# Contents

List of Acronyms ................................................................................................................................. i

Executive Summary .................................................................................................................................... 1

- Background .............................................................................................................................................. 1
- Summary of Findings ............................................................................................................................. 4
  - a) Relevance ........................................................................................................................................... 4
  - b) Achievement of Expected Outcomes .............................................................................................. 4
  - c) Effectiveness .................................................................................................................................... 5

1.0 CFHI’s Evolution and 5-Year Evaluation Objectives ........................................................................ 8

- 1.1 CFHI’s Evolution (1997-2014) ........................................................................................................ 8
- 1.2 CHSRF 1997 – 2002 ......................................................................................................................... 8
- 1.3 CHSRF: 2003 - 2006 ........................................................................................................................ 9
- 1.4 CHSRF: 2007 - 2010 ........................................................................................................................ 9
- 1.5 CFHI: 2011 to Present ...................................................................................................................... 12
- 1.6 Evaluation Questions ..................................................................................................................... 17
- 1.7 Report Structure ............................................................................................................................ 18

2.0 Methodologies ...................................................................................................................................... 19

- 2.1 Document Review ........................................................................................................................... 21
- 2.2 Key Stakeholder Interviews ............................................................................................................ 21
- 2.3 Performance Measurement Data Roll-Up ....................................................................................... 22
- 2.4 Partial Benefit-Cost Analysis ......................................................................................................... 22
- 2.5 Limitations ....................................................................................................................................... 23
  - 2.5.1 Document Review .................................................................................................................. 23
  - 2.5.2 PM Data Roll-up ....................................................................................................................... 23
  - 2.5.3 PBCA ...................................................................................................................................... 24

3.0 Question 1: Niche and Differentiation ............................................................................................. 26

- 3.1 Key Findings ..................................................................................................................................... 26
- 3.2 Analysis and Supporting Evidence ................................................................................................. 27
- 3.3 Conclusion ....................................................................................................................................... 38
- 3.4 Recommendations for Improvement ............................................................................................ 39
# Four Questions

## 4.0 Question 2: Relevance to Healthcare Priorities

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1 Key Findings</td>
<td>41</td>
</tr>
<tr>
<td>4.2 Analysis and Supporting Evidence</td>
<td>42</td>
</tr>
<tr>
<td>4.3 Conclusion</td>
<td>50</td>
</tr>
</tbody>
</table>

## 5.0 Question 3: Alignment with CFHI’s Strategic Priorities

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1 Key Findings</td>
<td>51</td>
</tr>
<tr>
<td>5.2 Analysis and Supporting Evidence</td>
<td>52</td>
</tr>
<tr>
<td>5.3 Conclusion</td>
<td>55</td>
</tr>
<tr>
<td>5.4 Recommendations for Improvement</td>
<td>56</td>
</tr>
</tbody>
</table>

## 6.0 Question 4: Fulfillment of Federal Funding Agreement Requirements

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Key Findings</td>
<td>57</td>
</tr>
<tr>
<td>6.2 Analysis and Supporting Evidence</td>
<td>58</td>
</tr>
<tr>
<td>6.2.1 Endowment Grant</td>
<td>58</td>
</tr>
<tr>
<td>6.2.1.1 Northwest Territories Collaboration</td>
<td>60</td>
</tr>
<tr>
<td>6.2.1.2 Atlantic Healthcare Collaboration</td>
<td>62</td>
</tr>
<tr>
<td>6.2.2 Dissemination Activities</td>
<td>63</td>
</tr>
<tr>
<td>6.2.3 EXTRA Grant</td>
<td>64</td>
</tr>
<tr>
<td>6.3 Conclusion</td>
<td>69</td>
</tr>
</tbody>
</table>

## 7.0 Question 5: Progress Against CFHI’s Strategic Priorities

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1 Key Findings</td>
<td>71</td>
</tr>
<tr>
<td>7.2 Analysis and Supporting Evidence</td>
<td>71</td>
</tr>
<tr>
<td>7.2.1 Strategic Priority #1: Engaging and Supporting Citizens</td>
<td>72</td>
</tr>
<tr>
<td>7.2.2 Strategic Priority #2: Accelerating Evidence-Informed Change</td>
<td>72</td>
</tr>
<tr>
<td>7.2.3 Strategic Priority #3: Promoting Policy Dialogue</td>
<td>72</td>
</tr>
<tr>
<td>7.3 Findings by Strategic Priority</td>
<td>73</td>
</tr>
<tr>
<td>7.3.1 Engaging and Supporting Citizens</td>
<td>73</td>
</tr>
<tr>
<td>7.3.2 Accelerating Evidence-Informed Change and Improvements</td>
<td>76</td>
</tr>
<tr>
<td>7.3.3 Promoting Policy Dialogue</td>
<td>78</td>
</tr>
<tr>
<td>7.4 General Findings</td>
<td>81</td>
</tr>
<tr>
<td>7.5 Conclusion</td>
<td>83</td>
</tr>
</tbody>
</table>
8.0 Question 6: Contribution to Acceleration of Healthcare Improvements ........................................... 84
  8.1 Key Findings ..................................................................................................................................... 84
  8.2 Analysis and Supporting Evidence .................................................................................................. 85
    8.2.1 General Findings from PBCA ................................................................................................. 85
    8.2.2 Sensitivity Analysis ................................................................................................................... 86
    8.2.3 Other Supporting Evidence ...................................................................................................... 87
  8.3 Findings by Healthcare Improvement Area ...................................................................................... 93
    8.3.1 Healthcare Efficiency and Patient Value ................................................................................... 93
    8.3.2 Patient- and Family-Centred Care .......................................................................................... 105
    8.3.3 Coordinated Healthcare ........................................................................................................... 107
  8.4 Conclusion ..................................................................................................................................... 108

9.0 Question 7: Extent of Spread ............................................................................................................. 109
  9.1 Key Findings .................................................................................................................................. 109
  9.2 Analysis and Supporting Evidence ................................................................................................. 109
  9.3 Conclusion ................................................................................................................................... 113
  9.4 Recommendations for Improvement ............................................................................................ 114

10.0 Question 8: Delivery and Operational Model ................................................................................. 115
  10.1 Key Findings ................................................................................................................................ 115
  10.2 Analysis and Supporting Evidence ............................................................................................... 115
  10.3 Conclusion ................................................................................................................................... 119
  10.4 Recommendations for Improvement ............................................................................................ 119

Appendix A: Evaluation Steering Committee Members .......................................................................... 120
Appendix B: Key Stakeholder Interviewees ............................................................................................ 121
Appendix C: Performance Measurement Data Summary Source Descriptions ..................................... 122
Appendix D: Major PBCA Analytic Assumptions for Cases Quantified ................................................ 133
Appendix E: Organizations Included in Identification of Current Healthcare Priorities ..................... 139
Appendix F: CFHI Improvement Model ................................................................................................. 141

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## List of Acronyms

### A
- ACAHO: Association of Canadian Academic Healthcare Organizations
- A/P: Antipsychotic Drugs/Medication
- AHC: Atlantic Healthcare Collaboration

### B
- BC: British Columbia
- B/C: Benefit/Cost
- BCMA: BC Medical Association (now known as Doctors of BC (January 20, 2014))
- BICL: Boehringer Ingelheim (Canada) Ltd.

### C
- CADRE: Capacity for Applied and Developmental Research and Evaluation
- CCHL: Canadian College of Health Leaders
- CCIOHTA: Canadian Coordinating Office for Health Technology Assessment
- CDM: Chronic Disease Management
- CEO: Chief Executive Officer
- CFHI: Canadian Foundation for Healthcare Improvement
- CHA: Canadian Healthcare Association
- CHHD: Conventional Home Haemodialysis
- CHSRF: Canadian Health Services Research Foundation
- CIHI: Canadian Institute for Health Information
- CIHR: Canadian Institutes of Health Research
- CKD: Chronic Kidney Disease
- CLSC: Centre local de services communautaires
- CMA: Canadian Medical Association
- CME: Continuing Medical Education
- CNA: Canadian Nurses Association
- COPD: Chronic Obstructive Pulmonary Disease
- CPAC: Canadian Partnership Against Cancer
- CPSI: Canadian Patient Safety Institute
- COI: Continuous Quality Improvement
- CSSS: Centre de santé et de services sociaux
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DESS</td>
<td>Diplôme d’études supérieures spécialisées</td>
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<tr>
<td>DHSS</td>
<td>Department of Health and Social Services</td>
</tr>
<tr>
<td>EBAPC</td>
<td>Evidence Based Analysis Priorities Committee</td>
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<tr>
<td>ED</td>
<td>Emergency Department</td>
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<tr>
<td>ESC</td>
<td>Evaluation Steering Committee</td>
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<td>EXTRA</td>
<td>Executive Training for Research Application</td>
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<td>FHA</td>
<td>Fraser Health Authority</td>
</tr>
<tr>
<td>FHHD</td>
<td>Frequent Home Haemodialysis</td>
</tr>
<tr>
<td>FiT</td>
<td>Financing, Innovation and Transformation</td>
</tr>
<tr>
<td>FORCES</td>
<td>Formation en recherche pour cadres qui exercent dans la santé</td>
</tr>
<tr>
<td>F/P/T</td>
<td>Federal / Provincial / Territorial</td>
</tr>
<tr>
<td>FP</td>
<td>Family Physician</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-Time Equivalent</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
</tr>
<tr>
<td>HCAHPS</td>
<td>Hospital Consumer Assessment of Healthcare Providers and Systems</td>
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<tr>
<td>HFIT</td>
<td>Healthcare Financing, Innovation and Transformation</td>
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<tr>
<td>HHD</td>
<td>Home Haemodialysis</td>
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<tr>
<td>HPD</td>
<td>Home Peritoneal Dialysis</td>
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<td>HPHA</td>
<td>Huron Perth Healthcare Alliance</td>
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<td>HQO</td>
<td>Health Quality Ontario</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>HUR</td>
<td>Home Utilization Rate</td>
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<td>ICED</td>
<td>Implantable Cardiac Electrical Devices</td>
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<tr>
<td>IDEAS</td>
<td>Improving &amp; Driving Excellence Across Sectors</td>
</tr>
<tr>
<td>IHI</td>
<td>Institute for Healthcare Improvement</td>
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<tr>
<td>IHSPR</td>
<td>Institute of Health Services and Policy Research</td>
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INSPIRED  Implementing a Novel and Supportive Program of Individualized care for patients and families living with Respiratory Disease

IPCDC  Initiative sur le partage des connaissances et le développement des compétences

IP(s)  Improvement Project(s)

IT  Information Technology

KPMG  Klynveld Peat Marwick Goerdeler

LEAD  Linking Evidence to Action on Decisions

LEAN  Lean is a customer-centric process improvement methodology used to eliminate waste

LHIN  Local Health Integration Network

LTC  Long-Term Care

MB  Manitoba

MD  Medical Doctor

MDS  Minimum Data Set

MOC  Maintenance of Certification

MoH  Ministry of Health

MOHLTC  Ministry of Health and Long-Term Care

MRC  Medical Research Council

MRP  Manitoba Renal Program

MSc  Master of Science

MSP  Medical Services Plan

MSSS  Ministère de la santé et des services sociaux

MUHC  McGill University Health Centre

NPV  Net Present Value

NRoR  Northern, Rural or Remote

NSTC  North Shore Tribal Council

NWT  Northwest Territories
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>OHA</td>
<td>Ontario Hospital Association</td>
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<tr>
<td>PBCA</td>
<td>Partial Benefit-Cost Analysis</td>
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<tr>
<td>PCH</td>
<td>Personal Care Homes</td>
</tr>
<tr>
<td>PD</td>
<td>Peritoneal Dialysis</td>
</tr>
<tr>
<td>PEP(s)</td>
<td>Patient Engagement Project(s)</td>
</tr>
<tr>
<td>PHC</td>
<td>Providence Health Care</td>
</tr>
<tr>
<td>PhD</td>
<td>Doctor of Philosophy</td>
</tr>
<tr>
<td>PIECES</td>
<td>Physical, Intellectual, Emotional, Capabilities, Environment and Social</td>
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<tr>
<td>PM</td>
<td>Performance Measurement</td>
</tr>
<tr>
<td>PREVIEW-ED</td>
<td>Practical Routine Elder Variants Indicate Early Warning for Emergency Department (or the “Tool”)</td>
</tr>
<tr>
<td>PSW</td>
<td>Personal Support Worker</td>
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<tr>
<td>PuP</td>
<td>Picking Up the Pace</td>
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<tr>
<td>RACE</td>
<td>Rapid Access to Consultative Expertise</td>
</tr>
<tr>
<td>RAI-MDS</td>
<td>Resident Assessment Instrument Minimum Data Set</td>
</tr>
<tr>
<td>REISS</td>
<td>Research, Exchange and Impact for System Support</td>
</tr>
<tr>
<td>RN</td>
<td>Registered Nurse</td>
</tr>
<tr>
<td>RRT</td>
<td>Renal Replacement Therapy</td>
</tr>
<tr>
<td>SHCWG</td>
<td>Seniors Hospital Care Working Group</td>
</tr>
<tr>
<td>SMT</td>
<td>Senior Management Team</td>
</tr>
<tr>
<td>SPOR</td>
<td>Strategy for Patient-Oriented Research</td>
</tr>
<tr>
<td>SSHRC</td>
<td>Social Sciences and Humanities Research Council</td>
</tr>
<tr>
<td>TAIC</td>
<td>Triple Aim Improvement Community</td>
</tr>
<tr>
<td>TBD</td>
<td>To Be Determined</td>
</tr>
<tr>
<td>TCAB</td>
<td>Transforming Care at the Bedside</td>
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</tbody>
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U

UAC  Unit Action Council
UHN  University Health Network

V

VCH  Vancouver Coastal Health
VP   Vice President

W

WRHA  Winnipeg Regional Health Authority
Executive Summary

The Canadian Foundation for Healthcare Improvement’s (CFHI’s) five-year independent evaluation was commissioned to meet the requirements of CFHI’s 2009 Comprehensive Funding Agreement with Health Canada (hereinafter referred to as the “comprehensive funding agreement”). The evaluation aimed to assess CFHI’s current and future relevance and value in accelerating healthcare improvement across Canada and its current programming achievements and organizational performance against its strategic priorities and goals. As the successful vendor in a competitive bid process, KPMG undertook the planning and implementation of the evaluation between October 2013 and July 2014.

The evaluation covers the timeframe from April 1, 2009 through March 31, 2014. Eight specific evaluation questions were developed through the evaluation planning phase, covering aspects of CFHI’s relevance, effectiveness, alignment with priorities, and achievement of expected outcomes. To address the evaluation questions, multiple lines of evidence and a mix of qualitative and quantitative sources of information were used by KPMG’s Evaluation team (the evaluation team). Four methods were employed during the evaluation, including document review, key stakeholder interviews, performance measurement (PM) data review and synthesis, and partial benefit-cost analysis (PBCA). The evaluation questions and supporting methodology were detailed in an evaluation plan that was approved by CFHI’s Board of Trustees on December 5, 2013.

The evaluation was overseen by an Evaluation Steering Committee (ESC) (See Appendix A), including members of CFHI’s Senior Management Team (SMT), CFHI’s Evaluation and Performance Improvement group, and a representative from Health Canada. The ESC provided strategic direction and input throughout the planning and conduct of the evaluation. CFHI’s Evaluation and Performance Improvement group provided a majority of the required secondary data for the evaluation, and KPMG’s Evaluation team undertook the collection of primary data, analysis, and the development of the results, conclusions and recommendations described in this report.

Background

From 1997 to 2012, CFHI was known as the Canadian Health Services Research Foundation (CHSRF or the ‘Foundation’). During this period, the Foundation’s programming largely focused on granting and research funding to build applied health services research capacity for evidence-based decision making, a very different mandate from that of CFHI today. CFHI’s name change in the fall of 2012 marked an important evolution for the organization, with the consolidation of its new strategic priorities, mandate, goals and programming.

Originally driven by a research “linkage and exchange” mandate, CHSRF offered grant funding and programming that encouraged interactions between researchers and users of health services research. The Foundation was known as an ‘arms-length’ applied health services research funding organization through programs such as the annual Open Grants Competitions (OGC, 1998-2004), the Research, Exchange and Impact for System Support competition (REISS, 2005-2008), the Linking Evidence to Action

Cutting through complexity

on Decisions (LEAD, 2009) grants and its longstanding programs, Executive Training for Research Application (EXTRA, 2000-2014) and Capacity for Applied and Developmental Research and Evaluation (CADRE, 1998-2011). These programs aimed to increase Canada’s capacity to undertake applied health services and nursing research. Combined, they funded and trained hundreds of researchers, physician leaders, nurse leaders and other health executives from organizations across the country in developing capacity and leadership for using research evidence in delivering health services and addressing policy challenges of organizations.

Over time, the Foundation evolved from its primary emphasis on building applied health services research capacity to working directly with healthcare delivery organizations to implement, measure and spread innovative healthcare practices. In response to an increasingly complex healthcare delivery environment and the needs of its programming partners, CFHI and its network of healthcare coaches and faculty from across the country began working shoulder-to-shoulder with healthcare leaders, managers and providers to implement and spread evidence-based innovations to improve the quality and efficiency of healthcare for Canadians. The Foundation’s new strategic priorities were established in 2009, a new vision and mission took effect in 2011, and its new goals and name were launched in 2012. Accordingly, programming increasingly focused on supporting leadership development in converting and spreading evidence and innovative practices into actionable policies, programs, and tools through cross-jurisdictional, regional and pan-Canadian collaborations in order to deliver better quality and more efficient care to Canadians.

With a new focus on implementing innovative improvement practices, CFHI also undertook a number of operational changes, including the establishment of new funding structures and partnerships. In June 2011, the Foundation’s Board of Directors agreed to pursue a combined funding approach consisting of: 1) government funding; 2) fees for services and products; and 3) funding from foundations and the private sector. This new funding approach was implemented with the Board-approved 2012 Program of Work. CFHI began to introduce modest cost-sharing and fees-for-services for some programs and continued to implement its business development plan to focus on partnering and raising revenues from a variety of sources, such as the private sector (e.g. Boehringer Ingelheim Canada Ltd.); other foundations (e.g. The Medavie Health Foundation, Max Bell Foundation); national organizations (e.g. the Institute for Healthcare Improvement, the Canadian Partnership Against Cancer, Health Council of Canada and the Canadian Patient Safety Institute); provincial and territorial governments and improvement organizations (e.g. the Atlantic region, Quebec, Northwest Territories, the BC Patient and Safety Quality Council, Saskatchewan Health Quality Council and Ontario Health Quality Council); and the federal government.

To support its evolved mandate, CFHI also realigned staff, brought on new clinical and quality improvement expertise, adopted a new branding and communication strategy and began building a new evaluation and performance measurement culture. CFHI invested in resources and software to help ensure the effectiveness and outcomes of quality improvement could be captured, monitored and communicated. This became a critical priority, which advanced the development and alignment of CFHI’s Improvement Model (see Appendix F). CFHI’s Improvement Model and performance measurement system, now embedded across CFHI programming, will allow its partners to measure the outcomes of their improvement efforts along a continuum of change and for CFHI to assess its value as a leading pan-Canadian improvement organization.

The changes and the context of CFHI’s new operations are important for readers of this report to understand, given that the progressive implementation of CFHI’s new mandate, strategic priorities, and programming spans the entire timeframe of this evaluation (2009-2014). Key events in CFHI’s evolution are provided in Exhibit ES-1.
Exhibit ES-1: CFHI’s Evolution

1997 1999 2003
CHSRF Endowment Grant
CIHR and Nursing Research Grants
EXTRA Grant and transfer research project funding to CIHR

2008 2009 2011 2012 2013
Shift to greater emphasis on implementing innovative improvement practices
New strategic priorities
New Mission and Vision
Name changed to CFHI and new Goals Identified
New program of work implemented

Creation of research evidence and using evidence effectively 1997-2009
Implementation of evidence for improvement and sustaining healthcare improvement change 2009-current
Summary of Findings

The following summary of findings is categorized by the three high-level areas that focused this evaluation: CFHI’s relevance; achievement of expected outcomes; and effectiveness.

a) Relevance

Alignment with Provincial, Territorial and Federal Priorities: The evaluation found that CFHI is aligned with today’s federal, provincial, territorial and regional healthcare priorities. CFHI has made itself very relevant to its key stakeholders, and there is support for the organization to continue with its drive and focus on healthcare quality improvement initiatives among its stakeholder groups.

Alignment with Strategic Priorities: Overall, there is a strong alignment of CFHI’s resources and program objectives with its strategic priorities. Annual programs of work are developed to align program activities with CFHI’s three strategic priority areas of engaging and supporting patients and citizens, accelerating evidence-informed change and improvements, and promoting policy dialogue. Furthermore, CFHI has developed partnerships over the years in each of its strategic priority areas to optimize its use of internal and external resources, including effectively securing partnership funding, in-kind resources, and paid contracted faculty. External sources leveraged by CFHI include applied researchers, practitioners, and healthcare system leaders who provide services as expert faculty members, academic mentors, and who act as improvement coaches offering advice to CFHI’s improvement project teams. Furthermore, the evaluation found that CFHI has made concerted efforts to continuously improve the effectiveness and efficiency of its processes and operating structure to support its mission and areas of priority.

b) Achievement of Expected Outcomes

Attainment of Strategic Priorities: In consideration of CFHI’s alignment with federal, provincial, and territorial priorities and its alignment of resources with CFHI’s strategic priorities, it is not surprising to find that CFHI, in turn, has made progress towards the achievement of its 2009-2013 strategic priorities. The documented evidence collected through this evaluation identify changes and improvements within numerous healthcare systems across Canada, related to CFHI’s three strategic priorities. Moreover, program participants cite satisfaction with the delivery of the programming and report increases in knowledge and skills in the three strategic priority areas of engaging and supporting citizens, accelerating evidence-informed change and improvements, and promoting policy dialogue. CFHI is accelerating improvements in the areas of healthcare efficiency and patient value, patient- and family-centred care, and coordinated healthcare. CFHI is also promoting best practices in healthcare delivery, both operational and organizational, that are found to be useful and are being implemented by its stakeholders.

It is clear that CFHI has been able to support substantive positive impacts on the Canadian healthcare system. The partial-benefit cost analysis, conducted as part of this evaluation, identified that CFHI programming generated significantly more benefits to Canada than the funding investments being made.
over the time period of 2006 through 2013\(^2\). Specifically, the evaluation found a positive lower bound net present value\(^3\) of between $103 million and $635 million, with a benefit/cost ratio of 1.60:1 to 5.70:1 when comparing the net benefits of high impact projects to total CFHI programming costs. CFHI’s total programming costs over the 2006 - 2013 time period covered by the evaluation ranged from $135 million to $171 million, depending on the discount rate applied.

**Fulfilment of Granting Requirements:** As a result of CFHI’s revised mandate, certain objectives of CFHI’s comprehensive funding agreement with Health Canada do not apply to CFHI today. As stated previously, over the period of the evaluation, CFHI shifted its focus from granting and commissioning research to working directly with healthcare delivery organizations to implement innovative healthcare practices. With this shift in direction, CFHI is now primarily aligned with one of the three objectives of its Endowment Fund Grant with Health Canada – the promotion of best practices of health services delivery. The evaluation identified numerous CFHI activities and programs targeted at the promotion of best practices in health services delivery as well as evidence of outcomes in this area. In addition, CFHI has had considerable success in fulfilling the objectives of the Health Canada Executive Training for Research Application Grant Agreement. The evaluation found that CFHI has contributed to increasing the skills of health services professionals and encouraging collaboration in the management of healthcare delivery.

The two remaining Endowment Fund Grant objectives relate to the identification of research gaps and needs, and the funding of peer adjudicated research into health services and health services delivery. These objectives are now addressed at a minimum level, consistent with CFHI’s revised focus on supporting the adoption and spread of innovative practices across the healthcare system in Canada.

c) **Effectiveness**

**Opportunities to Improve Program Delivery and Operations:** Opportunities to continue to improve CFHI’s program delivery and operations were identified. These include: more clearly delineating and focusing on the key differentiators of CFHI’s role in the healthcare system; increasing activities in relation to spreading best practice innovations; and continuing to implement a defined performance measurement system that aligns with CFHI’s newly developed Improvement Model to facilitate efficient reporting of results. These three opportunities for improvement are summarized below:

- **Increase focus on spread of innovative best practices.** The evaluation found the potential for CFHI to continue to broaden its application of “spread” related programming. Spread in this context refers to encouraging the up-take or adoption of demonstrated innovations outside of a pilot site. There is an opportunity for CFHI to focus its funding and programming on spread, now that there are existing CFHI-funded improvement projects that are showing sustainable quality and efficiency outcomes at the organizational and regional levels. The spread of innovative best practices will be key to CFHI’s ability to continue accelerating improvements in healthcare across regions throughout Canada, as well as contributing to the definition of its niche in the healthcare system. Spread is already central to CFHI’s 2014 Program of Work with the launch of two targeted pan-Canadian spread Collaboratives.

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\(^2\) The timeframe for the PBCA is different than that covered by the evaluation as the methodology is dependent on identifying the highest impact projects. As such, no restriction of timeframe within which the project had to have been delivered is imposed as long as the total costs of the organization are considered for the same time period. In the case of this evaluation, the “oldest” high-impact project considered for PBCA dated back to 2006. The total organization costs associated with the same timeframe covered by the high impact case projects is used in the analysis undertaken for the evaluation.

\(^3\) Net Present Value (NPV) = (Net benefits of high impact projects) minus (Total CFHI costs)
Drawing from a successfully scaled-up EXTRA initiative, one of the new pan-Canadian spread Collaboratives includes fifteen teams committed to using interRAI-MDS data and patient-centred care strategies to reduce the inappropriate use of antipsychotics in long-term care facilities. CFHI’s other pan-Canadian spread Collaborative focuses on spreading an award-winning INSPIRED\(^4\) model of care (already adopted by teams through CFHI’s Atlantic Healthcare Collaboration and led by CFHI’s new clinical lead) to improve and create value for patients and families living with chronic obstructive pulmonary disease (COPD). CFHI management is encouraged to continue to broaden the application of spread-related initiatives.

CFHI believes it is now positioned to lead large-scale improvement collaborations, drawing from its experience leading the cross-provincial Atlantic Healthcare Collaboration (AHC) and the cross-regional Northwest Territories (NWT) Collaboration, both focused on system level improvements in chronic disease management. In addition, the experience gained through these collaborations is expected to enhance CFHI’s credibility to expand its programming. A good example is CFHI’s role in the pan-Canadian Northern, Rural or Remote Collaboration, which focuses on the health needs of Aboriginal and Northern communities.

**Leverage key differentiators to maintain niche position and increase awareness of the CFHI brand.** It is evident that CFHI attempts to differentiate itself from other healthcare improvement organizations in its defined niche of quality improvement within the Canadian healthcare systems. However, CFHI needs to remain focused on its key differentiators and leverage its distinguished position as more organizations move into the quality improvement space. CFHI’s unique differentiators are found to be its tactical implementation approach, ability to compare and contrast across the country, and development of pan-Canadian networks.

CFHI also needs to continue increasing awareness of its new brand. The evaluation identified risks for potential overlap and/or duplication of efforts to occur in the future, particularly with organizations in the more crowded healthcare innovation/improvement space. The evaluation further identified opportunities to strengthen the recognition of the CFHI brand and its areas of focus among its key stakeholders.

To strengthen its niche and value-proposition, CFHI should consider increasing its efforts on clearly communicating its value-added role in the healthcare improvement space and continue to increase its focus on how it can further promote the implementation of innovative healthcare practices across Canada. In doing so, CFHI needs to be mindful of the board-directed funding approach, and be able to recognize and promote CFHI’s advantage(s) when competing with the private sector or other similar quality improvement organizations. Furthermore, as a not-for-profit organization, CFHI needs to continue to ensure that its core activities and programs remain well aligned with its non-profit objectives, particularly when pursuing initiatives in a competitive environment.

The evidence collected through a review of CFHI’s 2014 market research identified that nearly half of CFHI’s direct audience was unaware of its rebranding. This, in turn, may signal that CFHI’s new mandate and programming are not as well known or understood as would be desired. CFHI has started marketing its new programming. However, given CFHI’s size and resources, the evaluation noted that it is not necessary to employ a full branding campaign. Efforts to effectively reach, at a minimum, CFHI’s direct audience could be increased to strengthen its brand awareness.

\(^4\) Implementing a Novel and Supportive Program of Individualized care for patients and families living with Respiratory Disease
**Continue to strengthen the performance measurement system.** Evidence was collected that demonstrated a strong evaluative culture is being created within CFHI. Over the last year, a substantial amount of work has occurred to align CFHI’s new programming and performance measurement and evaluation system to its new mandate of accelerating healthcare improvement. CFHI has included in its work plan initiatives that support the building of an evaluation culture and an approach to developing a high performing measurement system. CFHI is encouraged to continue these efforts.

With a complex measurement environment, including many cross-linking and successive elements (i.e. one indicator or area of measure feeding or rolling-up to another from at least three levels: project, program, corporate), the evaluation recommends that a view to consistency, sustainability and supporting resources be kept in mind. CFHI has already started to focus efforts related to identifying the most important and useful indicators of improvement and learning, as well as efforts to pilot evaluative approaches and to identify and apply lessons learned from these pilots. CFHI’s Improvement Model will be key to strengthening this system and efforts should continue to focus in these areas.

In addition, in consideration of the value of strategic partnerships in supporting the cost-effective delivery of CFHI activities, CFHI would benefit from increasing the consistency of reporting on partnership financial contributions as a performance measure. In particular, CFHI should maintain a consistent financial record of the details of each of its partnership arrangements. The information collected should facilitate the demonstration of how the partnership financial arrangements align to CFHI’s strategic priorities and enable reporting on outcomes that can be attributed to the partnership activity. Examples of key pieces of information to consider are: annual CFHI funding commitment; annual partner funding commitment; and nature of supporting in-kind commitments both by CFHI and/or the partner.

KPMG’s findings and analysis for each of the evaluation questions are detailed in the subsequent sections of this report.
1.0 CFHI’s Evolution and 5-Year Evaluation Objectives

The Canadian Foundation for Healthcare Improvement’s five-year independent evaluation is intended to meet the requirements of CFHI’s 2009 Comprehensive Funding Agreement with Health Canada (hereinafter referred to as the “comprehensive funding agreement”). The evaluation aimed to assess CFHI’s current and future relevance and value in accelerating healthcare improvement across Canada and its programming achievements and organizational performance against its strategic priorities and goals. As the successful vendor in a competitive bid process, KPMG undertook the evaluation between October 2013 and July 2014.

The evaluation covers the timeframe from April 1, 2009 through March 31, 2014 and was conducted in two phases: Phase 1 (the design of the evaluation plan) and Phase 2 (the implementation of the evaluation). The detailed evaluation design plan was completed on November 22, 2013 and approved by CFHI’s Board of Trustees on December 5, 2013.

The evaluation was overseen by an Evaluation Steering Committee, including members of CFHI’s Senior Management Team, CFHI’s Evaluation and Performance Improvement group, and a representative from Health Canada. The ESC provided strategic direction and input throughout the planning and conduct of the evaluation. A list of all ESC members is provided in Appendix A for information purposes.

1.1 CFHI’s Evolution (1997-2014)

The following section provides a historical account of CFHI’s evolution as it shifted its focus from applied health services research funding and capacity building to working directly with healthcare delivery organizations to implement innovative healthcare practices. This background was prepared by CFHI and has been abridged from CFHI’s internal description of its governance environment. It is important for the reader of this report to understand the changes and the context of CFHI’s new operations, as the progressive implementation of CFHI’s new mandate, strategic priorities, and programming spans the entire evaluation timeframe (2009-2014). An overview of CFHI’s evolution since its inception is provided in Exhibit ES-1.

1.2 CHSRF 1997 – 2002

Funding for the establishment of a ‘health services research fund’ was announced in the 1996 federal budget. The government at the time pledged to provide an unconditional $65 million (from federal sources) over five years. One of the principles underlying the creation of the fund was that it would be managed by an organization that was arm’s length from the government. The Canadian Health Services Research Foundation was subsequently incorporated as a not-for-profit national foundation with charitable status in the spring of 1997 with the mandate of supporting evidence-informed decision-making in the organization, management and delivery of health services through funding research, building capacity and transferring knowledge.
Since its formation in 1997, the Foundation received $151.5 million from federal sources in three separate endowment contributions, for a variety of targeted purposes. In 1996-97, the Foundation received a $66.5 million establishment commitment from Health Canada, the (then) Medical Research Council (MRC), and the Social Sciences and Humanities Research Council (SSHRC).

In 1999, the Foundation received an additional $60 million from the federal government. This consisted of a $35 million endowment to work in partnership with the newly established Canadian Institutes of Health Research (CIHR, the successor to the MRC), to lead the Capacity for Applied and Developmental Research and Evaluation program, which aimed to increase Canada’s capacity to undertake applied health services and nursing research. It also entailed a $25 million endowment to assume a special role with respect to filling a critical gap in nursing research capacity, which resulted in the Nursing Research Fund (NRF). During this period, the Foundation recognized the need to increase the quality of health services research and its relevance and usefulness for policy makers and managers. These decision makers therefore became the primary audience for its work. CHSRF adopted a “linkage and exchange” strategy to achieve its ends: offering research granting, commissioned research and capacity training programs that encouraged far greater interaction between those doing research on the health system and those who might use it.

1.3 CHSRF: 2003 - 2006

In 2003, the Foundation received its third federal contribution. This $25 million was to build health services executives’ capacity to use research. Unlike previous funding, this was not made as a contribution to the endowment, but rather was a segregated 13-year grant for the Executive Training for Research Application program.

The EXTRA program reflected the increasing orientation of the Foundation to the needs of the decision-making community, partly in response to the recommendations of a 2002 international review panel that assessed the Foundation’s first five years of progress. The Foundation also developed complementary programs to increase the health system’s ‘receptor capacity’ for research, such as its knowledge brokering initiative, its inventory of promising practices in research use, and its regional Research Use Weeks.

