely but unless hospital beds are closed, many community-based services are simply an add-on cost. These studies provide examples of how redesigning existing organizational processes rather than instituting new ones can result in significant cost savings and a more integrated continuum of care.

Quality of Care (4 projects)

Outcomes self-identified by the projects

- Success of evaluation projects was dependent upon active involvement of clinical staff, presence of an on-site project champion, support from individuals skilled in methodology, lit review, focus group facilitation, data collation and manipulation and financial planning and management.
- Important indicators for assessing quality of care included: time interval between referral and first contact; amount of time care provider spent delivering intervention, information received about program and why services were provided; understanding of service plan and services needed; support for dealing with health conditions; support for independent community living.
- Indicators for quality care in a clinical setting included the Primary Health Care Parameters of first contact, longitudinality, comprehensiveness and coordination.
- Clients felt those delivering/administering services were committed to improving identified shortcomings in service delivery.
- Specialized consultation services using interpreters, culture brokers, and experts in cultural psychiatry can significantly improve the quality of care delivered to ethnocultural communities, immigrants, refugees, and Aboriginal people.
- By developing additional services, and through ongoing training and support of clinical institutions and personnel, the needs of special interest groups can be better met.
- The consultation process would be facilitated by clear mutual understanding of the referral request and the provision of a legible follow-up report.
- Potential improvements for better consultation included: standardized referral forms; greater opportunities for telephone consultations; computerized transfers of information; use of a nurse to help in communicating with all parties; better communication between the referring physician and the patient to help the patient understand the purpose of the referral.

Issues

Few issues were explicitly identified by the projects. The two that were, focused on the nature of the project itself, and the perceptions of clients who participated as part of the project.

- Clinicians (physicians and nurses) expressed concern that time taken for data collection impacted on time available for direct client care.
- Clients indicated that communication could be improved.

- In conventional mental health care settings, language barriers and cultural complexities can impede adequate assessment and treatment of psychiatric disorders; there are significant unmet needs for mental health services for Aboriginal people, immigrants, refugees, and asylum seekers; there is a clear need for specialized multidisciplinary teams or services to bring clinical expertise together with cultural knowledge and language skills.
- University mental health curricula should be strengthened, particularly in terms of training mental health practitioners to work through interpreters with patients of different cultures; interpreters require additional training to increase their expertise in working with mental health patients.
- Quality assurance and accreditation standards for specific and generic cultural competence must be further developed and applied to both training and service programs for mental health professionals and primary care providers.
- There is a pressing need for a national network in transcultural mental health that can act as a national clearinghouse for models of intervention, clinical resources, and training materials.

Example 1 Quality of Care
QC428 Quality of Outpatient Geriatric Psychiatric Consultation

One consequence of an aging population is that primary care physicians are dealing with increasing numbers of psychogeriatric disorders. These doctors often rely on consultations with psychiatrists, but the interaction between primary care physicians and consultant psychiatrists for geriatric patients can be problematic. Rita had noticed that her elderly mother, Mary was becoming increasingly lethargic and disinterested in social activities. She had also noticed signs of short-term memory loss. When Rita mentioned this to her family physician, he recommended that Rita take her mother to see a geriatric psychiatrist at the local hospital's outpatient clinic. Rita left her doctor's office feeling confused and uncertain as to the purpose of this appointment and wasn't sure she wanted to follow through on this recommendation. This is why a group of health care providers in the geriatric clinic of St. Mary's Hospital, Montreal, Quebec, decided to evaluate the psychiatric consultation process for seniors referred for depression or other common psychogeriatric complaints from the perspectives of the patient and family, the referring physician, and the consultant.

Rita and her mother were asked to participate in this study to investigate what happens when a primary care physician refers a patient for a consultation with a geriatric psychiatrist. The purpose was to help clarify how specialists and primary care physicians can best collaborate in dealing with seniors' mental health issues. The geriatric consultation process included the views of the patient and family, the referring physician, and the consulting psychiatrist. Rita and her mother were interviewed before the consultation to determine their expectations, and immediately afterwards to determine their satisfaction. The consultant also completed a questionnaire immediately after their visit, assessing the information provided by the referring physician and indicating the treatment plan. One month after the consultation, the referring physician was interviewed regarding his satisfaction with the consultation.

Although most patients and primary care physicians were satisfied with the consultation process, 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. Some of the problems encountered in the consultation process included the fact that many patients had no clear expectations about the consultation and were less satisfied with the depth of the relationship during the consultation (too superficial) and with the actual length of the consultation (too short). There were differences between the two groups of physicians that appear to make the goal of shared mental health care more difficult to achieve.

The study indicates that this process can be improved if specific methods for enhancing communication and thus the quality of patient care are implemented such as: a clear mutual understanding of the referral request between the referring physician and psychiatrist; provision of a legible (typed) follow-up report; standardized referral forms; greater opportunities for referring physician telephone consultations with the psychiatrist; computerized transfers of information; use of a nurse to help in communicating with all parties; and better communication between the referring physician and patients like Rita and Mary to help them understand the purpose of the referral.

The health care situation elsewhere in Canada presents many similarities with the present situation in Quebec: decreased hospital services, increased ambulatory services and cuts in psychiatric beds or closing of facilities. A new redistribution of responsibilities in the care of mentally ill seniors like Mary is part of an effort to better use hospital resources and specialists (geriatric psychiatrists) as expert resources to primary care physicians in their new role as "managers" of seniors' health. The model developed is expected to improve the consultation process and services in other settings, such as local health care centres and other agencies providing geriatric services in the community. The same evaluative approach could be extended to consultations in other specialties outside of Psychiatry to bring about better quality of care for senior Canadians.

Example 2 Quality of Care
SK121 Palliative Care Services Review

The reluctance of some health care providers to designate patients as ‘palliative’ plus the stigma attached to the terms ‘death’, ‘dying’, ‘hospice’ and ‘palliative care’ have long been recognized as barriers to the provision of care for those who are at the end of life. Those providers specializing in care for people at the end of their lives have identified the urgent need to make diagnostic, supportive, pain/symptom relief, hospice, respite and bereavement services visible, integrated, comprehensive and accessible in their communities. Palliative care is an important and expanding field as an aging population and a growing prevalence of chronic diseases such as cancer and AIDS indicate a need for compassionate, holistic care for the dying and their families. When Frank was diagnosed with lymphoma at the age of 89, he refused treatment and it was some time before he told anyone about his diagnosis, preferring to keep it to himself. Months later, when Frank's son Ben finally realized Frank's condition, he began to panic since he was unaware of community resources or treatments that could offer his father comfort and support. He had heard about a community hospice but feared his father would think he was 'giving up' on him if he sought their help. He was confused about the many medications, treatments and physicians involved in his father's care, knew Frank could no longer care for himself and would soon need to move to a facility but didn't know which way to turn. The difficulties Frank and Ben faced were some of the reasons why the Moose Jaw-Thunder Creek District Health Board approved a proposal for a comprehensive palliative care program to integrate home care, acute care, and long-term care. The program hoped to build coordinated and effective services, and to make sure that these services were known and accepted by people like Ben and his father as well as their community.

