



2006 Annual Report on the
Executive Training for Research
Application (EXTRA) Program



Canadian Health Services Research **Foundation**
Fondation canadienne de la recherche sur les services de santé

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Background

In response to a well-documented need by healthcare executives and leaders for effective use of research-based evidence in managing the healthcare system, the Canadian government allocated \$25 million in its 2003-04 budget to establish the Executive Training for Research Application (EXTRA) program.

The EXTRA program is a partnership between a group of national organizations: the foundation, the Canadian College of Health Service Executives (CCHSE), the Canadian Nurses Association (CNA), the Canadian Medical Association (CMA), and a consortium of 13 Quebec partners represented by the Agence d'évaluation des technologies et des modes d'intervention en santé (AETMIS). The foundation administers the program on behalf of the partners.

EXTRA Objectives and Impacts

The objectives of the program, as stated in the funding agreement between the minister of health and the foundation, are:

1. to increase the skills of health services professionals, such as nurse and physician managers and health service executives selected as EXTRA fellows, in how to use research to better manage the Canadian healthcare system; and
2. to encourage health service professionals, such as nurse and physician managers and health services executives selected as EXTRA fellows, to collaborate in the management of healthcare delivery.

As a long-term training initiative, EXTRA is expected to produce a significant number of health service executives who are equipped with the skills and motivated to improve the quality and effectiveness of the health system through the use of research. These senior decision makers will also act as important agents of change within their organizations. The fellowship also aims to encourage the increasingly important collaboration between health service executives, nurses, and physicians and share experiences with top managers from across Canada on complex healthcare management issues.

The program has five core components: 1) four away-from-home residency sessions; 2) one or several "intervention" projects at the home organization, proposed when the fellow applies to the program; 3) educational activities between residency sessions; 4) network-building opportunities between faculty and other fellows throughout the program; and 5) support and activities after the program wraps up to build a community of practice in evidence-informed decision-making.

An *intervention project* of direct relevance to the fellows' "home" organizations is conducted throughout the entire program. The intervention projects employ a systematic approach to inquiry in accordance with accepted research methodologies and can generate new information or data, analyse or apply existing data or research, and/or examine issues in searching for and applying evidence. Intervention projects are presented to expert panels and organizational CEOs at the final session. *Mentoring* by individual faculty and mentoring teams is provided on site and in the periods between the residency sessions. *Self-directed learning* is facilitated through the *EXTRA desktop*, using a customized Internet-based learning platform which provides participants with an electronic classroom, virtual library of online course software, databases, search engines, journals and other resources, as well as a variety of Internet technologies and an environment for collaboration and dialogue with other participants, faculty, and mentors. A post-program *community of practice* for fellows and organizations enables EXTRA alumni to continue professional development and build a network of decision makers and healthcare organizations across the country to share knowledge and experiences in health services management and delivery.

2006 Activities and Achievements

The first (2004 cohort) 24 EXTRA fellows graduated in April 2006. The 2005 and 2006 fellows are currently enrolled in the program (cohorts 2 and 3). Two additional fellows from the nursing stream were added to the 2006 cohort as part of the special funding agreement with the Ontario Ministry of Health and Long-Term Care's Nursing Secretariat.

New members appointed to the EXTRA advisory council in 2006 are Sonja Glass, nurse graduate from the first EXTRA cohort and corporate manager for risk management and quality improvement at Gray Bruce Health Services in Owen Sound, Ontario; Dianne Doyle, fellow of the Canadian Council of Health Service Executives and president and CEO of Providence Health Care in Vancouver, B.C.; Carol Trempe, directrice générale, Association des cadres supérieurs de la santé et des services sociaux, Quebec; and David Butcher, vice-president medicine, Northern Health Authority, B.C. Departing members are Chris Carruthers, Ken Fyke, David Helms, and Judith Ritchie.

Starting in 2006, the EXTRA program is accepting applications from interdisciplinary organizational teams. This program innovation allows for a separate stream of applications with a limited number of organizational applications for up to three linked interdisciplinary fellowships in a single organization. Physician involvement in the team application is strongly advised. This application stream is directed at large or multi-site health service organizations or regional health authorities with a desire to rapidly build a critical mass of evidence-informed decision makers able to accelerate the spread of a research-literate culture.

Continued improvements to infrastructure and support mechanisms for program delivery were implemented in 2006, including the launch of the EXTRA community of practice, recruitment of additional mentors and additional support to the regional mentoring centres, site visits to fellows' organizations, and enhancements of inter-modular learning material and desktop capabilities to allow for ongoing learning opportunities for fellows in the program.

The Graduate Certificate for Health System Leadership, with a specialization in evidence-informed decision-making, was launched in 2006 in collaboration with the Canadian College of Health Service Executives and Royal Roads University. This serves as a distance education offering in Canada for healthcare managers and is expected to increase the impact of EXTRA among a broader group of managers. The graduate certificate is offered to organizations of EXTRA graduates with a scholarship provision.