Also in response to a recommendation of the 2002 international review panel, the Foundation negotiated the transfer of its research project funding to CIHR, and consolidated its annual research grant funding to focus on research, capacity development, and knowledge transfer through initiatives, such as the Research, Exchange and Impact for System Support competition.

During this period, the Board of Trustees continued its commitment to a linkage and exchange strategy. It also saw the need to not only encourage researchers to engage with decision makers, but also to bring the decision-making community more into the research process. By 2006, this was reflected in a revised statement of institutional purpose, now focused on evidence-informed, rather than evidence-based, decision-making.

1.4 CHSRF: 2007 - 2010

A number of events were catalysts to forthcoming changes at the Foundation during this time period. In 2007, the founding Chief Executive Officer retired, opening the opportunity for the Foundation’s new leadership. Programs to build research capacity and fund research initiatives, from the previous ten years, such as the CADRE program, the regional training centres (RTC) and the Nursing Research Fund, were
winding down. The final Listening for Direction (LfD) report, a triennial national priority setting exercise on health services and policy research, was also wrapping up. Dissemination activities focused on communicating evidence through products such as Evidence Boost - a series of two-page articles that summarize the best available evidence to challenge widely held beliefs about policy issues in Canadian healthcare - also ended during this time.

Throughout 2008, the Foundation transitioned into new strategic priorities to guide the core programming activities. At the December 2008 board meeting, trustees approved the 2009-2013 strategic plan, which was developed based on the board’s input and staff consultations with key stakeholders across the country. The Foundation’s new vision (timely, appropriate and high-quality services that improve the health of all Canadians) combined with its new strategic priorities (engaging and supporting citizens; accelerating evidence-informed change; and promoting policy dialogue), prompted an important shift in the Foundation’s mandate and programming direction.

New programming, for instance, to support organizations in their efforts to engage patients in the healthcare system and as members of boards of healthcare organizations, was launched in 2009. The aim was to advance quality and excellence in Canadian healthcare, through a focus on patient experience and governance expertise. The Foundation commissioned research into quality and patient safety, and in partnership with the Canadian Patient Safety Institute (CPSI), the Ontario Hospital Association (OHA) and the Ministry of Health and Long-term Care (MOHLTC), developed an educational curriculum and toolkit to support healthcare board members and executives in their efforts to improve the quality and patient safety performance of their organizations.

The following year, the Effective Governance for Quality and Patient Safety education program and toolkit became available to help boards understand and implement effective governance practices. Between March 2010 and May 2011, a total of 12 education sessions were delivered involving 557 health services board members, senior managers, quality and patient safety executive leads, and clinical staff leaders from 196 Canadian healthcare organizations in three provinces (Ontario, Manitoba, and Saskatchewan). An evaluation of the program found that the educational curriculum was successful in transferring the required knowledge and skills, and in providing the resources and tools needed to advance quality and patient safety improvements within their respective organizations. The Foundation also commissioned several research reports on public engagement and governance, such as the Effective Governance for Quality and Patient Safety in Canadian Healthcare Organizations and Effective Strategies for Public Engagement in the Development of Healthcare Policies and Programs.

During this time, programs such as EXTRA continued to train leaders in evidence-based quality improvement and system change management. The Foundation also launched Picking Up the Pace: How to accelerate change in primary healthcare - an initiative aimed at accelerating evidence-informed change. As part of this initiative, CFHI established a national steering committee of 23 recognized leaders and experts to provide strategic advice on the event design. Five regional sub-committees were involved in gathering more than 120 effective innovations in primary care from across Canada, from which 47 were selected and grouped under 16 themes (e.g. mental health, hard-to-reach populations, First Nations, complex needs). At the two-day event, held in November 2010 in Montreal, 278 senior policy-makers,  

healthcare managers and clinicians engaged in a dialogue aimed at promoting innovative practices in primary healthcare.6

To support CFHI’s promoting policy dialogue strategic priority, the Foundation, in partnership with the Canadian Institute for Health Information (CIHI) and the CPSI and with support from Statistics Canada developed and released Canada’s first-ever Chartbook on the quality of healthcare in Canada.7 The Chartbook assessed Canada’s healthcare system performance in six key domains of quality: effectiveness, access, capacity, safety, patient-centredness and equity. By providing an overview of the comparative performance of Canada’s healthcare, internationally and across provinces and territories, the Chartbook created an opportunity for jurisdictions to learn from one another and to contemplate the steps required to improve quality across the country.

Furthermore, the Foundation continued its long-standing commitment to the Canadian Harkness Fellowship Award, which enables talented Canadians to participate in the Harkness Fellowships in Health Care Policy and Practice, a core program of the Commonwealth Fund’s International Program in Health Policy and Innovation8. Since 2001, CFHI has been bringing a Canadian perspective to the program by supporting the Harkness Fellowship Tour and, in 2012, began co-funding the Canadian Harkness Fellows. The Commonwealth Fund, in partnership with CFHI continues to offer a unique opportunity for midcareer professionals—researchers, policy-makers, clinicians, managers and journalists—from Australia, Canada, Germany, the Netherlands, New Zealand, Norway, Sweden and the United Kingdom, to spend a year in the United States to conduct a policy-oriented research study with leading health experts.

During this time, the seminal CADRE program, delivered in partnership with CIHR, was brought to its completion. The program imparted important lessons about the value that a pan-Canadian organization can bring to healthcare services and policy research training and development and approaches to meet the changing priorities and complex needs of the Foundation’s partners. Since CADRE’s inception in 2000, opportunities and funding increased in Canada for graduate training in applied health services from other funders and given CIHR’s and the Foundation’s priorities at the time, the CADRE program was not renewed, upon its funding completion in 2011. The following year an independent summative independent evaluation of CADRE was conducted, which identified the impact of CADRE on applied health services trainees’ competencies and skills, career trajectories and organizations’ use of evidence for healthcare decision-making.9

As a recognized leader in building research use capacity for the better management and organization of health services delivery, the Foundation was uniquely positioned to build upon its momentum and deliver on its new mandate of working directly with healthcare delivery organizations to implement, evaluate and spread innovative healthcare practices.

1.5 CFHI: 2011 to Present

CFHI’s new mandate prompted significant changes to the Foundation’s operations and programming. During this time period, CFHI officially evolved from its primary emphasis on building applied health services research capacity to supporting the acceleration of healthcare improvement. In response to an increasingly complex healthcare delivery environment, and needs of its programming partners, CFHI and its network of healthcare coaches and faculty from across the country began working shoulder-to-shoulder with healthcare leaders, managers and providers to design, implement and spread evidence-informed innovations to improve the quality and efficiency of healthcare for Canadians. While the Foundation’s new strategic priorities were established in 2009, a new vision and mission took effect in 2011, and new goals and the new name were launched in 2012. As a result, programming increasingly focused on the convergence between evidence-informed practices and quality improvement processes through cross-jurisdictional, regional and pan-Canadian collaborations. Emphasis was placed on supporting leadership development in quality improvement and strategies for adapting, implementing and spreading innovative practices into actionable policies, programs, and tools.

With an explicit focus on improvement programming, CFHI undertook a number of operational changes: new funding structures and partnerships, a new communication strategy and a new performance measurement system. In June 2011, the Foundation’s Board of Directors agreed to seek future funding.
Cutting through complexity

through an approach that combines a request for: 1) federal funding; 2) fees-for-services and products; and 3) funding from foundations and the private sector. This new funding approach was implemented with the Board-approved 2012 Program of Work. CFHI began to introduce modest cost-sharing and fees for service for some programs and continued to implement its business development plan to focus on partnering and raising revenues from a variety of sources, some including: the private sector (e.g. Boehringer Ingelheim Canada Ltd.); other foundations (e.g. The Medavie Health Foundation, the Max Bell Foundation); provincial and territorial governments and improvement organizations (e.g. the Atlantic region, Quebec, Northwest Territories, the BC Patient and Safety Quality Council); national organizations (e.g. the Canadian Partnership Against Cancer, Health Council of Canada and the Canadian Patient Safety Institute); international organizations (e.g. The Institute of Healthcare Improvement) and the federal government. Given an implicit decision of the Board to “spend down” the endowment, CFHI’s funding is expected to end in 2016 (the Board had been regularly informed of the Foundation’s life-cycle budget).

During this time period, the Foundation launched and refined a variety of programs to advance its mission. For example, the flagship EXTRA program has served as a key platform for delivering CFHI’s mandate and went through programmatic changes to ensure its effectiveness in meeting its stakeholders’ needs. Since 2004, the EXTRA program has provided evidence-based quality improvement and system-change training to 262 senior healthcare leaders and their organizations from across Canada. Originally, the program was targeted to individual senior health executives over a two-year period through a series of education modules including resident training, local coaching support and opportunities to learn from and network with peers from across the country. In 2012, the program was redesigned to reflect the needs of participants and faculty. Now delivered as a shorter, 14-month improvement program. EXTRA now requires a team-based approach (including leaders and clinicians) and a blended model of face-to-face and online learning (29 redesigned e-learning units). New sessions focus on using performance measurement data to drive healthcare change, effective engagement and leadership practices and approaches to sustaining and spreading improvements in the quality of patient care and outcomes.

CFHI’s increased commitment to evaluation and performance measurement informed the development and dissemination of impact stories about the outcomes of EXTRA’s quality improvement work\(^\text{10}\) and the design of its collaboration and spread programming. A series of evaluations conducted on EXTRA during this time, included on-going pre-post surveying of participant experience throughout the training modules, a post-program impact assessment of the improvement projects, an outcome evaluation of the impact of EXTRA on regional capacity and health care redesign in Quebec, and an independent cost-benefit analysis of the EXTRA program.\(^\text{11}\) Combined, these evaluations have generated telling evidence about the contribution of the EXTRA program to: building leadership and expertise in the use of research evidence; influencing career trajectories; and changing how organizations apply tools and data to effect, sustain and spread positive change in their organizations and regions.


More than 35 organizations have supported teams more than once through EXTRA since the program’s inception. In fact, two EXTRA teams from the 2013 cohort have built on previous EXTRA improvement projects that successfully reduced acute care use among frequent users of the health system and lowered antipsychotic use among seniors in long-term care.12 The EXTRA anti-psychotic reduction initiative, based out of the Winnipeg Regional Health Authority (WHRA), became the model improvement project for one of CFHI’s two new spread Collaboratives. Launched in June, 2014, the Reducing Antipsychotic Medication Use in Long-Term Care quality improvement collaborative, is a twelve-month collaborative that involves 15 healthcare teams and over 50 leaders and clinicians from long-term care and other types of facilities across the country. All teams are committed to using interRAI data and implementing demonstrated strategies to reduce the inappropriate use of antipsychotics medications to manage challenging behaviours associated with dementia among residents in long-term care facilities.13

The EXTRA program also bolstered CFHI’s ability to program regional collaborations. In 2011, the Foundation began forging opportunities to tailor and deliver ‘EXTRA-like’ programming to support regional improvement. By 2011, in partnership with the Department of Health and Social Services (DHSS), the Foundation launched the Northwest Territories (NWT) Integrated Chronic Disease Management Strategy Collaboration. This included the participation of all eight regional health authorities in the design and implementation of improvement projects focused on diabetes, renal disease and mental health across the territory. The following year, the Foundation further expanded its work in Canada’s north via a new Northern, Rural or Remote Pan-provincial (NRoR) Collaboration; uniting health regions across five provinces to identify common challenges and share solutions to improving health outcomes. A new collaboration with the North Shore Tribal Council (NSTC) to redesign their primary healthcare service delivery also commenced, to help develop a community-driven model of care for seven First Nations communities and the urban First Nations population of Sault Ste. Marie, Ontario.14

In 2012, drawing from the experience of EXTRA and the NWT Collaboration, the Atlantic Healthcare Collaboration was launched to improve healthcare outcomes for people living with chronic disease, including mental illness, diabetes and COPD, throughout Atlantic Canada. This regional initiative brought together ten teams chosen from seventeen participating health authorities across the four Atlantic provinces. Over one-hundred and eighty healthcare leaders, managers, providers and partners have been engaged in this collaboration.15 The evaluative results of the AHC Collaboration will be made available in December, 2014.

Across its collaborations, CFHI is applying its approach to improvement collaboration: supporting health teams as they assess and define their challenges, articulate clear improvement objectives, design

solutions, implement their improvements and evaluate their outcomes. For example, in Newfoundland and Labrador, an AHC team from Western Health is working to improve outcomes for patients with diabetes by enhancing self-management support received from healthcare professionals. In New Brunswick, Vitalité Health Network is working on reforming primary care services by implementing interdisciplinary models of care that align with the unique needs of the health region’s fifteen communities and engaging patients in decision-making. Nova Scotia’s Capital District Health Authority is exploring ways to implement and integrate a chronic disease management and prevention strategy for patients with multiple chronic conditions so they can receive more efficient, coordinated and patient-centred care. In addition, in Prince Edward Island, Health PEI is investigating ways to support realistic behaviour change by training primary healthcare professionals to work closely with patients and their families to co-design treatments and care. Together, all four provinces are accelerating improvements in patient care in Atlantic Canada and building an evidence base to drive and spread successful practices in chronic disease management.

An offshoot of the AHC Collaboration has been CFHI’s newly launched, INSPIRED Approaches to COPD: Improving Care and Creating Value collaborative, a fourteen-month, pan-Canadian improvement collaborative focused on implementing a proven approach to COPD care, an Accreditation Canada recognized leading practice model of care. The INSPIRED collaborative has generated $500,000 investment from private industry and participation from a network of clinical respirologists and allied health professionals from across the country. This work also set a precedent for CFHI’s appointment of its first Clinical Improvement Advisor, Dr. Graeme Rocker, an expert in COPD, who also served as an improvement coach with AHC.

With expertise in launching and leading improvement Collaboratives, CFHI began a new relationship with the Institute for Healthcare Improvement (IHI) in delivering hands-on workshops on Driving Quality and Lowering Costs and supporting ten Canadian teams through the Triple Aim Improvement Collaborative (TAIC). In 2013, CFHI in partnership with IHI delivered a two-day workshop seminar that brought together Canadian expertise with clinical quality teams and their finance colleagues to strengthen their knowledge, skills, and strategies to implement measurable cost reductions while improving quality of care. In 2014, this workshop is scheduled to be repeated and targeted to Western health authorities, in partnership with the BC Patient Safety and Quality Council (BCPSQ). CFHI’s partnership with IHI in the international TAIC involved providing nine Canadian teams opportunities for networking, information sharing and additional coaching, over the fourteen-month collaborative. In 2014, CFHI and IHI will continue this partnership through the Better Health and Lower Costs (BHLC) for Patients with Complex Needs Collaborative.

Engaging patients and citizens in health services and policy decision-making is one of the key strategic priorities of CFHI. To this end, the Foundation launched the Patient Engagement Projects (PEP) initiative in

the spring of 2010. The PEP initiative sought to accelerate effective and innovative strategies to engage patients in the design, delivery and evaluation of health services leading to care that is truly patient-centred. Ten improvement project teams led by senior healthcare administrators and decision-makers were funded in 2010 and a further seven were funded in 2011, with 17 healthcare organizations, from across the country participating in the initiative. 19 The Foundation’s PEP initiative provided training and mentoring on patient engagement, and the opportunity for pan-Canadian networking and shared learning. Part of the PEP initiative also entailed working with project teams and researchers to measure the impact of patient involvement on quality improvement. As a result, significant impacts to the delivery of patient-centred care within the participating organizations have been documented, such as the creation of Unit Action Councils, the implementation of safety scorecards and increased patient satisfaction. The PEP initiative also resulted in the forging of new partnerships with the Canadian Partnership Against Cancer (CPAC) and the Max Bell Foundation, who collectively committed over $400,000 to the program.20

The expertise, learning, resources and tools that were established over the three initial years of PEP were the foundation for the launch of the 2014-2015 pan-Canadian Partnering with Patients and Families for Quality Improvement collaborative.20 This sixteen-month collaborative aims to build capacity and enhance organization culture to partner with patients and families to improve the quality of care across the healthcare continuum. With over sixty-four team applications, a total of twenty-two teams from across Canada were selected. Successful teams demonstrated an improvement readiness with structures, mechanisms and resources in place for inclusive and appropriate participation in improvement activities. They represent organizations from across the continuum of care, including: acute care; community health services; and long-term care and provide service to rural, remote and urban areas from across the country. The teams also vary in their focus from children’s health, cancer, renal and diabetes care, rehabilitation services to senior’s care.

While continued efforts to promote policy dialogue were embedded within the collaborations and the resources CFHI provided to its partners, during this time, CFHI continued to launch various initiatives to convene policy dialogues. In 2011, the Foundation led an initiative funded by Health Canada to support a major policy analysis undertaking, Healthcare FIT (Financing, Innovation and Transformation). CFHI commissioned, edited and produced over 22 reports that analysed health system redesign options for: physician remuneration, hospital funding, pharmaceutical pricing and reimbursement, and options to extend financing where gaps exist in public insurance coverage.21 As a part of this work, the Foundation held a series of policy dialogues that addressed current economic challenges, and later developed a “What If” series that put forward tangible policy options for improving efficiency and addressing the sustainability

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20 CPAC committed $250,000 toward the PEP initiative and the Max Bell Foundation committed $190,000.


of Canada’s healthcare.22 On July 10, 2011, these options were presented to an international audience gathered in Toronto for the annual International Health Economics Association (iHEA) conference.

From 2011 to 2012, CFHI also collaborated with the Canadian Nurses Association (CNA) to produce and promote five policy papers on *Better Health, Better Care, and Better Value*. The papers informed the CNA’s National Expert Commission’s June 2012 nursing call to action with recommendations to improve the way healthcare is funded, managed and delivered in Canada. CFHI’s partnership with the Nuffield Trust in 2011, which included the delivery of a one-day master class on *Healthcare Challenges in an Era of Fiscal Restraint* also brought together senior Canadian healthcare policy-leaders and decision-makers to share their knowledge and experience with leaders from the English National Health Service.

Finally, CFHI’s Improvement OnCall, a live one-hour webinar series which since 2007 has regularly featured policy-makers, decision-makers and clinicians as they explore evidence and share their improvement stories, continued but evolved in its focus. Improvement OnCall now charges a modest participant fee, is offered more frequently and also features quality improvement leaders. In its first season, four OnCall webinars were delivered (2007-2008), whereas thirteen were delivered in season 7 (2013-2014). The infrastructure and expertise that CFHI has gained over the years in webinar delivery, through OnCall has also been adapted as a key learning modality across CFHI’s collaborations.

With its new improvement foci, between 2012 and 2014, CFHI’s policy dialogues included more proactive relations with Members of Parliament (MPs). CFHI is facilitating the meeting of its improvement teams with their local MPs under its Hill Days initiative. CFHI’s Hill Days began in 2012, with a successful initiative that linked PEP teams with their MPs. In 2013 and the spring of 2014, CFHI’s Hill Days included a broader representation of its programs and teams – this time including teams from EXTRA, the NWT Collaboration, TAIC and PEP.

For CFHI, 2011-2014 was a transformative time; a time that fuelled innovative collaborative programming focused on working shoulder-to-shoulder with its partners to deliver better patient care more efficiently. Accelerating and spreading pan-Canadian and cross-regional improvements to tackle persistent and complex challenges such as the management and prevention of chronic diseases, emergency department (ED) use and diversion, transitions in care, access and wait times, more effective approaches to frequent healthcare users, and engagement of patients and families directly in care (re)design – have become front and center to CFHI’s new innovation and improvement mandate. The progressive implementation of CFHI’s new mandate, strategic priorities, and programming spans the entire timeframe of this evaluation (2009-2014).

### 1.6 Evaluation Questions

The questions that guided CFHI’s five-year evaluation were developed through a formal review process, which included input and approval by the ESC, CFHI’s SMT, and CFHI’s Board of Trustees. The evaluation questions were designed to measure and fulfill the accountability requirements of CFHI’s comprehensive funding agreement with Health Canada. They were also designed to assess CFHI’s programming and organizational performance against its strategic priorities and goals. The following eight questions were the focus of CFHI’s five-year evaluation:

**Relevance**

1) What is the current niche of CFHI? How is CFHI differentiated from other healthcare organizations with an improvement mandate?

2) To what degree is CFHI’s current programming relevant to Federal/Provincial/Territorial and Regional healthcare priorities today and five years into the future? Are there program areas that CFHI could further expand?

3) How well are CFHI’s program objectives, leadership team mandates (i.e., Board of Trustees, Board Committees and Senior Management), partnerships and other resources aligned with its current strategic priorities?

**Achievement of expected outcomes**

4) To what extent has CFHI fulfilled the requirements of the 2009 Health Canada comprehensive funding agreement?

5) How successful has CFHI been in making progress towards the achievement of its 2009-2013 strategic priorities, namely:
   - Engaging and supporting citizens;
   - Accelerating evidence-based change/improvements; and
   - Promoting policy dialogue.

6) To what extent is CFHI, in its new mandate and programming, positioned to contribute to the acceleration of healthcare improvements in Canada in the areas of:
   a) Healthcare efficiency and patient value: Maximizing the full set of patient health outcomes per total dollar spent in healthcare and “bending the cost curve” (e.g., providing more appropriate healthcare for the same money);
   b) Patient- and family-centred care: Improving patient- and family-centred medical care, patient experience, and health outcomes; and
   c) Coordinated healthcare: Providing a more coordinated and integrated approach to complex health needs.

7) To what extent have initiatives supported through CFHI been spread within or across other organizations, health regions, provinces or elsewhere?

**Effectiveness**

8) Are there changes CFHI could make to its program delivery and/or operations to further accelerate improvement in the Canadian healthcare system?

### 1.7 Report Structure

The findings and analysis for each of the eight evaluation questions are provided in the following sections of this report. Each section defines the specific evaluation question and identifies the key supporting lines of evidence used to inform the analysis. The full evidence matrix is provided on pages 18 and 19 of this report. Each section also summarizes key findings, provides details on the analysis and evidence supporting key findings, and includes recommendations for improvement, where identified.
2.0 Methodologies

To address the evaluation questions, multiple lines of evidence and a mix of qualitative and quantitative sources of information were used by the evaluation team. Four methods were employed during the evaluation, including document review, key stakeholder interviews, performance measurement data review and synthesis, and partial benefit cost analysis. The evaluation methods and their relationship to each evaluation question are summarized in Exhibit 2.

Exhibit 2
CFHI Five-Year Evaluation Matrix – Methodology by Evaluation Question

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>1. Document Review</th>
<th>2. Key Stakeholder Interviews</th>
<th>3. PM\textsuperscript{23} Data Roll-Up</th>
<th>4. PBCA\textsuperscript{24}</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relevance</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1. What is the current niche of CFHI? How is CFHI differentiated from other healthcare organizations with an improvement mandate?</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>2. To what degree is CFHI’s current programming relevant to Federal/Provincial/Territorial and Regional healthcare priorities today and five years into the future? Are there program areas that CFHI could further expand?</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>3. How well are CFHI’s program objectives, leadership team mandates (i.e., Board of Trustees, Board Committees and Senior Management), partnerships and other resources aligned with its current strategic priorities?</td>
<td>✓</td>
<td></td>
<td></td>
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<tr>
<td><strong>Achievement of expected outcomes</strong></td>
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<tr>
<td>4. To what extent has CFHI fulfilled the requirements of the 2009 Health Canada comprehensive funding agreement?</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

\textsuperscript{23} Performance Measurement Roll-Up

\textsuperscript{24} Partial Benefit Cost Analysis
### Evaluation Questions

<table>
<thead>
<tr>
<th>Evaluation Questions</th>
<th>1. Document Review</th>
<th>2. Interview key stakeholders</th>
<th>3. PM&lt;sup&gt;26&lt;/sup&gt; data</th>
<th>4. PBCA&lt;sup&gt;26&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. How successful has CFHI been in making progress towards the achievement of its 2009-2013 strategic priorities, namely:</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>- Engaging and supporting citizens;</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Accelerating evidence-based change/improvements; and</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Promoting policy dialogue.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>6. To what extent is CFHI in its new mandate and programming positioned to contribute to the acceleration of healthcare improvements in Canada in the areas of:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Healthcare efficiency and patient value:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Maximizing the full set of patient health outcomes per total dollar spent in healthcare and “bending the cost curve” (e.g., providing more appropriate healthcare for the same money);</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>b) Patient- and family-centred care: Improving patient- and family-centred medical care, patient experience, and health outcomes; and</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>c) Coordinated healthcare: Providing a more coordinated and integrated approach to complex health needs.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>7. To what extent have initiatives supported through CFHI been spread within or across other organizations, health regions, provinces or elsewhere?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Are there changes CFHI could make to its program delivery and/ or operations to further accelerate improvement in the Canadian healthcare system?</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<sup>26</sup> Performance Measurement Roll-Up

<sup>26</sup> Partial Benefit Cost Analysis
Descriptions of each of the four data collection methods are provided below.

### 2.1 Document Review

The evaluation team reviewed and analysed available data and documents of relevance to each evaluation question. During the evaluation planning phase, more than 125 documents of relevance to the evaluation questions were identified by CFHI for review. This list was then prioritized by CFHI to include some 75 key documents that were reviewed and analyzed by the evaluation team. This documentation included corporate reports, board and management reports, program reports, previous evaluations, market research data, organizational charts, programs of work, and other relevant documentation. Additional documentation was reviewed in conjunction with the performance measurement data roll-up exercise described in the Performance Measurement Data Roll-Up section below.

A review of publicly available documentation was completed as part of the comparative review in support of the evaluation question related to CFHI’s niche. The websites of a number of organizations deemed to deliver services comparable to one or a number of service areas provided by CFHI were reviewed. Additionally, previous comparative research completed by KPMG related to healthcare improvement organizations was considered. This work is not considered to be a full environmental scan, as no supporting interviews were conducted.

### 2.2 Key Stakeholder Interviews

Telephone interviews were conducted with a purposeful sample of external stakeholders identified by CFHI and thought to be knowledgeable of CFHI and its operations. These external stakeholders were familiar to CFHI either as current or previous participants in CFHI programming. This included, for example, participation as an EXTRA Fellow, Mentor or Coach, Collaboration participant, or attendee at a webinar or workshop. These interviewees also included senior individuals, such as Deputy Ministers, Assistant Deputy Ministers, Presidents, and Chief Executive Officers.

A total of 15 interviews were conducted with representatives of the following stakeholder groups:

- CFHI Patient Engagement Projects (2 interviews).
- CFHI Collaboration Projects (4 interviews).
- Federal, Provincial and Territorial departments (3 interviews).
- Health Canada (1 interview).
- Provincial health authorities and healthcare organizations (5 interviews).

A complete list of stakeholder interviewees is provided in Appendix B.

The interviews sought to obtain external perspectives on CFHI’s relevance and achievement of outcomes, as well as gain insight to possible improvements to CFHI’s design and delivery of programs. Open-ended questions and questions containing a Likert rating scale were covered during the interviews. In all cases, verbal responses and verbal ratings provided by respondents were recorded during the interview.
2.3 Performance Measurement Data Roll-Up

A roll-up and analysis of CFHI performance measurement data was conducted based on several types of documentation collected by CFHI throughout the evaluation time frame (April, 2009 - March, 2014). These documents included evaluation surveys from workshops and webinars hosted by CFHI (including but not limited to: On Call webinars; EXTRA residency sessions; and other programming); reports; data coded and synthesized from improvement project (IP) reports for the purpose of the development of the CFHI IP Database; as well as other healthcare-related performance measurement literature and annual and partnership reports. Over 125 data sources were analyzed and synthesized through the evaluation. These were key sources of information to help assess achievements against CFHI priorities, objectives, and outcomes. A brief description of each source of information used in the PM roll-up is provided in Appendix C.

2.4 Partial Benefit-Cost Analysis

Partial Benefit-Cost Analysis is a form of benefit-cost analysis especially suitable for investigating programs in which the impacts are very heterogeneously distributed among individual project initiatives (i.e. a small proportion of the projects provide a high proportion of the total program impacts). KPMG had conducted a PBCA Scoping Study in August 2013, prior to this evaluation, which demonstrated that this was, in fact, the case for CFHI.

Through the PBCA, eight “high impact” case studies were investigated. These high impact projects were those with the highest known impacts, with impacts that were believed to be quantifiable in dollar terms, and where the impacts are clearly attributable, at least in large part, to CFHI. Using the PBCA methodology, existing impacts of the high impact projects were quantified, while future impacts were modelled over time. The sum of the net benefits across all case studies was then compared to the total sum of CFHI costs (i.e. all CFHI programming, administration and overhead costs, not just the costs of the “high impact” projects under detailed investigation) to estimate a lower bound for the net present value (NPV) and benefit/cost (B/C) ratio.

The PBCA methodology included a detailed review of all documents available for each case, additional external information (such as the use of various CIHI and Statistics Canada data sources) required to help confirm and quantify the case’s dollar impacts, interviews with the Improvement Project (IP) leads (who were different individuals interviewed in addition to the key stakeholder interviewees), and sensitivity analysis. A detailed Excel model was constructed to estimate lower and upper bound net economic impacts of each case, and compare the sum of impacts across all “high impact” cases to the sum of CFHI costs from 2006 to 2013, inclusive. Sensitivity analysis was performed using different discount rates on the net benefit and cost streams. Details on the quantification assumptions are provided in Appendix D for information purposes. The PBCA was performed jointly with CFHI.

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27 The timeframe for the PBCA is different than that covered by the evaluation as the methodology is dependent on identifying the highest impact projects. As such, no restriction of timeframe within which the project had to have been delivered is imposed as long as the total costs of the organization are considered for the same time period. In the case of CFHI, and particularly in the case of the older high impact project, the ESC decided to include the older project because many of the dissemination activities occurred during the evaluation timeframe. The total organization costs associated with the same timeframe covered by the high impact case projects is used in the analysis undertaken for the evaluation.
evaluation staff to most efficiently use the evaluation team’s resources and to provide knowledge transfer to CFHI on practical issues in conducting PBCA.

Of the eight high impact cases investigated (seven EXTRA cases and one Patient Engagement Project (PEP)), six were able to be quantified in dollar terms (Cases #1, 2, 3, 7, 8, and 14) and two cases proved to be unsuitable for PBCA, but provided interesting qualitative information that was considered and reflected in our analysis (Cases #5 and #9). The case numbering used in this report corresponds to the initial numbering system used during the early stages of the evaluation in which 14 potential cases were investigated to determine their applicability to the PBCA analysis. As such, only the eight high impact cases investigated are referenced in this report.

2.5 Limitations

The following limitations should be considered when reviewing the evaluation analyses and findings:

2.5.1 Document Review

The development of the list of current healthcare priorities across Canada used in the evaluation included a review of strategic planning documents from all provinces and territories and Health Canada. However, there may be a minor limitation related to the identification of regional priorities. The priorities were compiled to coincide with the key stakeholder interviewee organizations identified for the evaluation. While it is possible that not all regional priorities were identified, this is considered to be rather remote as the priority areas used in the evaluation are at a high level and somewhat generic in nature. As such, it is likely that other regions not investigated in our document review would have similar priorities.

The documents and websites reviewed in support of the evaluation question related to CFHI’s niche were limited to publicly available information. No interviews were conducted to further identify additional information or obtain clarification. This may limit the comprehensiveness of the information used.

2.5.2 PM Data Roll-up

The PM data roll-up was conducted using information sources provided by CFHI. Limitations associated with the data set of information include:

- Improvement Projects: IP data, for the purpose of the PM data roll-up, refers specifically to data obtained from existing project documentation (final reports, interim reports and/or proposals depending on the stage of the project). IP data was coded using the NVivo software by CFHI staff. The qualitative coding of data relied on a subjective interpretation of the latest available IP data contained in project documents such as those noted above. This could introduce coding bias; however, CFHI used a “double-blind” method to validate independently coded IP data. Furthermore, CFHI developed a coding framework (known as CFHI’s Improvement Project

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28 Two individuals would initially code a project separately and a verification process would follow to ensure agreement on the final coded categories.
Database Codebook) to provide precise definitions and concrete examples for coding in separate categories. These guidelines were communicated to all individual coders.

- **Partnership Funding:** The approach to reporting this information has changed over the last 5 years and, as such, should be considered in any annual comparisons. The differences between each year are described in detail in Appendix C.

- **Surveys and Evaluations:** There are a number of different bias or limitations with this data, such as:
  - Much of the PM data is participant self-rating or reporting and, as such, may be incomplete, inaccurate or could in some manner be biased. For example, an individual may provide a rating that the knowledge or skills gained within a learning session will be used signaling an intent to implement what they have learned. However, without returning back to the individual in the future to verify that this occurred, it cannot be said with certainty that the knowledge or skills were, in fact, actually used. This would most significantly affect the evaluation of CFHI impacts. However, PBCA data was the major source of information for the evaluation of impacts, thereby reducing the potential of this limitation on the evaluation results.
  - The response rates to the CFHI survey evaluations were not calculated by the KPMG evaluation team. This is because the scope of the evaluation did not allow for the matching of event attendance/invitation records to survey response data. As a result, any survey response rates presented in this report rely on secondary analysis sources provided by CFHI.
  - In addition, there is the possibility that one individual may have been a participant in a number of programs or sub-programs. As a result, it is possible that the same individual may have responded to multiple surveys and/or evaluations.
  - Finally, non-response bias is a limitation of any survey, and relates to issues that arise when the survey respondents do not provide a true representation of the individuals who participated in a program. Either one of these issues may generate more positive or negative responses depending on the bias and misrepresentation of the actual population.

The issues identified above are not believed to be significant limitations, as most of the survey responses reviewed were consistent in nature and there is no indication of an area in which there may be missing data.

### 2.5.3 PBCA

While PBCA is a rigorous and highly defensible best practice technique, like all economic methods it has some limitations, these being chiefly:

- The NPV and B/C ratio produced in PBCA are lower bounds of the program’s true impacts because the impacts of “non-high impact” projects are not estimated;

- It is often difficult or impossible to quantify in dollar terms the impacts of “soft” project benefits, such as better quality of life, improved safety and security, better environment, etc. Almost all of the “high impact” projects in the PBCA had, in some way, improved the quality of life of the targeted population. However, all economic techniques – not just PBCA – have difficulties in monetizing such impacts;
Other CFHI impacts are believed to result in reductions to mortality and morbidity. These are potentially amenable to quantification in dollar terms. However, the high-impact projects studied did not obtain solid data on these reductions, and thus they could not be included in the NPV and B/C ratios.