It was decided that before implementing the proposal, it would be important to identify gaps and overlaps in existing services, as well as the resources needed to provide a seamless, district-wide program of care for the dying. Researchers sought to determine whether the public was aware of the palliative care services available in the community, whether current resources and services were adequate and if families, staff, and others who had used the services were satisfied. Interviews and surveys were conducted with a sample of palliative care clients who had used the services and their caregivers, service providers and associated community workers (clergy, funeral home staff, health and social service workers). The approach was largely qualitative, with some quantitative refinements to the interviews and survey results through the collection of statistical data on demographics, budget, use of services such as long-term respite care, and program processes. An extensive literature review was also completed.

Frank and Ben were generally satisfied with the palliative care services received. They felt the program was well coordinated, reasonably priced, and had helped Frank to cope with pain, illness, and spiritual and emotional issues. Most staff that delivered palliative services, as well as associated members of the community indicated that the care was reaching the intended target group, and that it benefited clients and their caregivers. They found there was a need for an interdisciplinary approach for developing new policies and systems. They also identified a considerable communications gap and dissatisfaction with available information provided to the public, staff, and physicians.

Some caregivers expressed concern that their loved ones had been sent home from hospital or respite care facilities too soon, and questioned the availability of home care support. Some staff and stakeholders pointed out shortcomings in the existing program that included uncoordinated services, a lack of respite staff or beds, insufficient bereavement support and lack of physician involvement. There was also a perceived lack of available information on the program. Like Frank, most respondents had little awareness of the program before they needed it (40 percent of staff and 53 percent of stakeholders had only a "fair" awareness of the range of services available). The outcome of this study indicated that the effectiveness of this community's palliative services could be enhanced by strategies to bring about better coordination and integration, and by greater public awareness of services that could be applied in any region. That would ensure timely, supportive and comprehensive access to palliative and respite care services for people like Frank and Ben to increase Frank's quality of life as well as his quality of dying.

Lessons Learned

In the synthesis document, *Supporting an Evidence-Based Future in Canadian Health Care,* the author states that successful projects‘ produced findings relevant to billions of dollars of health expenditures and the lives and health of millions of Canadians……(and) many projects actually altered policy and practice’. But there were also projects the synthesis author labeled as ‘noble failures’ that provided ‘valuable information about the barriers to change’. We include seven examples of projects that experienced various challenges and forms of opposition in either the methodologies they used to carry out their projects or the way they carried out implementation of new models of practice.

Some of these projects identified a *‘complex and time-consuming array of approvals, clearances, contractual arrangements, and policies that had to be cleared’* before projects could proceed. Others reported considerable challenges and some resistance when defining roles, responsibilities and philosophies of care team members in attempts to implement more integrated models of care. Others experienced numerous complex technological difficulties as a result of inadequate planning, limited knowledge of the requirements and evolving regulations governing the use of technology in health care provision.

This evaluation supports the premise that the capacity for change is linked to how the process of change is managed, and how new models are implemented. We have chosen to label the following vignette examples, “Lessons Learned’ to highlight the fact that valuable insights are gained and unexpected outcomes experienced even in the face of insurmountable challenges – in fact, sometimes are a direct result of these challenges. New knowledge gained can influence and inform future efforts resulting in improved strategies.

Example 1 Lessons Learned
NA369 Socio Economic Differences in the Use of Health Care: Why are There Non-Financial Barriers to "Medically Necessary" Services?

While undertaking a study of socio-economic differences in access to health care in Canada, a team of university researchers from five provinces (British Columbia, Saskatchewan, Manitoba, Ontario, and Nova Scotia) revealed a deeply flawed and fractured system of provincial/federal health data keeping that presented a significant barrier to assembling data for research purposes. This project set out to create a Canada-wide network of health analysts and researchers, with the aim of developing a federal-provincial database and organizational structure to clarify the complex relationships between demographic factors, access to health services, and health outcomes. The objective was to break down inter-provincial barriers to analysis arising from differing concepts and definitions in provincial databases, and differences in policies regarding data access and sharing. The linked data for this project combined the best federal and provincial health data available on the demographic, socioeconomic, household, employment and health characteristics of Canadians (the NPHS1994, 1996) with the best and most detailed information available on health care utilization (administrative health care databases1992-98). However, various barriers of policy and logistics delayed the development of the database.

The researchers identified a complex and time-consuming array of approvals, clearances, contractual arrangements, and policies that had to be cleared before their 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 information being collected and different coding systems being used in each province for physician claims, hospital discharge data (collected under standards developed by the Canadian Institute for Health Information), and other databases, creating a major barrier to interprovincial research on health services utilization and outcomes. This study shed light on the inefficiencies in data collection and data protection systems in Canada, which will require political and administrative will to resolve.

It is remarkable that in spite of the challenges and barriers faced, the project was able to develop an effective collaborative framework— a pan-Canadian network of researchers, analysts, provincial research centres, and federal agencies — linking health information from five provincial databanks with a national database under federal jurisdiction to study the effects of health determinants on use of health services, and on health outcomes. The data linkages in this study provide tremendous research opportunities not previously available in Canada, and not generally available internationally. The maintenance and expansion of the database will require significant new organizational supports including the explicit backing of provincial, federal, and territorial governments; new provincial policies on data sharing; and harmonized review procedures related to privacy and confidentiality. Promoting successful research efforts in this field will require assembling research partnerships that combine the expertise of the federal government, the provinces, and academic institutions.

Determination and tenacity on the part of those involved in the study, resulted in success, and the researchers made specific recommendations that will help future researchers in obtaining the data necessary for future investigations. Statistics Canada should explore ways to make their contracts with outside researchers more flexible by broadening its definition of the "product" required from deemed employees. The Canadian Institute for Health Information (CIHI) should continue to place high priority on the development of data standards and finding solutions to coding differences. CIHI and the federal government should place high emphasis on the broad dissemination of technologies that will facilitate inter-provincial and longitudinal health research, such as the National Grouping System, and Case-Mix-Grouping software. The benefits of this study extend beyond an examination of access to health care services. The lessons learned, the organizational challenges overcome, and the data generated, will provide an important resource for an array of health services and population health research.