The curriculum is delivered in areas of study or "modules." In 2006, the third cohort of 26 fellows went through modules 1 and 2, and the second cohort of fellows went through modules 4 and 5. The curriculum is now complete and includes the following:

Module 1 — Demystifying the research world

Module 2 — Promoting the use of research-based evidence in healthcare organizations

Module 3 — Becoming a leader in the use of research-based evidence

Module 4 — Using research-based evidence to create and manage change

Module 5 — Sustaining change in the organizational context

Module 6 — Community of practice, presentation of intervention projects, CEO forum

Horizontal Health Information Management (HIM) curriculum — spread across the six modules

Curriculum module 5 was significantly revised with development of additional case studies on sustainability in organizations in a comparative context. A lead faculty was appointed for module 6 and a national CEO forum was launched as an ongoing feature of module 6. New tools and features were incorporated into the health information management curriculum to assist fellows with project development and reporting on work in progress. The program curriculum component, while fully developed, is subject to ongoing review and improvements by the lead faculty committee, the steering committee, and the EXTRA advisory council.

Pending final approval from the graduate studies department in 2007, EXTRA fellows will soon have the option of acquiring credits from the EXTRA program toward a Diplôme d'étude supérieures spécialisées (DESS) or a master's in health administration at l'Université de Montréal. Under the arrangements a master's degree can be obtained if 12 additional credits are obtained through other courses at the department of health administration at l'Université de Montréal. The EXTRA program work will amount to 30 credits toward the diploma or degree. A similar accreditation agreement is under negotiation with Royal Roads University in British Columbia.

As part of the knowledge transfer activities of the EXTRA program, arrangements with three journals were negotiated to publish EXTRA intervention projects. The *Journal of Health Services Research and Policy*, *Canadian Healthcare Forum*, and *Le Point* will publish supplements dedicated solely to the on-the-job change management intervention projects completed by the fellows in the course of the EXTRA fellowship. Calls will be issued in 2007 and intervention projects will undergo review for inclusion in the journal supplements.

The formative evaluation component of the program is underway; results will be reported annually on program impacts and achievements. Discussions are underway with SEARCH Canada to conduct case studies involving both SEARCH and EXTRA fellows and organizations to fully understand the impact of training for research use offered by these two programs. A workshop, scheduled for June 25-27, 2007, will assemble evaluation expertise from across Canada to develop a proposal for the granting councils to support a five-year program of research looking at the organizational impact of the EXTRA and SEARCH programs.

The summary of total EXTRA expenditures and uncommitted funds at December 31, 2006 is included as Appendix 1.

Program Evaluation and Impacts

Documentation on the program's development was reviewed in 2005. Interviews were also conducted by the evaluation team with key stakeholders at the commencement of the program (foundation staff and steering committee members). The overall mission of the program is to develop capacity and leadership to optimize the use of research-based evidence in Canadian healthcare organizations. Based on the document review and interviews, the EXTRA/FORCES *program theory* was developed and has since been accepted by the foundation and the EXTRA/FORCES advisory council.

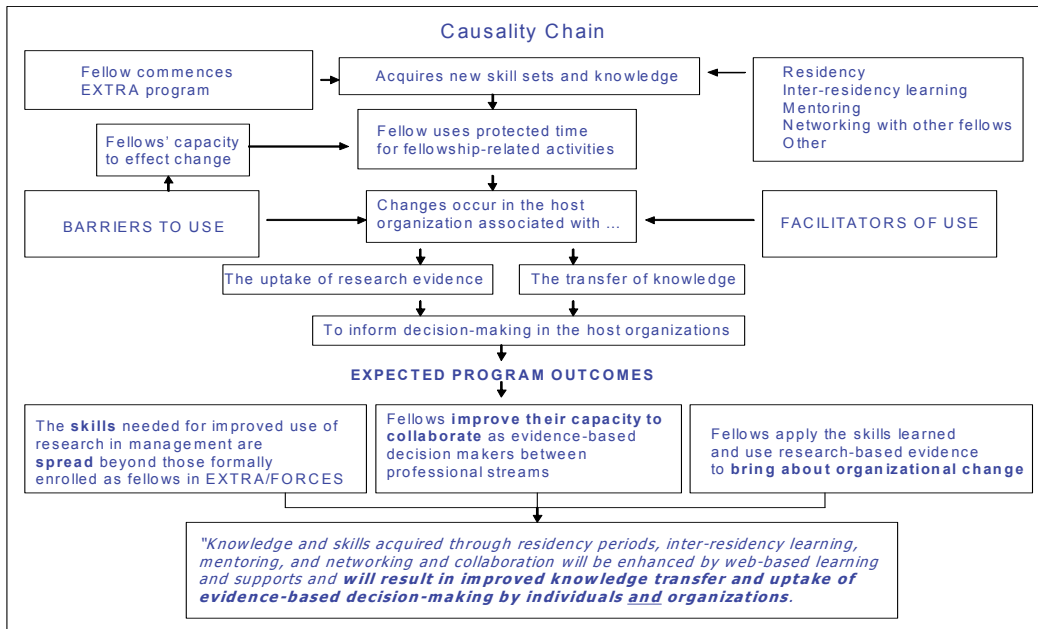
*“Knowledge and skills acquired through residency periods, inter-residency learning, mentoring, and networking and collaboration will be enhanced by web-based learning and supports and **will result in improved knowledge transfer and uptake of evidence-informed decision-making by individuals and organizations**. This will lead to improved healthcare being provided across Canada.”*