In addition, because the eight CFHI-PBCA healthcare improvements projects are recent implementations, and in many cases have not yet spread beyond the original IP institutions, assumptions had to be made to model their impacts out into the future. These assumptions are described in detail in Appendix D.
3.0 Question 1: Niche and Differentiation

Question 1: What is the current niche of CFHI? How is CFHI differentiated from other healthcare organizations with an improvement mandate?

Supporting Lines of Evidence

<table>
<thead>
<tr>
<th>Document Review</th>
<th>Key Stakeholder Interviews</th>
<th>PM Data</th>
<th>PBCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

The analysis in this section considers the evolution of CFHI’s vision, mission, and strategy from its original mandate as CHSRF, into its current form from 2009 onwards, including recent initiatives. These topics were discussed with a sample of key stakeholders who were deemed to be highly knowledgeable about both CFHI activities and those of at least some of the other organizations reviewed as part of this evaluation. The analysis compares the objectives of CFHI programming to that of other healthcare improvement organizations and whether any potential overlap exists. The analysis of the PBCA interviews was used to identify specific situations in which CFHI’s current strategic priorities provide value-add in specific healthcare situations. From these various lines of evidence, key differentiators of CFHI’s role were determined.

3.1 Key Findings

- CFHI does differentiate itself from other healthcare organizations; however, it needs to continue to focus on what those differentiators are and leverage its distinguished position as more organizations move into the quality improvement space.

- CFHI’s unique differentiators were found to be its tactical implementation approach, ability to compare and contrast across the country, and development of pan-Canadian networks.

- There is an opportunity for CFHI to continue to increase its foci from micro-level improvement initiatives to macro-level system change by identifying and spreading high impact projects that are relevant to Canadian healthcare organizations.

- CFHI’s strategic re-positioning of its goals and programming towards implementation of healthcare quality improvement is seen as a valuable role and one that is filling a gap.

- There is a need for CFHI to continue increasing awareness of its new brand and value to key stakeholders, and to provide clear communication and delineation regarding its role and relevance in the healthcare system.
3.2 Analysis and Supporting Evidence

Since its creation in 1997, CFHI has shifted from being a predominantly granting or health research-funding organization to an organization working directly with healthcare delivery organizations to implement innovative healthcare practices. As stated in its Strategic Direction 2009-2013 document, CFHI’s current vision and mission are as follows:

- **CFHI’s Vision**: Timely, appropriate, efficient and high-quality services that improve the health of Canadians.

- **CFHI’s Mission**: The Canadian Foundation for Healthcare Improvement is dedicated to accelerating healthcare improvement and transformation for Canadians. We collaborate with governments, policy-makers, and health system leaders to convert evidence and innovative practices into actionable policies, programs, tools and leadership development.

Exhibit 3 below illustrates the changing direction and mandate of CFHI since its inception.

Exhibit 3
Evolution of CFHI’s Focus


**Creation of Evidence**
- Identify gaps in applied health services research
- Funding the researchers who could investigate those gaps

**Using Research Effectively**
- Support efforts to bring about improved quality and performance
- Knowledge translation and exchange between researchers and policy makers

**Implementation of Evidence for Improvement**
- Facilitate collaborations across a broad spectrum of healthcare issues, and across jurisdictions, regions, provinces and territories
- Engage individuals and teams within their own healthcare contexts to implement and sustain much-needed healthcare improvements

**Sustaining Healthcare Improvement Change**
- Working in tandem with healthcare leaders and policy-makers, helping assess and articulate challenges, helping analyze relevant research, helping organizations contextualize policy issues, and introducing them to effective change-management processes
- Supporting the spread of practices in healthcare delivery that show promise in addressing gaps in the quality of patient care

Adapted from the CFHI website, [http://www.cfhi-fcass.ca/AboutUs/History.aspx](http://www.cfhi-fcass.ca/AboutUs/History.aspx)

Starting in 2008, CFHI began to review its position within the Canadian healthcare system, specifically considering its endowment fund and how the organization as a whole could better respond to Canada’s healthcare systems needs. CFHI wanted to ensure it was providing useful and relevant service to its partners at the local, regional, provincial, territorial, and federal levels.
As part of its re-positioning, CFHI redefined its strategic priorities and moved toward becoming an organization that mainly focused on supporting the adoption of innovative practices across the healthcare system in Canada. This role is significantly more implementation-focused than its previous mandate, and CFHI is now working directly with healthcare delivery organizations on the “what” to improve (evidence) as well as “how” to improve (process).

In 2008, CFHI undertook a stakeholder consultation process with key stakeholders across the country to receive feedback on the directions outlined in CFHI’s new strategic plan and direction (CFHI Board Decision document, 2008). Two key findings from the consultation process demonstrate support for the new model:

- The Foundation’s Evolving Niche – Overall, stakeholders consulted showed a high level of understanding about the Foundation’s past work, allowing for a high-level discussion about future opportunities. Everyone expressed a desire for a strong and continued role for the Foundation, and the broad directions in the document make sense and are appropriate areas where the Foundation can add value as an independent organization on the national scene.

- Change Management – Stakeholders would like to see the plan reflect a much more active role by the Foundation to serve as a national resource for local change initiatives. This was referred to as a “change resource” or an “innovation incubator” role. In general, stakeholders saw this as a unique niche that is not being played well by a national organization, and which could complement (rather than conflict with) provincial activity in the area.29

These views continue today. All key stakeholder interviewees contacted for the five-year evaluation noted CFHI’s shift to promoting and supporting innovation and improvement in the healthcare system is important. Almost two-thirds of the key stakeholder interviewees commented that CFHI’s move away from a research-based organization towards a more applied and practical implementer of healthcare improvement was the right move.

All key stakeholder interviewees noted the important role that CFHI is playing in healthcare in Canada and that it is advantageous to have an organization that was identified as being in a position of coordination and influence at the system level.30 Government, health authority, and collaborator key stakeholder interviewees see opportunity for CFHI to be the “convener” or “provocateur” of health system change. Within Canada, there is currently no mechanism to promote the formal coordination that is needed for system-wide change.

The most common differentiator noted by key stakeholder interviewees is that CFHI is “on the ground,” and in a position to jump start activities. CFHI is pulling organizations together at a tactical, tangible level.

“[CFHI] brought a hands-on approach with new cutting edge techniques.”

Key Stakeholder Interviewee Comment

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30 Across regions and jurisdictions
Interviews conducted for PBCA demonstrated that there are some situations in which CFHI has a clear niche in addressing specific, specialized, topics that are difficult to address within ministry or regional health authority priorities. These topics may reflect situations where relatively little funding is otherwise available, such as those pertaining to LTC facilities, or those where a significant, specific medical issue exists (e.g., home kidney dialysis, ‘high-needs’ patients) but there are regional differences in the level of interest in addressing them. As an example, CFHI’s EXTRA projects can provide more specialized and/or localized funding and initiate projects that would almost certainly not have happened otherwise. In other PBCA cases, there may have been existing interest on the part of local health authorities and hospitals with regard to a certain issue, but CFHI provided the needed assistance to help convince partners that a particular project was worth undertaking, without which it would take a lot longer to achieve the desired outcomes. For example, one project was already underway before EXTRA, but EXTRA provided additional resources to assure the organization they were using best practices. Specifically, this EXTRA project focused on a literature review of best practices used world-wide, developed a logic chart, and gave the participants more confidence and understanding of other models used.

One clear niche area relates to CFHI’s emphasis on innovations being evidence-informed. The results of the PBCA demonstrate that this is a very strong feature of EXTRA programming. PBCA also demonstrated that there are opportunities for CFHI to further increase its emphasis here. Further details and analysis on these results are provided in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements).

No key stakeholder interviewee cited current duplication of effort with other organizations in the healthcare system. CFHI is seen as broader and more inclusive in its mandate (i.e. not just cancer, not just safety) and more applied and practical in its work. However, many interviewees cited opportunities to further coordinate CFHI’s efforts with other organizations. One key stakeholder interviewee suggested connecting with other organizations researching or promoting healthcare innovation improvements to see if there is applicability to CFHI stakeholders. Examples of these connections include identifying what results others are generating and determining whether these can be shared and whether there is opportunity to leverage the work already developed in relation to healthcare improvement and best practices, such as those identified by the now retired Health Council, CIHR’s Evidence Informed Healthcare Renewal program or emerging Strategy for Patient-Oriented Research (SPOR) results, or best practices promoted by Accreditation Canada, among others.

While no current duplication of efforts were cited, the risk for future overlap was identified. Some interviewees from provincial health authorities and healthcare organizations, and an interviewee engaged in CFHI’s collaborations programming, raised the point that there is increased movement towards quality improvement in healthcare by many organizations, such as the provincial Quality Councils. They further identified that there is a focus and trend on transformative research among research-based organizations, bringing others into the quality improvement domain as well.
Results from recent CFHI market and audience research\textsuperscript{31} also raised points related to risks of CFHI being viewed as similar to other organizations, but still garnered very positive opinions of CFHI’s efforts.

The market and audience research report identified that the results of respondent perceptions signalled the existence of perceived overlap between CFHI and other organizations working in the healthcare improvement space, but at the same time those who could differentiate CFHI exhibited positive perceptions of it. An excerpt from that report follows:

\begin{quote}
"While many respondents were unsure what differentiated CFHI from other organizations, a number of respondents in the elite audience\textsuperscript{32} pointed to the existence of overlap, with one pointing out that “each [organization] has their individual nuances but there is some definite overlap and confusion as to what each organization is contributing”. This sentiment, along with the uncertainty characteristic, reflects the importance of clearly and strongly defining CFHI’s value proposition to each audience, and ensuring that those at the highest levels of client organizations are made aware of what drives each element of CFHI’s value.

. . . this report highlighted what respondents identified as a lack of internal resources [in their organizations] available to support change management; here, a key member of the elite audience specifically referenced this area as a strength of CFHI, saying they offer “[a] stronger focus on leadership and change management.”

Further, those elite audience members who can differentiate CFHI from others exhibited extremely positive responses, including “The mentorship and support that they provided through the patient engagement project was fantastic; I have never experienced such support from a funding organization in the past.”"
\end{quote}

The high value brought by CFHI through the programming it delivers was also noted by the key stakeholders interviewed for this evaluation. The one value most commonly mentioned by key stakeholder interviews were that CFHI brings a common sense approach to healthcare improvement at an operational, practical level. However, they cautioned that CFHI’s continued focus should not be on localized, transformation initiatives, but rather on spreading the results so that value can be realized elsewhere.

One interviewee described this quite concisely as:

\begin{quote}

\textsuperscript{32} The elite audience was defined in the Abacus Data Inc., report as “For this project, CFHI provided Abacus Data with a list of 90 individuals as potential targets for elite consultations. The list was comprised primarily of senior executives (mainly presidents and CEOs) of major health organizations or health authorities across Canada.”
\end{quote}
“CFHI has a role in: 1. Finding the innovation; 2. Spreading the innovation; and 3. Providing the implementation science so the innovation can be implemented by the providers . . . CFHI should not be doing the work.”

Key Stakeholder Interviewee Comment

It was also acknowledged by key stakeholder interviewees that CFHI is still perceived to be in the process of changing as an organization. Not all interviewees felt that CFHI has been able to make itself known in its new role. Key stakeholder interviewees from government and health authorities speculated that CFHI may still be struggling to articulate its “raison d’être”, noting they are not as familiar with CFHI in its new mandate.

The evaluation identified four key categories of CFHI’s programming for comparison with other organizations offering the same or similar types of service: quality improvement work, capacity building, research knowledge and dissemination, and policy dialogue. Exhibit 4 and Exhibit 5 use these categories to give an example of how CFHI’s programming compares to the programming of other healthcare organizations with an improvement mandate. By reviewing services offered under CFHI’s 2013 program of work, the evaluation mapped CFHI’s programming to four areas of activity, noting presence of overlap between the activities each program covers.

Exhibit 4
CFHI Programs

<table>
<thead>
<tr>
<th>Comparison area of activity</th>
<th>CFHI Programs³⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quality Improvement Work</td>
<td>Collaboration for Innovation and Improvement</td>
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<tr>
<td></td>
<td>Patient Engagement</td>
</tr>
<tr>
<td></td>
<td>Education and Training</td>
</tr>
<tr>
<td></td>
<td>Applied Research and Policy Analysis</td>
</tr>
<tr>
<td>2. Capacity Building</td>
<td></td>
</tr>
<tr>
<td>3. Research Knowledge and Dissemination</td>
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<tr>
<td>4. Policy Dialogue</td>
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</table>

The evaluation found that clear delineations exist between the efforts of CFHI and the efforts of other organizations in three of the activity areas reviewed: capacity building; policy dialogue; and research knowledge and dissemination. The area of quality improvement could not be as clearly differentiated. There appears to be some potential for overlap in this area with other organizations. This is represented in Exhibit 5 by the overlap in the circles of CFHI’s programming and the programming of other organizations. While provincial quality councils, such as Health Quality Ontario may have complementary quality improvement programming; they do not provide opportunity for pan-Canadian collaborations and comparisons.

³³ Services provided by CFHI in the Evaluation and Performance Measurement area were excluded from this scan as the planned scope of the review utilized publicly available information and previous assessments completed by KPMG which did not contain information covering this area.

³⁴ As identified on CFHI’s website
Exhibit 5
CFHI’s Programming and Other Organizations

An overview and examples of CFHI programming in each of the activity areas that clearly delineate CFHI from other organizations is provided in Exhibit 6.
### Organizational Comparison by Activity Area

<table>
<thead>
<tr>
<th>Activity Area</th>
<th>Examples of CFHI Programming and Value Add</th>
</tr>
</thead>
</table>
| **Capacity Building** | The EXTRA Program for Healthcare Improvement provides training to quality leaders and teams from organizations across the country who are undertaking improvement and system-change initiatives. Drawing from its network of prestigious Canadian and international faculty and practice leaders EXTRA builds individual and team capacity in designing, implementing and evaluating evidence-based quality improvement initiatives.  

CFHI’s EXTRA program is seen as a large success by all key stakeholder interviewees contacted during this evaluation and is the main program that appears to set CFHI apart from others. EXTRA is very different than other healthcare leadership development programs offered by academic institutions in that the residency requirements are seen as providing more exposure to “experts” in the field.  

While there are new capacity building programs offered by the provincial quality councils, these are much shorter in duration and focused on individual provinces. For example, Health Quality Ontario (HQO) has a new program called *Improving & Driving Excellence Across Sectors* (IDEAS). It is a province-wide learning initiative to advance Ontario’s health system priorities by building capacity in quality improvement, leadership, and change management across all healthcare sectors. Through IDEAS, health care professionals and managers from all disciplines and sectors will learn, apply and share quality improvement knowledge and tools—and implement change across the health care system.  

Another example is the Canadian Healthcare Association (CHA) Learning’s Continuous Quality Improvement (CQI) program. This is a traditional individual online study course.  

In contrast to these provincial programs, EXTRA is noted to provide participants with more exposure to experts, allows for cross jurisdictional collaboration and networking, and its duration of 14 months provides time to enable the concrete development of significant project efforts and relationships.  

CFHI has proactively made linkages with other accredited programs through EXTRA, namely formal recognition by the University of Montreal and the University of Toronto. Graduates of the EXTRA program can earn university credits toward a Diplôme d’études supérieures spécialisées in health services administration (DESS) or an MSc at the University of Montreal. The University of Toronto offers credits toward the MSc Health Services Research from the Department of Health Policy, Management and Evaluation.  

Through CFHI, participants are also eligible for Continuing Medical Education Credits offered by the Royal College of Physicians and Surgeons of Canada and the College of Family Physicians of Canada, as well as Maintenance of Certification (MOC) Level 1 credits by the Canadian College of Health Leaders (CCHL). |
### Activity Area

<table>
<thead>
<tr>
<th>Examples of CFHI Programming and Value Add</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy Dialogue</strong></td>
</tr>
<tr>
<td>CFHI does not duplicate the efforts of other issue-specific organizations in informing policy. It is not a “national voice”, such as the CHA or the retired Health Council of Canada, nor does it advocate in specific issue areas, as do disease-specific foundations or other professional associations. CFHI is also not membership based.</td>
</tr>
<tr>
<td>CFHI attracts policy makers, administrative decision makers, researchers, and others. It appeals to a very broad audience much different than those engaged by policy institutes. CFHI has integrated policy into its work and, in turn, partners with other organizations to deliver relevant programming. CFHI’s efforts at informing health policy-making and promoting health policy dialogue are focused across Canada’s health systems.</td>
</tr>
<tr>
<td>In 2011, CFHI embarked on an initiative commissioned by Health Canada known as Healthcare FIt (<strong>Financing, Innovation and Transformation</strong>) to synthesize evidence on cost drivers, policy options to improve financing and efficiency, and health system transformation in Canada. The Healthcare FIt initiative was, by design, conducted to support health policy innovations through the dissemination of evidence-based knowledge and the promotion of dialogue among policy-makers, researchers, and the public.</td>
</tr>
<tr>
<td><strong>Research Knowledge and Dissemination</strong></td>
</tr>
<tr>
<td>Numerous research programs throughout Canadian university networks, faculties of medicine, and research institutes are focused on conducting basic and applied health research, medical discovery and innovation as well as providing the large majority of physical infrastructure to support the research.</td>
</tr>
<tr>
<td>Information organizations such as CIHI are focused on data collection and dissemination, with less emphasis on potential resulting policy implications.</td>
</tr>
<tr>
<td>Research organizations such as CIHR’s Institute for Health Services and Policy Research (IHSPR) does fund considerable research on innovative healthcare practices. However, it does not move as far into tactical implementation as does CFHI.</td>
</tr>
<tr>
<td>CFHI moves beyond the generation of knowledge and the subsequent dissemination of that knowledge through its development of improvement programming. It supports changes to ways of working to improve patient outcomes. For example, the improvement projects in the NWT Collaboration have involved a number of knowledge and dissemination activities in chronic disease management in the NWT. The three NWT improvement projects worked to enhance communication among regions and departments, support greater standardization of care, better information sharing, earlier</td>
</tr>
</tbody>
</table>
The quality improvement activity area, however, is a much more crowded landscape. A summary of current initiatives by other organizations within this space is provided in Exhibit 7.

**Exhibit 7**
**Current Initiatives in Quality Improvement Work by Other Organizations**

<table>
<thead>
<tr>
<th>Activity Area</th>
<th>CFHI</th>
<th>Health Quality Ontario</th>
<th>Health Quality Council of Alberta</th>
<th>Accreditation Canada</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the effectiveness of new healthcare improvement initiatives</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Provide opportunities to collaborate with other healthcare professionals and learn and implement innovative approaches to quality improvement.</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provision of tools and resources</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Support quality improvement</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


36 Private sector indicates for-profit companies that practice in the area of healthcare improvement such as Deloitte Canada, PricewaterhouseCoopers Canada, and IBM Canada.

37 Private sector indicates for-profit companies that practice in the area of healthcare improvement such as Deloitte Canada, PricewaterhouseCoopers Canada, and IBM Canada.
Although only a small number of organizations were reviewed, one can easily observe that there are other organizations providing the same or similar services related to healthcare quality improvement, indicating the potential for overlap and duplication in this space. This is supported by the key stakeholder interview results as well as the results of CFHI’s recent market research study as noted above.

Still, CFHI is distinctly different from these other organizations in that CFHI is:

- A tactical collaborator, on the ground, working directly with healthcare organizations to assist them with improvement activities. In contrast, other organizations leave it to the healthcare organization itself to find and implement change in their local system and achieve improvements in health or local system outcomes.
- Providing a pan-Canadian perspective that is not tied to any one jurisdiction’s priorities or efforts.
- Opening and supporting collaborations and networks across Canada through its EXTRA program, CEO Forums, collaboration programming and other dissemination activities.

CFHI also differentiates itself in other ways. Many of CFHI’s collaborations span jurisdictions—cities, regions, provinces and territories - to allow healthcare professionals to design, adopt and adapt successful approaches to similar challenges. For example:

- The AHC involves 17 regional health authorities undertaking 10 improvement initiatives to enhance healthcare services for Atlantic Canadians living with chronic diseases. Over a two-year period, collaboration partners worked together to build networks for sharing and spreading evidence-informed solutions throughout their organizations and health systems, in the Atlantic provinces and beyond.
- The three pilot projects designed and implemented under the NWT Collaboration involved more than 80 health services managers, clinical leaders and health authority staff focused on changing the way NWT manages chronic disease. The pilots have imparted important lessons towards the development of an integrated, territory-wide CDM strategy.

There are also instances where CFHI has actively competed for differentiation. For example, CFHI was the successful recipient of the North Shore Tribal Council (NSTC), Change Management towards a New Primary Healthcare Service Delivery Model, Request for Proposal (RFP) that was issued to a wide range of improvement providers, including those within the private sector. Although the NSTC

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38 There are a number of large, middle tier, boutique and independent healthcare advisory services firms (e.g., Deloitte Canada, PricewaterhouseCoopers Canada, IBM Canada, BDO, Optimus, Hay Group ) that have specialized healthcare practices addressing a number of quality improvement areas namely organizational design, strategies to enhance patient care, LEAN initiatives to improve clinical outcomes and patient satisfaction, etc. There are also hospitals “selling” in-house capabilities such as Toronto East General Hospital, Hamilton Health Sciences, and The Hospital for Sick Children and other medical equipment firms such as GE and Phillips that are building up their consulting practices to offer free value-add services.
initiative was initially a request for advisory services, as the project charter evolved, it focused on building First Nation capacity in community engagement – a service in which CFHI has programming experience. CFHI has been working with NSTC to sustain this work through opportunities such as CFHI’s larger NRoR Collaboration. As such, this could bring one more region into a larger effort targeted at northern, rural and/or remote healthcare improvement.

CFHI’s differentiation was also discussed as a part of key stakeholder interviews. Almost half of the key stakeholder interviewees suggested that CFHI’s programming was not focused enough at the system level. Key stakeholder interviewees identified mostly micro level investments being made, with some macro level initiatives being undertaken. Key stakeholder interviewees were unsure of how the micro and macro pieces fit together. This was suggested by half of the interviewees, who perceived that up-take was not currently happening and that not enough was being done to support the spreading of best practices across Canada. This is one program area that the key stakeholder interviewees felt could be expanded.39

“Strengthen the piece around transformative change. The incremental quality improvement space is overpopulated with consultants and lean strategies. This isn’t a good space to operate in. CFHI needs to create movement for transformation and reform.”

Key Stakeholder Interviewee Comment

The results of CFHI’s stakeholder consultation conducted in 201140 pointed to similar reflections:

“The conceptual framework should articulate and build on CHSRF’s acknowledged strengths (pan-Canadian perspective; dynamic interaction between research and management; networking across Canada; quality; independence; commitment to bilingualism; non-partisan; credibility; expertise; ability to bring policy-makers to the table; proven track record) – the Foundation’s “distinctive competencies” – and avoid straying into territory that is heavily occupied by, or associated with, other players.”

The results of the recent CFHI market and audience research report also alluded to risks of overlap and the need to differentiate:

“For the elite group,41 conveying CFHI’s value proposition is also a central challenge. Many larger organizations offer similar improvement programs, and, in some cases, there is perceived to be a range of other improvement organizations to choose from.”

Contributing to this perception may be the newness of CFHI’s rebranding efforts and the communication of its value-proposition held within its new brand. Two key stakeholder interviewees felt CFHI needs to increase its regular communication activities (even with previous partners/cohorts) and one interviewee noted that when they raised their pending interview for the evaluation to an internal team, the senior health team being addressed was unaware of CFHI.

39 The evaluation notes that spread and encouraging wider up-take is a recent feature of CFHI programming.
40 CHSRF Stakeholder Consultation: Highlights of Findings and Recommended Actions, Lillian Bayne and Marcel Villeneuve, March 30, 2011.
41 As defined earlier.
The recent CFHI market and audience research report also identified opportunities for CFHI to increase brand awareness. Findings from the report related to this area include the following:

“Overall, the Direct Audience\textsuperscript{42} was more familiar with CFHI and CHSRF than the Indirect Audience,\textsuperscript{43} which should not be seen as very surprising, as access to this group was provided by CFHI, with the same being true of the elite audience. Although this demonstrates strong success in that CFHI has been able to establish identity within a direct circle, these findings also expose an opportunity to extend that recognition across the healthcare sector in senior levels and among front line staff.

Although it may be expected that virtually all of the Indirect Audience would be unaware of the evolution of CHSRF into CFHI, it should be seen to be somewhat concerning from a brand perspective that nearly half of CFHI’s Direct Audience was unaware of the rebranding.”

Additionally, the analysis of performance data presented in Section 6 (Question 4: Fulfilment of Federal Funding Agreement Requirements) looks at the number of returning users to EXTRA. Although these results are positive in that CFHI has attracted repeat users of their programming, there may be an opportunity to expand promotion of services so that many different organizations are reaping benefits. One key stakeholder interviewee also alluded to the need to reach other parties. There is a perception that CFHI tends to establish relationships/collaborations with the same organizations.

\subsection*{3.3 Conclusion}

The documentation review found that CFHI considered its stakeholders’ needs when delineating its position in the Canadian healthcare system and defining its strategic priorities in 2009. Key stakeholder interviewees supported CFHI’s shift in direction towards promotion and implementation of evidence-informed improvement in the Canadian healthcare system. The PBCA also identified clear niche areas for CFHI.

A review of available corporate documentation of other organizations in the healthcare improvement space revealed that CFHI clearly distinguishes itself from other organizations in the areas of capacity building, policy dialogue, and research knowledge and dissemination. Although some overlap in the area of quality improvement may exist, CFHI’s unique differentiators in this regard are its tactical implementation approach, ability to compare and contrast across the country, and the development of pan-Canadian networks. CFHI is the only C-organization dedicated to working actively with existing organizations on a project-based approach to microsystems, program and large system improvement with supportive faculty and management coaches. CFHI’s many improvement teams from across the

\textsuperscript{42} The Direct Audience was defined in the Abacus Data Inc., report as “those who may have had some sort of existing or previous contact with CFHI.”

\textsuperscript{43} The Indirect Audience was defined in the Abacus Data Inc., report as “the general healthcare audience”. “This group was recruited from Research Now’s panel of over 450,000 Canadians, one of Canada’s largest and most respected panel providers”
country are supported in contextualizing, adapting and adopting innovative improvement practices that fit with their local delivery environments.

However, the risk for potential (real or perceived) overlap or duplication to occur in the future in the area of healthcare quality improvement programming, must be managed. The documentation review, stakeholder interviews, and secondary data sources identified a number of organizations that evaluate the effectiveness of new healthcare improvement initiatives, provide tools and resources related to healthcare improvement initiatives, support healthcare quality improvement activities, and provide healthcare quality improvement training; albeit largely within, and not across, jurisdictions. CFHI’s evolved emphasis on supporting leadership development for quality improvement in adapting, implementing and spreading innovative practices into actionable policies, programs, and tools through cross-jurisdictional, regional and pan-Canadian collaborations – must be at the forefront of its value-proposition.

It is recognized that CFHI’s new strategic priorities and modified areas of focus are still very young, having only launched its revised programming in 2013. As such, shifting the organization’s direction, value-proposition and role in the healthcare system will take time. With its new mandate and programming, the organization is poised to work collaboratively with provincial organizations with common transformation objectives across a variety of healthcare settings.

In consideration of the key stakeholders’ perceptions related to the need for CFHI to focus on spreading results to increase value across the system and grow more partnerships with other similar or complementary organizations, and in consideration of the existence of a range of improvement organizations, CFHI’s unique value-proposition has risks that need to be mitigated.

### 3.4 Recommendations for Improvement

To strengthen its niche and value-proposition, CFHI should consider increasing its efforts on clearly communicating its value-added role in the healthcare improvement space. It should also continue to increase its focus on further promoting the implementation of innovative healthcare practices across the Canadian healthcare systems. In doing so, CFHI must be mindful of the board-directed funding approach, while recognizing and promoting CFHI’s advantage(s) when competing with the private sector or other similar quality improvement organizations. Although charging for services is within the scope and mandate of a not-for-profit organization, CFHI will need to continue to ensure that there is alignment between fee-for-services programming and its mandate.

CFHI has already started to increase its focus on promoting the implementation and spread of healthcare improvement across the Canadian healthcare systems, as evidenced by the launch of CFHI’s new *Spreading Healthcare Innovations Initiative* in 2014. See Section 9 for more information.

The evaluation notes that, while not deemed necessary to employ a full branding campaign given CFHI’s size and resources, the findings of CFHI’s market research report signal that CFHI’s new mandate and programming may not be well known as nearly half of CFHI’s direct audience was unaware of its rebranding. Efforts to reach, at a minimum, CFHI’s direct audience could be increased.

With cited opportunities to further coordinate CFHI’s efforts with other organizations, CFHI may consider increasing connections to other organizations involved and/or interested in quality improvement. One example provided by a key stakeholder interviewee identified possible dialogue with the Federal, Provincial and Territorial (FPT) Council on Healthcare—Healthcare Innovation
Working Group to gather a more common understanding of what is occurring across the country, but additionally could be an opportunity for CFHI to provide its own information at a pan-Canadian table related to the work it is doing.
4.0 Question 2: Relevance to Healthcare Priorities

Question 2: To what degree is CFHI’s current programming relevant to federal, provincial, territorial, and regional healthcare priorities today and five years into the future? Are there program areas that CFHI could further expand?

<table>
<thead>
<tr>
<th>Supporting Lines of Evidence</th>
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<tr>
<td>Document Review</td>
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<tr>
<td>✓</td>
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The analysis in this section was conducted using multiple lines of evidence regarding how CFHI’s priorities and goals align with the priorities of Canadian health authorities at the federal/provincial/territorial (F/P/T) and regional levels. A high-level environmental scan was conducted to identify the current healthcare priorities of all Canadian jurisdictions and a cross-section of the CFHI key stakeholders who were interviewed. These priorities were cross-referenced to CFHI’s current programming and other internal initiatives (e.g. board decisions) to identify areas of congruence and/or possible gaps. The key stakeholder interviews were used to validate and discuss these preliminary findings. Additional supporting evidence from the PBCA interviews was used to inform the analysis, in terms of how the “high impact” cases correspond with CFHI’s three key goals, and in turn how these correspond to the priorities of federal/provincial/territorial and regional priorities.

### 4.1 Key Findings

- All lines of evidence indicate that CFHI’s current programming is aligned with federal, provincial, territorial, and regional healthcare priorities today.

- CFHI’s current programming is very relevant to federal, provincial, territorial, and regional healthcare priorities across Canada. This is consistent with earlier stakeholder consultation work completed in support of CFHI’s strategic plan development.

- CFHI should continue with its current strategic direction and objectives in the implementation of healthcare quality improvement initiatives.
4.2 Analysis and Supporting Evidence

The environmental scan involved reviewing the publicly available strategic documents of all provincial and territorial health ministries, Health Canada, a number of regional health authorities and the specific organizations affiliated with the key stakeholder interviewees (refer to Appendix B and E for full listings). The review resulted in a listing of common healthcare priority areas across Canada, against which the alignment of CFHI programming was assessed. The Canadian healthcare priority areas identified are listed in Exhibit 8 below.

Exhibit 8
Canadian Healthcare Priorities

<table>
<thead>
<tr>
<th>Identified Canadian Healthcare Priorities*</th>
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<tbody>
<tr>
<td>• Quality and Patient Safety</td>
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<tr>
<td>• Efficiency</td>
</tr>
<tr>
<td>• Effectiveness</td>
</tr>
<tr>
<td>• Management (leadership capacity,</td>
</tr>
<tr>
<td>accountability, transparency,</td>
</tr>
<tr>
<td>performance measurement)</td>
</tr>
<tr>
<td>• Health Human Resources</td>
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<td>• Community-based Care</td>
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<td>• Patient Centred Care</td>
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<td>• Primary Healthcare</td>
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<td>• Health Policy</td>
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<td>• Population Health</td>
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<td>• Information Technology</td>
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<td>• Wellness</td>
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<tr>
<td>• Innovation</td>
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<tr>
<td>• Integrated Care/Services</td>
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<td>• Appropriate Care</td>
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<tr>
<td>• Specialized Healthcare Areas</td>
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<tr>
<td>• Mental Health</td>
</tr>
<tr>
<td>• Continuing Care</td>
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<tr>
<td>• Aboriginal Health</td>
</tr>
<tr>
<td>• Patient/Citizen Engagement</td>
</tr>
</tbody>
</table>

This Canadian healthcare priorities list is rank ordered based upon the number of organizations coded as identifying the priority. The first priority area listed, Quality and Patient Safety, was identified by 83% of the organizations reviewed. The frequency of times they are identified by organization decreases with each subsequent line item on the list, with the specialized healthcare areas becoming quite variable in terms of frequency it was identified among the organizations.
Based on the results of the document review, CFHI’s programming aligns with a majority of the Canadian healthcare priorities identified and, in particular, is directly aligned with the top three priorities identified by Canadian healthcare organizations and government bodies. Exhibit 9 provides examples of CFHI’s programming as it aligns with each of the top three priorities identified:

**Exhibit 9**
**Alignment of CFHI Programming with Top Four Canadian Healthcare Priorities**

<table>
<thead>
<tr>
<th>Identified Canadian Healthcare Priority</th>
<th>Examples of CFHI Programming$^{44}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality and Patient Safety</td>
<td>EXTRA: The EXTRA Program for Healthcare Improvement places an emphasis on the use of evidence to improve the quality of care, patient outcomes and cost-effectiveness. An EXTRA project based out of Ontario, for example, implemented a tool to reduce preventable ED visits by long-term care residents.$^{45}$ The tool measures nine indicators and their related signs, symptoms and severity levels. It is based on an aggregate scoring system to quantify change in a resident’s condition. Increased targeting of early signs and symptoms of decline in health status allows the elderly in LTC to be treated at their places of residence, thereby lowering or eliminating the need for ED visits and in-patient stays and the potential iatrogenic complications.</td>
</tr>
</tbody>
</table>

**Patient Engagement Projects (PEP):** In order to uncover lessons about how engagement can lead to improvements in the quality of care, CFHI supported 17 patient engagement projects from across the country. CFHI’s PEP initiative recognizes that to be successful in improving health services that meet patients’ needs and preferences, providers must have comprehensive patient engagement strategies that include the patient and/or their family members as full partners. The Toronto Rehabilitation Institute PEP team, for example, focused its initiative on developing priority safety measures that are relevant to the rehabilitation community through engaging patients, families, staff members and leaders.$^{46}$ The result was a safety scorecard that focuses on eight safety issues and incorporates measurement tools already in place into one easy-to-use scorecard.