Example 2 Lessons Learned
AB301-22 Primary Health Care Project for Elnora Area

The HTF recognized that rural communities face particular challenges in terms of access to health services, transportation, and availability of resources, both material and human. Remote communities face difficulties recruiting and retaining staff, accessing primary health care and specialists or ensuring that the providers they already have, are kept up to date with the latest evidence. These factors can seriously impact on the health of people living in these less populated areas. The HTF funded many projects to explore ways of dealing with difficulties experienced by rural inhabitants in accessing health care, in overcoming the shortages of health care practitioners and in developing a better health services delivery system. In the Elnora area of the David Thompson Regional Health Authority, the closing of the local hospital and the absence of physician services prompted residents to consider how to create a healthier community. The Elnora Primary Health Care Project was part of a larger Healthy Communities Initiative, involving five sites within the region that set out to develop, implement, and evaluate a primary health care model for rural areas by combining primary health care with community development principles. Its focus was on providing medical and emergency services right in the community, along with health and safety education programs.

The project had three main components. The first focused on establishing a multidisciplinary primary health care team at the Health Centre, with the key addition of a nurse practitioner. It sought to provide Elnora area residents with affordable, accessible, effective and acceptable health care services through the introduction of the nurse practitioner (NP) at the rural health centre to provide extended nursing practices such as prescribing medication, suturing, physical examinations, and ordering and interpreting lab work, as well as maintaining basic emergency supplies, equipment, and related drugs. The services of the NP were used and accepted, and people had no trouble differentiating between an illness or injury that needed a physician's attention and one that could be seen by an NP. As a result, they reported increased confidence in emergency response management. The second component was the establishment of accessible, effective, and affordable primary health care services. The third was community action through residents' participation in a consultation process to identify the services to be provided. This last, component that stemmed from the broader-based Healthy Communities Initiatives, was vital to the project.

An evaluation framework was developed to identify measures and data collection methods associated with eleven key research questions. These questions addressed issues such as quality of care, access to care, and community involvement. Methods used included client surveys, a document review, and project team focus groups.

This project faced considerable challenges in developing and implementing this innovative model of practice. It was a challenge to integrate physicians with the rest of the team and to make clear the precise role of the nurse practitioners and the nature of their collaboration with the physicians. Community involvement in implementing the project was uneven despite the structures established to facilitate project development. Over the course of the project, the sense of team support actually decreased, along with a decrease in shared leadership and consensus decision-making. Both professionals and people in the community were confused by the task of integrating community development principles and enhancing primary health care.

Project leaders identified key factors to be considered in future initiatives that seek to develop primary health care models for rural areas. Frequent reflection on roles is needed, including continuous and effective formal communication between all those involved, both health care providers and members of the community. Professional regulations need to be changed in order to allow nurse practitioners to practice more readily in a context of various settings and providers. The sustainability of this type of project must be ensured since the fear of losing the services once the funding period is over, is often a great concern to supporting communities.

Example 3 QC322 Lessons Learned: A System for Optimizing the Planning and Delivery of Front-Line Care - Medical Practice of the Future - Phase II

Increasingly, health care delivery systems are recognizing the potential benefits of information technology to improve quality of care and health outcomes, and to decrease administrative costs and duplication of services. Because the HTF recognized the importance of this developing area in health care, it supported multiple projects for a variety of providers and applications. This Quebec project sought to enhance the quality of care delivered by primary care physicians by implementing a system of networked electronic health records to increase access to clinical data, such as previous prescriptions and lab results, and generate computer-based alerts and reminders for preventive care, chronic disease management, and potential prescribing problems. The use of such technology has been largely confined to health care institutions, with little provision for primary care physicians, even though they are the front-line providers in the health care system. The project also piloted a mechanism that the public health unit could use to monitor the health of the general population by collecting data from physicians' records.

The original evaluation plan envisaged assessing the impact of the model in a randomized controlled trial. However, given the challenges encountered, the evaluation was largely concerned with process issues. Because the model never became fully operational, the project evaluation focused on lessons learned in terms of barriers and complexities for the use of electronic health records and insights gained into reality-based solutions for future development.

Not only were numerous technological difficulties encountered, but the model was also found to be inappropriate for the real needs of physicians. Both hardware and software requirements were significantly greater than anticipated. For example, implementing the electronic reminder system in a physician's office required at least one additional computer, a network connection between the receptionist and the physician, and office management software tools. Hardware upgrades for physicians' workstations had insufficient memory for the project software, and new computers were required. The software was poorly adapted to the daily needs of primary care physicians. Data security and patient consent issues proved complex and time-consuming. The company that was originally mandated to provide data security devices could not deliver a satisfactory product, resulting in a switch to a new vendor at a late stage. Telecommunications proved problematic throughout the project, resulting in many delays and frustrations. Patients' visits were significantly longer when using the electronic health record (up to twice as long), which created immediate financial disincentives for physicians. An attempt to integrate decision support tools such as algorithms and CPGs was unsuccessful since the base product for an electronic health record system was not fully integrated into practice before introducing advanced decision support. Until value-added components are included within electronic health record deployment and advanced decision support, efforts to assist primary care physicians in incorporating current Canadian guidelines for their practice population are premature. These components include electronic tools such as information on dispensed drugs, easier ways of providing advanced decision support for detecting drug interactions, drug/disease contraindications, drug allergies, and provision of electronic lab results to diminish both administrative overhead and time to track down test results.

Although the study output is somewhat different from what was expected, it should not be considered as having a lower value since lessons learned are critical to the future direction of health policies in this area. At the regional level, this project was the first to directly address policies in relationship to the regulations governing the provincial health Intranet (RTSS), which links public health care institutions. The results of its use of Bell Service-T communications to connect with the RTSS may lead to policy revisions with respect to access by physicians and other providers outside of official public institutions. The project was also the first to test online transmission of personal health information through the health Intranet, the Régie de l'assurance-maladie du Québec (RAMQ), and private clinics. The project pioneered methods of assessing patient privacy, confidentiality, and consent for electronic transmission of health data. Results are being monitored by SOGIQUE, the Quebec government's information management group, and will be incorporated into deliberations regarding future plans in this field. Methods used to address the complex technological issues faced during this study can serve as a prototype that could be readily replicated in other parts of the province and across Canada with appropriate financial incentives for the high tech industry as well as professionals in practice and the support from provincial and federal governments.