There are three major outcomes expected from the program:

- fellows apply the skills learned and use research evidence to bring about organizational change;
- the skills needed for improved use of research in management are spread beyond those formally enrolled as fellows in EXTRA; and
- fellows improve their capacity to collaborate as evidence-informed decision makers between professional streams.

The program is designed to exchange knowledge between the fellows and help to build capacity for research-evidence-informed decision-making in healthcare organizations. What happens in the fellows’ respective organizations during and following their fellowship period is essentially up to the fellows themselves. Schematically, the program’s logic is shown below (Figure 1).

Figure 1: The Causality Chain



Theory of Learning

The theory of learning used by the program is centred on an *adult learning approach* and an environment that is “responsive to the needs of and aware of participants’ considerable existing skills and knowledge” (Final Report of the Design Working Group, 2003). Typically, adult learners are problem-centred and results-oriented. They have specific results in mind for their learning. Adult learners are self-directed and not dependent on others for direction. They are often skeptical about new information and prefer to try it out before accepting it. They accept responsibility for their own learning if they feel that learning is timely and appropriate. Importantly, they seek educational avenues that relate directly to their perceived current needs.

Evaluation Methodology and Organizational Structure

This is a multi-year, multi-faceted evaluation. It employs multiple methodologies and is conducted by a diverse and experienced team of evaluators. Given the depth and breadth of the program the multiple

methodologies enable triangulation of the data to strengthen the validity of the findings. Evaluation team members are:

- Malcolm Anderson (Queen’s University) — lead evaluator;
- Lynda Atack (Centennial College);
- Dorothy Forbes (University of Western Ontario);
- Susan Donaldson (Susan Donaldson and Associates);
- Melanie Lavoie-Tremblay (McGill University);
- Manon Lemonde (Ontario University of Technology);
- Lorna Romilly (Lorna Romilly and Associates);
- Lyn Shulha (Queen’s University);
- Ingrid Sketris (Dalhousie University);
- Richard Thornley (Alberta Heritage Foundation for Medical Research); and
- Stephen Tomblin (Memorial University).

The evaluation is multi-layered, with outcomes being examined predominantly at the *micro* (individual) level (such as changes observed with the fellows) and the *meso* level (changes observed in culture and practice at the fellows’ organizations). The more distal the outcomes the more challenging it is to ascribe causal linkages to the EXTRA program itself. We examine a number of process measures, recognizing that this can assist the program as it continues to seek improvement.

Surveys

Each cohort of fellows will be surveyed six times. The data in this report are based on four rounds of surveys with the second cohort (n=26). Two more rounds of the survey will be completed by the fellows in the year following the two-year fellowship. The items on the surveys cover a range of topics related to various components of the program. A number of items are repeated in each survey.

Focus Groups

Focus groups were conducted with four groups of the cohort 2 fellows at the Quebec residency (February 2007). All fellows participated in these focus group sessions, which were recorded and transcribed. The areas of discussion focused on each of the components — what worked and what needed improvement — and actual and expected outcomes from being in the fellowship program.

Interviews

Interviews are conducted with fellows during their fellowship period. In addition they are interviewed in the year following completion of their two-year fellowship. The interviews have been important in the early stages of the evaluation as they have provided a richness of experience and have helped to further refine the survey instrument

Administrative Data

A range of data sources have been used for continuous improvement activities in the program. These include, for example, fellows’ on-site assessments of the residency sessions, data on mentoring activities, desktop use reports, and organizational liaison reports. Although not reported on here, these data sources have provided information that has been fed into the development of the program. While providing

important process data, these sources do not directly focus on the outcomes of the program and so are not included in this report.

2006 Evaluation of Program Components

Profile of the Cohort 2 Fellows

Nine of the fellows are vice-presidents, chief executive officers, or executive directors in their organizations. The remaining 17 are directors. Six of the fellows are based in tertiary care settings — acute care hospital settings affiliated with academic health science centres. Ten fellows identified themselves with regional health authorities. Three fellows are based in community hospitals, one is in a long-term care facility, and another is an executive director in a home and community care organization. Five fellows are based in other organizations such as government or rehabilitation centres. Three of the fellows have been with their organization for more than 20 years, while four others have been with their organization for between 11 and 19 years. Eight fellows have been with their organization for between four and 10 years.