**Patient Engagement Resource Hub:** This collection of existing resources and tools has been gathered over the course of CFHI’s work in patient and family engagement. The resource hub is designed to facilitate access to these tools for organizations who are interested in partnering effectively with patients and families to improve the quality of

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$^{44}$ Note: Upcoming and recently launched programming is italicized


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<thead>
<tr>
<th>Identified Canadian Healthcare Priority</th>
<th>Examples of CFHI Programming</th>
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</thead>
<tbody>
<tr>
<td><strong>Atlantic Healthcare Collaboration:</strong></td>
<td>The AHC collaborative involves ten improvement teams from across the four Atlantic provinces, working towards improved quality in chronic disease management. The Health PEI quality improvement team, for example, is working to reduce preventable hospitalizations for ambulatory care sensitive conditions by focusing on improved transitions between acute and primary care services to enhance patient experience of care and improve health outcomes.</td>
</tr>
<tr>
<td><strong>NWT Collaboration:</strong></td>
<td>The three improvement teams within the NWT Collaboration, focused on building local capacity in chronic disease change management, and generating impacts on the quality of services and care. The NWT mental health pilot project, for example, drew on evidence from various jurisdictions in NWT and engaged staff to develop a referral pathway and resource toolkit to improve the continuity, quality, coordination of care and patient outcomes.</td>
</tr>
<tr>
<td><strong>Triple Aim Improvement Community (TAIC):</strong></td>
<td>Through CFHI’s partnership with the Institute for Healthcare Improvement (IHI), nine Canadian teams participated in the ten-month TAIC collaborative. These teams are part of a larger international cohort which includes teams from the United States, Denmark, Sweden and the United Kingdom. The TAIC teams are working towards improving patient experience of care, population health and reducing the cost of care. The Grey Bruce Health Services team in Owen Sound, for example, is implementing a project directed at optimizing the health of individuals with COPD by assisting them in managing their chronic disease while improving their experience of care and controlling health system costs.</td>
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<tr>
<td><strong>North Shore Tribal Council (NSTC):</strong></td>
<td>Through the NSTC initiative, CFHI has been supporting the development of an implementation plan designed to move the N’Minoeyaa AHAC towards its desired goal of redesigning a delivery model that will produce optimal health for community members. The model aims to help community members/clients reclaim ownership and be empowered to take control of their own health and well-being, as well as, those of their family members.</td>
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<table>
<thead>
<tr>
<th>Identified Canadian Healthcare Priority</th>
<th>Examples of CFHI Programming</th>
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<tbody>
<tr>
<td><strong>INSPIRED Approaches to COPD: Spreading Healthcare Improvements Initiative</strong>: CFHI, in partnership with Boehringer Ingelheim (Canada) Ltd (BICL), will provide approximately fifteen healthcare organizations with funding, coaching, educational materials and tools, and other support through a quality improvement collaborative aimed at improving care for patients living with COPD while managing costs. In addition, CFHI and BICL will partner with the Alberta-based Institute of Health Economics (IHE) to undertake complementary policy and economic analyses.</td>
<td></td>
</tr>
<tr>
<td><strong>Reducing Antipsychotic Medication Use in Long Term Care: Spreading Healthcare Improvements Initiative</strong>: This collaborative will provide up to fifteen long term care (LTC) facilities with funding and training to actively assess and reduce inappropriate use of antipsychotic medications. One in three LTC residents in Canada is on antipsychotic medication without a diagnosis of psychosis from a doctor. There is also significant variation between rates in different long term care homes, pointing to the potentially inappropriate use of these medications. Research has shown that antipsychotic practices are, at best, only minimally effective in managing behavioural issues and have serious risks associated with them, especially in the elderly.</td>
<td></td>
</tr>
<tr>
<td><strong>Partnering with Patients and Families for Quality Improvement</strong>: This collaborative is focused on harnessing the potential of patient and family engagement to drive quality improvement in healthcare. The collaborative will provide funding, coaching and other support to help up to 15 teams from Canadian healthcare organizations engage patients and families in designing, delivering and evaluating healthcare services with the goal of better patient care and outcomes.</td>
<td></td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td><strong>EXTRA</strong>: See EXTRA examples as discussed in Section 8: PBCA analysis.</td>
</tr>
<tr>
<td><strong>Patient Engagement Projects</strong>: The McGill University Health Centre’s Transforming Care at the Bedside initiative, is one example of a PEP project which addresses efficiency. This project aimed to understand the inpatient experience through the eyes of patients and families; and to deeply engage patients and families, along with staff, in reshaping care processes that respond to patients’ and families’ real needs. Nursing stations, medication rooms, family visiting rooms, treatment rooms and supply rooms have been redesigned; equipment relocation means nurses spend less time searching for needed equipment. Whiteboards have been added to each patient’s bedside as a two-way communication tool among patients, families and staff. Nurses now take time to ask a few basic questions of their patients on every shift so they know patients’ priorities for the day. In addition, the admission process for mental health patients, which used to take more than...</td>
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</table>
### Identified Canadian Healthcare Priority

**Examples of CFHI Programming**

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Four hours and required meeting separately with nurses, physicians, psychologists and social workers, now takes less than one hour. There has also been a 30 percent increase in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey scores related to responsiveness of care from the patient’s perspective, surpassing US benchmarks.</td>
<td>Atlantic Healthcare Collaboration: An example of an AHC project working towards improving efficiency, is Eastern Regional Health Authority. This team has identified the need to strengthen collaboration at transition points to create seamless approaches to diabetes care. Two pilot sites, one rural and one urban, have been selected to integrate a coordinated and inclusive approach to diabetes care. Reductions in duplicated services will enhance efficiencies, while standardized tools and referral processes will increase consistent clinical practice and improve communication amongst providers and clients. By improving the navigation system for diabetes clients and moving forward clinical practice guideline adoption, standardized and consistent care can be spread throughout the region and result in better overall health outcomes.</td>
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<tr>
<td>Saskatchewan Health and Johnson-Shoyama Graduate School of Public Policy Collaboration: As Saskatchewan undertakes a massive health system transformation agenda, this initiative focused on better understanding how transformation occurs by embedding health services researchers in the process. The research is ongoing. The embedded researchers are using methods such as storytelling, narrative analysis and participant observation to derive a better understanding of the facilitators and barriers of large-scale health system transformation. The project began in June 2011 and will conclude in June 2014.</td>
<td>Healthcare FIT: Healthcare accounts for roughly half of most provincial programming budgets. As a result, policy-makers across Canada share a similar challenge: controlling costs while strengthening the quality of healthcare. In 2011, CFHI embarked on a program of research funded by Health Canada. Under the Healthcare FIT (Financing, Innovation and Transformation) initiative, CFHI commissioned, edited and produced over 22 reports and held a series of policy dialogues that address current economic challenges. By disseminating the best knowledge and evidence—as well as promoting productive dialogue among policy-makers, researchers and the public—the Healthcare FIT initiative has supported numerous health policy innovations and improvements to healthcare in Canada.</td>
</tr>
<tr>
<td>Identified Canadian Healthcare Priority</td>
<td>Examples of CFHI Programming</td>
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<tr>
<td><strong>Better Health, Lower Costs (BHLC) for Patients with Complex Needs:</strong> CFHI will sponsor 10 Canadian teams to take part in IHI’s BHLC Collaborative. This initiative will help organizations to plan and implement comprehensive care designs that serve the needs of organization’s most complex, high risk, and costly patients resulting in better health outcomes, a better care experience and lower total cost.</td>
<td></td>
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<tr>
<td><strong>Management</strong></td>
<td>EXTRA: A critical component of the EXTRA program is giving participants the skills and knowledge to become change agents in healthcare improvement. EXTRA offers unique opportunities for participants to conduct evidence-informed improvement projects in their organizations, based on change management principles, with the goal of enhancing patient outcomes, quality of care and cost-effectiveness. Team members build on their own experience and apply the knowledge and skills gained from the program to solve performance and health service delivery issues in their home organization or ministry. Consequently, the improvement project is intended to be the main vehicle for translating learning into practice.</td>
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<td></td>
<td>At the CSSS Richelieu-Yamaska, in Quebec, an EXTRA team worked to redesign the care continuum for seniors. Project outputs included the overhaul of the organizational chart to avoid silos; the implementation of a micro-program on change management and population responsibility for 30 middle managers; and the design and implementation of nine projects led by the middle managers recruited in the micro-program connected with the care continuum for seniors.</td>
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<tr>
<td></td>
<td><strong>Online Workshops and OnCall Webinars:</strong> CFHI’s online learning activities regularly feature policy-makers, decision-makers and clinicians as they explore evidence for designing and managing change and share their improvement stories. Each session provides participants with concrete strategies, lessons learned and results achieved on key healthcare topics. The February 14th, 2013 On Call Session, ‘Strategizing for Healthcare Improvement’, for example, was targeted towards healthcare leaders and providers as well as provincial health ministries’ staff and patients. It was designed to introduce listeners to CFHI’s work towards understanding high-performing health systems and developing a framework and approach for supporting healthcare improvement. The session introduced key attributes of high-performing health systems, key levers for change in Canada and an introduction to CFHI’s approach to animating collaborative health system change and improvement across Canada. A total of 175 participants attended this webinar.</td>
</tr>
</tbody>
</table>
Identified Canadian Healthcare Priority | Examples of CFHI Programming
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**Effective Governance:** In 2011, CFHI, CPSI, OHA and MOHLTC partnered to deliver an educational curriculum and resources as part of the *Effective Governance for Quality and Patient Safety* program. The program aimed to help board members and executive leaders improve their current governance knowledge and skills in overseeing safety and quality improvements within their organizations.

Of the 268 board members and executives who responded to the post-program survey, 213 (79.4%) stated their intention to apply the knowledge and resources acquired as a result of this educational program to initiate quality and patient safety changes within their healthcare organizations. The sharing of experiences and tools across different healthcare organizations, particularly those tools of practical value (e.g. sample dashboards/scorecards, quality and patient safety plans, toolkits, gap analysis) was cited by participants as one of the main strengths of the program.⁴⁹

**CEO Forum:** For seven years, CFHI’s CEO Forum provided CEOs, senior leaders, deputy ministers and prominent experts from across Canada the opportunity to share experiences, challenges and ideas on key issues in healthcare policy and management.

**Fraser Health Transformation Project:** In 2011, the Fraser Health Authority and the Institute for Health System Transformation & Sustainability joined with CFHI on a multi-phased health system transformation project. Three research papers were commissioned to generate knowledge for advancing transformation in the region. The results of the papers are helping the project team achieve an accurate and common understanding of the Fraser Health context for improving health outcomes as well as an understanding of how other high-performing systems manage clinical care—a top priority for Fraser Health.

**IPCDC:** The main focus of this collaboration, known as the Quebec Joint Action Group for Population-Based Responsibility, is providing training to healthcare managers and front-line public health practitioners in the province. The managers and practitioners are using the competencies they gain to implement improvement projects locally in nearly all regions of Quebec—Saguenay-Lac-St-Jean, Capitale-Nationale, Laurentides, Chaudière-Appalaches, Montérégie and Bas-St-Laurent. These improvement projects, which focus on aging, housing, mental health, chronic disease management, and youths and families, are designed to improve population health, optimize the use of resources and enhance healthcare experiences of patients and families.

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One of the consistent messages identified through the CFHI Board Decision document and from the stakeholder consultation process undertaken in 2008 was that stakeholders believed the broad directions in the CHSRF Strategic Directions 2009-2013 document made sense and contained appropriate programming areas. The results of the key stakeholder interviews undertaken through this evaluation are consistent with those of the 2008 CFHI consultation process; CFHI can add value as an independent organization on the national scene.

Key stakeholder interviewees found CFHI’s current programming overall to be very relevant to F/P/T, and regional healthcare priorities across Canada as illustrated in Exhibit 10. The translation of highly actionable projects and the applicability of focused topic areas was considered very relevant by interviewees.

Key stakeholder interviewees were asked:

“To what extent is CFHI’s programming relevant to Federal/Provincial/Territorial Priorities across Canada?” and

“To what extent is CFHI’s programming relevant to your organization’s healthcare priorities?”

Exhibit 10
Key Stakeholder Interview Results – Relevance of CFHI Programming

<table>
<thead>
<tr>
<th>Extent of CFHI’s Relevance to F/P/T Priorities:</th>
<th>Extent of Relevance Average Rating</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today</td>
<td>4.3/5</td>
<td>11</td>
</tr>
<tr>
<td>Five years into the future</td>
<td>4.3/5</td>
<td>8</td>
</tr>
<tr>
<td>Extent of CHFI’s Relevance to Organizational Priorities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Today</td>
<td>4.1/5</td>
<td>10</td>
</tr>
<tr>
<td>Five years into the future</td>
<td>4.0/5</td>
<td>5</td>
</tr>
</tbody>
</table>

Rating scale was 1=Not at all relevant, 2=Low relevance, 3=Moderately relevant, 4=Very relevant, 5=Extremely relevant.

A few key stakeholder interviewees felt that they did not see CFHI working in their priority areas specifically, but these responses were in relation to specialized healthcare areas and as noted previously in the note to Exhibit 8 – Canadian Healthcare Priorities, these areas become highly variable among and between organizations. One would not expect CFHI to be aligned with priorities at this level of granularity.

There is indication from the PBCA analysis that the eight projects supported key F/P/T and regional priorities, although this was not a question asked during the interviews. As demonstrated in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report, PBCA highlighted significant impacts related to all three main CFHI goals: healthcare efficiency and patient
value; patient-and family-centred care; and coordinated healthcare. Given that these goals are consistent with F/P/T and regional priorities, this provides additional indirect support that CFHI’s programming is consistent with and supports broader Canadian healthcare priorities.

4.3 Conclusion

All lines of evidence examined through the evaluation indicate that CFHI is highly aligned with F/P/T and regional healthcare priorities today. CFHI’s programming was mapped to the priorities identified by F/P/T and regional bodies through an environmental scan. Opinions from key stakeholders consistently indicated that CFHI is aligned with priority healthcare areas across Canada and the PBCA further highlighted significant impacts related to all CFHI priorities and goals.

No recommendations for improvement were identified with respect to CFHI’s relevance to healthcare priorities.
5.0 Question 3: Alignment with CFHI’s Strategic Priorities

**Question 3:** How well are CFHI’s program objectives, leadership team mandates (i.e., Board of Trustees, Board Committees and Senior Management), partnerships, and other resources aligned with its strategic priorities?

<table>
<thead>
<tr>
<th>Supporting Lines of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Review</td>
</tr>
<tr>
<td>✓</td>
</tr>
</tbody>
</table>

The analysis in this section presents the results of the review of various elements of CFHI’s internal structures, processes, activities, and work efforts to promote alignment with its strategic priorities at all levels of the organization. Results of the document review are presented first, followed by other supporting evidence gathered from the roll-up of performance measurement data.

### 5.1 Key Findings

- Overall, there is strong alignment of CFHI’s resources and program objectives with its strategic priorities.

- CFHI has been able to develop partnerships in each of its strategic priority areas to optimize its use of internal and external resources in the pursuit of common goals. However, CFHI should consider increasing the consistency and level of detail with which it is tracking and reporting on partnerships.

- Board members represent all of CFHI’s target audiences for the delivery of programming.

- Annual programs of work are developed to align program activities with CFHI’s three strategic priority areas.

- A high percentage of CFHI healthcare improvement projects address CFHI’s goals (efficiency, patient-family centered care and coordination) which are directed by the three strategic priority areas.
5.2 Analysis and Supporting Evidence

As part of its shift in direction, CFHI identified three strategic priorities to guide its healthcare transformation and improvement work:

- Engaging citizens, patients and families;
- Accelerating evidence-informed change/improvement in healthcare delivery; and
- Promoting policy analysis and facilitating dialogue.

Each of the above strategic priorities is achieved through CFHI’s day-to-day activities and programming. To ensure that CFHI activities are aligned with and support the achievement of its strategic priorities, CFHI develops an annual Program of Work to guide and prioritize its programs and resources each year. Programs of Work provide a clear crosswalk of planned CFHI programs and activities with each of its three strategic priorities. In addition, the Program of Work defines the CFHI’s annual budget in total and for each program area, including the proportion of financial and human resources allocated to each core activity. Some CFHI programs are operated on a cost-shared and cost-recovery basis, and as a result, the Program of Work clearly describes how each program will be supported by core services, such as strategic communications, marketing, corporate services, and business development. In addition, key activities and operational targets are further defined for each program area to help ensure day to day activities are focused and aligned with CFHI’s overall strategic priorities.

Based on our review of the 2011 through 2014 Programs of Work, we confirmed that CFHI annually re-assesses and re-establishes its upcoming priorities in consideration of the previous year’s performance, resource limitations, and changes in the internal and external environment that may necessitate a change in areas of focus. In all years, a clear alignment was demonstrated between planned activities/programs and CFHI’s three strategic priorities.

As will be demonstrated in Section 7 (Question 5: Progress Against CFHI’s Strategic Priorities) of this report, almost half of CFHI’s improvement projects included patient- and family-centred care activities. A large majority of IPs addressed healthcare efficiency (aligned with accelerating evidence-informed change), and about 60% addressed coordination of care. This indicates that CFHI is purposely aligning its improvement programming to its strategic priority areas.

To support the achievement of its new mandate and strategic priorities, CFHI has undergone several organizational restructuring exercises to better align its human resources with its priorities. Based on a review of supporting documentation, decisions regarding changes in organizational structure were made with clear consideration of CFHI’s new mandate and included external specialist advice regarding how to maximize efficiency and cost-effectiveness of CFHI’s structure in relation to its new mandate. CFHI regularly sought and considered the input and approval of its Board of Trustees in organizational restructuring decisions. In examining the changes made to the organizational structure and internal processes over the past five years, a number of key improvements were made to better support the achievement of CFHI’s mandate and strategic priorities, including:

- Streamlining of core corporate functions under Corporate Services to improve integration, efficiency and reduce duplication of effort;
Streamlining of complementary activities and programs into core portfolios to obtain better synergies and increase overall alignment with strategy;

Eliminating non-critical positions and restructuring of the organization to better support CFHI’s three strategic priority areas, such as hiring personnel in new areas of strategic focus and revising the structure of the SMT; and

Clarifying the critical skill sets required to support strategic priorities based on job evaluation analysis and consideration of CFHI’s new mandate and objectives.

The above changes were supported by strengths in CFHI’s governance structure, in which CFHI’s Board of Trustees consists of representatives from each of CFHI’s key stakeholder groups and target audiences, including hospitals, medical associations, and health ministries. Based on our review of the Board member composition from 2009-10 through 2013-14, members have been recruited from government, academia, and healthcare organizations.

CFHI provides regular reporting on the results and performance of its programming and corporate services through annual reports, corporate profiles, President’s Reports, and other mechanisms. Based on our examination of CFHI’s Annual Reports and President’s Reports from 2009 to 2014, we confirmed that CFHI regularly assesses and reports on its achievements against its three strategic priorities. In particular, the President’s Reports are provided quarterly to the Board of Trustees. These reports detail key activities completed and relevant future activities against each of the program areas defined with the annual Program of Work. These provide a sound means of formally monitoring and reporting on CFHI’s progress against its annual goals and its strategic priorities.

To supplement its internal resources and leverage external sources of expertise, CFHI has an extensive network of external partners and individuals who support program delivery in support of its three strategic priorities, most notably the accelerating evidence-informed change priority. This includes:

Expert Faculty: Senior applied researchers and practitioners from various domains (clinical, managerial and policy sectors), who develop curriculum to support improvement and provide advice for facilitating analysis across CFHI’s collaborations, improvement initiatives and teams.

Academic Mentors: Applied health services researchers and practitioners who offer tailored advice to improvement teams to assist them with problem formulation, methodology and data requirements, as well as the systematic assessment and application of evidence from research to improvement initiatives.

Improvement Coaches: System leaders (including current and former CEOs and VPs) with extensive service delivery expertise, who offer tailored advice to improvement teams to assist them with their change management processes and the tactical and strategic approaches to effective implementation of the improvement initiatives.
From 1997 to 2012, CFHI has overseen $178.5 million in improvement projects, for which it funded $66.5 million or 1.68 was leveraged from its formal partnerships. In addition, the number of partnerships has been stable over the past five years. CFHI’s 2013 Annual Report reports 17 new agreements with 16 partners in the most recent fiscal year, indicating a reduction in new partners in the past year. However, 24 partner agreements were carried forward into 2013 implying that the overall number of partnership agreements has remained stable due to multi-year partnerships. The number of new partnership agreements entered into over the past five years is illustrated in Exhibit 11 below.

**Exhibit 11**

**Number of New Partnership Agreements – 2009 to 2013**

CFHI’s ability to develop and maintain effective partnerships is a key success factor in managing costs and leveraging the resources of organizations with similar goals and objectives to achieve greater synergies and impacts. Equally important to CFHI’s success is the effective management, monitoring, and assessment of the value of partnerships. Based on our discussions with management, the evaluation team understands that CFHI changed their formal approach over the years to guide the management and assessment of partnership performance.

The evaluation identified alignment between partnership agreements and CFHI’s priorities. As illustrated in Exhibit 12, in 2009 and 2011, more than half of the funds from new partnership agreements targeted CFHI’s priority of promoting policy dialogue, whereas in 2010 much of the funding (or 45%) targeted engaging and supporting citizens. Also in 2009 and 2011, CFHI was able to leverage more than twice its funds by partnering. Similar information for 2012 and 2013 was not available as CFHI changed the way partnership funds were being reported. Partner contributions are

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50 CFHI enters into partnerships with other organizations to promote working towards a more efficient healthcare system with better outcomes. For every dollar funded by CFHI an additional $1.68 was contributed by partners. It is not clear as to whether or not this figure included “in-kind” contributions by partners.


52 The responsibility for collecting and reporting partner data moved between CFHI’s Evaluation Division and Corporate Services Division where it now resides. Additionally, there was turnover in the Directors responsible for these areas. The approach to collecting and reporting partner contributions has varied between these two groups and the different Directors over the evaluation timeframe.
no longer reported by strategic priority area but rather by program area and in 2013 only a lump sum was reported.

### Exhibit 12
Number of New Partnerships by Strategic Priority – 2009 to 2011

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting Citizens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evidence-Informed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promoting Policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dialogue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Granting &amp; Awards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In summary, CFHI has successfully leveraged partnerships over the past five years, and the alignment of these partnerships with its three strategic priority areas is clearly demonstrated. The variance in the proportion of new partnerships aligned with each priority area from year to year is reflective of the different areas of focus that are determined through each year’s Program of Work.

### 5.3 Conclusion

CFHI’s resources and program objectives are aligned with its strategic priorities. The document review revealed that CFHI has focused on the optimization of delivering on its mandate through internally focused initiatives (formal planning exercises, self-evaluation exercises, organizational review and restructuring, and engagement of its Board of Trustees) and the leveraging of external backing (both in-kind and cash funding) in each of its strategic priority areas. Results identified through the PM data and PBCA\(^{53}\) demonstrating improvement project outcomes in and across each of CFHI’s three strategic priority areas provide further evidence that CFHI’s resources and objectives are well aligned with its areas of priority in light of the results that have been achieved.

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\(^{53}\) See PBCA evidence presented in Section 7.0: Progress Against CFHI’s Strategic Priorities
5.4 Recommendations for Improvement

In consideration of the value of strategic partnerships in supporting the cost-effective delivery of CFHI activities, CFHI would benefit from consistently reporting partnership financial contributions the same way each year for comparison purposes. In particular, CFHI should maintain a consistent financial record of the details of each of its partnership arrangements. Examples of key pieces of information to consider collecting consistently are: annual CFHI funding commitment; annual partner funding commitment; and nature of supporting in-kind commitments both by CFHI and/or the partner.

The information collected will facilitate the demonstration of how the partnership financial arrangements align with CFHI’s strategic priorities and enable reporting on outcomes that can be attributed to the partnership activity.
6.0 Question 4: Fulfillment of Federal Funding Agreement Requirements

Question 4: To what extent has CFHI fulfilled the requirements of the 2009 Health Canada comprehensive funding agreement?

The analysis of evidence related to this question was based upon a detailed review of the purpose and objectives of the comprehensive funding agreement, in particular as related to the Endowment Fund Grant and the EXTRA Grant. These were considered in light of CFHI’s current strategic priorities, goals and programming (including individual improvement projects and collaborations) to assess the degree of alignment of CFHI activities with the objectives of the comprehensive funding agreement. Data was reviewed regarding the nature and impacts of a variety of CFHI programming activities and was supplemented by information from the PM data roll-up.

6.1 Key Findings

- CFHI aligns with the Health Canada funding agreement objective of promoting best practices of health services delivery.

- Results against the Endowment Fund Grant show more targeted, organic, program design elements addressing gaps, needs and priorities in the field of health services delivery.

- Today, given the evolution of CFHI’s priorities, CFHI minimally aligns with the original research objectives that are stated in the Health Canada Comprehensive Funding Agreement.

- Although taking less pre-eminence in CFHI’s new strategic direction, peer adjudicated research is still supported and has contributed to health services scientific literature.

- Numerous activities and programs are targeted at the promotion of best practices in health services delivery.

- CFHI has contributed to increasing skills of health service professionals and encourages collaboration in the management of healthcare delivery through the EXTRA program.
6.2 Analysis and Supporting Evidence

The Health Canada comprehensive funding agreement includes all current and historical grant funding received by CFHI (and its previous incarnation of CHSRF) from Health Canada. These include the Endowment Grant, the CIHR Grant, the Nursing Research Fund Grant, and the EXTRA Grant. The CIHR Grant and the Nursing Research Fund Grants are out of scope for this evaluation, as these two grants were fulfilled prior to 2009. The grant funding in scope for this evaluation are the Endowment Grant and the EXTRA Grant. Further information depicting the historical account of CFHI as an organization is provided in Exhibit 1 in Section 1: Context and Objectives of this report.

The areas of enquiry supporting evaluation questions #5 and #6 overlap with this question significantly, particularly in reviewing the fulfilment of the Endowment Grant Objective (c) (see definition below). In some instances, the analysis and supporting evidence used for questions #5 and #6 has been drawn upon in the analysis below.

The analysis and results of evaluative evidence is presented separately for each grant in the following sections.

6.2.1 Endowment Grant

The purpose and objectives of the Endowment Grant are:

(a) Identifying research gaps and needs in the field of health services research and defining priorities;

(b) The funding of peer adjudicated research into the management, organization and effectiveness of health services, including research into the outcomes of health affecting interventions as well as into the organization and management of institutional and non-institutional models of health services delivery; and

(c) The promotion of the best practices of health services delivery and the communication of research outcomes.

CFHI has moved away from operating as a research granting organization as described in section 1.1. In response to an increasingly complex healthcare delivery environment, the needs of its programming partners, and given the creation of CIHR’s Institute for Health Services and Policy Research (IHSPR), it was time for the Foundation to expand and differentiate its expertise and services. As a result, CFHI’s current programming only minimally supports objectives (a) and (b) of the Endowment Grant. The focus is no longer on identifying research gaps and needs nor the funding of peer adjudicated research, but rather CFHI has shifted most of its emphasis to objective (c) the promotion of best practices by meeting the direct needs of health services organizations utilizing research evidence. An emphasis on programming aligned to objectives (a) and (b) was in place prior to CFHI’s shift in strategic priorities in 2009.

CFHI’s strategic priority of promoting policy dialogue is an area that is still somewhat aligned to objective (a) defining research priorities. In 2010, for example, CFHI hosted six roundtables across Canada on the aging population (Calgary, Winnipeg, Halifax, Toronto, Montreal and Ottawa). These roundtables brought together policy-makers, healthcare executives, researchers and the public to discuss how to address health system challenges related to Canada’s aging population. The results of
the discussions were synthesized into a report, *Better with Age: Health Systems Planning for the Aging Population*\(^5^4\).

As well, through the Healthcare FiT initiative, a program of research funded by Health Canada (as described previously in this report), CFHI commissioned, edited and produced 22 reports and a series of policy dialogues that addressed current economic challenges; including policy options related to cost drivers and efficiency, financing models, and innovation and transformation for healthcare in Canada. In July of 2011, these options were presented to an international audience gathered in Toronto for the annual International Health Economics Association (iHEA) conference.

Between 2011 to 2012, CFHI collaborated with the Canadian Nurses Association to produce and promote five policy papers on *Better Health, Better Care, and Better Value*. The papers informed the CNA’s National Expert Commission’s June 2012 nursing call to action and the need and recommendations to improve the way healthcare is funded, managed and delivered in Canada.

CFHI’s CEO Forums (2007-2013) brought policy-makers and experts together to share the challenges they face in their own institutions and to exchange views on health system priorities, knowledge gaps and evidence-based strategies for sustainable improvement. CFHI’s final CEO Forum, hosted in 2013, focused on promoting dialogue on implementation strategies for achieving efficiencies, improving disease management, and introducing new technologies to drive patient- and family-centred care.

Between 2012 and 2014, CFHI’s policy dialogue efforts transformed into more proactive meetings with MPs. With the advent of the Hill Days initiative, CFHI is facilitating meetings of its improvement teams with their local MPs - including teams from EXTRA, the NWT Collaboration, the TAIC and PEP.

With respect to objective (b), the funding of peer adjudicated research into the management, organization, and effectiveness of health services, two programs can be looked at directly for supporting evidence:

- **The Harkness Fellowships**: is a core program of The Commonwealth Fund’s International Program in Health Policy and Innovation. Chosen Harkness Fellows spend a year in the United States conducting policy-oriented research with leading health experts. Since 2001, CFHI has been a funding and delivery partner, by supporting the Harkness Fellowship tour. The Tour provides all Harkness Fellows with the opportunity to meet pan-Canadian, provincial and regional healthcare policy and delivery leaders, to gain a greater understanding of how healthcare in Canada is organized, financed, managed and delivered. Since 2012, CFHI has been financially supporting the Canadian Harkness Fellows. The expected deliverable of the fellowship is a peer-reviewed journal article or a policy report for health ministers and other high-level policy audiences. Many of the Fellows are Assistant or Associate Professors who have generated nine research publications, to date, in various peer reviewed journals, such as the *Canadian Medical Association Journal*, the *Journal of American Medical Association*, and the *British Medical Journal*.

Linking Evidence to Action on Decisions (LEAD): Implemented in 2009, the LEAD grants were designed to sustain evidence-based change within healthcare organizations. LEAD aimed to support the generation of new knowledge about factors that affect the successful implementation of evidence-informed management and policy decisions. The former CHSRF committed funding to three LEAD initiatives in 2009. This program is now completed.

CFHI’s current mandate and strategic directions best fit with the third objective of the Endowment Grant, objective (c). CFHI’s NWT Collaboration, AHC, PEP initiative and EXTRA program are good examples of how promotion of best practices in health services delivery is accomplished. The EXTRA program is fully described separately in section 6.2.3 in relation to the separate grant awarded for this program.

Across these programs, CFHI now brings its unique approach to supporting health teams as they assess their challenges, articulate clear improvement objectives, design solutions, mobilize change champions, implement their improvements and evaluate their outcomes. Real-time performance measurement is achieved through the requirement, across all programs, of improvement team progress and final reports. The improvement outcomes and lessons learned are increasingly being disseminated by CFHI through various channels, including the development of communication materials such as impact stories and OnCall webinars (on-line presentations on various healthcare improvement topics).

As will be demonstrated in Sections 7 (Question 5: Progress against CFHI’s Strategic Priorities) and 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report, many different aspects of CFHI’s programming have resulted in positive impacts to health services across a number of organizations. Results indicate that projects are successful and deductively demonstrate that gaps and needs, according to health system organizations, are starting to be addressed. Section 9 (Question 7: Extent of Spread), also validates this, where it is noted that up-take of innovative healthcare practices is occurring in programming and activities supported by CFHI.

The section below draws on the NWT Collaboration and the Atlantic Healthcare Collaboration as two examples of CFHI’s programming, that demonstrate the promotion of best practices in health services delivery. Both collaborations focus on improving regional chronic disease management and were informed by elements of Wagner’s Expanded Chronic Care Model. These initiatives are described in detail in the following sections.

6.2.1.1 Northwest Territories Collaboration

The NWT Collaboration was launched in September 2010 as part of an ongoing effort to reduce the risks and improve the management of chronic disease in the NWT, in partnership with the NWT Department of Health and Social Services (DHSS). Throughout the collaboration, CFHI offered four workshops and ongoing support to:

1. Develop and implement diabetes, renal disease and mental health improvement projects that maximize the use of resources and provide care based on evidence and informed practices;

2. Draw lessons from these projects to inform the development of an integrated CDM strategy; and

3. Strengthen capacity and self-reliance to measure performance and outcomes and to use evidence to inform sustainable and efficient health system decisions, processes and policy.\[56\]

The NWT Collaboration, included three pilot projects that focused on testing a variety of interventions (self-management, health system design, decision support, information systems) in the context of achieving improvements in diabetes, renal disease and mental health. The three initiatives have had an impact on healthcare coordination and efficiency.\[57\] For example, in the areas of professional and organizational practice, improvements included enhanced communication among regions and departments and broad support for new care protocols and clinical practice guidelines. Greater standardization of care, better information sharing, earlier identification and diagnosis of diseases, more timely and appropriate referrals, and better engagement with and management of patients are among the improvements noted in the delivery of NWT’s health services.\[58\]

The participants of the NWT Collaboration reported, through a workshop evaluation survey, increased capacity across a number of areas as elaborated in Exhibit 13 below. For example, most of the respondents to the evaluations for workshops 2 and 3 felt the workshops were effective to somewhat effective in supporting the participant's ability to initiate and implement evidence-based change management strategies. The pre-and post-workshop survey responses also indicate that respondents intended to share their workshop learnings (either across improvement projects and/or externally with individuals/other organizations).