Example 4	**Lessons Learned**
BC402`	**Evaluation of Clinical Paths for Congestive Heart Failure Patients Spanning the Continuum of Care**
	and
QC303	**Development and Application of Guidelines for Optimizing Medical Practice**

The introduction of clinical paths or clinical practice guidelines (CPGs) for guiding and directing health care has received a variety of receptions since their conception. This ranges from full endorsement by some health care professionals and administrators who see CPGs as an effective model for standardizing divergent practice and smoothing the transition for patients along the continuum of care to harsh criticism by others due to suspicion that these are simply a method to capitate service levels and dictate practice by use of a 'cookie-cutter approach' that denies professional creativity and autonomy. Several projects were funded by HTF to test and evaluate new strategies for the development, dissemination, and uptake of evidence-based CPGs developed by scientists, decision-makers, and clinicians.

These projects developed and implemented clinical paths - step-by-step guidelines for managing care in hospital and in the community - to ensure that patients receive systematic, evidence-based care and are able to access the services most appropriate for their needs. In one project, clinical paths were developed and implemented for people suffering from complex congestive heart failure (CHF) in Vancouver area hospitals and the community. The clinical paths consisted of a standardized flow chart to describe and guide the care of the CHF patient while in hospital through transition to the community. It was hoped that the clinical paths would ensure appropriate use of resources in both the hospital and community while improving patient/client outcomes. In another study in Quebec, work was initiated on developing CPGs for prostate cancer screening, stable angina pharmacological treatment, medical imaging prescription, and use of knee arthroscopy. Limited progress in the all but one area meant the project was unable to determine if guidelines can change medical practice or the best way to develop and implement guidelines.

Evaluation was carried out through the completion of questionnaires by project staff and physicians, interviews with staff at the hospitals and in the community, review of hospital records and provincial health databases to assess the impact of clinical paths on patient/client outcomes such as readmission rates, lengths of stay, and quality of life. The outcomes for the CHF path indicated significantly reduced hospital stays and reduction in costs with no increased burden on caregivers or clients and no shift of economic burden from acute care to the community sector. The guidelines for screening prostate cancer appeared to reduce the use of unnecessary laboratory tests. Resources developed included two CHF clinical paths, educational material for staff and physicians, and patient teaching materials, including a pamphlet translated into Punjabi and Chinese and a CPG for prostate cancer screening.

Significant challenges regarding implementation of clinical paths were encountered in both studies. There was resistance due to conflicts about the roles and philosophies of various health providers and between sites, difficulties due to the complexity of patients, lack of leadership, and entrenched cultures. Also impacting the successful implementation of the paths was a lack of medical support and staff shortages that reduced the time available for educational activities. One project revealed that it was frequently difficult to develop functioning interdisciplinary health care teams because of alliances and autonomy within individual professional groups. Although structured clinical paths can link health care providers across the continuum of care, and support them in their delivery of consistent, evidence-based care, to succeed, such a model demands the formation of teams that respect the contributions of all disciplines, and are prepared to share responsibility for quality patient care. Before developing CPGs, it is necessary to define the exact nature of the problem, the needs perceived by providers, obtain clear directions from existing knowledge, and determine the ability to influence medical practice. The process requires the leadership of the professional colleges, the close support of professional associations, the participation of a panel of experts, and reliable and relevant databases. Critical to success is solid planning for all stages in the process, from creating the guidelines at the outset to producing real changes in practice by completion. Dissemination and uptake of CPGs is a serious concern that requires further investigation since it is unclear if those paths that have been developed are being used consistently and appropriately on an ongoing basis.

Example 5 Lessons Learned
AB301-19 Evaluation of the Usefulness of Telehealth in Providing Enhanced Primary Health Services to the Northern, Geographically Remote Communities of Trout Lake, Peerless Lake and Red Earth Creek

The use of communications and information technologies to overcome geographic distances in the delivery and provision of health care has become increasingly important for enhancing health services delivery in rural and remote regions where health care resources and expertise are often scarce and sometimes non-existent. In this geographically large, sparsely populated area with a culturally diverse population, a project was initiated to improve health service delivery to four communities by providing a nurse at local health centres and by implementing use of new technologies to provide telehealth services such as speech pathology, audiology, health promotion, and dental examinations plus provider and client education via satellite. The project evaluated the effectiveness of an existing telehealth service in providing primary health care to three geographically remote communities. Telehealth services are thought to be useful because they may improve the quantity, continuity, availability, and accessibility of care in isolated communities.

Goals of the project were: to use telehealth to improve health care delivery within the region; to improve access to health services; to provide more equitable services; to enhance programs that promote health and health education; and to reduce travel costs for patients and caregivers. The project included both demonstration and evaluation elements. A telehealth coordinator was hired to implement the technology (and to trouble-shoot where necessary), to promote its use in the three target communities of Red Earth Creek, Trout Lake, and Peerless Lake, and to manage the project. 42 telehealth sessions took place over the course of the evaluation. Most sessions were either educational (50 per cent) or involved clinical consultations (28 per cent). Only one community used the technology for clinical consultations.

The evaluation focused on the project's success in meeting its stated goals. Data collection methods included a telehealth database, session log and evaluation log; a client satisfaction questionnaire; and interviews with key informants.

The project provided a wealth of examples of the various barriers that telehealth initiatives may encounter during development and implementation, including a number of technical and organizational problems. These included technical issues with the computer equipment and satellite technology; staffing resources and role definitions; and training issues. Many informants felt that more time was spent fixing and adjusting the equipment than was spent delivering services. Because of the difficulties experienced with this particular project, those involved had specific advice for others who may attempt similar projects. They recommended that Telehealth initiatives be more developed and stable before being implemented in remote communities. In this project, researchers found that the technology was insufficiently developed and relatively unstable, resulting in an implementation period that was protracted and fraught with difficulties. They indicated that Telehealth initiatives cannot be "layered on" an existing health care system. Integration with more traditional forms of service delivery must be carefully planned. Project staff and participants did not receive sufficient training in telehealth operations, and participants found there were not enough telehealth interactions to conclude whether or not this technology delivered quality care, was cost-effective, or increased access. Very little statistical or perceptual data was available to enable researchers to answer the original question of whether telehealth was useful or not which raised doubts as to the project's success in meeting its stated goals.