More than 60 percent of the cohort 2 fellows are aged 40-49, while another 35 percent are aged 50-64. The regional distribution is as follows:

Region	Number	Percent	Region	Number	Percent
Alberta	2	8%	Ontario	6	23%
British Columbia	3	11%	Prince Edward Island	0	-
Manitoba	2	8%	Quebec	9	35%
Newfoundland & Labrador	0	-	Saskatchewan	1	4%
New Brunswick	1	4%	Northwest Territories, Yukon, Nunavut	0	-
Nova Scotia	2	8%	Total	26	100%

As was the case with cohort 1 fellows, the main objectives identified by the cohort 2 fellows at the beginning of their program for participating in EXTRA were to:

- apply research evidence to their work environment;
- apply skills learned to conduct a successful intervention project;
- acquire new knowledge;
- establish contacts and networking opportunities;
- develop an evidence-supported decision culture in their organization; and
- improve leadership and management skills through utilizing evidence.

These outcomes were revisited with cohort 2 fellows in the 4th round survey in February 2007.

Residency Sessions

In the round 4 survey conducted in February this year (2007), fellows were asked for their overall views about the residency sessions. It is clear the residency sessions have been highly valuable as learning tools for the fellows (see table below). These data mirror closely the experiences of the first cohort.

Table 1: Residency sessions	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
RESIDENCY (cohort 2: n=21)					
The residency periods enhanced your research literacy	10 (48%)	10 (48%)	1 (5%)	0	0
You understand the link between research literacy and evidence-based decision-making	14 (67%)	7 (33%)	0	0	0
You understand approaches and strategies for leading and promoting evidence-based decision-making	12 (57%)	9 (43%)	0	0	0
Your ability (that is, through use of tools and strategies) to apply research-based evidence in organizational change was enhanced by the residency periods	13 (62%)	8 (38%)	0	0	0
Stronger collaborative networks/relationships were built between the professional streams (nurse, physician, and other health service executives) participating in the program	8 (38%)	10 (48%)	3 (14%)	0	0
Strategies were developed for creating a community of practice for evidence-based decision-making beyond the formal residency sessions	0	9 (43%)	10 (48%)	2 (10%)	0
The visibility and use of evidence-based decision-making in the Canadian healthcare system increased during the residency periods	4 (19%)	11 (52%)	4 (19%)	1 (5%)	0

These data strongly suggest that skill sets and research evidence knowledge were acquired from the residency sessions. They are further validated by survey data collected over the duration of the fellowship, presented later in this report.

Intervention Project

Despite a number of challenges, the fellows felt their intervention projects evolved the way they had intended. Like the first cohort, the challenges included competing priorities, resistant professionals, the slow pace of cultural change, determining the key change agents within the organization, lack of culture using data to make decisions, lack of expertise in using data in the organization, political environment, staff commitment to the project and implementation, isolating the time to develop the implementation plan and carry the project forward, the sustainability of the changes over time, and time available for the fellow to work on the intervention project itself.

Overall, two-thirds of the fellows felt they had achieved what they had intended with their intervention project (4th round survey, 2007). The remaining 33 percent felt they had partially achieved what they had intended. These are very positive findings because the intervention projects to a large extent are at the

interface between knowledge acquisition and skill set development and the real world application in complex organizational environments.

Table 2: Intervention project	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
INTERVENTION PROJECT (cohort 2: n=21)					
You applied the skills acquired in the program to the intervention project	11 (52%)	10 (48%)	0	0	0
Your organization engaged in change management strategies based on the intervention project	8 (38%)	9 (43%)	4 (19%)	0	0
Your intervention project created opportunities for interdisciplinary work and interprofessional collaboration	10 (48%)	8 (38%)	2 (10%)	1 (5%)	0
The findings of your intervention project (and change management experiences derived from intervention project) were transferred beyond your organization	8 (38%)	8 (38%)	3 (14%)	0	0
The mentors supported the implementation of the intervention project	10 (48%)	9 (43%)	1 (5%)	1 (5%)	0

These data also strongly suggest the intervention project has contributed to interdisciplinary work and interprofessional collaboration within and beyond the host organizations.

Network Building and Support

In the round 4 survey of cohort 2 conducted in February 2007, fellows were asked for their views on a number of key questions about networking and support. The program has been able to foster networking and support (see table below).

Table 3: Networking and support	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
NETWORKING (cohort 2: n=21)					
The IT infrastructure supported the building of a community of practice	4 (19%)	7 (33%)	9 (43%)	1 (5%)	0
Your involvement with EXTRA/FORCES changed how you collaborate and network	9 (43%)	9 (42%)	3 (14%)	0	0
Collaboration and networking between participating organizations was encouraged in	11 (52%)	10 (48%)	0	0	0

the EXTRA/FORCES program					
There were system-level changes of more support for evidence-based decision-making through the development of networks, collaborative relationships, and communities of practice	4 (19%)	11 (52%)	5 (24%)	1 (5%)	0

Inter-residency Learning and Mentoring

In the round 4 survey of cohort 2 conducted in February 2007, fellows were asked for their views on a number of key questions about the inter-residency and mentoring components of the program. The following table summarizes the survey data.