Exhibit 13
NWT Collaboration Evaluation Results

<table>
<thead>
<tr>
<th>Effectiveness of the workshop in helping you to:</th>
<th>Workshop 2</th>
<th>Workshop 3</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify/adopt evidence to address &quot;the problem&quot;</td>
<td>3.5</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Access relevant docs &amp; literature/Using research</td>
<td>2.9</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td>Access relevant/timely support from faculty members</td>
<td>3.9</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Address challenges &amp; identify strategies to support change</td>
<td>3.9</td>
<td>4.0</td>
<td></td>
</tr>
</tbody>
</table>


\[57\] The NWT Collaboration impact example cited here is provided by CFHI, based on the results coded in NVivo.

6.2.1.2 Atlantic Healthcare Collaboration

In 2012, CFHI and CEOs of 17 Atlantic regional health authorities partnered to support ten improvement teams focused on improving chronic disease management in Atlantic Canada. CFHI worked with regional healthcare leaders and Deputy Ministers from across the Atlantic Provinces to identify common healthcare improvement priorities which the Collaboration would address. Throughout the Collaboration, CFHI has been offering ongoing support for the teams, including three inter-provincial workshops (with the fourth and final workshop held in June, 2014), localized coaching and a variety of online webinars.

Although a final evaluation of the AHC Collaboration is underway, to date the evidence from these activities and workshops demonstrates that CFHI continues to promote best practices of health services delivery and the communication of research outcomes, as per objective (c) of the Endowment Grant.

Workshop evaluation surveys were conducted at the conclusion of each of the three AHC workshops (See Exhibit 14 below).

Workshop I: Included three open-ended questions. The key take-away messages that were reported by respondents included the reassurances that participants had access to resources to support their initiatives, and success was being achieved in the sharing of ideas between individuals who normally would not have had this opportunity.

Workshop II and III: Most of the survey respondents agreed/strongly agreed that the workshops fulfilled their objectives and enhanced their knowledge of how to implement change, quality improvements, and collaboration.

Exhibit 14
AHC Evaluation Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-workshop webinar prepared me for the workshop.</td>
<td>5 (24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshop enhanced my understanding of theories of change.</td>
<td>4 (30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developed my understanding of the different questions that need to be answered to design and execute implementation plans.</td>
<td>3 (30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will be able to apply what I learned in this workshop to my workplace.</td>
<td>2 (30)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The materials presented enhanced my understanding of how to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- identify challenges and opportunities related to patient engagement in quality improvement</td>
<td>4 (27)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- encourage collaboration and involvement of front-line clinicians in quality improvement</td>
<td>4 (27)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- prepare for and make changes to my IP along the way</td>
<td>3 (27)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The networking helped me identify opportunities for cross-regional/provincial sharing and collaboration</td>
<td>3 (24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-Point Rating</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n)</td>
<td>27</td>
<td></td>
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</table>
Teams are currently implementing evidence-based solutions at their local sites while working together towards system level change across the Atlantic provinces.

6.2.2 Dissemination Activities

CFHI undertakes a myriad of activities related to the dissemination and promotion of best practices in health services delivery. Among these are:

- **OnCall Webinars**: CFHI’s On Call program is a live one-hour webinar series which regularly features policy-makers, decision makers and clinicians as they explore evidence and share their improvement results. Session topics vary throughout the year. Over the past five years there have been 39 webinars.

- **Mythbusters**: CFHI’s Mythbusters were a series of two-page articles that summarize the best available evidence to challenge widely held beliefs about issues in Canadian healthcare. They were a series of reader-friendly summaries addressing some of today’s major debates in Canadian health services management and policy. Since 2009, there have been a total of 16 articles with 2 to 6 written in a year.

- **Picking Up the Pace: How to accelerate change in primary healthcare (PuP)**: CFHI launched PuP to accelerate momentum for transforming primary healthcare in Canada. Five regional sub-committees gathered more than 120 effective innovations in primary care from across Canada, from which 47 were selected and grouped under 16 healthcare themes. The inaugural event, held November 1 and 2, 2010 in Montreal, engaged 278 senior policy-makers, healthcare managers and clinicians in a dialogue aimed at promoting innovative practices in primary healthcare. The 47 innovations were showcased at the conference by the organizations that had implemented them, enabling participants to learn from their experiences and consider how to adapt these innovations to the realities of their own regions and settings.

- **Pass it On!**: Pass it On! was a series of stories (2009-2010) about successful changes to the way healthcare is delivered. Each story details an initiative that was either motivated or enhanced by evidence – whether observed in a specific project or emerging from scientific literature – and has resulted in better health outcomes for patients. The profiles provide practical ideas that can be adapted and used to inspire change in organizations across Canada.

- **Healthcare Fit**: As discussed earlier, through the Healthcare Fit initiative, CFHI commissioned, edited and produced 22 reports and a series of stakeholder dialogues, to discuss policy options and implications. Subsequent reporting focused on four areas of health system design: physician remuneration; hospital funding; pharmaceutical pricing and reimbursement; and options to extend financing where gaps exist in public insurance coverage.

The results of some of these activities have been analysed in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report. The analysis identifies specific examples of effectiveness in promoting best practices. For example, positive feedback was received from PuP conference attendees where most respondents to the conference evaluation survey felt that the PuP conference was effective in engaging dialogue aimed at promoting innovating practices, addressing challenges with implementation, and spreading lessons learned in primary healthcare.

Section 9 (Question 7: Extent of Spread) of this report also complements this area by providing evidence of the spread of best practices. The key stakeholder interviews, performance measurement
data analysis, and the PBCA all indicate that the up-take of evidence-based best practices has occurred.

6.2.3 EXTRA Grant

The purpose and objectives of the EXTRA Grant are to:

a) Increase the skills of health service professionals, such as nurse and physician managers and health service executives, in how to use research to better manage the Canadian healthcare system; and

b) Encourage health service professionals, such as nurse and physician managers and health service executives, to collaborate in the management of healthcare delivery.

The EXTRA program has been evaluated a number of times, both internally by CFHI and externally by third parties. A Health Canada Audit performed in 2008 identified that CFHI was funding program activities as intended by the EXTRA Grant and other evaluations also concluded positively on the results of the EXTRA program.

Drawing from past EXTRA evaluations, it can been seen that CFHI’s curriculum was effective in advancing professional development and career pathways, increasing research use skills of health service professionals and in enhancing collaboration in the management of healthcare delivery.

Results reported in the 2009/10 evaluation of the EXTRA program, “Participation in the EXTRA/FORCES Program: Leveraging for Career Advancement” stated:

- Most fellows (88%) reported that their involvement with the EXTRA program had positively influenced their professional career.

- Many of the fellows reported that the EXTRA program was a positive factor in being offered a new position within their organization (32%), another organization (26%), and another province (3%). One fellow (1%) accepted a new position in another country.

- The majority of fellows not only implemented their own intervention project but also became involved with additional projects within their organization (68%). Nearly half of the fellows participated on other research projects (48%).

Also, responses to the EXTRA scoping survey and residency evaluations provide further evidence as to the influence of EXTRA on Fellows’ professional development and career pathways. For example, 11 of the 12 responding EXTRA Fellows indicated in the scoping survey that their experience with the EXTRA program positively altered their career trajectory. A majority of respondents to the residency evaluations reported that the curriculum provided through the EXTRA modules were relevant to their professional development (as shown below, 72% strongly agree and 26% moderately/slightly agree

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with an average rating of 4.7 where 5 means strongly agree and 1 means strongly disagree). The chart below presents the results by cohort (5-10), then by module (1-5).

Exhibit 15
EXTRA Residency Session

An EXTRA evaluation concluded in 2013, “Evaluation of Intervention Projects carried out in Quebec under the EXTRA Program”\(^{60}\) highlighted the impact of the EXTRA program on individual and organizational capacity and professional career paths. It states:

“By stressing the use of evidence, the EXTRA program has mobilized a tool that has proven to be powerful enough to help the organizations adopt a structured approach and a new matrix, enabling them to define problems that had existed for many years in new ways, to design off-the-beaten-track solutions and to generate innovations. This reliance on evidence and diverse sources of information within the intervention projects marked, for many organizations, the starting point of sustained effort to develop a culture of measurement and evidence-informed decision-making.

The testimonials obtained in this study (from fellows and from sponsors) all reflected the positive impact that the EXTRA program had on the fellows’ career paths. This impact was observed in three main ways: 1) The increased recognition that they enjoyed, both within their own organization and across the network; 2) Lessons learned in terms of evidence-informed decision-

making, leadership in resolving complex problems and awareness of research; and 3) Access to a broad network of resources and contact persons.

The 9 years of the EXTRA program that were covered by this study made it possible to make progress in developing a critical mass of champions aware of the importance of using evidence as decision-makers, clinical leaders and agents of change."

Finally, recent research published in Implementation Science included CFHI’s EXTRA program as a case study comparator in exploring the organizational impact of evidence-informed decision making training initiatives. This study found that: 61

“At EXTRA sites, the fellows seem to have influenced their colleagues [organizational attitudes and the language around the use of evidence in decision-making] during their program participation; this influence came about primarily through the intervention projects, which increased the fellows’ organizational visibility.

[The research] hypothesized that individual learning could spread within an organization through the interaction of tacit and explicit knowledge via four modes of knowledge conversion. [The research] found that the impact could primarily be felt in close circles; that is, in trainees’ immediate work environments. [The] results showed a change in the language used by colleagues and a new awareness and sensitivity about the use of evidence in decision making. The conversion of attitudes was found to be easier to achieve than the conversion of skills.”

As all the quantifiable PBCA case studies were EXTRA projects, the results from the PBCA show the encouragement of collaboration through the program. For example, in case management, there was collaboration across clinical specialties, between FPs and specialists, with nursing and LTC staff, and with patients and families. Full details of the PBCA cases can be found in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report.

Similar observations related to increasing skills of health service professionals in how to use research to better manage, and encourage collaboration in the management of healthcare delivery were also found in reviewing the performance measurement data supplied by CFHI for this evaluation, as illustrated below.

**Improvement Projects (IPs) – EXTRA Target Population:**

The target audience for the EXTRA IPs implemented over the period 2009-2013 (or the population which is the primary target of the intervention) included both healthcare providers and patients.

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When healthcare providers were the identified target population of these EXTRA IPs, 19 projects (43%) included a range of healthcare professionals, encouraging exchange and collaboration for improvement between healthcare professionals in the management of healthcare delivery.

**Exhibit 17**
**EXTRA IP – Targeted Healthcare Provider**

Most of the EXTRA IPs implemented over the evaluation time frame were located in Quebec, Ontario and British Columbia. However, there were projects implemented in the NWT, Saskatchewan, Manitoba, Nova Scotia and Newfoundland; showing that CFHI has reach across Canada and the potential for further future collaborations to be created between provinces and territories. A total of 11 EXTRA improvement projects will be implemented in 2014-15 (7 in Ontario, 1 in British Columbia, 1 in Quebec, 1 in Saskatchewan and 1 in Nova Scotia), with participation from forty-two fellows.
A total of 61 organizations participated in 73 EXTRA projects from 2009 to 2013. Most projects implemented over this timeframe involved one organization, however there were 3 projects involving collaboration between two organizations and 2 projects involving three organizations. Most organizations have participated in the implementation of at least one EXTRA project. A total of 16 organizations have been repeat users of EXTRA. The chart in Exhibit 19 lists organizations that have most often participated in EXTRA over the evaluation time frame.

**Exhibit 19**
EXTRA Projects – Repeat Users

<table>
<thead>
<tr>
<th>Organization</th>
<th># of EXTRA IPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre hospitalier de l’Université de Montréal</td>
<td>6</td>
</tr>
<tr>
<td>Winnipeg Regional Health Authority</td>
<td>5</td>
</tr>
<tr>
<td>Peel Public Health</td>
<td>4</td>
</tr>
<tr>
<td>St. Joseph’s Healthcare</td>
<td>3</td>
</tr>
<tr>
<td>Eastern Health</td>
<td>3</td>
</tr>
<tr>
<td>Centre hospitalier universitaire de Québec</td>
<td>3</td>
</tr>
</tbody>
</table>

**EXTRA Residency Modules – Evaluations**

One component of the EXTRA program includes away-from-home residency sessions where participants are presented with curriculum and coaching to assist them with their leadership development, and improvement project design and provided with networking opportunities (for more information please refer to Appendix C). In the evaluation of these residency sessions, almost all of the participants felt the curriculum was excellent, very good or good. When examining participants
within a particular cohort or module, a greater percentage of those in cohort 7, cohort 8 and module 1 rated the session(s) excellent. Module 1 had the lowest mean, which indicates participants gave this module the best assessment (Module 1 focuses on assessing and appraising research evidence). However, there is very little difference between the means shown below.

Exhibit 20
EXTRA Residency Session – Overall Assessment of the Curriculum

(Note the scale used in the presentation of the data in this chart is inverted as compared to previous charts presented, with 1 being positive and 5 being negative.)

In addition, there was an overwhelming agreement that the material presented in the EXTRA modules was relevant to the participant’s professional development (see Exhibit 15 above) and the material was applicable to their work setting.

6.3 Conclusion

The evaluation found that CFHI aligns with the Endowment Fund Grant objective of promoting best practices related to health services delivery. This is supported by the documentation of positive impacts to the delivery of health services across a number of organizations as a result of CFHI’s work. It was found that CFHI has, and does, undertake a number of activities related to the dissemination and promotion of best practices. Further, the evaluation results of the NWT and emerging findings from the AHC Collaboration indicate participant intent to share materials and findings with other individuals and/or organizations.
The comprehensive evaluation of the NWT Collaboration demonstrated increased capacity and enhanced linkages, with the results of the improvement pilots informing the development of an integrated chronic disease management strategy for the North. The performance measurement data analysis and the PBCA also indicate that the uptake of evidence-based best practices has occurred.

Given its evolution in priorities, CFHI does not place the same focus on the original research related objectives as identified in the Endowment Fund Grant. However, some effort is still directed to these objectives, as there is evidence of peer-adjudicated research and contributions to scientific literature found through results of the Harkness Fellowships and CFHI’s programming targeted towards creating dialogue between and among policymakers across Canada.

The PM data provide evidence that the EXTRA program increased skills of health service professionals and encouraged health service professionals to collaborate. The PM data also provide evidence that this is occurring across Canada with the distribution of EXTRA project leads in almost every province and from a number of different organizations. Third-party evaluations completed on the EXTRA program have also consistently reported positive impacts to the careers of EXTRA participants, including organizational visibility, how to use research evidence, and leadership skills.

No recommendations for improvement were identified with respect to CFHI’s fulfilment of the objectives of its comprehensive funding agreement.
7.0 Question 5: Progress Against CFHI’s Strategic Priorities

Question 5: How successful has CFHI been in making progress towards the achievement of its 2009-2013 strategic priorities, namely: engaging and supporting citizens; accelerating evidence-based change/improvements; and promoting policy dialogue?

Supporting Lines of Evidence

<table>
<thead>
<tr>
<th>Document Review</th>
<th>Key Stakeholder Interviews</th>
<th>PM Data</th>
<th>PBCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

The evaluation activities described in sections 3 (Question 1: Niche and Differentiation) and 4 (Question 2: Relevance to Healthcare Priorities) of this report addressed CFHI’s three key strategic priorities. This section focuses on assessing CFHI’s progress towards achieving its strategic priorities, by drawing on four lines of evidence: document review (e.g. analysis of the goals of CFHI’s overall programming, and the goals and impacts of individual initiatives and partnerships), an analysis of CFHI’s performance measurement data, findings from key stakeholder interviews, and PBCA case studies. The PBCA case studies are used here to provide evidence in regard to the extent to which the goals and outcomes of each “high impact” case correspond to CFHI’s strategic priorities.

7.1 Key Findings

- CFHI has been successful in making progress towards the achievement of its 2009-2013 strategic priorities.
- Some of the healthcare change/improvement is a result of engaging and supporting citizens.
- Documented results identify accelerating evidence-based change/improvement in numerous healthcare systems across Canada.
- Aspects of promoting policy dialogue are embedded in CFHI’s initiatives as an integrated program component.

7.2 Analysis and Supporting Evidence

CFHI’s three strategic priorities have been defined in the CHSRF Strategic Directions 2009 – 2013 document, which states that CHSRF and its partners will undertake programming as follows:
7.2.1 Strategic Priority #1: Engaging and Supporting Citizens

- Support healthcare organizations and providers to do a better job of engaging the public, including exploring ways to report effectively to the public about healthcare quality.
- Help healthcare providers access and apply information about the patient experience, particularly in primary healthcare.
- Connect citizens with information about what they should expect from their interactions with healthcare systems.
- Invest strategically in implementing and evaluating community-based initiatives designed to improve health.

7.2.2 Strategic Priority #2: Accelerating Evidence-Informed Change

- Fund research that provides a better understanding of the processes of change and learning within innovative Canadian health organizations, and that identifies lessons learned about overcoming major barriers and being catalysts for change.
- Provide a national resource centre to support local change initiatives, which will include linkages to expertise in operations, research, and evaluation.
- Support communities of practice that provide enhanced sharing of information among organizations and providers.
- Lead a series of organizational learning initiatives that bring organizations together to focus on some of the most persistent problems in Canadian healthcare, supported by research, evaluation expertise, and best practice.
- Continue to invest in building the capacity of senior managers to understand and apply research evidence in their work, by capitalizing on the success of the EXTRA program.

7.2.3 Strategic Priority #3: Promoting Policy Dialogue

- Provide formal and informal opportunities for sharing policy challenges and emerging strategies across Canada’s provincial health systems.
- Develop, encourage, support, and sustain new and non-traditional partnerships.
- Actively promote the social and economic benefits of investing in health services research and of its application in Canada.
- Work with the research community to ensure that credible, relevant, and helpful commentary is available to the news media on emerging health issues.

The analyses and supporting evidence that follows are presented in two main sections: findings that are specific to each strategic priority of CFHI; and, general findings. Some of the findings relate to more than one strategic priority; and as such, they have been compiled into the general findings section. Since four lines of evidence informed this evaluation question, some findings may overlap with those presented in other sections of this report.
7.3 Findings by Strategic Priority

7.3.1 Engaging and Supporting Citizens

In designing and delivering programming for this priority, CFHI operationalized the meaning of the word ‘citizen’ as patients and families in the Canadian healthcare context. The ‘citizens’ of healthcare improvement are effectively patients and their families. CFHI has programming that both directly and indirectly supports the priority area of engaging and supporting citizens.

Over the 2009-2014 timeframe, CFHI funded and supported a significant number of improvement projects across the country that engage patients and their families in designing, delivering and evaluating healthcare services, with the goal of improving the patient experience and outcomes. This strategic priority is embedded as an essential component in various collaboration initiatives, such as the NWT Collaboration and the AHC. It is also addressed in various education and training initiatives, such as webinars and e-workshops. Certain EXTRA improvement projects have also tackled this topic. Moreover, patient engagement is at the core of CFHI’s 17 PEP projects implemented to date, and the new pan-Canadian Partnering with Patients and Families for Quality Improvement Collaborative launched in 2014. The goal of this collaborative is to help healthcare organizations deliver care that is more patient- and family-centred, coordinated, safe and efficient.

An example of impacts achieved by one of the PEP projects is abridged below:62

“The Huron Perth Healthcare Alliance (HPHA) is comprised of four rural community hospitals in Southwestern Ontario. As with many health delivery organizations across the country involved in quality improvement, HPHA staff knew they needed to find a better way to engage patients and families. Up to that point, care planning had focused on health provider roles without considering the roles of patients and families. The adoption of a new interprofessional practice model that emphasized the importance of patient and family-centred care, made the need that much more timely.

HPHA leaders created Unit Action Councils (UACs) across the Alliance. Fifteen UACs were formed across the four hospital sites, with eight including patients and families and the remaining seven acting as a control. Patients and families were recruited as members of the eight UACs and were encouraged to participate in a workshop where they were trained for their roles. In addition to patients and families, all staff and leaders attended mandatory workshops on interprofessional care, as well as patient- and family-centred care.

To date, 49 improvement initiatives have been initiated. These include:

- Communication and education enhancements such as developing educational materials to support patient transitions from the critical care unit to surgery, improved signage to direct patients to surgical services and creating new signage for

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doors to patient rooms in the maternity unit including “sleeping moms”, “breast feeding” and “epidural in progress”.

- Relocation and redesign of physical spaces such as creating a communal dining room for rehab patients, improving wheelchair availability and redesigning and relocating a chemo unit, among others.

- Clinical improvements like implementing hourly patient rounding (bedside visits by a physician—or other health professional—to evaluate treatment, assess current course and document the patient’s progress or recuperation) and a falls prevention program. One clinical initiative resulted in fast-tracking the turnaround time for blood analysis within a chemotherapy unit from a previous average of 2 to 3 hours, to 15 to 20 minutes. The immediate benefit: cancer patients and their families no longer have to wait endless hours to hear from the hospital laboratory and can get the treatment they need sooner.

The value of working alongside patients and families emerged as one of the key outcomes; a significant difference in cooperation was seen in the intervention group that involved patients, compared the control group which did not involve patients and families. Unit Action Councils are now recognized part of the organizational structure and patient and family members will now be included on all UACs.

One member put it this way: “having former patients and family members on the Unit Action Council gives more strength to that council, because management and upper management have to listen. What we have now really works. We have all of the players at the table.”

Another example of CFHI’s programming aimed at engaging and supporting citizens can be drawn from surveys of CFHI’s OnCall webinars. In 2013, CFHI introduced a patient engagement series comprised of four episodes focusing on key elements of patient and family engagement. These sessions covered four key topics to support organizations to advance the practice of patient- and family-centred care:

- What is patient and family engagement and why do it?
- How do we plan for meaningful, effective and appropriate patient and family engagement?
- Who needs to be engaged? The staff, patient/family and leadership trilogy
- How do you measure patient and family engagement and capture its impact?

Throughout the course of the series, patients or family members attended some of the episodes. In a survey of the series, six individuals responded that they were a patient or family member. All six individuals felt the episode they attended was relevant.

In seasons 6 and 7 of the On-Call series, a few of the episodes covered topics to increase knowledge in the area of engaging and supporting citizens. The respondents to the surveys were in agreement that the webinar did increase their knowledge (See Exhibit 21). The average rating ranged between 1.8 and 2.2, where 1 equates to strongly agree and 5 equates to strongly disagree.
Almost half (49%) of the IPs funded and supported under the EXTRA program, the PEP initiative, and Collaborations programming over the evaluation timeframe included an explicit focus on enhancing patient- and family-centred care. Exhibit 26 depicts these results which can be found in the General Findings (Section 7.4). In fact, over a half (53%) of EXTRA improvement projects alone identified patients as their target population (See Exhibit 22).

Some examples of how EXTRA projects sought to engage and support citizens include:

- Inclusion of a patient focus group to validate recommendations and decisions of a physician advisory group and to ensure broad representation from the patient perspective.
- Inclusion of patients in healthcare redesign events, introduction of a new site specific patient binder, and the implementation of electronic distress screening.

In addition, the analysis of PM data further confirms that the improvement projects were mainly targeted towards patients and improving patient experience and outcomes (See Exhibit 22). This is in alignment with CFHI’s goal of targeting patient- and family-centred care, which links to the engaging and supporting citizens priority.

Exhibit 22
Improvement Projects – Target Population
Finally, approximately $1.8 million (or 20%) of the new partnerships signed between 2009 to 2011 support CFHI’s strategic priority of engaging and supporting citizens as shown in Exhibit 12 in Section 5 of this report. This demonstrates that CFHI has successfully leveraged partnerships over the past five years in alignment with this priority area.

All PBCA cases studied align with the strategic priority of engaging and supporting citizens through their consideration of patient-and family-centred care. Key relevant PBCA findings related to accelerating improvement in patient-and family-centred care are presented in Section 8, Question 6: Contribution to Acceleration of Healthcare Improvements, of this report.

### 7.3.2 Accelerating Evidence-Informed Change and Improvements

To support CFHI’s strategic priority of accelerating evidence-informed change and improvements in healthcare delivery, CFHI funded and supported a significant number of programs and initiatives over the 2009-2014 timeframe. Programs and initiatives such as EXTRA and the CEO Forum are a few examples of CFHI’s work which are directly linked to accelerating evidence-informed healthcare improvement. Increasingly and more recently, CFHI’s efforts to accelerate healthcare improvement have focused on building regional collaborations, capacity development, and spreading innovations in health systems. This is reflected in CFHI’s ongoing EXTRA program for healthcare improvement, and is further supported by 22 improvement projects that have been, or are being, implemented as part of CFHI’s collaborations programming. Other CFHI activities such as e-workshops further aim to enhance evidence-informed change and improvements in healthcare delivery.

The results of the PBCA discussed in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report also contribute to the evaluative evidence supporting CFHI’s progress toward achieving this strategic priority. Namely, the PBCA finds that CFHI’s programming generates significantly more benefits to Canada than the funding investments being made. In fact, the PBCA was the major source of evidence in evaluating the extent of CFHI’s contribution to the acceleration of healthcare improvements. All but one PBCA case investigated generated quantifiable improvements in healthcare and overall resulted in a benefit/cost ratio greater than one, demonstrating that healthcare change and improvement is occurring. Details of the changes and healthcare improvements achieved are provided in Section 8 for each PBCA case.

CFHI has also reported on a number of successful projects demonstrating change and improvements in a variety of healthcare services. To date, 35 impact stories have been developed that document the healthcare system challenge, how the project addressed the improvement challenge, and the resulting impacts. Examples of some of the reported impacts include:

- **British Columbia, Fraser Health Authority:** Within six months of implementation, the Implantable Cardiac Electrical Devices (ICED) program consolidated and standardized cardiac services across the health authority from four sites to two. Cardiac implants increased from 22 per week to 30 per week, the waitlist was reduced from 120 to 40 patients and there were no cancelled procedure days due to lack of staffing. New wait time targets were met 80 percent of the time, resulting in a majority of inpatients receiving implants within 48 hours. Additionally, staff and patient feedback on the new care model and service has been positive.

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These include 10 AHC projects, 9 TAIC projects, 3 NWT projects
Ontario, Princess Margaret Hospital and the University Health Network: A pilot project that implemented a new model of care at the hospital’s Gynaecologic Oncology Site Group generated impressive results. The time to make referrals for secondary care decreased from as many as 17 days to fewer than five days. The percentage of patients deemed to be seen on time for treatment increased from 28 to 70. In addition, the percentage of “on-time starts” of consultations and treatments increased from 80 to 94, while “on-time finishes” rose from 53 to 65.

Newfoundland, Eastern Health: Eastern Health developed and introduced a standardized referral tool and a centralized intake and triage model for its full suite of orthopaedic services. The new tool enables healthcare officials to establish, collect and share a comprehensive data set related to the demand for orthopaedic services. To supplement the tool, Eastern Health developed and implemented methods to reliably match supply and demand for these essential services. All referrals for patients who require assessment by orthopaedic specialists are now managed by one system. As a result of this advance, Eastern Health has reduced the median wait time for orthopaedic services for high-priority patients by 72 percent. The median wait time for all other patients who require these services dropped by 45 percent. Improving patient flow further, the new centralized access model has virtually eliminated duplicate referrals and has made wait times for individual physicians nearly the same.

Additional sources of evidence that corroborate CFHI’s progress in accelerating evidence-informed change and improvements is drawn from the analysis of performance measurement data. These include:

- **EXTRA Scoping Survey** - When asked if the EXTRA influenced their organization’s use of evidence, 10 out of 12 respondents indicated it did. In fact, three of these organizations are now using data to influence change or measure improvements.

- **Partnerships** - $1.5 million of the new partnerships signed between 2009 to 2011 support CFHI’s strategic priority of accelerating evidence-informed change and improvements as illustrated previously in Exhibit 12.

- **On-Call Surveys** – As an example, webinar episode 3, season 7 was entitled “Making data matter: Real-time measurement for healthcare improvement”. This webinar was designed to provide an introduction to fundamental concepts and applications of performance measurement for improvement. In the follow-up survey, participants were asked to rate whether or not they felt the episode increased their knowledge in using data or evidence. Overall, most of the respondents felt it did, but there were some individuals who were indifferent or felt it did not. This information has helped CFHI design an intermediate version of this webinar, being offered in the fall of 2014.
Additionally, CFHI’s OnCall Surveys have probed participants if they plan to apply what they have learned from the webinar in their workplace. A sample of surveys conducted in seasons 6 and 7 demonstrate that the majority of participants agreed or strongly agreed that they would be able to apply what they learned from this webinar in their workplace (see Exhibit 34 for an overview of the survey results).

7.3.3 Promoting Policy Dialogue

As outlined in Section 6 (Question 4: Fulfilment of Federal Funding Agreement Requirements) of this report, the results achieved against CFHI’s Endowment Grant show more targeted, organic, program design elements addressing gaps, needs and priorities in the field of healthcare improvement. Programming in this area aims to inform the development of healthcare policy in Canada by disseminating the best knowledge and evidence and by stimulating productive dialogue on some of the most pressing issues facing the healthcare sector. Some of CFHI’s programming activities in support of promoting policy dialogue include and/or have included: the annual leadership forums, the development and release of Canada’s first-ever Chartbook on healthcare quality, the Healthcare FIT initiative, Mythbusters, Aging Population Roundtables, PuP and other numerous policy dialogues and events.

One example is CFHI’s release of Canada’s first-ever Chartbook on the state of healthcare quality in Canada developed in partnership with CPSI and CIHI, and with support from Statistics Canada. The Chartbook assessed six key domains of quality: the effectiveness of the healthcare sector; access to healthcare services; the capacity of systems to deliver appropriate services; the safety of care delivered; the degree to which healthcare in Canada is patient-centred; and equity in healthcare outcomes and delivery. Based on a wide range of publicly reported data, the Chartbook compared healthcare performance between provinces and territories, and also showed how Canada fares in comparison to other countries. Within the first year of its publication in February of 2010, the Chartbook was downloaded 36,000 times from CFHI’s website. By providing a broad picture of comparative performance of Canada’s healthcare systems, the Chartbook created an opportunity for jurisdictions to learn from one another and to contemplate the steps required to improve quality across the country.

Another policy dialogue initiative is CFHI’s Picking Up the Pace: How to accelerate change in primary healthcare (PuP) conference, which showcased a number of innovations that reflected F/P/T policy.
Feedback from the event indicated that most conference survey respondents felt that PuP was “very effective” or “effective” in helping them share and discuss innovations and promising practices in primary healthcare and in helping them spread lessons learned in primary healthcare across Canadian jurisdictions (See Exhibit 24). 64

There were some slight differences in the mean ratings depending on respondent role. 65 Those in health services and government policy felt the conference was more effective at addressing challenges related to implementation of primary healthcare practices than those in research. Those in research felt that the conference was more effective at mobilizing long-term advancement in primary healthcare than those working in health services or government policy.

**Exhibit 24**

**PUP Survey Results – Effectiveness of the Conference**

[Table showing effectiveness of the conference across different roles]

Respondents to the conference survey felt the event was somewhat effective in making connections with various groups of attendees (average ratings on a 5-point scale ranged from 3.3 to 3.5 where 1 means very ineffective and 5 means very effective). The average ratings were slightly higher when it came to meeting individuals in roles similar to the respondent (see results for "Mean by Role" shown in Exhibit 25 below that are enclosed by a box).

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65 In Exhibit 24, the mean by role is highlighted in red when it is lower than the total mean and blue when it is higher than the total mean.
A follow-up evaluation 3-6 months after PuP (February-April, 2011), found that significant momentum for reforming primary healthcare across Canada was generated as a result of the conference. “Questions, however, remain about whether the momentum can be sustained, what form it will take, and how it will be supported”.66

Another example of a CFHI hosted event that promotes policy dialogue is the CEO Forum. The CEO Forum serves as an opportunity for health system leaders from across Canada to explore strategies for improving Canada’s healthcare system. The seventh annual CEO Forum held in Montreal in February, 2013 focused on achieving improvement and reducing costs in healthcare in Canada through the lens of patient-centred approaches. The forum examined implementation strategies for achieving operational efficiencies, improving disease management, and introducing new technologies for patient care. Some of the main takeaways described in the evaluation of the 2013 CEO Forum include:

- Participants appreciated the high calibre of speakers and acknowledged the value of showcasing key examples of innovation, transformation and patient engagement;
- Many appeared inspired to take action and drive improvement in their own organization; and
- Many emphasized the value of sharing innovations and improvements, and while appreciating the role of the Forum in promoting these projects, seemed to suggest that more could be done to continue to spread and disseminate leading practices across Canada.
- The performance measurement data in support of CFHI’s achievements in promoting policy dialogue included partnership data, as well as, data on numerous policy initiatives launched over the 2009-2014 time frame. Partnership data indicated that half of the funding (or $4.5 million) of new partnerships signed between 2009 to 2011 support CFHI’s strategic priority of promoting policy dialogue as illustrated in Exhibit 12 in Section 5 of this report.

66 An Evaluation of the Canadian Health Services Research Foundation’s (CHSRF) Picking up the Pace (A Social Network Analysis). Internal document.
Promoting policy dialogue is also embedded in CFHI’s approach to collaboration for healthcare improvement. Through its collaborations, CFHI brings together a range of stakeholders in the healthcare system—executives, administrators, managers, practitioners, government officials and patients and their families—to bear their unique knowledge, skills and experiences to resolve persistent challenges, perform vital functions and tackle common problems together.