Despite these challenges, and substantial costs at start-up, most informants in this project and others funded by the HTF felt that telehealth technology demonstrated potential to deliver health services to remote communities. It was seen as a way to improve rural health services delivery by reducing travel and bringing diagnostic, treatment, rehabilitation and educational services to rural and remote areas. The provision of continuing education for rural practitioners would increase expertise and reduce a sense of professional isolation. Researchers felt that under the right conditions and guidance, telehealth could benefit not only the communities studied, but also other remote and rural areas of Canada where health care services and education are limited or less accessible. However, it is yet unclear if the benefits realized outweigh the expense incurred in establishing telehealth services.

Example 6 Lessons Learned
QC421 From Innovation to Change - Lessons Learned from Quebec Projects Supported by the Health Transition Fund (HTF)

The main goal of this evaluation was to benefit from the aggregate lessons of the 40 Quebec projects funded under the HTF in order to improve the health system and, consequently, the care and services with which the public is provided. The project undertook a meta-evaluation of the results of the 40 Quebec projects funded under the HTF and sought to identify aggregate lessons from the projects with a view to improving the health care system and, consequently, the care and services with which the public is provided.

The evaluation proceeded in three stages: first, it characterized the projects; second, it identified characteristics that appeared to facilitate change with a view to improving services, processes, and practices; and third, it identified conditions conducive to effecting change at a system level. Overall, the evaluation found that the HTF projects provided opportunities for capacity-building in the health care system and encouraged collaboration among the academic community, health administrators, and care providers but cautioned that instituting inter-professional and multidisciplinary practices is limited by the current approach to compensation of physicians.

The factors identified by this team of researchers will inform future research and facilitate positive outcomes by minimizing or eliminating barriers to the development and implementation of new and innovative approaches for delivering health care. The researchers found the studies to show that relatively straightforward projects targeting a single disease or condition (rather than a more generalized population approach) were the simplest to implement and demonstrated results fairly rapidly. But they also found that, although this type of change was significant and relatively foreseeable, it was limited and did not address fundamental structural issues in the health care system. Highly complex projects with broad-ranging implications were more difficult to implement, but had greater potential in terms of change in the medium and long term.

The characteristics identified as determining factors and facilitators of a greater capacity for change and innovation were:

- ☐ Capitalizing on existing professional and organizational expertise by building on active involvement by stakeholders (targeting those receptive to change);
- ☐ Allowing the emergence of a variety of initiatives in a context of decentralization;
- ☐ Supporting flexible structures to increase inter-professional and inter-organizational collaboration;
- ☐ Adopting a vision for change and innovation that is held not only by health care providers but also by recognized leaders who are able to interest other stakeholders and encourage collaboration;
- ☐ Ensuring adequate numbers of qualified human resources to whom appropriate training is available;
- ☐ Allocating sufficient financial resources for transitional activities;
- ☐ Securing support from departmental and regional authorities to assist in meeting challenges and overcoming barriers; and
- ☐ Ensuring adequate timelines for all activities (many HTF projects lacked time to demonstrate their potential).

This meta-evaluation demonstrated that HTF projects provided opportunities for creating capacity for change in the health care system, reflecting on health care reform, and encouraging collaboration. Some projects combined the roles of operator and designer, thus reducing the distance between these roles and mobilizing stakeholders with a variety of backgrounds and qualifications to improve organizational performance. The capacity for change is linked to how the process of change is managed, and how new models are implemented. On the whole, these HTF projects generated a rich knowledge base in terms of both quantity and quality. Part of the significance of the HTF projects was that many used the expertise of various professionals and strengthened synergy between the clinical and management spheres.

APPENDIX B

Detailed Methodology

Document Review

The document review set the scene for the collection of empirical data. We systematically examined the material available and collected key observations that focus directly on knowledge transfer and impact as it relates to each of the components in the hierarchy.

We reviewed the following documents:

- Interim Evaluation (including Technical Reports 2000, the Evaluation Report 2002 and memorandum to the Development Audit and Evaluation Committee)
- HTF Project Files including Project Reports and additional Dissemination Reports
- HTF Program and Regional Workshops
- Project Fact Sheets, and the
- Synthesis and Dissemination strategies
- Synthesis Series

The documents provided information on the history, philosophy, expected outcomes, objectives of the HTF, findings on processes at the program level and to some degree, actual 'impact'. We paid particular attention to the evaluations that *each* project submitted, as these not only reflected the quality of evidence, but also the anticipated and actual uptake of the findings. In essence, the review examined:

- Documents of a strategic nature (e.g., the Interim Evaluation and associated technical reports)
- Documents that reported on key activities (e.g., project reports, workshop reports)
- Documents related to knowledge generation (e.g., synthesis reports, fact sheets)

The process for the Document Review involved several strategies. At the first face-to-face meeting between the researchers and Health Canada a number of documents were provided. Subsequently a CD was prepared of those Project reports that were available electronically. Security clearance was required to access documents stored in Iron Mountain.

To ensure that the Document Review was comprehensive it was necessary to pursue a number of activities. A list of documents and their location was provided by Health Canada. Documents available on the HTF Website were down loaded. Documents were also accessed from Websites that had posted additional information regarding projects (e.g., Alberta Health and Wellness).

Initial review indicated approximately 27 boxes of HTF documentation were available for review. After further discussion it was determined that Health Canada had the Project reports in hard copies that are not available electronically, and provided these to the researchers. In addition, binders for several Workshops were made available. This reduced the number of documentation boxes required to those that contain the Dissemination Reports. Documents were reviewed and a site visit to Health Canada for confidential information was conducted to enable the timely review of documentation.

Health Canada facilitated access to the documents the researchers required. The logistics of the collection of the documents for review was multi-faceted. There was ongoing willing collaboration of the Health Canada staff to help the research team access the documents required. Phone, email, courier, paper, CD and electronic copies of documents all enhanced the collection and review of the required documentation.

All 10 Synthesis reports and the Interim Evaluation report (including the 3 technical reports) were reviewed in hard copy. The project reports were reviewed either in hard copy or from an electronic version. All dissemination reports available were reviewed in hard copy. There were some reports that did not include a section on dissemination (e.g., NA 101). A number of projects had included a section on Dissemination in their report and provided an update between October 2000 and January 2002. Others had done either one or the other. Binders were available for the 2 of the 3 National Conferences that were funded by the HTF and each of these was reviewed.

The research team read the material and engaged in continual discussions over the duration of the review. Primary responsibilities were assigned for specific types of reports and the ongoing dialogue ensured that there was a consistent approach to the review process. To ensure consistency we reviewed the same report and then compared our assessments.