Table 4: Inter-residency and mentoring (cohort 2: n=21)	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
Your organization provided you with an effective liaison to mentoring functions as related to the change management role of your intervention project	8 (38%)	10 (48%)	2 (10%)	0	1 (5%)
The regional mentoring centre supported collaboration and networks between you and other organizations	5 (24%)	5 (24%)	5 (24%)	4 (19%)	2 (10%)
The mentoring activities supported the building of a community of practice	1 (5%)	3 (14%)	12 (57%)	5 (24%)	0
The mentors supported the implementation of the intervention project	9 (43%)	9 (43%)	1 (5%)	2 (10%)	0
You were provided with effective and high-quality self-directed learning and mentoring support between residency sessions	10 (48%)	9 (43%)	1 (5%)	1 (5%)	0
You were provided with effective and high-quality desktop support between residency sessions	9 (43%)	10 (48%)	1 (5%)	1 (5%)	0
Your organization provided the necessary supports for you to engage effectively in the two-year EXTRA/FORCES fellowship	9 (43%)	11 (52%)	1 (5%)	0	0

Regional Mentoring Centres

The regional mentoring centres also survey the fellows and the mentors on a range of issues. The data summarized in the tables below are taken from the mentoring performance assessments conducted by the centres in January 2007. When compared with cohort 1 fellow data gathered in January 2006, there is a significant increase in the level of satisfaction reported by fellows. Specifically, in 2006 26 percent of cohort 1 fellows rated the clarity of roles as either poor or insufficient. In 2007, 95 percent of cohort 2 and 3 fellows felt that role clarity was either sufficient or excellent. Moreover, fellows who felt the support from the centres was either sufficient or excellent rose from 65 percent to 97 percent in 2007.

Cohort 2 and 3 Fellows: Assessment of mentoring (overall)

n=82	Poor	Insufficient	Sufficient	Excellent
Time invested in the mentoring relationship	0%	8.9%	67.1%	24.0%
Support/advice from mentor regarding project	0%	3.8%	46.3%	50.0%
Communication with the mentor	0%	8.8%	45.0%	46.3%
Clarity of expectations about each one's roles	0%	4.9%	62.2%	32.9%
Organizational support for the intervention project	1.3%	9.0%	56.4%	33.3%
Organizational support to work on "my" project (n=71)	0%	11.3%	59.2%	29.6%
Support from the regional mentoring centre (n=68)	2.9%	0%	64.7%	32.4%

Notes: Results for academic and decision-making mentors are combined.

The mentors' survey data also exhibit an increase in the levels of satisfaction compared to the January 2006 data. The number of mentors reporting either a sufficient or excellent level of satisfaction in January 2007 does not drop below 86 percent on any of the issues being assessed and are as high as 100 percent on the receptiveness to mentoring support, as well as the support from regional mentoring centres. There are concerns related to organizational support, which are being examined by the centres with the help of the organizational liaison.

Mentors: Assessment of mentoring (overall)

n=46	Poor	Insufficient	Sufficient	Excellent
Time invested in the mentoring relationship	0%	8.7%	69.6%	21.7%
Receptiveness to your support regarding the project	0%	0%	30.4%	69.6%
Communication with the fellow	0%	4.3%	50.0%	45.7%
Clarity of expectations about each one's roles	0%	10.9%	47.8%	41.3%
Organizational support for the intervention project (n=44)	2.3%	6.8%	52.3%	38.6%
Organizational support for fellow's work on the project (n=43)	2.3%	11.6%	48.8%	37.2%
Support from the regional mentoring centre (n=38)	0%	0%	78.9%	21.1%

Note: Results for Western Regional Mentoring Centre not included.

To complete the information obtained through the mentoring performance assessment survey, mentoring centre leads conduct follow-up phone calls with fellows to obtain additional insight into some of the challenges and successes of the mentoring relationships. While there is still some difficulty regarding the shortage of time fellows have vis-à-vis meeting with mentors and working on their intervention projects, most fellows recognize that regular, scheduled contact with mentors enables them to advance through the EXTRA program with greater ease. As well, fellows reported that a greater clarity of roles and an increased understanding of EXTRA program goals on the part of the mentor helped to enhance mentoring support.