Key stakeholder interviewees generally did not attend the CFHI policy forums. As a result, it is difficult to identify the perceived satisfaction and usefulness of these sessions. The two who did identify their participation verbally rated their satisfaction during the interview as “moderately satisfied” on a scale from 1=not at all satisfied to 5=extremely satisfied. One key stakeholder interviewee mentioned that policy analysis or the role of informing policy is deliberately not a strength of CFHI; however, this is not a role that CFHI currently addresses.

The PBCA cases were not focused on what one might term “Big P” policy dialogue; i.e. large-scale healthcare or prevention policy development applicable to multiple organizations, regions, diseases, and patient cohorts. However, this is reflective of the fact that, with the exception of one case, all PBCA cases were EXTRA projects, for which “Big P” is not a primary target. Rather, these projects had a strong focus on “small p” policy; i.e. developing dialogues and cooperation and collaboration among different healthcare providers associated with specific health issues (e.g. kidney dialysis), specific healthcare delivery innovations (e.g. telephone-based specialist access), evidence-based disinvestment/reinvestment opportunities for specific products and services, and, or specific patient cohorts (e.g. LTC residents). All of these projects had explicit involvement from regional healthcare ministries and officials, as well as local service providers.

### 7.4 General Findings

The PBCA provides one source of insight into CFHI’s achievement of its strategic priorities. All eight PBCA cases investigated addressed all three strategic priorities, particularly, accelerating evidence-informed improvements and changes. The PBCA cases also demonstrated engagement and support for citizens (particularly if ‘citizens’ is taken to mean patients and their families).

As will be seen in Section 8 (Question 6: Contribution to Acceleration of Healthcare Improvements) of this report, key stakeholder interviewees who participated in CFHI’s programming found it to be “very useful” in supporting their organizations achieve results in three areas: healthcare efficiency and patient value, patient- and family-centred care, and coordinated health care – all areas that overlap with CFHI’s strategic priorities.

From the performance data analysis, it can be concluded that a wide variety of programming activities span the three priorities areas. A brief description of each data source is included below; for more information please refer to Appendix C.

#### Improvement Projects

Since 2009, CFHI has funded 111 improvement projects under the EXTRA, PEP and Collaborations programming. In 2013, CFHI underwent an exercise to define, categorize and describe the Foundation’s improvement work and the health quality domains its IPs were addressing. Eight main healthcare quality improvement domains and 65 sub-domains were identified. The results of this
Coding exercise at the domain or activity level for the 111 IPs are shown in Exhibit 26. This exhibit shows that the majority of the IPs (80%) were related to improving healthcare efficiency, or had otherwise demonstrated outcomes in this domain. Almost 60% of these projects addressed coordination of care and about half included activities related to enhancing patient- and family-centred care. The IPs are/were coded against an average of four activities.

**Exhibit 26**

**Improvement Projects by Activity**

<table>
<thead>
<tr>
<th>Activity</th>
<th># of IPs</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>89</td>
<td>80%</td>
</tr>
<tr>
<td>Coordination of Care</td>
<td>66</td>
<td>59%</td>
</tr>
<tr>
<td>Effectiveness and Appropriateness</td>
<td>54</td>
<td>49%</td>
</tr>
<tr>
<td>Patient- and Family-Centred Care</td>
<td>54</td>
<td>49%</td>
</tr>
<tr>
<td>Population Health and Health Outcomes</td>
<td>37</td>
<td>33%</td>
</tr>
<tr>
<td>Safety</td>
<td>19</td>
<td>17%</td>
</tr>
<tr>
<td>Accessibility</td>
<td>18</td>
<td>16%</td>
</tr>
<tr>
<td>Equity</td>
<td>16</td>
<td>14%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

*Projects could and were coded against more than one type of activity by CFHI.

**Partnerships**

As illustrated previously in Exhibit 12 in Section 5, new partnership agreements signed from 2009 to 2011 were aimed at addressing one of the three strategic priorities of CFHI. In addition, and as stated previously, in 2009 and 2011 more than half of the funds in new partnership agreements targeted promoting policy dialogue, whereas in 2010 much of the funding (or 45%) targeted engaging and supporting citizens.
7.5 Conclusion

Multiple lines of evidence confirm that CFHI has made progress toward the achievement of its 2009-2013 strategic priorities. CFHI has implemented relevant programming that both directly and indirectly support its three strategic priority areas of engaging and supporting citizens, accelerating evidence-informed change, and promoting policy dialogue.

Numerous improvement projects and initiatives have supported CFHI’s priority of engaging and supporting citizens. Impacts have been documented and the relevancy of programming has been cited by patients and family members themselves. CFHI’s work in engaging and supporting citizens is evident in its PEP initiative which supports activities that directly engage patients and their families in decisions about service design and delivery or that increase patients’ capacity for engaging more meaningfully in such decision-making. In addition, IPs under other CFHI programming such as EXTRA and Collaborations are also addressing this priority area through the incorporation and consideration of various aspects of patient- and family-centred care, such as patient experience and patient engagement and involvement. The analysis of PM data further corroborates that CFHI’s improvement projects were mainly targeted toward patients and improving their experience of care and outcomes. This is in alignment with CFHI’s goal of enhancing patient- and family-centred care, which corresponds to the engaging and supporting citizens priority area.

The results of CFHI’s improvement projects are a major piece of evidence demonstrating that CFHI has made progress in accelerating evidence-informed change and improvement in the healthcare system. In fact, PBCA provides evidence that CFHI’s improvement projects have achieved quantifiable results in improving healthcare for Canadians. Specifically, PBCA finds that the benefits of CFHI’s IPs exceed the funding investment made. A sample of these benefits have been documented in impact stories made available by CFHI on its website.

Promoting policy dialogue is a priority embedded throughout CFHI’s programming. The analysis of PM data indicates success in sharing and discussing promising healthcare practices and in establishing connections among policy-makers, decision-makers and researchers.

No recommendations for improvement were identified with respect to CFHI’s progress against the achievement of its strategic priorities.
8.0 Question 6: Contribution to Acceleration of Healthcare Improvements

Question 6: To what extent is CFHI, in its new mandate and programming, positioned to contribute to the acceleration of healthcare improvement in Canada in the areas of: healthcare efficiency and patient value; patient-and family-centred care; and coordinated healthcare?

The analysis of evidence addressing this evaluation question is divided into two main sections: general findings, and findings of relevance to CFHI’s three goals: healthcare efficiency and patient value, patient- and family-centred care, and coordinated healthcare. A significant portion of the findings discussed in this section is derived from the PBCA. Aggregate PBCA findings are described in the “General Findings” section, and specific details on each PBCA case are provided in the “Findings by Healthcare Improvement Area” section below. In addition, an overview of the PBCA methodology and of the key analytic assumptions used for each PBCA case are provided in Appendix D for information purposes.

8.1 Key Findings

- CFHI has demonstrated quantifiable improvement results across its three goals of healthcare efficiency, patient- and family-centred care, and coordinated healthcare.

- CFHI programming generates significantly more benefits to Canada than the funding investments being made, suggesting that CFHI programming is “worth the money”.

- A positive Net Present Value of between $103 million and $635 million is shown, depending on assumptions, and a benefit/cost ratio of 1.60:1 to 5.70:1.

- CFHI’s programming is useful and is being used by organizations to support their ability to achieve improvement results in healthcare.
8.2 Analysis and Supporting Evidence

8.2.1 General Findings from PBCA

The PBCA shows that the six “high impact” cases that were quantified have generated a Net Present Value (NPV) of between $103 million and $635 million of net benefits over and above the entire CFHI programming costs from 2006 to 2013. CFHI programming has generated net benefits from six cases alone that are at least equal to double its entire programming costs, and up to about six times its entire programming costs, depending on the exact analytic assumptions made. A summary of the PBCA results is provided in Exhibit 27 below.

Exhibit 27
Summary PBCA Results

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Discount rate</strong></td>
<td>2% 5% 8%</td>
<td>2% 5% 8%</td>
</tr>
<tr>
<td><strong>Net benefits in &quot;high impact&quot; cases</strong></td>
<td>323 295 274</td>
<td>770 657 575</td>
</tr>
<tr>
<td>Program costs (2006-2013)</td>
<td>135 152 171</td>
<td>135 152 171</td>
</tr>
<tr>
<td><strong>Net Present Value</strong></td>
<td>188 143 103</td>
<td>635 505 404</td>
</tr>
<tr>
<td><strong>Benefit-Cost Ratio</strong></td>
<td>2.39 1.94 1.60</td>
<td>5.70 4.32 3.37</td>
</tr>
</tbody>
</table>

It is important to note that all figures in the above exhibit represent lower bounds – even the assumption used to model the upper bound benefits of the selected PBCA cases are very conservative in light of the following:

- Only six EXTRA cases (summarized in Appendix D) were able to be quantified. Those not quantified had benefits that were mainly qualitative in nature which were difficult to monetize, or had impacts that were still too early and/or uncertain for quantification;
- The EXTRA program only consumes about 19% of total CFHI programming costs. The value of other CFHI programming is not easily quantified in PBCA, although the costs of this programming (and total CFHI administrative costs) were nonetheless included in the cost stream; and

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67 In this case “net” means that the known costs of implementing the IPs (e.g., further validation or training in order to spread the innovation) were deducted from the gross benefits.
Even within the cases included in the PBCA, many important impacts were not able to be quantified through this evaluation, such as the economic implications of improvements to health and quality of life. As a result, virtually all of the impacts modelled were based on “primary” cost savings to the healthcare system (e.g. the cost savings from reduced numbers of unnecessary visits to the ED, rather than “secondary” or “knock-on” effects such as improved quality of life associated with reduced ED visits.68)

As a result, it can be concluded that CFHI programming generates significantly more benefits to Canada than was captured within the PBCA, and CFHI programming is “providing value for money”.

8.2.2 Sensitivity Analysis

Discount Rate. A variety of discount rates were used as a sensitivity analysis in this evaluation:

- 2%, reflecting recent Bank of Canada rates for real return bonds (i.e. exclusive of inflation);
- 5%, reflecting recent recommendations regarding discounting for healthcare innovations;69 and
- 8%, reflecting recent Treasury Board recommendations.70

The 5% rate was considered to be the most reasonable rate to employ for this analysis, as it does not unduly penalize innovative practices which only provide payoffs in the mid- to long-term, but is not so lax as to encourage investing only in projects which may take decades to bear fruit.

Effect of Removing the Highest Value Case. Case #3 (Evidence-informed Changes to Funded Health Services and Products), which addressed disinvestment and reinvestment decision-making, generated the highest net impacts of the projects included in the PBCA. If this case were removed from the analysis:

- The NPV would drop to between -$66 million and +$403 million (i.e. the program would “lose money” overall under lower bound benefit assumptions, but would still be worthwhile under upper bound benefit assumptions);
- The B/C ratio would drop to between 0.61:1 and 3.98:1, suggesting that the program would cover between 61% and 398% of its total costs through these five PBCA cases.

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68 For example, the value of reduced iatrogenic problems caused by the unnecessary ED visits, either from the perspective of what these downstream problems cost the healthcare system, or from the perspective of what avoiding them is worth to the patients and their families. Oftentimes, avoiding such problems is worth far more to patients and their families than any financial costs avoided within the healthcare system. In a full economic analysis, this would be termed “consumer surplus”. There are ways of estimating consumer surplus but they are quite time-consuming.

69 Canadian Coordinating Office for Health Technology Assessment Guidelines for economic evaluation of pharmaceuticals: Canada. 2nd ed. Ottawa: Canadian Coordinating Office for Health Technology Assessment (CCOHTA), 1997

Such a situation is normal in PBCA, as even the “high impact” cases display high heterogeneity in the distribution of their impacts. It does point out, however, three salient points:

- The potential direct healthcare cost savings of the PBCA cases are not terribly large, at least at present. Thus, CFHI’s future spread efforts are critical to ensure greater benefits are realized over time.

- The ability to identify, measure, and monetize “knock-on” health impacts would undoubtedly add significantly to the NPV and B/C ratio, even in the absence of innovations such as those represented by Case #3. However, this is not possible given the present state of the data.

- Moreover, even within Case #3, some data were not available that would allow the analyst to fully understand the “worth” of its impacts.

Information on how the PBCA cases align with the three improvement goals of the CFHI are presented in the “Findings by Healthcare Improvement Area” section below.

### 8.2.3 Other Supporting Evidence

CFHI’s contribution to accelerating healthcare improvement is also demonstrated through the results of key stakeholder interviews and the analysis of performance measurement data.

Key stakeholder interviewees found CFHI’s programming to be very useful in supporting their organization’s ability to achieve improvement results in healthcare. Across CFHI’s three key goals, the average rating given by interviewees was greater than four or “Very Useful” as identified in Exhibit 28.

#### Exhibit 28

**Key Stakeholder Interview Results – Utility of CFHI Programming**

Key stakeholder interviewees were asked:

> “How useful has CFHI’s programming been in supporting your organization in achieving results in:”

<table>
<thead>
<tr>
<th>Result Areas</th>
<th>Average Rating of Usefulness</th>
<th>η</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare efficiency and patient value</td>
<td>4.1</td>
<td>9</td>
</tr>
<tr>
<td>Patient- and family-centred care</td>
<td>4.3</td>
<td>6</td>
</tr>
<tr>
<td>Coordinated healthcare</td>
<td>4.2</td>
<td>7</td>
</tr>
</tbody>
</table>

*Rating scale was 1=Not at all useful, 2=Low usefulness, 3=Moderately useful, 4=Very useful, and 5=Extremely useful.*
Further, key stakeholder interviewees were asked about their satisfaction with CFHI programming. Of those key stakeholders who answered the question, the average level of satisfaction with CFHI’s programming was “Very Satisfied” as shown in Exhibit 29.

**Exhibit 29**

**Level of Key Stakeholder Interviewees’ Satisfaction with CFHI Programming**

<table>
<thead>
<tr>
<th>CFHI Programs</th>
<th>Average Level of Satisfaction</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTRA Training</td>
<td>4.4</td>
<td>9</td>
</tr>
<tr>
<td>Collaborations</td>
<td>4.0</td>
<td>5</td>
</tr>
<tr>
<td>CEO Forum/Picking Up the Pace</td>
<td>4.0</td>
<td>4</td>
</tr>
<tr>
<td>Patient Engagement Projects</td>
<td>5.0</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CFHI Programs</th>
<th>Average Level of Satisfaction</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Forums</td>
<td>3.7</td>
<td>3</td>
</tr>
<tr>
<td>Online webinar or workshop</td>
<td>3.8</td>
<td>3</td>
</tr>
</tbody>
</table>

*Rating scale was 1=Not at all satisfied, 2=Low satisfaction, 3=Moderately satisfied, 4=Very satisfied, and 5=Extremely satisfied.*

**Improvement Projects**

- CFHI staff reviewed project documents (such as progress reports, impact stories, synopsis, or final reports) and coded the impacts reported within those documents. The following summarizes the identified ‘impacts’ they found within those documents. It includes the projects that identified anticipated impacts in their scope of work even though those final results were not yet reported. Note that at this point in time, it may be too soon for the impact to be noticeable. As a result, these have been identified as “TBD” in Exhibit 30 below. The “Unknown” group consists of projects in which the information was not available in the documentation. In addition, five of the IPs are PBCA cases.

- Also of note, while the impact stories provided some post-project information, the majority of these documents reflect the status of the projects at the end of their active participation with CFHI’s programming. As found in the EXTRA evaluation of a sample of projects from Quebec by Carl Ardy Dubois and Marie Pascale Pompey, “the life cycles of the intervention projects and their impact on the organizations extend beyond the two years during which the fellows are enrolled in the EXTRA program, evidence of remarkably lasting results. In many cases, major achievements were made after the fellows had completed the program. The program enabled the organizations to initiate projects which subsequently evolved and served as catalysts for new initiatives.”

- This indicates that the impacts reported on through this evaluation in relation to the IPs are likely a lower-bound identification of all impacts being generated. There would be incremental improvement long after the cessation of CFHI’s involvement.
Exhibit 30 demonstrates that almost 70% of IP projects attained outcomes in at least one of the following four healthcare quality areas: efficiency, coordination, patient experience, and health outcomes by the end of their intervention period. Only one project did not have, or had not yet obtained, the efficiency impact that was intended.

Exhibit 30
IP Project Impacts

The four "Other" impacts in the above exhibit were improved timeliness of care, improved provider experience, decrease in wait times, and data collection.

The documentation for seven projects (three are PBCA cases) reported impacts on lowering or improving costs.

Analysing those projects which achieved impacts in the areas of efficiency, coordination, patient experience and/or health outcomes (i.e. the 69% of projects in which an impact was achieved in any of the four areas in Exhibit 30), over 60% of these projects achieved all their planned impacts. The following chart illustrates the number of projects achieving "all" planned outcomes. As an example, 92% of IPs achieved at least one of their planned outcomes. The percentage of IPs achieving all their planned outcomes decreases as the number of planned outcomes increases.
Seven IPs indicated there were some fiscal gains as a result of the project and six of these indicated that the gains resulted in the lowering of costs. Note in the coding for fiscal gains, CFHI included projects that explicitly measured or projected measurement for fiscal change. Any other gains in efficiency (such as time savings, improved process, decreased wait times) were not included.

Excluding the PBCA cases from this analysis, there is an indication of some fiscal gain in four projects with three of these indicating that the gains resulted in the lowering of costs.

EXTRA Scoping Surveys

Analysis of PM data indicates that participants in the EXTRA programming who completed a scoping survey felt some of the measurable organizational improvements (resulting from the EXTRA IPs) include better coordination of care and improved access, as shown in Exhibit 32.
On-Call Surveys

- Survey respondents felt the webinars were relevant and/or that the material presented was useful, supporting that CFHI programming is found to be useful by participants to support their ability to achieve improvement results in healthcare.

Exhibit 33
Webinar Survey Results – Relevance

- In seasons 3 and 4, most of the survey respondents felt that the information would not lead to measurable change in their organization. A different question was asked in seasons 6 and 7 that used a rating scale where survey respondents were asked to what extent they agreed with the statement “I will be able to apply what I learned from in this webinar to my workplace” - those in seasons 6 and 7 felt that they would be able to apply what they learned to their workplace, with more than 70% either agreeing or strongly agreeing to the statement.
Exhibit 34
Webinar Survey Results – Impact on Change

When considering the current position of the respondent, it is clear that more of those in Administration and Management from seasons 3 and 4 felt the information could lead to a measurable change. Also in seasons 6 and 7, more of those in management, clinical practice, and education/research felt they would be able to apply what they learned, further supporting that CFHI programming is found to be useful by participants in supporting their ability to achieve improvement results in healthcare.

Exhibit 35
Webinar Survey Results – Respondent Positions
8.3 Findings by Healthcare Improvement Area

8.3.1 Healthcare Efficiency and Patient Value

Other Supporting Evidence

Based on the analysis of performance data related to CFHI’s improvement projects, there is an indication of some fiscal gain in four projects (other than PBCA), with three of these indicating that the gains resulted in the lowering of costs leading to increased efficiency.

The EXTRA Scoping Survey demonstrated that 50% (or six projects including two PBCA projects) of respondents indicated they expect quantifiable savings, with two (one PBCA) of the respondents indicating their work resulted in the lowering of costs.

All the PBCA cases investigated address patient value, and most attempted to provide both better quality care and increased efficiency (including lower costs). Often the two go hand-in-hand, in that inefficiencies often result from poor diagnosis and/or poor analysis and/or poor coordination of treatment options. In turn, these result in unnecessary healthcare system actions, which are both costly and may cause iatrogenic problems. Specific impacts brought about by each PBCA case in the areas of efficiency and patient value are discussed below. More details on the dollar values associated with these can be found in Appendix D.

In the findings below, the case numbers refer to the evaluation team’s internal working documents. They have been retained and are referenced in this report to assist in the event that case study data are updated by CFHI in the future.

PBCA Case #1: The Challenges of Chronic Conditions: Integrated, Intensified Clinical Monitoring and Proactive Follow-Up of Stratified “Chronically Ill Population.” Chronic care is a growing problem due to the aging population. Two hundred patients considered “high users” of the system (hospital, ED) were selected for the small IP pilot project from the CSSS des Sommets (serving Québec’s Laurentian area, with about 60,000 population in Ste-Agathe and a total population of 559,700 in the Laurentian area). A relatively small portion of the population consumes a large portion of healthcare, ED time and hospitalization - about 3% of patients consume about 50% of these resources according to the IP report. The objective of the IP was to gain knowledge of the behaviour of high healthcare consuming patients, to better their quality of life, and reduce their need to access healthcare services (especially hospitalization and ED). To this end, the IP identified their “high-use” clients by name, based on the stratification of data available on: who was likely to need the most assistance; by geographic territory; and for both ED and hospital days, based on existing data from a clinical information system.

Patients in the “high-use” category were addressed in both a proactive and reactive manner. The proactive elements used community outreach through the community nursing community, contacting individuals who might benefit from early intervention. The IP estimated that 50% of such “high-user” individuals are already known to community nurses, but were not well followed within the system.

71 As per the 2011 Statistics Canada Census for the Laurentides Québec region.
and not in a good collaborative manner among the various relevant healthcare professionals, while the remaining 50% weren’t followed at all prior to the IP pilot project. The reactive component allowed ED and/or hospital staff to identify “high-use” patients through a ‘star’ placed against their names in the province’s clinical database, identifying them as potentially having a complex condition requiring special attention (e.g. previous infection with C. difficile). While it is often believed that patients might find such use of their clinical data objectionable, no difficulties were experienced by the IP - in fact, patients were “delighted” to be contacted for special attention.

The IP then worked to develop cooperative, collaborative case management for these ‘starred’ patients, empowering the family physicians (FPs), nurses, and the patients and their families to identify life goals, lifestyle changes, and the clinical practices likely to best benefit each individual patient. Many unnecessary visits to the ED and/or hospital were avoided, simply by working with patients to set realistic expectations and goals. For example, patients with heart conditions could be educated as to what types and frequencies of chest pains necessitated a hospital visit, and which did not. The IP closely tracked the clinical impacts for these “high-use” patients.

The results reported by the improvement project indicate that reductions were achieved in the key performance areas targeted by the project as illustrated in Exhibit 36.

**Exhibit 36**

**PBCA Case #1: IP Results for a Cohort of 200 Patients**

<table>
<thead>
<tr>
<th>Performance Indicators for 200 Patients</th>
<th>Pre-IP 2010-2011</th>
<th>Post-IP 2011-2012</th>
<th>Reduction in Number</th>
<th>Reduction in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of hospitalizations</td>
<td>208</td>
<td>127</td>
<td>81</td>
<td>39 %</td>
</tr>
<tr>
<td>Number of days in hospital</td>
<td>2275</td>
<td>1356</td>
<td>919</td>
<td>40 %</td>
</tr>
<tr>
<td>Number of visits to ED</td>
<td>1,250</td>
<td>526</td>
<td>724</td>
<td>58 %</td>
</tr>
<tr>
<td>Number of hours on stretcher</td>
<td>9,874</td>
<td>5,514</td>
<td>4,360</td>
<td>44 %</td>
</tr>
<tr>
<td>Number of CLSC community clinic interventions</td>
<td>2,088</td>
<td>1,883</td>
<td>205</td>
<td>10 %</td>
</tr>
</tbody>
</table>

Source: IP report

The modelling of this case in PBCA considered the impacts on reduced ED admission and reduced hospital length of stay.

**PBCA Case #2: Improving Home-based Dialysis Utilization in Manitoba and Northwestern Ontario** Home kidney (renal) dialysis, either as home haemodialysis (HHD) or as home peritoneal dialysis (HPD), is the provision of lifesaving renal replacement therapy (RRT) in one’s home in either a self or assisted-care manner. This can be an ideal form of RRT as some forms of home dialysis are associated with improved clinical outcomes and all are associated with relatively less use of human, fiscal, and hospital space resources compared to hospital-based RRT.
Manitoba currently does not use home dialysis modalities through its Manitoba Renal Program (MRP)\(^{72}\) as greatly as other Canadian jurisdictions, despite having the highest rate of renal disease in Canada. It was the goal of the IP to improve home-based dialysis use in Manitoba and Northwestern Ontario. This improvement in utilization was accomplished through the implementation of a number of specific interventions.\(^ {73}\) These interventions were broadly aimed at: (1) expanding the current mix of home dialysis service offerings (regimens) by the MRP to better meet the unique needs of individual renal patients, and (2) improving early identification of patients so that home-based modalities can be promoted to patients at the outset of the disease. A targeted home dialysis utilization rate of 30% of all dialysis patients (HHD and HPD combined) was established in the IP.

Over a four-year period, the MRP increased its home dialysis utilization rate by 4.26 percentage points (Oct. 2011 vs. Oct. 2007), and the penetration rate of both HHD and HPD has since continued to increase.

**Exhibit 37**

**PBCA Case #2: Summary of Available Quantified Information on Home Dialysis Use in the MRP**

<table>
<thead>
<tr>
<th>Core IP Data</th>
<th>October 2007</th>
<th>October 2008</th>
<th>October 2009</th>
<th>October 2010</th>
<th>October 2011</th>
<th>February 2012</th>
<th>IP Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of HHD Patients</td>
<td>6</td>
<td>9</td>
<td>21</td>
<td>24</td>
<td>37</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Number of HPD Patients</td>
<td>182</td>
<td>206</td>
<td>235</td>
<td>254</td>
<td>258</td>
<td>256</td>
<td>305</td>
</tr>
<tr>
<td>Total MB Dialysis Patients</td>
<td>1,014</td>
<td>1,084</td>
<td>1,161</td>
<td>1,235</td>
<td>1,294</td>
<td>1,318</td>
<td>n/a</td>
</tr>
<tr>
<td>(home + hospital-based)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Utilization Rate (HUR%)</td>
<td>18.54%</td>
<td>19.83%</td>
<td>22.05%</td>
<td>22.51%</td>
<td>22.80%</td>
<td>22.4%</td>
<td>30.0%</td>
</tr>
</tbody>
</table>


The most recent data (March, 2014) indicate that the overall home dialysis rate is about 22.7% (representing 49 HHD and 273 HPD patients out of a total of 1,420 Manitoba dialysis patients), indicating the upward trend appears reasonably stable.

The IP mainly addressed HHD, rather than HPD (which is a home-based technique to begin with), and the detailed data show that the HPD rates have not changed much over the course of the project, only

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\(^{72}\) Manitoba Renal Program (MRP) is structured as a provincial program under the Winnipeg Regional Health Authority (WRHA). The MRP grows on average by 4-7 net new patients per month or 45 to 85 net new patients per year, based on Dan Skwarchuk’s “2012 Canadian Conference on Physician Leadership Presentation”.

\(^{73}\) Evidence-informed interventions that were adopted for the project included the following: continued CKD promotion and staff and patient education; routine estimated glomerular filtration rate reporting; information systems development; augmentation of multidisciplinary staffing in nephrology clinics; development of community-based renal nurse specialists; increased access to PD specialty solutions; development of home-care assisted PD; development of dialysis capacity with chronic care beds; resurrection of the HHD program; and development of alternate HHD modalities such as daily and nocturnal regimens.
increasing perhaps 1% - 2%. They are currently at about 19% with a target of 21%. However, the IP leads believe that the main impact of the IP has been to maintain Manitoba’s relatively high usage of HPD compared to the Canadian national average of 16% - 18%. Although the IP focused on HHD, the IP lead believes there has been an important “knock-on” impact\(^\text{74}\) in maintaining high HPD rates. There has also been a knock-on impact in terms of improved renal disease prevention programs, and improved renal disease identification and earlier intervention.

Benefits from the increase in HHD rates and maintenance of HPD rates are likely to continue for at least another 10 years. This is an important factor, as first year costs for HHD are higher than in-clinic dialysis (mainly due to equipment purchase).\(^\text{75}\) There is also ongoing high home power use to operate the equipment, although there is some potential to improve cost savings through negotiation for lower home power use for HHD patients – this may be an opportunity for CFHI intervention.\(^\text{76}\)

The modelling of this case in PBCA considered the impacts on increased HHD rates and maintenance of HPD rates.

**Case #3: Evidence-informed Changes to Funded Health Services and Products.** The majority of healthcare services and technologies provided today received funding approval without robust (or in some cases, any) evidence to support their safety, effectiveness and overall value to patients, providers and the health system. Even where assessment has been done, new evidence can mean that funding decisions made in the past may no longer be valid. The question is: if most products and services aren’t supported by a comprehensive evidence base, what credible basis can there be for scaling back or disinvesting and where might one begin?

This EXTRA IP focused on the development and implementation of a reassessment framework within the MOHLTC. The framework, with defined triggers and criteria, helps flag which existing funded services and products may be of low value - or even harmful - to patients. The reassessment framework took less than one month to apply. The framework includes triggers that prompt reassessment - a service or product is a good candidate for reassessment if two or more of the following triggers are noted (with criteria where applicable):

- An evidence-based recommendation against use by an external body exists;
- It is nominated by a local clinical expert as being inappropriate;
- Safety concerns are noted in the literature;
- Regional and/or temporal variation suggest inappropriate use;

\(^{74}\) “Knock-on” is used to describe an impact not originally intended, or in an unintended area, but that is related to the original target outcome.


\(^{76}\) Note that home dialysis costs vary tremendously across provinces depending on how costs are reimbursed; e.g., through individual vendor contracts, through global funding to hospitals (some of which goes to renal care), etc. Cost differential also vary depending on how inclusive the cost models are; e.g., some cost models include human resource and/or capital costs, others do not; some separate out dialysis costs from general renal disease costs, others do not.
A change in use is likely to provide benefit to significant number of people in Ontario (the criterion is that change would have positive impact for least 1000 individuals per year);

- A change would result in cost saving (the criterion is that a change would result in cost savings of at least $1 million per year); or

- Data suggest significant a percentage of cases receive the nominated service/product inappropriately.

The IP established an Evidence Based Analysis Priorities Committee (EBAPC) in April 2013 at the ministry level to identify candidates for reassessment of existing products and services, or assessment of new products and services, and brought together information related to implementation. This was the ministry focal point for evidence-based analyses performed by external groups. The Committee work was supported by a process diagram, also developed as part of this IP project, which establishes a common understanding of the roles and responsibilities associated with reassessment. It is the formal, evidence-based process established that is considered by the IP lead to be the most important output of the project, even more than the early reassessments done, as the process will continue to be used in future. This work also led to the development of a definition for ‘appropriateness’ for the healthcare sector and was adopted by the Council of the Federation Health Innovation Working Group.

Five early candidates for reassessment were identified in November 2011 by the EXTRA Project Steering Committee as potential “quick wins”, without the formal reassessment framework having been finalized, and in advance of the creation of EBAPC. Two of the candidates (standard diagnostic tests ordered for vitamin B12 and serum ferritin) have already been acted on. The estimated impact, calculated by HQO, is that ~$39 million/year in unnecessary testing will be reduced, with those funds now directed to other higher value-added laboratory tests. A further $20 million related to two other disinvestment candidates are now under investigation. The fifth candidate was assessed as being of relatively low value, but having no evidence of harm and being infrequently employed; thus no change in use was recommended.

Some additional points on this case from the PBCA perspective include:

- The IP did not attempt to value the “worth” of tests eliminated. For example, would they have been kept if they only cost $5 million or $10 million? This value would normally be considered in an economic assessment of the incremental impact of the project (i.e. the “pre-worth” would be subtracted from the “post-worth” figure). The economic perspective is different from a purely financial one, in which only the dollar value of the “savings” is considered. However, the economic perspective is more useful here, as there are no true “savings” in that the institutions’ overall funding envelope remains the same.

- In a similar vein, there is no information on what the “saved” $39 million is spent on, or what this is “worth”. There is an opportunity for future EXTRA projects to consider “worth” issues such as this (i.e. to consider the “worth” of tests under review for disinvestment), making recommendations not only on what not to spend on, but what to do instead.

- As a result of the absence of information on re-investment, a conservative assumption was made that the benefits of this case would continue for 5 years. It is assumed that health authorities are frequently looking for opportunities like this and that the worth of tests discontinued would be $20 million, considering the threshold that would have to be reached in order to assume the benefit of discontinuing the tests in the first place.
The modelling of this case in PBCA considered the already established benefit of the disinvestment related to unnecessary testing.

**Case #5: Decreasing Functional Decline in Older Adults Admitted to Acute Care.** In Canada, over fifty percent of acute care hospital beds are currently occupied by seniors (persons aged 65 years and older) on any particular day. Moreover, one third of older persons admitted to acute care will be discharged at a significantly reduced level of functional ability and most will never recover to their previous level of independence.

This EXTRA IP project began as Vancouver Coastal Health’s (VCH) Transforming Seniors Care initiative at a regional level, and led to the development of Practice Statements under each of the five target areas for practice improvement. The EXTRA IP helped finalize the existing work, and focused on improving acute care for seniors through early intervention (based on best practices) to prevent disability during the hospital admission. The team developed an approach to care branded as “48/5”, meaning that within 48 hours of hospital admission, care plans will be developed to address the needs of older patients in five key areas including: delirium/cognition, medications, functional mobility, nutrition/hydration, and bladder/bowel. Through a “bundled” assessment of these five areas, within the first 48 hours of admission hospital staff could help prevent the complications of not addressing symptoms early on. For this purpose, inter-professional practice statements were developed as key strategies to ensure high quality care to seniors in hospital settings and for achieving the goals of the intervention.

As a person-centered approach, 48/5 includes strategies for home care and family caregivers to help prevent hospital admissions, where possible, and facilitate the transitions through acute care when hospital admission is necessary to minimize the risk of disability in older patients. The problem with the existing system was that, although the importance of these five areas was known, the areas were not typically assessed by hospital staff until near the end of a hospital stay. The 48/5 strategy thus has the potential to not only improve health outcomes for seniors but to also increase the system capacity to provide care for everyone.

Although 48/5 was based on best practices known within VCH and from the literature, the IP did not find significant improvement in the key performance indicators established to measure the impact in the five key clinical areas. However, at the time, the project was very early in its implementation. A small improvement was noted in two areas, delirium and medication use, but the IP lead noted that a number of factors other than 48/5 may have confounded these results, and he believes that they require further investigation to confirm the impacts. As a result, PBCA analysis was not possible for this case.