Interviews

Thirty semi-structured telephone interviews were conducted with a range of stakeholders. Interviews were conducted with individuals believed to be representative of key stakeholders and decision-makers. The data were triangulated to balance both the expectations of the HTF and the views on overall impact of the HTF. Interviews were conducted with individuals who were representative of decision-makers involved in the HTF, synthesis paper authors and project investigators (see sample identification below). This is consistent with Becker (1993), who observes that it is naive to believe that researchers begin a study without pre-conceived ideas about the subject area, and Corbin and Strauss (1990:15), who note that “greater generalizability, precision, and predictive capacity” can be achieved through the initial use of systematic and widespread *theoretical sampling*. The concepts and themes that emerged from our variegated sampling enabled us to understand the nature and extent of the HTF impact in greater detail.

A letter introducing the purpose of the study, requesting participation for an interview, and explaining the terms of confidentiality was sent by email to potential interview participants. They were followed up if necessary with telephone calls to confirm interview times. The interviews were conducted using thirteen questions, 12 of which were open-ended. We identified prevailing themes and issues under five categories:

- ❏ Knowledge Transfer
- ❏ Impact Continuum
- ❏ Capacity Building
- ❏ Sustainability
- ❏ Overall Contribution

We worked with Health Canada to identify key stakeholders. We had hoped to interview more than the final sample size of 30 but there were significant problems in finding and contacting potential participants, which drained resources (especially with numerous postponements and cancellations), and was compromised by the timeframes and sequential nature of the methods used and expected due date for completion of the Impact Evaluation. Some potential interviewees moreover, were reluctant to be interviewed, in part because they had felt their involvement was too peripheral and that too much time had passed for them to be able to accurately recollect the nature and extent of their engagement that, in some cases, was several years ago. The sample size of 30 is typically sufficient as *saturation* is reached at this point; in other words there is little new information that emerges from additional interviews.

The interviews lasted, on average, approximately one to one-and-a-half hours. We focused on the *utility and impact* of the HTF. The research team worked with one another on a continual basis throughout the interview process – discussing various perspectives raised by the interviewees, identifying needs and opportunities for further probing and the elucidation of new themes and patterns that emerged.

The key selection criterion for selecting interviewees was to ensure that there was a broad cross-section of representation of stakeholders who could provide in-depth discussion of the perceived impact. The sample was selected from the following groups:

- ❏ F/P/T Working Group: Cross Canada representation with additional consideration given to Provinces and Territories that had a significant number of Projects and one that did not have a proposal funded (n= 3)
- ❏ Health Canada Steering Committee (n= 2)
- ❏ HTF Staff and Former Staff: A convenience sample based on the recommendation of Health Canada based on the length of time that individual staff was involved with the Project and current accessibility (n= 6)
- ❏ Project Investigators: A sample that represented a cross section of National, Provincial and Territorial projects from the respective themes (n= 15)

- Synthesis Authors: Interviews were conducted with 4 synthesis authors (n=4).

Analysis of the interviews focused on identifying themes and patterns from the interviews and exploring these in greater detail as the study unfolded. The interview notes were reviewed independently by two of the project team who then integrated their reviews to report on the key findings.

E-Surveys

We conducted two E-surveys:

- *E-Survey One: Project Investigators*
- *E-Survey Two: Developers and Decision-makers (External stakeholders, F/P/T Working Group, Health Canada Steering Committee, and HTF staff. Note: excluding individuals who will be interviewed)*

Selection Criteria for E-Survey of Developers and Decision Makers:

- External Stakeholders: The sample included representation from across all Provinces and Territories. Individuals were identified upon consultation with Health Canada.
- F/P/T/ Working Group: The selection reflected cross-Canada representation.
- Health Canada Steering Committee: The selection reflected a cross section of representation of interest by Policy, Practice and Research. Final identification of individuals was determined upon consultation with Health Canada.
- HTF Staff and Former staff: This sample was selected from staff not included in the list of Interviewees. Final identification of individuals was determined upon consultation with Health Canada.

Instrument Items

Using predominantly Likert scaling, the fundamental questions for the E-Surveys were clustered under the following content areas:

- Knowledge Transfer
- HTF Impact
- Capacity building
- Sustainability
- Overall Impact

Administration

We used the same approach for both surveys. We contacted the entire population of possible recipients (e.g., for the E-Survey of HTF projects the n=141). This is possible from a resource perspective as E-surveys significantly reduce costs of survey administration. Primarily we used a modified Dillman approach to the development and administration of the surveys (Dillman, 1978, 2000, nd). The specific steps used were as follows:

- Development of the survey instrument – development of items (questions).
- Review by Health Canada.
- Translation of the survey into French.
- Development of analytical framework.
- Collect databases from Health Canada for participant email addresses and contact telephone numbers (if any more are required following initial collection of contact information in preparation phase).
- Pilot testing of survey and revisions (including review by Health Canada).
- Construct web-based survey and database.
- First E-mailing of surveys.
- Second E-mailing of surveys to participants who had not returned the first survey.
- E-mailing of 'post card' reminders to participants who had still not responded.
- Telephone follow-ups (many)
- Survey data cleaned and entered into database (ongoing as surveys were returned).
- Analysis.
- Component Report

Data was entered into an access database. The data was subsequently imported into SPSS 11.0 for analysis. Analysis was completed using SPSS 11.0. The survey data were analyzed predominantly by HTF theme, funding level and a number of key variables.

Although the sample size was small (n=50), the profile of the survey respondents compared favourably with the larger population of HTF projects. The following 2 tables illustrate the comparability between the respondents and all the projects.

	Survey Respondents	**All HTF Projects**
Theme	**% of Funding**	
Homecare	21%	12%
Integrated Service Delivery	19%	43%
Pharmacare	8%	5%
Primary Health Care	52%	40%

$ Amount	Survey N=48*	%	HTF Projects N=141	%
< $100,000	7	14%	24	17%
$100,000 - $199,000	10	21%	38	27%
$200,000 - $499,000	17	35%	36	26%
$500,000 - $999,000	6	13%	19	13%
$1,000,000 - $4,000,000	6	13%	17	12%
> $4,000,000	2	4%	7	5%

Note:* We also analyzed the data presented in this report by funding level. Even with the small cell size present with the data there were no significant trends or differences observed among the data.

Contact Challenges

Considerable time and effort was spent in both attempting to locate HTF participants and in encouraging those that were located to respond to requests to complete the electronic survey or participate in a telephone interview regarding their HTF experience.