The centres have evolved and matured in their role and capacity to provide support and direction to mentors and fellows. Of the many factors indicated in the 2006 mentoring centre annual activity reports, here are some of the adjustments that helped to improve the mentoring component of the EXTRA program:

- Presence of regional mentoring centre leads at the August residency sessions, which helped to strengthen the connection with fellows and the collaboration among centres.
- Earlier contact with new fellows and matching with mentors.
- Provision of orientation sessions with new fellows and mentors.
- More direct involvement of the centres in the mentoring performance assessment and informal follow-up calls added to the assessment process.
- Retention of mentors from cohort 1.
- Monthly teleconference calls between centre leads, the organizational liaison, and EXTRA program staff.
- Leveraging other events to connect with fellows (Research Use Weeks in Moncton and Prince George, community of practice meeting in Montreal, OTC Summer Institute, ARTC theme-based workshops, etc.).
- Further integration of the EXTRA program into regional training centre initiatives (including an EXTRA section on their newsletters and web sites, and invitations of fellows to events).

In addition to ensuring regular and meaningful contact with EXTRA fellows, the centres have helped to promote the EXTRA program through their regional network of contacts.

Evaluating the Expected Outcomes

This section examines the extent to which the expected outcomes have been achieved with the second cohort of EXTRA fellows.

Efficacy of the Training

The first critical step in understanding whether involvement in the fellowship leads to organizational change (the underlying assumption) is establishing the efficacy of the training on the various modules. In other words, has the training been effective in enhancing the knowledge base of the fellows? And if so, has it been applied?

To look at this, fellows were asked a number of questions repeatedly in the four rounds of surveys. The following tables consistently show improvements in knowledge by the fellows. Where relevant, data have been shaded in the tables to highlight the significant changes in responses over time.

Knowledge Base

Table 5: Level of research literacy (2005-07)

	August 2005	February 2006	February 2007
Excellent	4%	12%	9%
Very Good	12%	12%	62%
Good	42%	65%	19%
Fair	17%	6%	14%
Poor	25%	6%	0%

Table 6: Knowledge of research-based evidence (2005-07)

	August 2005	February 2006	August 2006	February 2007
Excellent	0%	6%	11%	19%
Very Good	17%	35%	56%	71%
Good	42%	41%	28%	9%
Fair	33%	12%	6%	0%
Poor	8%	0%	0%	0%

Table 7: Skill set for doing research (2005-07)

	August 2005	February 2006	August 2006	February 2007
Excellent	0%	0%	6%	5%
Very Good	0%	12%	28%	19%
Good	29%	41%	33%	52%
Fair	42%	35%	28%	24%
Poor	29%	12%	6%	0%

Table 8: Skill set for assessing quality of evidence (2005-07)

	August 2005	February 2006	August 2006	February 2007
Excellent	4%	6%	6%	9%
Very Good	8%	29%	56%	43%
Good	25%	41%	33%	38%
Fair	42%	12%	6%	9%
Poor	17%	12%	0%	0%

Table 9: Knowledge of change management (2005-07)

	August 2005	February 2006	August 2006	February 2007
Excellent	0%	18%	28%	38%
Very Good	50%	65%	67%	57%
Good	21%	12%	6%	5%
Fair	17%	6%	0%	0%
Poor	8%	0%	0%	0%

In all respects the tables clearly show the program has achieved the intended outcome of improving the knowledge base of the cohort 2 fellows. The assumption is that the newly acquired, more in-depth knowledge base will support the fellows as they undertake to increase the nature and extent of research evidence in their respective organizational contexts.

The Organizational Context

The following tables present data on the use and transfer of research-based evidence as reported by the fellows in the four rounds of surveys.

Use of Research in the Host Organization

Table 10: Fellows' frequency of research use (2005-07)

	August 2005	February 2006	August 2006	February 2007
All the time	0%	6%	0%	43%
Most of time	4%	35%	56%	38%
Frequently	25%	35%	0%	14%
Some of time	37%	23%	39%	5%
Little time	25%	0%	6%	0%
Never	8%	0%	0%	0%

Table 11: Frequency host organization uses research (2005-07)

	August 2005	February 2006	August 2006	February 2007
All the time	0%	0%	0%	5%
Most of time	4%	18%	39%	19%
Frequently	25%	41%	0%	48%
Some of time	37%	35%	56%	24%
Little time	17%	6%	6%	5%
Never	8%	0%	0%	0%

Table 12: Ability to promote the use of research evidence in the host organization

	August 2005	February 2006	August 2006	February 2007
Excellent	4%	23%	28%	43%
Very Good	12%	35%	39%	43%
Good	33%	35%	17%	14%
Fair	29%	6%	17%	0%
Poor	12%	0%	0%	0%

Table 13: Ability to create a more evidence-based decision-making environment

	August 2005	February 2006	February 2007
Excellent	0%	12%	4%
Very Good	17%	47%	71%
Good	21%	29%	24%
Fair	46%	12%	0%
Poor	17%	0%	0%

Table 14: Fellows’ opportunities to learn more about research-based evidence while at work

	August 2005	February 2006	August 2006	February 2007
All the time	0%	0%	0%	5%
Most of time	0%	18%	33%	19%
Frequently	25%	29%	0%	48%
Some of time	12%	47%	44%	24%
A little time	46%	6%	22%	5%
Never	17%	0%	0%	0%