Since the model was first developed, 48/5 has been adopted by the BC Ministry of Health, which has established the Seniors Hospital Care Working Group (SHCWG) to refine the practice statements and develop an evaluation strategy for implementation across all acute care hospitals in BC. The Ministry renamed the 48/5 model to become 48/6 to reflect the addition of pain as a sixth area of care about two years ago, and 48/6 was picked up as a provincial strategy. The model has become a Clinical Care Management Strategy, which requires all health authorities in the province to implement it. There are five regional health authorities in BC. Now all BC Health Authorities are rolling the strategy out with full implementation expected by September 2014. Ontario’s Local Health Integrated Networks have also expressed interest in adopting the program.

No modelling for PBCA was done for this case.
**Case #7: Just in Time Delivery of Quality Results to Influence Decision Making.** The IP focused on the development of an elder-specific tool that can be used by point-of-care staff in LTC facilities to predict health status decline in residents. The tool known as PREVIEW-ED® (Practical Routine Elder Variants Indicate Early Warning for Emergency Department, or “the Tool”) assists staff in the identification of early health decline related to four conditions: pneumonia, urinary tract infections, dehydration, and congestive heart failure. These four conditions are identified as being potentially preventable or treatable in LTC facilities.

PREVIEW-ED® was piloted on 66 residents (50 percent of the total population) at a University Health Network (UHN) LTC facility (Lakeside Long-Term Care Centre) for a three month period (October 1 to December 31, 2012). A review of transfers of residents from the LTC facility identified that 33% of transfers were the result of the aforementioned four conditions.

The Tool was aimed at helping staff recognize and intervene when early signs and symptoms of decline are identified, preventing avoidable ED visits and hospital admissions. The assumption was that if the early identification of decline of health status resulted in actions that prevented further deterioration and resulting transfer to acute care, this would benefit the LTC residents’ quality of life, decrease risk, and might also result in health system cost savings.

The tool is paper-based and is used once a day by PSWs to log each resident’s normal routine, e.g. eating, socialization, etc. Any change in a resident’s normal routine would trigger the Tool. The Tool is based on a weighted scoring system. For example, on a normal day the Tool is at Level 0; any other levels require the PSW to notify registered staff. At Levels 1-3, registered staff can make a decision as to what to do (e.g., further monitor the resident), however at Levels greater than 3, the staff must notify a physician.

Over the course of the IP:

- There was a dramatic drop in both Tool-sensitive and non-Tool-sensitive ED transfers (58% and 46%, respectively), with attendant reductions in both healthcare costs and transfer costs. The IP lead believes the reduction in ED transfers associated with non-Tool-Sensitive conditions may be a “knock-on” effect on other conditions, to which the LTC staff and physicians became more sensitive. The costs savings of the Tool-related impacts were modelled in PBCA.

- Anecdotally, there were significant reductions in iatrogenic complications such as bedsores, dehydration, and delirium that often result from ED and/or hospital admission. This obviously benefits residents, but also the LTC staff.

The modelling of this case in PBCA considered the impacts on ER costs avoided (ER transfer and ER visit) and inpatient costs avoided.

**Case #8: Collaborative Management of Patients with Chronic, Complex Co-morbid Conditions.** A model of shared care that Providence Health Care (PHC) launched in June 2010, the Rapid Access to Consultative Expertise, or RACE model, is a telephone advice line where FPs can call one phone number and choose from a selection of 10 specialty services and be routed directly to the specialist’s cell phone or pager for real-time advice. RACE grew from what was originally a pilot project in 2008 between the PHC Department of Family Medicine and the Division of Cardiology. Funding was obtained from the joint BCMA/MoH Specialist Services Committee provided the financial support for
cardiologists’ time spent answering calls. With funding from the Shared Care Committee, PHC was able to expand the service and formally launch RACE with a broader range of specialists in June 2010.

RACE is targeted towards patients with complex chronic conditions. These individuals must often navigate multiple care interfaces and often experience fragmented care and poor outcomes. Improving chronic disease management presents opportunities for creative, collaborative and innovative solutions. In British Columbia, there are over 210,000 patients with a combination of 2 - 4 chronic conditions that were responsible for annual healthcare costs of over $2.6 billion, according to the IP final report. In BC, the IP report states that people with chronic diseases represent approximately 34% of the population, consuming 80% of pharma-care, Medical Services Plan, and acute care.

CDM belongs in the realm of primary care from a continuity of care and economic perspective, with episodic specialist treatment. As care systems become more complex, coordination of services across primary, secondary, and tertiary care has become fragmented. RACE attempts to improve coordination between primary care and specialist sectors as patients move from one area of the system, by providing FPs with fast and easy access to numerous specialists as one aspect of improving CDM, for instance through improved knowledge transfer.

The IP showed that RACE benefits include:

- Improved clinical judgment. RACE is a first step towards more integrated and collaborative CDM, by providing “just in time” specialist advice to FPs. As RACE is further implemented, additional benefits through improved continuity of collaborative care management will be investigated;
- Education for FPs, through the discussion with specialists. Part of the work is to improve the relationships between FPs and specialists, and FPs can apply for 0.25 CME credits per phone call as the service provides an educational opportunity;
- Reduced wait times for specialist advice for patients - often consultation is available during the FP visit;
- Reduced number of face-to-face consults with specialists;
- Reduced number of ED visits;
- Better medication management;
- Improvement in office efficiencies for family physicians; and
- Redundant travel and time off for patients is avoided.

Data from the IP show that these effects are significant, as demonstrated in Exhibit 38 below.
### Exhibit 38
**PBCA Case #8: Available Quantitative Information**

<table>
<thead>
<tr>
<th>Reported Period, by Source</th>
<th>Total # of calls</th>
<th>% of calls returned within 10 minutes</th>
<th>% of calls less than 15 minutes in length</th>
<th>% of calls less than 10 minutes in length</th>
<th>% of calls avoid a face-to-face consult with a specialist</th>
<th>% of calls that avoid an ED visit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>June 24, 2010 – June 10, 2011</strong> <em>(IP Preliminary Report)</em></td>
<td>420</td>
<td>77%</td>
<td>90%</td>
<td>70%</td>
<td>62% of 116 calls</td>
<td>32% of 116 calls</td>
</tr>
<tr>
<td><strong>January – December 2011</strong> <em>(IP Final report)</em></td>
<td>1,188</td>
<td>78%</td>
<td>80%</td>
<td>N/A</td>
<td>60% of 161 calls</td>
<td>33% of 150 calls</td>
</tr>
<tr>
<td><strong>September 2010 – December 2011</strong> <em>(IP Final Presentation)</em></td>
<td>2,031</td>
<td>77%</td>
<td>88%</td>
<td>70%</td>
<td>60% of 116 calls</td>
<td>33% of 116 calls</td>
</tr>
<tr>
<td><strong>June 2010 – June 2012</strong> <em>(Providence Health Care Poster)</em></td>
<td>&gt;7,000</td>
<td>80%</td>
<td>90%</td>
<td>70%</td>
<td>60% of 417 calls</td>
<td>37% of 384 calls</td>
</tr>
<tr>
<td><strong>November 2010 – October 2013</strong> <em>(RACE Talk to Me Presentation)</em></td>
<td>&gt;8,000</td>
<td>80%</td>
<td>90%</td>
<td>Not reported</td>
<td>60% (proportion not known)</td>
<td>32% (proportion not known)</td>
</tr>
</tbody>
</table>

Although RACE is streamlined for chronic, complex co-morbid conditions, some acute conditions are also appropriate for a RACE call. Five years from now, they would hope for seamless integrated provincial advice line where FPs can easily access specialists as a simple call to RACE.

New specialties are added based on the needs of family physicians, and compensation for specialists’ time is provided by the Specialist Services Committee. The cardiology RACE line is expanding to include specialists from Fraser Health Authority along with the VCH cardiologists. This service will provide support for over 2,500 FPs in the two health authorities. Work is currently underway to develop a provincial structure for telephone advice for the specialty areas in which the majority of specialists are clustered in the south-western area of BC, with child psychiatry and chronic pain RACE services providing centralized support to FPs across the province. Based on the RACE model, the Northern Health Authority has initiated a RACE-like telephone advice line for cardiology, and other areas of the Province are currently exploring what model of telephone advice would best fit the needs of their FPs.
The IP leads consider RACE to be scalable provincially and nationally. It is an example of developing good working relationships between FPs and specialists – encouraging each region to consult with them and develop a model that fits their needs. “This is a slow and thoughtful spread, rather than a one size fits all model”.

Exhibit 39
PBCA Case #8 - Spread of Specialty Areas Included in RACE

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Specialty Areas Included in RACE</td>
<td>5</td>
<td>10</td>
<td>14</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Source</td>
<td>IP Final Report</td>
<td>IP Final Report</td>
<td>Scoping Survey</td>
<td>RACE Talk to ME</td>
<td><a href="http://www.RACEconnect.ca">www.RACEconnect.ca</a> (List of Specialty areas)</td>
</tr>
</tbody>
</table>

Without the CFHI EXTRA funding, PHC would still have developed RACE, as it was up and running in June of 2010 with 5 services, whereas the EXTRA project began in August of 2012. However, EXTRA allowed an extensive literature review, mapped out a logic model, and identified experts available through the EXTRA faculty that could be consulted. In essence, EXTRA allowed a better understanding of other similar models in use, and assured PHC they were ahead of the current best practices (e.g. there were no other multi-speciality advice lines, only single-specialty telephone services). However, most attribution would be to the other partners.

The modelling of this case in PBCA considered the impacts on the number of face-to-face specialist visits avoided and the number of ER visits avoided.

**Case #9: Patients and Professionals Partner to Redesign Inpatient Care Systems: Improving Safety, Access and Work Environment.** The aim of this patient engagement project is to transform in-patient care processes to better respond to the real needs of patients and families. To achieve this, the IP had three key objectives: (1) to understand the in-patient experience “through the eyes of patients and families”; (2) to engage patients and families, along with staff, in reshaping care processes that respond to their real needs, thus improving safety, access and work environment; and (3) to increase registered nurse (RN) time in direct care by eliminating waste and duplication.

The redesign process used the tools and techniques provided in the program Transforming Care at the Bedside (TCAB) developed by IHI. TCAB engages frontline staff to proactively initiate and implement changes by training them in rapid cycle improvement processes (Plan, Do, Study, Act), and leadership and change management skills. The novelty of the IP is that it goes beyond the usual TCAB program by including patients in all aspects of the inpatient care redesign. TCAB was first launched in 2003 by the Robert Wood Johnson Foundation and the Institute for Healthcare Improvement (IHI) as a nationwide effort to improve healthcare delivery in the US. The PEP project provided the IP lead with the opportunity to introduce similar innovations at the MUHC.

To the IP lead’s knowledge, McGill University Health Centre (MUHC) is the only healthcare organization to directly engage patients as partners in inpatient care and process redesign based on TCAB. Five pilot units (in three of MUHC’s hospitals) volunteered to be implementation units. These...
included an internal medicine unit, a mental health unit, a neurosurgical unit, a gynecology-oncology unit and a multiple-service surgical unit.

A number of benefits were noted during the course of the PEP project including improvements to patient experience of care, delivery of care, the working environment and clinical efficiency. The following list provides some specific examples of the achieved improvements:

- Work sampling at six different intervals over the two years revealed an 8% increase in RN direct time in care and in time spent in value-added care activities. As well, time spent in non-value activities and those activities classified as “waste” decreased by 50% e.g. hunting for people, information, equipment or supplies, and waiting delays.

- Whiteboards, implemented on all units, significantly improved communication between professionals and patients and their families. All patients surveyed said it improved their quality of care and 100% of RNs said it improved communication with patient and families, while 80% stated it had a positive effect on work.

- Patient perception of the care experience improved as demonstrated by a 20-30% increase in the HCAHPS survey metric of “responsiveness of care providers”. A 10% improvement in “communication about medications and pain management” was also reported.

- The introduction of a ‘no interruption zone’ at medication carts at the neurosurgical unit led to a 50% reduction in interruptions during medication administration. Medication documentation errors also decreased by 60% following the introduction of a ‘quiet zone’ for medication administration and use of safety cross for measurement. 83% of staff felt these changes led to safer practice, and 100% described the changes as a positive learning experience.

- Increased staff engagement in understanding care “through the patient’s eyes”

- There were mixed results in terms of improvements in falls and injuries, pressure ulcers, and uncontrolled pain.

- Other improvements were reported in perceived teamwork, based on improved staff ratings of their work environments, and of the care they provide.

- Redesigned inter-professional admission process at the mental health unit, which led to a reduction in admission time (1 hour compared to 4.23 hours prior to the PEP project). This implies saving of roughly 0.7 FTEs.

- Redesigned chemotherapy treatment room shortened the wait to start chemotherapy by 57%.

- Equipment relocations made it easier for staff to locate needed equipment leading to a possible savings of 0.7 FTEs or more. An average of $3,000 in equipment was returned to the biomedical unit as well.

The evaluation team noted that these effects, while quantifiable, were likely to return only small dollar cost savings within PBCA. Further, several of the impacts would be quite challenging to model in dollar terms. As a result, this case was used to demonstrate qualitative impacts only.
**Case #14: Using the Resident Assessment Instrument/Minimum Data Set to Promote Continual Quality Improvement in Personal Care Homes (Nursing Homes) - The PIECES Model.**

This EXTRA improvement project used the Winnipeg Regional Health Authority’s (WRHA) Minimum Data Set (MDS) data to gain insights on the use of antipsychotic medication to treat residents for dementia. There are 39 Personal Care Homes (PCH) within the Winnipeg Regional Health Authority.

The IP leads discovered that those PCHs whose residents had markedly lower use of antipsychotic drugs rely on the Physical, Intellectual, Emotional, Capabilities, Environment, and Social (PIECES) care model for those with dementia. Working with senior staff members, the IP leads developed a variation of the PIECES model for the Middlechurch nursing home as a pilot facility, and organized training workshops for staff at the home. In addition to educating frontline staff, the intervention required the facility management to be educated in the interpretation of MDS reports and encouraged decision making based on these reports to complement the clinical work of the staff. Further, in an attempt to reinforce the face-to-face education, an online education module was developed and launched at the pilot facility.

The reduction in anti-psychotic medication use at Middlechurch home was a 10 percentage point reduction in usage of antipsychotic medications among all residents over a 6-month intervention phase period (2011 Q1-2011Q2). At the start of the project, 40% (79/197) of all residents at Middlechurch were taking antipsychotic medication. Six months later, only 30% of residents were prescribed antipsychotics.

**Exhibit 40**

**PBCA Case #14 - Pilot Facility-Level Anti-Psychotic Prescribing Rate**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Antipsychotics (% of residents)</td>
<td>38.9%</td>
<td>39.4%</td>
<td>39.7%</td>
<td>43.2%</td>
<td>39.9%</td>
<td>33.5%</td>
<td>30.2%</td>
<td>27.8%</td>
</tr>
</tbody>
</table>

*Source: Scoping Survey, Quarterly MDS data.*

The IP team also followed a discrete cohort of 70 residents (who were on antipsychotic medications at the beginning of the project) during the project intervention phase. In terms of incidence, of the 70 residents on antipsychotic medications (who remained in the population over the 6 month project intervention) 19 (27%) were taken off of the medication. Both quantitative and qualitative impacts were demonstrated:

- A recent cost analysis has shown that a reduction of antipsychotic usage in a PCH from 30% to 10% saves the facility and the region approximately $100,000. Potentially, the analysis suggested this could result in regional savings of over $1 million annually. This is modeled in more detail in Appendix D, but the data are based on analysis of actual pre/post costs of antipsychotics within Middlechurch.
- Enhanced quality of care by promoting more interaction with residents;
- Because reactive behaviors are now being managed in a more holistic way, many outbursts can now be prevented or mitigated, so staff time in the end is less intensive;
• Improved health outcomes for residents weaned off the medication through the elimination of the adverse side-effects of anti-psychotics, which include:\(^77\)
  - Improved resident safety: decreased risk of falls and/or fall-related injuries among those residents taken off the antipsychotic medication;
  - Decreased chance of death, stroke, and heart attack related to use of antipsychotics;
  - Additional adverse effects of antipsychotics include cardiovascular and metabolic effects, extrapyramidal symptoms, cognitive worsening, and infections;
  - Ability to participate more fully in activities of daily living due to the absence of the sedating effect of the drugs; and
  - Incidence of challenging behaviours remained unchanged (there was no increase in behavioural symptoms or any increase in the use of physical restraints among this group of residents, as demonstrated using data routinely collected in the facility.

• Improved teamwork and decision making that is more inclusive of a multidisciplinary team. During the project, all members of the clinical unit, from nurses and healthcare aides to housekeepers and recreation staff were included in “huddle” discussions around implementation of resident care plans designed to reduce the antipsychotic usage. Since the intervention phase ended, these teams continue to come together to problem solve complex care issues;

• Growing leaders through staff empowerment; and

• Evidence-based decision-making through the use of these data by staff as an integral component to clinical and operational decision making.

One of the IP leads is now involved in rolling out the innovation, working with three additional care facilities, as well as assisting with start-up province-wide projects in Alberta and BC. Within Manitoba, it appears that the initiative will only be rolled out within the Winnipeg Regional Health Authority, but it is anticipated that roughly three-quarters of the 39 sites will be engaged within about four years.

The modelling of this case in PBCA considered the impacts in the reduction of anti-psychotic medication use.

### 8.3.2 Patient- and Family-Centred Care

All PBCA cases addressed CFHI’s goal of enhancing patient- and family-centred care. The major impacts achieved in relation to this goal by the PBCA cases analysed include the following:

\(^77\) There are unfortunately no quantitative data yet available on these knock-on effects.
Case #1: Stratifying “high-users” of healthcare services allows better diagnosis/treatment, better quality of life, and less use of ED and hospital time. Early identification of “high-users” (e.g. patients with complex chronic co-morbidities) allows both proactive engagement with patients and better reactive engagement during treatment. This has been of great satisfaction to the patients identified through the stratification.

Case #2: Increased use of two modes of home haemodialysis (HHD\textsuperscript{76}) and maintenance of high rates of home peritoneal dialysis (HPD) improves patients’ quality of life, and lowers both patient and healthcare costs. It is noted that patient engagement into treatment plan is not a primary goal of this initiative. However, extensive patient and family training is involved, and existing health evidence indicates that home dialysis modes increase patient’s quality of life and less intrusion into “normal life” (e.g. nocturnal dialysis).

Case #3: Developed formal criteria to identify existing healthcare products or services that are not providing sufficient patient value or that may even be harmful, and a process for agreeing whether to reduce and/or discontinue use of these products and services. The project indirectly supports the goal of patient- and family-centred care in that it should result in more appropriate care and better clinical outcomes.

Case #5: This project had a high focus on developing integrated case management plans for the elderly, very quickly, such that within 48 hours of hospital admission, care plans are developed in 5 key clinical areas. Early assessment is intended to result in reduced rates of premature admission to LTC facilities, and better quality of life for both patients and their families.

Case #7: Routine daily assessment of LTC residents using the PREVIEW-ED Tool allows for timely identification of health decline symptoms in residents. This involves more detailed and responsive interactions with residents and their families, who can have input into the PREVIEW-ED tool. Significant improvements in quality of life have anecdotally resulted for residents, their families, and LTC staff. For example, there are fewer iatrogenic problems associated with unnecessary ED and/or hospital admissions.

Case #8: The RACE telephone line provides quick and easy access to specialist advice. This initiative is very responsive to patients’ and families’ need for expert advice. In addition, FPs gain significant expertise to enhance patient care (to the point that the IP leads believe RACE usage may eventually stabilize or even decline over time, simply because FPs need specialist advice less often). For patients, the initiative also significantly reduced travel time and disruptions to “normal life” associated with visits to specialists and/or ED. Although it is streamlined for chronic, complex conditions, RACE can also be applied to some acute needs.

Case #14: The PIECES model has proven to be effective in reducing A/P use among LTC residents suffering from dementia. This project focused on improving the patient and family experience of care and improving the quality of life of residents. The PIECES “huddle” method uses input from all LTC staff. The method also deliberately promotes more

\textsuperscript{76} Both conventional HHD and frequent HHD.
interaction with LTC residents and their families through promotion of non-pharmacological approaches to care.

EXTRA Scoping Survey

- 50% (or 6) respondents indicated measurable health outcomes (patient and/or population) resulting from their IP, such as decreased patient fall rates, wait time reductions, and more standardized care.

- Enhanced patient safety or satisfaction was mentioned as a measurable improvement by two EXTRA projects leads as shown previously in Exhibit 32.

### 8.3.3 Coordinated Healthcare

All but one PBCA case specifically encouraged and fostered coordinated healthcare as an essential component of the project’s success. Improvements in coordination of care were achieved through collaboration between:

- Different clinical disciplines – e.g. Case #5, Case #1;
- FPs and specialists – e.g. Case #8;
- LTC staff at all levels, from uncertified Personal Support Workers to facility clinical directors – e.g. Case #7;
- Medical personnel and families – e.g. Case #5, Case #7, and Case #14;
- Clinical practitioners, institution staff, and health authorities – e.g., Case #3.

*Case #2 was less focused on this area, while Case #5 specifically noted some difficulties with coordination and collaboration among different clinical disciplines during the course of the implementation, but it is unknown why this case stood out, and the current situation may have improved.*

EXTRA Scoping Survey

Analysing performance data from the EXTRA scoping surveys, coordinated healthcare was mentioned as a measurable quality improvement achieved by 5 of 11 responding extra IP leads (or 45%) as illustrated in Exhibit 41.
8.4 Conclusion

The PBCA was the major source of evidence in addressing the extent of CFHI’s contribution to the acceleration of healthcare improvements. All but one PBCA case generated quantifiable impacts that resulted in a benefit/cost ratio greater than one. In fact, the upper bound estimate reveals impacts to the range of six times CFHI’s entire programming costs. The non-quantified cases also generated many important impacts to the healthcare system and to the quality of life of patients. This was true across all of CFHI’s intended impact areas of healthcare efficiency and patient value, patient- and family-centred care, and coordinated healthcare.

In addition, key stakeholder interviewees conveyed satisfaction with CFHI’s programming and considered it very useful in supporting their respective organization’s in achieving results in healthcare efficiency and patient value, patient- and family-centred care, and coordinated healthcare. Other PM data also provide evidence on the usefulness of materials and information provided by CFHI to support healthcare improvement, particularly for those in healthcare administration, management and clinical practice positions.

The PM data identified that IPs have been successful in achieving their planned impacts and can identify measurable organizational or healthcare system improvements, including increased efficiencies, better coordination, enhanced patient experience and/or health outcomes and improved costs. Other evaluative data indicate that the reported impacts are likely a lower-bound identification of the full impacts being generated by the IPs. There would be incremental improvement long after the cessation of CFHI’s involvement. No recommendations for improvement were identified with respect to CFHI’s contribution to the acceleration of healthcare improvements.
9.0 Question 7: Extent of Spread

<table>
<thead>
<tr>
<th>Supporting Lines of Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Review</td>
</tr>
<tr>
<td>✓</td>
</tr>
</tbody>
</table>

The analysis presented in this section reviews CFHI’s activities and initiatives related to increasing and spreading the up-take of healthcare improvement practices. A review of new and existing programming is presented along with supporting evidence drawn from PM data, key stakeholder interviews, and PBCA cases. The extent of spread is reviewed and the consistency among these lines of evidence is also elaborated.

The term "spread" in the evaluation is defined as the additional up-take or implementation of quality improvement initiatives (beyond the pilot site) that have been shown to be successful at the pilot site and through previous health research evidence. The assessment of spread is based on this definition.

9.1 Key Findings

- Targeted activities related to spreading and supporting the up-take of innovative healthcare practices have recently been launched by CFHI.
- The further up-take of innovative healthcare practices appears to be occurring mainly at the organizational level.
- PBCA cases have had mixed success in spreading best practice results, although it is acknowledged that spread was not the primary intent of the EXTRA projects (all but one PBCA case is an EXTRA project).
- There is potential for broader application of spread activities by CFHI.

9.2 Analysis and Supporting Evidence

CFHI has recently launched a new initiative targeted at increasing the implementation of known, promising healthcare practices that improve quality of patient care. The Spreading Healthcare Innovations Initiative was announced in January of 2014 with two initial collaborative opportunities:
Reducing Antipsychotic Medication Use in Long-Term Care: CFHI is supporting 15 multidisciplinary teams from healthcare organizations in seven provinces in a collaborative aimed at reducing inappropriate antipsychotic medication use in long-term care for patients diagnosed with dementia. The 15 Antipsychotic Collaboration teams are specifically adapting and implementing an improvement initiative previously supported through CFHI within their own respective organizations. Through the Collaborative, CFHI is providing teams with funding, coaching and mentoring, educational materials and tools, forums for sharing with other innovators and other support. This initiative was launched on March 7, 2014.

INSPIRED Approach to COPD: Improving Care and Creating Value: CFHI, in partnership with Boehringer Ingelheim (Canada) Ltd., will help healthcare providers improve care for patients living with COPD while managing costs. CFHI will provide approximately 15 healthcare organizations with funding, coaching, educational materials and tools, and other support in a quality improvement collaborative aimed at improving care for patients with COPD and increasing multidisciplinary teams to work together. This 12-month quality improvement collaborative was launched on April 15, 2014.

These Collaboratives are designed to help teams from healthcare delivery organizations and ministries advance innovations that make care more patient- and family-centred, better coordinated, and more efficient. Successful recipients will receive funding as well as coaching from CFHI faculty, who are experienced leaders in quality and performance improvement, and staff to help implement and evaluate the innovations. An important aspect of the Collaboratives is that CFHI is supporting multidisciplinary healthcare improvement teams, with support that goes beyond funding to help teams implement best practices through access to a faculty of Canadian and international experts who provide hands on coaching. Responses to these two new spread initiatives received by CFHI as of the beginning of May of 2014 are summarized in Exhibit 42 below.

**Exhibit 42**
Spread Initiatives – Initial Responses as of May 2014

<table>
<thead>
<tr>
<th></th>
<th>Reducing Antipsychotic Medication Use in Long-Term Care</th>
<th>INSPIRED Approach to COPD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative opportunities available</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Download of applications from CFHI website</td>
<td>54</td>
<td>50</td>
</tr>
<tr>
<td>Participants registered for CFHI information calls related to opportunity</td>
<td>73</td>
<td>44</td>
</tr>
<tr>
<td>Submission of applications</td>
<td>15</td>
<td>27</td>
</tr>
</tbody>
</table>

*All figures as provided to the evaluation by CFHI*

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70 This initiative is one of the PBCA cases studied during this evaluation.

The above two *Spreading Healthcare Innovations Initiatives* have drawn more interest than there are opportunities available, which is a positive indicator of the validity of the program concept.

In analysing the PM data provided by CFHI, about half of the improvement projects reported that some type of further spread is taking place. As identified in Exhibit 43, most of the reported spread occurred within the implementing project’s organization.\(^{81}\) However, nine IPs reported more than one type of “spread”. It should also be noted that it was too early at this time to determine the spread for 20 of the Collaboration IPs.

**Exhibit 43**

**Improvement Projects\(^ {82}\) – Type of Spread**

<table>
<thead>
<tr>
<th>Type of Spread</th>
<th>% (n) Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>91 51%</td>
</tr>
<tr>
<td>Organizational</td>
<td>23 21%</td>
</tr>
<tr>
<td>Provincial or Territorial</td>
<td>8 7%</td>
</tr>
<tr>
<td>Regional</td>
<td>6 5%</td>
</tr>
<tr>
<td>Across Care Levels</td>
<td>4 4%</td>
</tr>
<tr>
<td>Interprofessional</td>
<td>2 2%</td>
</tr>
<tr>
<td>International</td>
<td>1 1%</td>
</tr>
<tr>
<td>National</td>
<td>1 1%</td>
</tr>
<tr>
<td>None indicated</td>
<td>57 51%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>91 51%</strong></td>
</tr>
</tbody>
</table>

Examples of how improvement projects are being spread were also documented in the Evaluation of Intervention Projects carried out in Quebec under the EXTRA program\(^ {83}\). An excerpt from that report follows:

> “. . . project outputs were adopted by the IPCDC to develop a micro-program on population responsibility and management training modules for workers on the job. The

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\(^{81}\) Spread within a project organization means that the application of the IPs results has been implemented by other departments internal to the organization.

\(^{82}\) Results from four PBCA projects are included in these figures.

process and the tools that were tried out in this project were also turned to good account for various other purposes: in-house training for the public health department team at the regional agency; short training projects for the professionals in the local public health departments in the CSSSs; and the development of a competency framework for the adoption of population responsibility in the CSSSs. In the second case (Case 1), the project laid the groundwork which was then put to use and invested in two major initiatives: the Transforming care at the bedside project, with the support of the MSSS and various foundations; and a patient engagement project . . . in the third case (Case 12), the project made it possible to set up a clinical governance structure which served as the basis for a vast process improvement project (clinical and administrative processes) throughout the organization . . .”

This organizational up-take is consistent with other lines of evidence that informed this evaluation. Three key stakeholder interviewees were aware of the spread or up-take of CFHI improvement initiatives. When a key stakeholder interviewee could identify the subsequent application of a quality improvement initiative, it was within their own organization or region.

Four PBCA cases (Case #1, Case #3, Case #5 and Case #8) are actively attempting to spread their healthcare improvement innovations, though it is difficult to assess how quickly up-take will occur. Case #2 is likely at maximum spread, at least in Manitoba, and has been identified for CFHI’s Spreading Healthcare Innovations Initiative launched in March of 2014. Case #7 is temporarily stalled but is anticipated to begin another round of active dissemination and promotion in the near future. Case #14 is already part of CFHI’s Spreading Healthcare Innovations Initiative, with 15 teams engaged in spreading the EXTRA innovation.

Some specific challenges to effective spread identified through the PBCA cases include:

- Organizational and staff changes (turnover) within the adopting “spread” organization (or even within the original institution).
- Over-reliance on one individual to conduct spread and/or training.
- Some projects generate quantifiable and direct impacts for other organizations, not the organization implementing the change. For example, not sending LTC residents to the ED reduces ED costs for the hospital, but not LTC costs in the nursing home, even though there may be other impacts not directly related to costs, such as improved wellbeing/quality of life of LTC residents and staff satisfaction.
- There is a lack of funding in LTC facilities to absorb training costs to implement the findings of IPs. This is also likely relatively easily addressed within CFHI’s Spreading Healthcare Innovations Initiative.
- There were some issues with data quality, in some cases suggesting that a Phase II for some EXTRA projects is worthy of consideration in order to bolster the evidence base, before undertaking spread initiatives. Specific examples are:
  - There is an apparent opportunity for Case #3 to reinforce the quality of data on impact measurement (e.g. related to the pre/post comparison of “worth” of the disinvestments and reinvestments made), but also, and more importantly, on the nature of future impacts, by not only considering which products or services not to invest in, but also which products or services to support with the “saved” funding.
- There is the unusual situation in Case #5 where the IP lead is not convinced by the project data, but the BC Ministry of Health is not only rolling the project out province-wide, but is doing so for even more clinical conditions than the project addressed (the initiative is now “48/6” as opposed to project’s “48/5”, as a sixth condition has been added). This is not to say that the IP innovation did not add value, only that the data appear to be lacking to convincingly demonstrate so.

- There is strong interest in Case #7 in many quarters, notwithstanding that the data are based on very few LTC residents, and modelling a very small amount of “noise” in the actual data drastically changes the results (e.g. moving two subjects from the experimental group to the control group implies the innovation would cost more money, not less). This is not to suggest that the new practices are not worthwhile, only that a Phase II would appear to be justified to fully understand these impacts. In fact, there is good reason to suspect that the impacts are even greater than have been modelled in PBCA, because of positive knock-on impacts within the control group.

### 9.3 Conclusion

CFHI has not yet maximized its potential role in the up-take or spread of best practices across Canada’s healthcare systems. This was raised frequently by the key stakeholder interviewees as identified in Section 4 (Question 2: Relevance to Healthcare Priorities) of this report, and the results of the performance measurement data analysis indicate that the application of improvement project results appear to be contained locally within an organization—that is, up to the 2014 launch of CFHI’s Spreading Healthcare Innovations Initiative.

The high variability in impacts among the PBCA case studies show that the efforts to increase the spread of the results of the IPs is critical to generating high impacts for Canada overall. However, the projects require attention tailored to the specific case-by-case factors that are likely to increase their spread, i.e. this cannot be a “cookie-cutter” approach. Some PBCA examples include:

- Finding ways to provide consistent, stable leadership for spreading the initiative in situations where there is significant turnover in an organization’s staff or officials.

- Finding ways to bolster HR support within a given spread initiative, so that it is not completely reliant on any one individual.

- Developing solid data and a peer review publication to help spread innovations in cases where these do not yet exist.

- Paying special attention to IPs which generate financial impacts for organizations other than those implementing the innovation(s); e.g. reductions in ED transfers from LTC facilities mainly benefit the ED and hospital system, not the LTC facilities themselves (which may also suffer from initial training costs to implement the new practices).

As stated previously, the EXTRA program has recently added a focus on measuring the performance and outcomes of the improvement projects it supports in addition to learner-level impacts. Most PBCA cases were based on earlier cohorts of EXTRA IPs where the main focus was on acquiring skills and knowledge and leadership tactics to lead evidence-based improvement.
9.4 Recommendations for Improvement

CFHI should further increase programming directed at broadening its spread activities and tracking uptake. The launch of CFHI’s *Spreading Healthcare Innovations Initiative*, the NWT Collaboration and AHC (as previously featured in section 6.2.1) are a good start to this, and senior management is encouraged to continue its efforts to increase spread through future programming.
10.0 Question 8: Delivery and Operational Model

Question 8: Are there changes CFHI could make to its program delivery and/or operations to further accelerate improvement in the Canadian healthcare system?