The electronic survey was sent out initially and then followed up a short time later with a subsequent e-mail since response to the first distribution was low. At the time of the second distribution, it was identified that nearly half of the e-mail addresses contained in the master mailing list were no longer valid (54 of 123). The main reasons for the high number of changed addresses included the fact that many of those involved had changed employment or in some cases, the actual organizational structure of the agency had changed as the Impact Evaluation took place considerably later following completion of projects (in some cases, approaching 5 years). There was also the impact of advancing computer-based technology where government and academic e-mail addresses have been continually refined and standardized over the last few years. At the same time, the trend for individuals to change Internet providers from time to time was also evident, resulting in frequent changes in personal e-mail addresses. Technology also enables those with hectic schedules who are inundated with requests to complete surveys, to eliminate unwanted messages by using filters. Once these problems were identified, attempts were then made to locate individuals and contact them by telephone to obtain up-to-date e-mail addresses.

Making telephone contacts presented a new set of challenges. In an age of technology, it is rare to make direct voice contact with individuals, since voice answering systems are prevalent. Over the course of a 6-week period, every person who had not submitted a completed survey or who had not been interviewed was contacted by phone (n=100) and voice mail reminders were left requesting that surveys be completed and submitted. Of those contacted by phone, 60 individuals were contacted 6 times each. In a few cases where it was possible to speak with individuals directly, it was identified that the web-based survey presented problems and requests were made for hard copies that could be returned by fax. Subsequent e-mail message reminders therefore included Word document versions of the survey with instructions that the survey could be completed by using the web-based version, by attaching the Word document to an e-mail or by completing a hard copy and faxing it to the research office. In many cases, where researchers were able to actually speak with individuals, they identified that they had either never received the initial e-mail regarding the survey or had lost it. In these cases, the information was re-sent with the individuals agreeing to complete it. There were several individuals whose voice mailbox was continually full, so it was not possible to leave a message.

Forty percent of those contacted by phone proved to be ‘dead-end’ calls where the voice message was either a different person, or the person did not know the individual being sought or did not have the new contact information. In some cases, the individual had retired or was on maternity leave and due to privacy/confidentiality of information, researchers were unable to obtain home phone numbers. In other cases, the phone number was a fax number or the number was no longer in service. In one case, the individual had died since completion of the project. Although considerable effort was made to investigate all possibilities to find a correct number, success was very limited. Where administrative personnel could be identified and contacted, their assistance was sought to facilitate response to the survey. All possible avenues for searching out correct information were utilized including Internet searches, government and university database directories, Canada 411 directory, etc. One particular individual actually admitted, following the fifth voice mail contact, that e-mail and voice mail requests for things like survey completion were routinely ignored because of a hectic schedule and that the wrong email address was actually sometimes given purposefully to avoid an overload of such requests. The person congratulated the researchers for their persistence and agreed to complete the survey as a result.

Similar difficulties were experienced in attempting to contact principal investigators, synthesis authors, members of the F/P/T Working Group, and Health Canada Steering Committee. Of considerable concern to the researchers was the fact that some individuals had no recollection of their involvement with the HTF initiative and refused to participate either in the survey or the key informant interviews as a result. Many interviews were scheduled and rescheduled multiple times because of heavy workloads – in one case, five times. In other cases, interviews were scheduled with one individual, confirmed with a different individual, then another and then finally cancelled entirely. One principal investigator did not participate because a superior had indicated that the person’s involvement in the interview was not appropriate, as the request did not seem to apply to their department. However, it should be stated that some interviewees were very creative with how they fit the extra demand for interview time into an already overloaded work schedule – one was interviewed while driving from a business meeting to home in another city; another while eating lunch; another while making errand stops on the way home from the office, stating that there would not be 2 minutes without interruption if the interview was completed at work.

It is evident that the greatest challenge with contacting those involved in the HTF projects was a result of the time span between project initiation and completion. It was evident to the researchers that there was little understanding or expectation on the part of those involved that they would be required to respond to an HTF impact evaluation years later. The researchers recommend that in future, all participants be informed and commit to a project evaluation component that includes not only evaluation of individual projects, but also evaluation of the initiative as an entire process and warned that there could be a time lapse. A further recommendation would be for the impact evaluation to have been completed considerably earlier than at the four to five year mark to ensure a fresh recollection and commitment for participation on the part of those involved.

Project Themes and Example Vignettes

This method focused on success stories as ‘hard data’ (Kibel, 1999). We applied the main tenets of *results mapping* to inform, in detail, success stories *and lessons learned* from the HTF projects. We worked with Health Canada to develop explicit criteria upon which to include specific vignettes as success stories of the HTF.

In order that the reader might clearly understand and experience, in a small way, the vast depth and breadth of the HTF initiative, 30 vignettes were created. These are stories of the successes, challenges and in some cases, failures that show the impact of the projects on the individual locally, on organizations regionally, and on health care systems provincially and nationally. Criteria for selection of projects to be written as vignettes was agreed upon as:

- ☐ Evidence of an impact that suggests that one or some of the broader HTF expected outcomes has been achieved.
- ☐ Evidence of improved health outcomes for patients/clients
- ☐ Changes made to the way care is provided
- ☐ Changes made to policy (organization, regional, provincial and/or national level) directly attributed to the HTF project
- ☐ Sustainability
- ☐ Production of materials developed by the HTF project (e.g., training materials, manuals, equipment, implementation guidelines, software, etc)
- ☐ Clear causal connection between HTF and knowledge uptake in other organizations and/or jurisdictions (transferability)

Other factors influencing the choice of projects for vignettes included projects mentioned in key informant interviewees as being most memorable, those that demonstrated each of the emerging cross-cutting themes that were identified upon reviewing documentation of all the projects, those that represented a variety of provinces and territories, a variety of health and cultural issues and a variety of disciplines or approaches. A mix of large, national, multi-sectoral, inter-provincial projects and small, single site, sole investigator projects was sought to demonstrate the range.

The vignettes were developed to ‘put a face’ on the HTF initiative and demonstrate the unique impact of the projects by creating fictitious individuals to help the story unfold. Any resemblance to real individuals who may have taken part in any of the projects is purely coincidental. An attempt was made to accurately reflect the outcomes of the projects and not to enhance these outcomes as a result of individual interpretation. The ‘stories’ were developed through review of the Internet-based HTF Fact Sheets and Research Reports for the projects, the synthesis documents and in some cases, through speaking directly with the project investigator. The project participants themselves did not review the completed vignettes. Six vignettes were also created to reflect the insurmountable challenges sometimes faced by some of the projects and the subsequent lessons learned.