Table 15: Fellows’ opportunities to use research when collaborating with other professionals in their own organizations

	August 2005	February 2006	February 2007
All the time	0%	0%	0%
Most of time	8%	23%	33%
Frequently	17%	41%	52%
Some of time	29%	29%	14%
A little time	37%	6%	0%
Never	8%	0%	0%

Table 16: Fellows’ opportunities to use research when collaborating with other professionals in other organizations

	August 2005	February 2006	August 2006	February 2007
All the time	0%	0%	0%	0%
Most of time	0%	18%	44%	9%
Frequently	17%	41%	0%	52%
Some of time	37%	29%	39%	14%
A little time	25%	6%	17%	0%
Never	21%	6%	0%	0%

The Use of Time

When asked at the beginning of the program what they anticipated their release time from work obligations would be, 26 percent of cohort 2 fellows felt they would be able to allocate between 20 and 29 percent of their time to EXTRA, while another 48 percent felt it would be between 11 and 19 percent of their work time. Six months into the program just one person was able to protect 20 to 29 percent of his/her time (six percent), while another 53 percent were able to commit 11 to 19 percent of their work time to EXTRA.

The second cohort noted many challenges in balancing work commitments with the fellowship. The following quotes reflect some of the experiences of the fellows:

“Taking into account the size of our organization, it is difficult to delegate responsibilities to others. As a result, my days are long and it’s hard to find the time for EXTRA.”

“Longer work days and continued on weekends. More delegation and less presence of non-essential managers. Less time to coach and mentor staff — a critical issue.”

“I have been fortunate to be able to shift the focus of my work to my project. My staff have had to pick up some work and I am less available to them and others.”

“I seem to be using time for each that should be given to the other.”

“My employer is supportive of EXTRA but responsibilities have not been decreased.”

“The work stays the same. The quantity of time that I work on my EXTRA project is in a large part done during my personal time.”

Various strategies, however, have been used to protect time for the program. These include the realignment and delegation of work of some staff, refocusing work to be more closely aligned with the intervention project, reserving one day per week for EXTRA, increasing staffing levels, and scheduling specific days in a month ahead of time to be off-site.

Fellows Achieving Their Own Outcomes

Fellows were asked about the extent to which they had achieved the outcomes they themselves hoped to achieve from being involved in the EXTRA program. The following table reports on the findings from this inquiry. As the data show, the individual outcomes have been met and closely parallel the outcomes anticipated at the larger programmatic level.

Table 17: Fellow’s own objectives for being involved in EXTRA

Fellows felt they were able to:	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
Apply research evidence to their work environment	62%	33%	5%	0%	0%
Apply skills learned to conduct a successful intervention project	81%	19%	0%	0%	0%
Acquire new knowledge	95%	5%	0%	0%	0%
Establish contacts and networking opportunities	86%	9%	5%	0%	0%
Develop an evidence-supported decision culture in their organization	29%	48%	24%	0%	0%
Improve leadership and management skills through the use of evidence	38%	52%	9%	0%	0%
Improve organizational outcomes and delivery of services	19%	57%	19%	0%	0%
Share the use of research evidence knowledge with colleagues	38%	62%	0%	0%	0%
Enhance awareness and understanding of evidence-based healthcare	35%	65%	0%	0%	0%
Be a role model and inspire colleagues in the use of research evidence	30%	44%	25%	0%	0%

Source: 4th round survey of cohort 2 fellows, Quebec, February 2007

Overall, there was a wide range of changes observable by the fellows in their organizations due to their involvement in the EXTRA program. The following table identifies some of the major changes that occurred.

Table 18: Outcomes achieved in the organizations by cohort 2 fellows

	Yes	No	N/A
More questioning about where to search for best evidence (increased curiosity)	100%	0%	0%
Those involved in the intervention project will have increased capacity to critically examine their actions related to problem-solving and decision-making	95%	5%	0%
Increased awareness of evidence-based decision-making and its value	95%	5%	0%
Increased use of evidence in decisions	95%	5%	0%
Improved diffusion and use of evidence-based tools	95%	5%	0%
Implementation of “better” practices	90%	10%	0%
Create an environment in which there is an expectation that issues will be challenged by evidence	90%	10%	0%
Sharing of resources (articles) and knowledge on the learning (from lectures and readings and interactions with faculty and fellows)	90%	5%	5%
Become a role model for triggering applications to the EXTRA program from other health executives within your organization	90%	10%	0%
Increased desire by the executive team to add rigour to approaching problems/issues and at times attempting to use some of what the fellow learns to assist with decisions	86%	14%	0%
An interdisciplinary culture that acknowledges and incorporates evidence-based research in clinical practice, administration, education, and research	86%	9%	5%
Strategies for colleagues to use and apply evidence	86%	14%	0%
Increased readiness to develop databases needed to facilitate decision-making	81%	14%	5%
Increase in objective decision-making in administrative sectors	81%	19%	0%
Directors and managers demonstrating an increased ability to recognize and use evidence that is research-based	81%	19%	0%
Greater collaboration with researchers	81%	19%	0%
Better project management, improved outcomes	76%	14%	10%
A change in the organizational culture with more use of evidence-based decision-making	76%	19%	5%
Changing roles and expectations of the senior management team and board of directors to be more evidence-based with decisions	52%	29%	19%

Summary

In summary, there have been a consistent and large number of observed changes in the knowledge base of the cohort 2 fellows. Encouragingly, the data suggest this has been translated into increasing use of research evidence to inform decision-making in the respective host organizations. It should also be noted there has been a high level of satisfaction with the program by the second cohort of fellows (again, consistent with the first cohort).

The emphasis of the EXTRA program has clearly been on the fellows, with much less attention on the organizations, or indeed the decision makers in those organizations. What we know less of, from an evaluative perspective, is the full nature and extent of the changes and the longer-term effects in the host

organizations. Simply, more data need to be collected in the organizational context. Based on the data collected from the evaluation of the first years of the program, and given its observable, ongoing success on a range of levels, the evaluation is shifting its emphasis to focus more closely on the nature and extent of changes occurring within the host organizations. This is even more important as the catalytic effect of the fellowship may not be fully realized until after the formal two-year period has ended. From an evaluative perspective it is important to engage the organizations as soon as possible to develop indices of change that can be monitored over time.

Finally, it should be emphasized that the program is highly regarded by the fellows and their organizations. It is an enormous opportunity for individual and organizational growth. Quite simply, it has been a catalyst for change. A few quotes from the second cohort conclude this report:

“The CHSRF staff are excellent. The ‘we are equal and it is okay to have fun’ concept practiced is appreciated.”

“The program is very stimulating and energizing. The residency sessions are very good.”

“This program will enable me to be not only a better leader and be better equipped to use the convincing data, but also to be a better person by the human exchanges that surround the program as a whole. Thank you!”

Major Activities for 2007

Implement continuous improvements to EXTRA curriculum, mentoring support, and development of intervention projects. Undertake revisions to module 6, dealing with community of practice sessions and development of skill acquisition sessions on evidence-based storytelling.

Plan for the 2008 CEO forum involving the U.K. CEOs in a comparative learning event.

Select fourth cohort of 24 EXTRA fellows and prepare for graduation of cohort 2.

Monitor and assess impact of new stream of organizational teams participating in the 2007 cohort.

Implement accreditation arrangements with University of Montreal and Royal Roads University.

Undertake four pilot evaluation case studies in organizations. Submit application, with SEARCH Canada, to Canadian Institutes of Health Research and Social Sciences and Humanities Research Council for a five-year program of evaluative research to examine impact assessment of EXTRA and SEARCH training on organizations.

Strengthen role of regional mentoring centres in providing regional capacity for liaison and linkage and exchange between decision makers and researchers involved in the EXTRA program.

Leverage opportunities to promote program through publications and presentations at key conferences and panels.

Summary of EXTRA Fund Expenditures and Activities 2003-2006

Total EXTRA expenditures and uncommitted funds at December 31, 2006

Initial investment	\$25,000,000
Salaries and benefits from Apr. 1, 2003 to Dec. 31, 2006	(\$848,212)
Other direct costs paid from Apr. 1, 2003 to Dec. 31, 2006	(\$6,694,884)
Overhead costs allocated Apr. 1, 2003 to Dec. 31, 2006	(\$1,577,519)
Investment management fees Apr. 1, 2003 to Dec. 31, 2006	(\$205,812)
EXTRA fellow registration revenue	\$231,666
Investment income Apr. 1, 2003 to Dec. 31, 2006	<u>\$3,868,382</u>
Balance in fund as at Dec. 31, 2006 before commitments	\$19,773,621
Commitments made under existing programs for 2007-2016:	
Salaries and benefits (note 1)	(\$3,269,042)
Other direct costs	(\$17,575,000)
Overhead (note 2)	(\$4,304,688)
Investment income (note 3)	\$4,826,481
EXTRA fellow registration revenue	\$940,000
Investment management fees (note 4)	<u>(\$462,500)</u>
EXTRA remaining balance after commitments	(\$71,128)

Assumptions:

1. The salaries and benefits assumption includes a three-percent increase year over year up to 2016 to cover costs directly attributable to the EXTRA fund.
2. The overhead rate will continue to be approximately 25 percent of other direct costs. Overhead is charged to the EXTRA fund to cover infrastructure costs such as rent, telephone, postage, etc. that are not directly allocated to the EXTRA fund. This overhead allocation methodology was developed by CHSRF's auditors.
3. Investment income will be approximately five percent on yearly average EXTRA balance.
4. Investment fees are estimated at \$50,000 per year.