E-Delphi

The E-Delphi methodology elicits information and judgments from participants to facilitate problem-solving, planning, and decision-making. Information is exchanged via email. The purpose of the E-Delphi is to:

- ☐ Develop a sense of agreement on the primer that reports on the findings of the Impact Evaluation of the HTF initiative; and,
- ☐ Discuss the nature of the legacy that the HTF has left.

We engaged the participation of 15 key informants who had knowledge of the HTF at various levels. These key informants included decision-makers, synthesis authors, project investigators and HTF staff. The entire process was conducted anonymously. At no point were participants able to identify other participants’ comments.

Conducting the E-Delphi

It is common to use regular mail for this purpose, but email decreases the time and costs required for completing a Delphi technique. This technique takes advantage of participants’ creativity as well as the facilitating effects of group involvement and interaction.

The E-Delphi involved the following steps:

- *Sending a primer on the findings from the study to the key informants.* Asked each participant to comment on the findings. We asked questions of the key informants based on the findings presented in the primer, and the legacy of the HTF.
- *Response to first email. Each participant listed his/her ideas in a brief, concise manner and returned the list anonymously to the researchers.*
- *The researchers collected all raw responses and synthesized the findings.*
- *Create and send Questionnaire #2. Both the synthesis and raw data were sent back out to the participants. A second questionnaire (3-4 questions) was also sent to participants. This looked for areas of agreement and disagreement and asked further questions that further refined our understanding of the data from the study. If necessary we asked participants to refine their comments.*
- *Response to second questionnaire. Participants anonymously recorded their responses to Questionnaire #2 and returned them to the researchers.*
- *Create and send Questionnaire #3. Created and send a third questionnaire that summarized the input from the previous step and asked for additional clarifications, strengths, weaknesses, and any new ideas.*
- *Continuation of the process. If required, iterations of the preceding process were done until it became clear that no new ideas were emerging and that there was consensus on the findings and the legacy of the HTF.*
- *Consensus/Agreement.*

The researchers directed the entire process over the course of two weeks in late June and early July. Feedback from the E-Delphi participants included this comment:

> *"I've appreciated the opportunity this synthesis provides to reflect on the insights of a number of key respondents. Having read the synthesis and feedback from the other respondents, I am comfortable that the small sample responding to the Delphi has painted a very clear picture of what worked, what did not work and the lessons to be learned from the HTF. The small sample of respondents has not been a limitation at all in this overall evaluation process".*

APPENDIX C

Impact Evaluation of the Health Transition Fund

Interview Protocol

HTF Stakeholders

Purpose:	To obtain information on the impact of the HTF projects. The information you provide will help us to evaluate the overall effectiveness of the HTF Initiative.
The Interview:	The telephone interview consists of several questions regarding the impact of the Health Transition Fund. It should take approximately 60 minutes to complete.
The Importance of Your Participation:	Your involvement is critical to fully understanding the impact of the HTF, and will be instrumental in developing similar programs
Use of the information provided:	The responses given in the interview will provide valuable material to assist us with our overall project, which is to evaluate the impact of the Health Transition Fund. All information you provide is strictly confidential. At no time will data collected in this interview be disclosed in a manner that will be attributed to specific participants or organizations. The final report will represent aggregated data.
Questions?	If you have any questions about the interview or the study in general, please contact Susan Donaldson, Project Manager at Phone number (613) 331-3946.

Thank-you very much for your time and cooperation.

Title and/or Project Code of the HTF project you were associated with (if applicable)

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Your role associated with HTF

Principal Investigator ☐

Project Coordinator ☐

Project Staff ☐

Decision maker (local) ☐

Decision-maker (provincial) ☐

Other (please specify) ☐

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Section 1. Knowledge Transfer

One of the important considerations with the HTF was the nature and extent of knowledge transfer with the wide range of projects receiving funding.

1. Based on your own experiences with the HTF projects, do you think the knowledge transfer activities were effective? Could more have been done, and if so, what other activities would you suggest?

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Section 2. HTF Impact

One of the central themes of the HTF was to develop and/or evaluate innovative approaches to health care. Integral was the belief that the new knowledge developed could be broadly disseminated. This section seeks to examine the extent to which the new knowledge was applied. Examples of impact could include one or more of the following:

- ☐ *Used directly by consumers of health care*
- ☐ *Cited or referred to in some way by the decision-makers*
- ☐ *Transferred to the users*
- ☐ *Influential in policy decisions*
- ☐ *Influential in service delivery and practice decisions*
- ☐ *Directly the cause for changes in policy*
- ☐ *Directly the cause for changes in service delivery and practice*

2. Do you think the HTF projects have resulted in improvements in health care? (e.g., by providers, in your organization, community, provincially, nationally) If so, could you please give examples?

3. Do you feel that the HTF encouraged a culture of evidence-based decision-making in health services?

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4. Do you feel that the HTF filled a gap in research?

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5. Do you feel that the HTF developed information that was useful and relevant to the target audience?

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6. Do you feel that the HTF resulted in longer-term cost savings?

Section 3. HTF Project Capacity building

'Capacity building' refers to the extent to which the HTF project achieved various goals. One goal is financial capacity building, in that the projects provided leverage for ongoing financial commitment.

7. In your experience, do you feel that the HTF projects enabled financial capacity building for organizations to continue with their expected project outcomes?

8. Do you feel that the HTF projects led to effective partnership or network formation within and among organizations?

9. Do you feel that the HTF projects enhanced the professional careers of project team members

Section 4. HTF Sustainability

There are several key dimensions to "sustainability". Expected outcomes are the drivers of new projects, and are typically targeted toward change or improvement for end users. Examples of sustainability include:

Cultural change within an organization

- ☐ *Partnerships*
- ☐ *Employment of key personnel*
- ☐ *New, and, now routine practice(s) in your organization*
- ☐ *Funding*
- ☐ *New values*
- ☐ *Interest in developing innovative approaches to health and health care*
- ☐ *Expected outcomes of the HTF project*
- ☐ *Improved health outcomes for patients/clients*

10. Based on your experience with the HTF, could you please comment on the extent to which the HTF has contributed to longer-term sustainability?

Section 5. Overall Impact

11. Overall how would you rate the overall impact of the HTF with regards to <u>improving health and health care for Canadians</u>?

No Impact at all ☐

Very little Impact ☐

A little Impact ☐

Some Impact ☐

A Significant Impact ☐

12. Overall, what would you say was <u>the major contribution</u> of the HTF?

13. Do you feel there were any negative affects of the HTF?

That completes the interview. We greatly appreciate your time and input. If you would like a copy of the findings please provide us with the following contact information.

Name: ______________________________

Organization: ______________________________

Email Address: ______________________________