Supporting Lines of Evidence

<table>
<thead>
<tr>
<th>Document Review</th>
<th>Key Stakeholder Interviews</th>
<th>PM Data</th>
<th>PBCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
</tr>
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The analysis in this section mainly draws from the evidence supporting the other evaluation questions assessed. Results draw from a review of the use of CFHI’s resources in support of its strategic priorities, key stakeholder opinions on areas for improvement, and PBCA. This section also identifies emerging opportunities for improving CFHI’s program delivery and operations.

10.1 Key Findings

- CFHI has made concerted efforts to continuously improve the effectiveness and efficiency of its processes and operations to support its mandate and strategic priorities.

- Based on the results of the previous seven evaluation questions, CFHI’s programming is well aligned with Canadian healthcare priorities and currently fills a unique role in accelerating improvements in the healthcare system.

- Opportunities to continue to improve CFHI’s program delivery and operations were identified in three primary areas through other sections of this report: more clearly delineating and focusing on the key differentiators of its role in the healthcare system; increasing its activities in relation to “spreading” best practice innovations; and strengthening CFHI’s processes to manage and monitor partnership arrangements.

- One additional opportunity for improvement identified through the evaluation is the need for management to continue to support implementation of a defined performance measurement system that aligns with its newly developed Improvement Model to facilitate more efficient results reporting.

10.2 Analysis and Supporting Evidence

As described previously in Section 5 (Question 3: Alignment with CFHI’s Strategic Priorities) of this report, CFHI has taken numerous measures to streamline its processes, restructure its organization,
and strengthen its programming in the past five years. Most significantly, CFHI has undergone several restructuring exercises to “right-size” itself and secure the critical skill sets and levels of experience required to support its stated mission and strategic priorities. Further, through the development of annual Programs of Work, budgets that allocate financial and human resources to specific initiatives are established and areas of focus are revised annually to reflect current resource realities, the results of the prior year’s performance, and changes in internal and external risks.

Based on a review of the Programs of Work for each of the past four years, plans supporting new areas of focus, new types of programming, and revised resource allocations were evident to strengthen CFHI’s likelihood of success in achieving its strategic priority areas. In addition, CFHI’s enhanced use of external partners and resources to provide a recognized level of expertise and support to its program delivery is evident through the quality and calibre of individuals contracted from the industry, academia, and the healthcare field to serve as faculty members, academic mentors, and/or coaches.

As mentioned previously, CFHI provides regular reporting on the results and the performance of its programming through a variety of corporate reports including Annual Reports, corporate profiles, Reports of the President, and other mechanisms.

Key stakeholder interviewees had no further suggestions on areas of improvement for CFHI, other than those already identified in previous sections of this report. These are: solidly distinguishing its position in the healthcare improvement area; potential opportunities to increase collaboration and partnership with other organizations operating in a similar area; and increasing efforts towards the uptake or spread of quality improvement initiatives.

Over the last year or so, CFHI has undertaken a substantial amount of work to align its new programming and evaluation and performance measurement system with its new mandate of accelerating healthcare improvements and change. In its work plan, CFHI has included initiatives that support the building of an evaluation and performance measurement system. CFHI has undertaken to:

- Develop and finalize its Improvement Model (logic model).
- Develop an indicator set against its Improvement Model.
- Develop a standardized IP database, evaluation plans, tools and strategies (including finalizing standardized improvement indicators and performance measures) across programs.
- Embed evaluation resources/staff into programs to support ongoing data collection and continuous quality improvement. This includes evaluative and measurement activities at two levels:
  - At the improvement project level to enable an understanding of the evidence and learnings about healthcare improvement results across all improvement projects and collaborations. This includes the development of indicators specific to the project topic as well as indicators contributing to the measurement of CFHI’s priorities and objectives.
At the corporate level to identify continuous improvement opportunities related to the development and delivery of improvement initiatives. In addition to the development of specific measures of corporate performance, this also includes the embedding of “learning” indicators into all evaluation and performance measurement activities.

- Develop standardized survey instruments and processes for data collection and analysis across all programs that align with the Improvement Model and key corporate indicators. CFHI has completed an exercise that synthesizes all event data/categories from the past and has used this to standardize its event survey design processes, templates and analysis (webinars, workshops) across programs. This will allow CFHI to collect a core set of consistent information about demographics, quality/relevance of content, skills/competencies, coaching and mentorship, IT, networking, areas for improvement and marketing.

- Develop standardized reporting requirements for improvement projects and collaboration projects to facilitate the tracking of activities and impacts (short- and medium-term). Standard quarterly progress reporting and final reporting templates are being finalized.

- Continue to develop the evaluation culture of the organization. Program staff are becoming actively involved in the evaluation and measurement activities of the improvement projects and collaboration projects they lead, as well as CFHI’s corporate performance indicators. Communications staff are involved in collecting and reporting evaluative findings. This includes participating in the development and implementation of CFHI’s follow-up Impact Assessment process (surveys and key informant interviews with past participants) and communication tools (e.g. impact stories and provincial profiles) to share results with different stakeholders.

The new evaluation and performance measurement system is currently being tested and rolled-out in 2014 across all of CFHI’s programming. This new system is very comprehensive. However, the evaluation notes that PM data available to support the evaluation timeframe of 2009-2014 was not aligned to a standard reporting scheme which posed challenges to the PM data roll-up. There were many pieces of PM data, all retained separately, and inconsistencies existed in reporting from year to year. It is acknowledged that during much of this time period, CFHI was largely focused on undertaking large summative evaluations of past programming (e.g. CADRE, Listening for Directions, Picking Up the Pace, EXTRA, NWT Collaboration) and on building and realigning its new evaluation and performance measurement system with CFHI’s Improvement Model.

The evaluation found examples of inconsistencies in evaluation documents:

- Often documents were not consistently labeled, dated or identified with basic information, such as content (e.g. report, questionnaire, summary statistics, raw data); time frame (e.g. workshop number or actual date of the workshop); and versioning (e.g. various drafts of the same information were provided).

- Various formats of data for webinar surveys, paper surveys, and workshop evaluations were provided. For example, a spreadsheet with the actual survey data may have been provided for one component, but for another component it was a spreadsheet with the counts on the number of responses.
Inconsistencies in the capturing of survey data across years and across programs (basic demographic data) were evident in a number of sources. It is expected that the collection of data through surveys will evolve over time as the organization gains more experience and better understanding of the audience they are serving. For example, CFHI may want to consider adding demographic questions to the EXTRA evaluations, such as those found in the surveys of OnCall webinars. This will allow for additional comparative analyses among different demographic groups.

A number of data sets held information related to a very small sample of participants. These data sets were too small to provide meaningful insight into performance. In the analysis, the data presented was the data that was available. As an extension of the above, data sets can be expanded if similar information were collected across various programs or initiatives.

As discussed previously, the results from the PBCA were very positive. CFHI should continue to address its three goals of healthcare efficiency and patient value, patient- and family-centred care, and coordinated healthcare. The qualitative impacts of the PBCA cases are likely quite significant, and these may generate significant quantitative impacts as well. Accordingly, there are opportunities for EXTRA projects to undertake additional or subsequent measurement to more fully understand the qualitative and the quantitative outcomes of the implemented changes.

Although reasonably good data are usually available for what might be termed as the “primary impacts” of the projects (e.g. reductions in unnecessary ED visits), quantitative data on the “knock-on” impacts are usually unavailable (e.g. quality of life and cost implications). Although some anecdotal evidence exists demonstrating these “knock-on” impacts, a thorough investigation and quantification of these impacts were outside the scope of the improvement projects considered for PBCA. Specifically, the EXTRA improvement projects considered under PBCA were primarily focused on building individual capacity for evidence-based change, rather than on a team-based approach to implementing and measuring quality improvements. As a result, a full understanding of the true impacts of each PBCA case was not possible.

The lack of information on the value of these “knock-on impacts” will make it difficult for CFHI, the EXTRA fellows, and/or partner organizations to properly target healthcare improvements. For example, a project that provides relatively high “primary impacts”, but relatively small “knock-on” impacts, might obtain high levels of funding and attention. Conversely, another project with relatively low “primary impacts”, but very important “knock-on” impacts may find it difficult to obtain support, even though it may provide the same (or even greater) patient value when both “primary” and “knock-on” impacts are quantitatively assessed. “Knock-on” impacts are often significant in projects that rely on innovations, and are often not well recognized or measured. For instance, in projects that address disinvestment/reinvestment opportunities data on the “worth” of the products and services discontinued would help clarify the true incremental impacts, and recommendations on what products and services to fund instead with the “saved” funds would help maximize the impacts of these important initiatives.

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84 Acknowledging that EXTRA was an adult learning program until it moved away from individuals and focused on improvement of organizations.
One implication of the PBCA findings is that CFHI and its partner organizations could potentially make more strategic investments in the IPs if a more complete understanding of the qualitative and quantitative impacts of the IPs is developed. This could probably be achieved in the future by thinking carefully about such impacts ahead of time (for example, developing metrics and measurement methods targeting both “primary” and “knock-on” impacts) and by tracking their sustainability. This point has already been taken into consideration by CFHI through the launch of the re-designed EXTRA program for healthcare improvement.

10.3 Conclusion

In summary, there are a limited number of areas in which CFHI could further improve its operations and programming. These include:

- A need to focus on specific key differentiators for CFHI to solidly distinguish its position in the healthcare improvement area. Section 3 identifies a risk to CFHI’s defined niche of healthcare quality improvement. This is clearly a crowded space and is expected to continue to grow in the future. The perception that there is a range of other improvement organizations to choose from and that CFHI should be taking advantage of its position as a neutral (not jurisdictionally specific), national (pan-Canadian) body make it necessary to ensure the most value is being derived from its work.

- A need to continue enhancing the spread of innovative best practices and increasing awareness of CFHI’s new “brand”, as discussed in Sections 3 and 9 of this report. This will be key to CFHI’s ability to continue accelerating improvements in healthcare across Canada as well as contributing to the definition of its niche in the healthcare system.

- A need to strengthen processes to monitor and assess the financial value of partnerships as a performance measure in a consistent manner, as described in Section 5.

10.4 Recommendations for Improvement

In addition to the areas for improvement identified previously in this report and acknowledging that significant efforts are being undertaken to build, test, and enhance the new evaluation and performance measurement system, the evaluation encourages continued efforts in this area. In particular, efforts related to identifying the most important and useful indicators of healthcare improvement as well as efforts to pilot evaluative approaches for impact measurement are key. CFHI has started to do this. An example of this is the fact that lessons learned from the NWT Collaboration and AHC are feeding modifications and streamlining of evaluative tools and strategies for other Collaboratives moving forward. With such a complex measurement environment including many cross-linking and successive elements (i.e., one element feeding or rolling-up to another), the evaluation recommends that a view to sustainability also be kept in mind. CFHI should continue to refine the indicators that are most important to support progress reporting against its Improvement Model, with particular attention being paid to outcome and impact measurement.
Appendix A: Evaluation Steering Committee Members

CFHI Members:

- Maureen O’Neil, President
- Stephen Samis, Vice-President, Programs
- Nancy Quattrochi, Vice-President, Corporate Services
- Graeme Wilkes, Senior Director, Communications and Government Relations
- Kaye Phillips, Senior Director, Evaluation and Performance Improvement
- Lysanne Bullen, Improvement Lead, Evaluation and Performance Improvement
- Natalie McCarthy, Program Officer, Evaluation and Performance Improvement

External Members:

- Gavin Brown, Director, Health Care System Division, Health Canada
- Karen Croteau, Manager, KPMG
- Dennis Rank, Senior Associate, KPMG
- Nancy Chase, Partner, KPMG
Appendix B: Key Stakeholder Interviewees

The fifteen key stakeholders interviewed in conjunction with this evaluation are listed below in alphabetical order.

- Bell, Robert. President and Chief Executive Officer, University Health Network, Ontario
- Davidson, Janet. Deputy Minister of Health, Alberta
- Daybutch, Gloria. Health Director, Mamaweswen Health Department, North Shore Tribal Council, Ontario
- Delancey, Deborah. Deputy Minister, Department of Health and Social Services, Government of the Northwest Territories
- Florizone, Dan. Deputy Minister of Education, Ministry of Education, Saskatchewan
- Herd, Karen. Deputy Minister, Manitoba
- Hoffman, Abby. Assistant Deputy Minister, Strategic Policy Branch, Health Canada
- Johnson, Beverly. President and Chief Executive Officer, Institute of Patient- and Family-Centred Care, International
- Kitts, Jack. Chief Executive Officer, The Ottawa Hospital, Ontario
- Murray, Nigel. President and Chief Executive Officer, Fraser Health Authority, British Columbia
- O’Connor, Patricia. Director of Nursing, McGill University Health Centre, Quebec
- Power, Christine. President and Chief Executive Officer, Capital Health, Nova Scotia
- Roy, Denis. Vice-Président, Affaires scientifiques, Institut national de santé publique du Québec
- Skwarchuk, Dan. Health Services Integration, Manitoba
- Wilgosh, Arlene. President and Chief Executive Officer, Winnipeg Regional Health Authority, Manitoba
Appendix C: Performance Measurement Data Summary Source Descriptions

The sources of information and data utilized in the PM roll-up exercise are described below. Additional tables and results of the roll-up that have not been included in the body of this report are also provided in this Appendix for information purposes.

Improvement Projects

- Improvement projects are conducted through three programs: Executive Training for Research Application (EXTRA), Patient Engagement Projects (PEP), and Collaborations.

- EXTRA has been a key piece to CFHI’s programming since its inception in 2004. It is designed to support teams of health leaders in the design, implementation and evaluation of an IP. The program includes mentorship and coaching; expert faculty; and a curriculum delivered through a half-day session, e-learning opportunities and support, and three away-from-home residency sessions.

- PEP was a two year offering used to support teams in either involving patients in decisions about service design and delivery or increasing patients’ capacity for engaging more meaningfully in such decision-making. Key components of the PEP program included workshops and coaching activities.

- Collaborations began in 2010 and comprise of initiatives to bring together leading healthcare professionals such as executives, administrators, managers, practitioners, government officials, patients and families to tackle a common healthcare problems together.

- The data included one workbook containing descriptive information plus data extracted from NVivo software (activity type, impact table, spread and fiscal for three programs).
Since 2009, there have been a total of 113 new IPs under the EXTRA, PEP, and the Collaboration programs. A breakdown by start year is illustrated below:

Note: The 23 IPs listed under "Collaborations" are/were conducted under six main collaborations.

Most of the EXTRA, PEP, and Collaboration IPs involved organizations located in Ontario, Quebec and British Columbia. However there are/were IPs involving organizations located in the other provinces or territories.

62 organizations have participated in 90 EXTRA and PEP projects since 2009. Most projects involved one organization, however there were five projects involving collaboration between two organizations and two
projects involving collaboration between three organizations. Most organizations have implemented one EXTRA or PEP project. However, 19 organizations (or 31%) have implemented more than one project either under the EXTRA program or the PEP initiative. Organizations that have implemented 3 or more projects are as follows:

<table>
<thead>
<tr>
<th>Organization</th>
<th>EXTRA</th>
<th>PEP</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre hospitalier de l’Université de Montréal</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Winnipeg Regional Health Authority</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Peel Public Health</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>St. Joseph’s Healthcare</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Alberta Health Services</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>McGill University Health Centre</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Eastern Health</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Centre hospitalier universitaire de Québec</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

**EXTRA Scoping Survey**

- A scoping survey was collected from some of the participants of EXTRA IPs. There were 15 completed questionnaires (in Word/PDF format), but in two instances, two questionnaires had been completed for an improvement project. As a result, the survey covered 13 distinct EXTRA IPs.

- The 13 projects that started in 2009 or 2010, located in 6 provinces across Canada, were conducted by two main types of health organizations and involved a total of 22 fellows. Below are four bars showing how the projects are distributed by year, region, organization type and number of fellows. The legend is indicated above each segment.

**Extra Survey - Improvement Project Attributes**

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>Total #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23%</td>
<td>77%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>31%</td>
<td>31%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>Quebec</td>
<td>31%</td>
<td>8%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>East</td>
<td>31%</td>
<td>8%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>Org Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital/Care Provider</td>
<td>77%</td>
<td>23%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>Health Authority/Region</td>
<td></td>
<td></td>
<td>13 Projects</td>
</tr>
<tr>
<td># of Fellows</td>
<td></td>
<td></td>
<td>22 Fellows in</td>
</tr>
<tr>
<td>One</td>
<td>23%</td>
<td>64%</td>
<td>13 Projects</td>
</tr>
<tr>
<td>Two</td>
<td>64%</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Three</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The survey consisted of six open-ended questions which we reviewed and coded into common themes.

One respondent only provided a response to the last question.

Two of the projects with a scoping survey were PBCA cases.

EXTRA Away-From-Home Modules – Evaluations

One component of the EXTRA program includes three away-from home residency sessions. An evaluation is completed at the end of the modules.

The analyses included evaluations from 23 modules involving cohorts 5 to 10; the cohorts attended five possible modules from August, 2008 to March, 2014. (Note: we excluded the evaluation from cohort 5, module 6 since the questions contained in the evaluation were very different from the other modules and there was only one evaluation for module 6.) The documents we reviewed included word documents of questions included in some of the evaluations and a PDF document that contained summary statistics (e.g., overall frequencies and average ratings) for each evaluation. In total, there were over 50 documents.

The evaluations usually contained about 30+ rating questions. We focused on the following five: (Note: “X” text below differed/was excluded depending upon the module.)

- What is your overall assessment of curriculum module X? (Rating Scale: "Excellent" to "Very poor")
- The material presented since the beginning of the residency session was new to me. (Rating Scale: “Strongly agree” to "Strongly disagree")
- The material presented in this module is applicable to my work setting. (Rating Scale: "Strongly agree" to "Strongly disagree")
- The material presented in this module is relevant to my professional development. (Rating Scale: "Strongly agree" to "Strongly disagree")
- The networking opportunities were: (Rating Scale: "Excellent" to "Very poor")

The rating scale changed from 7-points to 5-point in 2011. In order to maintain consistency for our analysis we converted all the ratings to a 5-point scale where by ratings between an end-point and the mid-point were combined, as illustrated in the table below.

<table>
<thead>
<tr>
<th>Excellence Scale</th>
<th>Agreement Scale</th>
<th>Assigned Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>Strongly agree</td>
<td>1 1</td>
</tr>
<tr>
<td>Very good</td>
<td>Moderate agree</td>
<td>2 2</td>
</tr>
<tr>
<td>Good</td>
<td>Slightly agree</td>
<td>3</td>
</tr>
<tr>
<td>Average or Neither good nor poor</td>
<td>Neither agree nor disagree</td>
<td>4 3</td>
</tr>
<tr>
<td>Barely acceptable</td>
<td>Slightly disagree</td>
<td>5 4</td>
</tr>
</tbody>
</table>
Patient Engagement Projects – Evaluations

- The purpose of the PEP webinar series projects was to promote the practice of family-centered care by identifying and disseminating lessons learned.
- The lessons learned portion included workshops for the various teams in a cohort meeting together and with experts in the field.
- Evaluation data/summary results were provided for the following four workshops:
  - October 14-15, 2010 in Ottawa (n=23)
  - May 12-13, 2011 in Toronto (n=18)
  - March 5-6, 2012 in Ottawa (n=19)
  - October 22-23, 2012 in Montreal (n=15)

Collaborations

**Atlantic Healthcare Collaboration**

- The AHC began in 2012. Currently there are 10 IP projects in the Atlantic region. Teams are supported in part through a series of four workshops, three of which have occurred as of the end of the evaluation fieldwork:
  - Workshop II – From Theory to Practice, Saint John, New Brunswick, May 9-10, 2013
  - Workshop III – Staying the Course to Improve Chronic Care for Patients and Families, Charlottetown, Prince Edward Island, November 6-7, 2013
  - Workshop IV – Sustaining and Spreading Improvement for Patients & Families with Chronic Disease, St. John’s, Newfoundland, to be held June 9-10, 2014
- The material provided by CFHI included five word documents of the workshop questionnaire and survey summary, one excel document of the data from workshop III, and one PDF document summarizing the results from workshop I. Original paper versions of the survey responses could have been accessed.

**Northwest Territories Collaboration**

- Initiated in 2010, this collaboration focused on the development of chronic disease management strategy for the territory.
A series of workshops were included as part of the program. Workshop evaluation survey information was provided by CFHI for the following:

- Workshop 2 – 26 surveys out of 35 participants
- Workshop 3 – April 19-20, 2011 (Note: there was a discrepancy between the data in a spreadsheet and a summary report, so we have used the results from the summary report.)
- Pre- and Post-Workshop Assessment (n=30)

Partnerships

- The information sources for partnerships were the 2009 Partnership Report, the Annual Report for 2010, 2011 and 2012, and a draft Annual Report for 2013.

- Reporting on partnership funding has changed over the last 5 years:
  
  In 2009, the Partnership Report identified both the cash and "in-kind" contributions received (i.e., non-financial contributions that are quantified in dollars).

  In both 2010 and 2011, the annual reports indicate "$X million cash commitment by CHSRF and $Y million by its partners for disbursement". As a result, it is unclear as to whether the partner share includes both cash and "in-kind" contributions.

  In 2012, the annual report states that "new CFHI partnerships represented $793,500 from partners", but there is no clear indication as to whether this is strictly cash contribution or if there is some "in-kind" contribution. Further, there is no indication of CFHI’s contribution to these new agreements.

  The draft annual report for 2013 states: "new CFHI partnership represented $571,700 towards new collaborations and partnerships”. We have interpreted this as referring only to the partners’ portion and are unsure if it includes in-kind contributions.

Endowment Grant

- Information was obtained from spreadsheets which tracked projects conducted under the Harkness and Lead Programs. For collaborations, the data was obtained either from data from CFHI’s IP database, CFHI’s website or CFHI personnel.

On-Call Surveys

- CFHI began offering webinars in 2007 which consist of live one-hour web-based sessions featuring various topics, such as improvement stories shared by policy-makers, decision makers and clinicians.

- From January 2009 to December 2013, there have been a total of 39 episodes of webinars. 32 of these included a survey of participants and the surveys had a total of 536 responses.
The number of survey respondents per episode ranged from a minimum of 2 to a maximum of 57 with an overall average of 16.8 respondents per episode.

The themes of the webinars are:

- Patient and Family Centred Care;
  - Patient Engagement Series (4 episodes)
- Efficiency;
- Coordination; and

The number and type of questions varied between episodes, but generally some of the same questions were common within a season. As such, the summaries in this report indicate the number of respondents, the number of episodes, and the season.

CFHI Webinar seasons operate on a school-year cycle, i.e., running from September of one year and finish June 30th of the following year. Season 2 ran from September 1, 2008 to June 30, 2009 and season 7 runs from September 1, 2013 to June 30, 2014. Because the scope of this evaluation starts from 2009 to present day, only half of each of season 2 and season 7 is included in our analysis. The number of webinar and survey participants by season is illustrated below:
In season 6 (or the 2012/13 year), the webinars switched from a free to a partial cost-recovery model in which registrants paid $99 per organization (with the ability to have unlimited participants within their organization).

Of the 39 episodes, 28 (or 72%) were offered in English, 3 (or 8%) were offered in French and 8 (or 20%) were bilingual. For the 32 episodes in which a survey was conducted, 24 were offered in English, 3 in French and 5 were bilingual.

From seasons 2 to 5, survey respondents were offered a choice of responding to the survey in either English or French. Since season 6, all the surveys have been completed in English. Approximately 90% of respondents from all seasons completed an English questionnaire.

Over the last three sessions, a greater percentage of the participating organizations are affiliated with healthcare delivery, as illustrated in the chart below.

Over 35% of the survey respondents indicated their current position was in education/research, however the percentage in education/research has decreased over the last two sessions.
Mythbusters

- This consists of a series of short articles summarizing some of the major issues that are being debated about the Canadian healthcare system. The articles date as far back as 2001 and most of the articles are available on the CFHI website. CFHI provided a spreadsheet listing the title of each article with the date.

Picking up the Pace

- “Picking Up the Pace: How to accelerate change in primary healthcare” (PuP) included the hosting of a national conference and establishing a national steering committee of expert representatives and five regional sub-committees (North, West, Ontario, Quebec, Atlantic).

- The conference took place November 1-2, 2010; about 280 individuals attended, with 151 participating in the conference survey.

- Nine documents were provided by CFHI including draft/final evaluations reports, survey data and summary statistics and draft/final survey questionnaire.

- The survey respondents represented nine provinces and one territory; close to 40% of respondents were from Ontario:
More than 35% of respondents indicated they spent most of their time managing or providing health services, 21% influence policy development in a government setting, and 19% undertook or supported health research.

Effective Governance for Quality and Patient Safety Workshops

- A series of twelve workshops were delivered to 557 health service board members, senior managers, quality and patient safety executive leads, and clinical staff leads. These individuals represented 196 Canadian healthcare organizations in three provinces (Ontario, Manitoba and Saskatchewan).

- The workshops focused on equipping healthcare boards and executives with the knowledge and skills needed to develop and implement quality and safety improvements in their respective organizations. Information provided by CFHI included an evaluation report and 17 spreadsheets which contained pre and
Based on matched pre- and post-workshop survey responses, the evaluation report found that the Effective Governance for Quality and Patient Safety workshops were effective in deepening participant knowledge and skills in advancing quality and patient safety improvements within their organizations.

Qualitative feedback indicated that participants valued the sharing of experiences and tools across the different healthcare organizations, patient narratives, and group work discussions.

CEO Forum

CEO Forum is a one-day annual event that brings together CEOs, senior leaders, deputy ministers and prominent experts to share knowledge, perspective and experience on key issues in healthcare policy and management.

The forum provides a rare opportunity for healthcare leaders from across Canada to network with their peers and key players in Canadian health services, discuss the practical applications of evidence to resolve a key issue facing healthcare leadership, and share leading-edge strategies for driving high-performing and high-quality healthcare across the continuum of care, at the institutional, provincial and territorial levels.

Since 2007, CFHI has been hosting the Forum, in collaboration with the Canadian Medical Association (CMA), the Association of Canadian Academic Healthcare Organizations (ACAHO), Canadian Nurses Association (CNA) and CIHI. CFHI’s seventh annual and final CEO Forum was hosted in 2013.86 Five documents were provided by CFHI, including a copy of the evaluation forms used in 2011 and 2012, a de-brief document (with notes on such topics as logistics, communications, production, and IT), a spreadsheet listing open-ended responses to three questions (single most important takeaway, how to improve forum and topics for future forums) and the 2013 evaluation results. Paper survey responses were also offered by CFHI but the scope of the evaluation did not allow their review.

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Appendix D: Major PBCA Analytic Assumptions for Cases Quantified

In PBCA, one carries out rigorous benefit-cost analyses through case studies of a sample of the highest impact projects, and compares the net benefits of this sample to the total cost of a program. The “high impact” case studies investigated are those:

- with the highest known impacts;
- having impacts which can be quantified in dollar terms, and
- where the impacts are clearly attributable, at least in large part, to CFHI (as opposed to other parties).

PBCA is superior to sampling techniques in cases where benefits are unevenly distributed. There, analyzing a small random sample of projects and extrapolating to the total program runs a great risk of accidentally missing the highest impact projects, and thus greatly underestimating total benefits. On the other hand, accidentally including too many high impact projects runs the risk of significantly overestimating total program benefits.

Existing impacts of the high impact projects (only) to date are quantified, while future impacts are modelled over time. The analyst then sums these net benefits across all case studies, and compares the sum to the total program costs to estimate:

- Net Present Value = (Net benefits of high impact projects) minus (Total program costs); and
- Benefit/Cost ratio = (Net benefits of high impact projects) divided by (Total program costs).

Both the NPV and B/C figures provide very strong and defensible evidence regarding economic impacts. It is common to model several scenarios; e.g., more conservative lower bounds, vs. more optimistic upper bounds.

The key assumptions used in the determination of upper and lower bounds for the PBCA are summarized in the tables below for each of the six quantifiable high impact case examined through this evaluation. These assumptions were drawn from the existing health services literature, reported impacts achieved by the individual case studies (e.g. final reports), and interview data with IP case leads.
### Case #1: THE CHALLENGES OF CHRONIC CONDITIONS: INTEGRATED, INTENSIFIED CLINICAL MONITORING AND PROACTIVE FOLLOW-UP OF STRATIFIED ‘CHRONICALLY ILL POPULATION’.

<table>
<thead>
<tr>
<th><strong>Lower Bound Assumptions</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>About 3% of patients consume about 50% of ED and hospital resources (‘high-use’ patients)</td>
<td></td>
</tr>
<tr>
<td>ED use by ‘high-use’ patients decreases by 58% relative; and days in hospital decrease by 40% relative</td>
<td></td>
</tr>
<tr>
<td>These decreases applied to 3% of the population in Ste-Agathe</td>
<td></td>
</tr>
<tr>
<td>Average ED visit cost of $386 for seniors in Ontario(^{87})</td>
<td></td>
</tr>
<tr>
<td>Average cost of a hospital stay of $842/day(^{88})</td>
<td></td>
</tr>
<tr>
<td>At full take-up, IP is applied to 3% of the population with an average of 6.25 ED visits and 11.375 days in hospital in Ste-Agathe</td>
<td></td>
</tr>
<tr>
<td>Impacts begin in 2006 through 2012 for the 200 patient cohort</td>
<td></td>
</tr>
<tr>
<td>Take-up on percent of population in Ste-Agathe from 1% in year 1 up to 3% year 5</td>
<td></td>
</tr>
<tr>
<td>Full take-up in 5 years in 100% of Ste-Agathe population</td>
<td></td>
</tr>
<tr>
<td>Continued use for another 10 years; i.e., through 2027</td>
<td></td>
</tr>
<tr>
<td>IP implementation costs unknown</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Upper Bound Assumptions</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as above, with the exception of:</td>
<td></td>
</tr>
<tr>
<td>Take-up to 25% in first 5 years, to 50% in the next 5 years and capped at 50% for the next 5 years of the population in the Laurentian area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Benefits not modelled</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Knock-on impacts of health improvements</td>
<td></td>
</tr>
<tr>
<td>Population increases over time</td>
<td></td>
</tr>
<tr>
<td>Population increases due to high tourism business</td>
<td></td>
</tr>
<tr>
<td>Knock-on impacts of health improvements</td>
<td></td>
</tr>
</tbody>
</table>


### Case #2: Improving Home-based Dialysis Utilization in Manitoba and Northwestern Ontario

<table>
<thead>
<tr>
<th><strong>Lower Bound Assumptions</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Home peritoneal dialysis (HPD) cost savings per patient, per year = $30,000 in Manitoba</td>
<td></td>
</tr>
<tr>
<td>- Canada-wide cost data:</td>
<td></td>
</tr>
<tr>
<td>- Frequent home haemodialysis (HHD) costs additional $6,652 per patient in Year 1, compared to in-centre dialysis</td>
<td></td>
</tr>
<tr>
<td>- Frequent home haemodialysis (FHHD) saves $3,412 per patients in Year 2 and subsequent years</td>
<td></td>
</tr>
<tr>
<td>- Conventional home haemodialysis (CHHD) saves $2,239 per patient in Year</td>
<td></td>
</tr>
<tr>
<td>- Conventional home haemodialysis saves $12,403 per patient in Year 2 and subsequent years</td>
<td></td>
</tr>
<tr>
<td>- Uptake only modelled for Manitoba</td>
<td></td>
</tr>
<tr>
<td>- HHD target of 61 patients in year 2012 = penetration rate of 4.30%.</td>
<td></td>
</tr>
<tr>
<td>- FHHD is 70% of HHD overall; CHHD is 30% of HHD overall.</td>
<td></td>
</tr>
<tr>
<td>- Number of patients on HHD has increased by 4.92% compounded to date; this is assumed to remain true for future, but capped at IP target of 4.30%</td>
<td></td>
</tr>
<tr>
<td>- Assumes benefits continue for next 10 years; i.e., through Year 2024.</td>
<td></td>
</tr>
<tr>
<td>- Without this IP effort to increase HHD, HPD rates would decline to the national average of 16%-18% of HD overall (17% figure used in model), as compared to target figure of 21%</td>
<td></td>
</tr>
<tr>
<td>- Target of 21% HPD penetration from 2015 through 2024.</td>
<td></td>
</tr>
<tr>
<td>- IP implementation costs not known</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Upper Bound Assumptions</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as above, with the exception of:</td>
<td></td>
</tr>
<tr>
<td>- HPD cost savings per patient, per year = $50,000 in Manitoba</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Benefits not modelled</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Reduced use of satellite dialysis centres, in which per person costs are much higher than large urban clinics</td>
<td></td>
</tr>
</tbody>
</table>

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89 Ref: Paul Komenda, personal communication

### Case #3: Evidence-informed Changes to Funded Health Services and Products

<table>
<thead>
<tr>
<th>Lower Bound Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Worth” of tests discontinued $10 million per year</td>
<td></td>
</tr>
<tr>
<td>• “Worth” of replacement tests $39 million per year</td>
<td></td>
</tr>
<tr>
<td>• These benefits exist for another 5 years from present; i.e., from 2011 (date of IP project) through 2016 (assumes other processes would have identified and made similar disinvestments, even if IP protocol had not been developed)</td>
<td></td>
</tr>
<tr>
<td>• IP implementation costs not known</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper Bound Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as above, with the exception of:</td>
<td></td>
</tr>
<tr>
<td>• “Worth” of tests discontinued was $5 million per year</td>
<td></td>
</tr>
<tr>
<td>• Two more tests that cost $20 million per year under consideration for disinvestment are actually discontinued: these were “worth” $10 million</td>
<td></td>
</tr>
<tr>
<td>• There is a 50% likelihood that this will actually happen</td>
<td></td>
</tr>
</tbody>
</table>

**Benefits not modelled**

- Knock-on impacts of health improvements

---

### Case #7: Just in Time Delivery of Quality Results to Influence Decision Making.

<table>
<thead>
<tr>
<th>Lower Bound Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• This IP led to significant reductions in both Tool-sensitive ED transfers, and non-Tool-sensitive ED transfers, and subsequent hospitalizations. The non-Tool-related impacts are a possible knock-on effect of the IP.(^{91})</td>
<td></td>
</tr>
<tr>
<td>• For ED and hospitalization differential rates, the cost savings are based on the costing model developed in the IP.(^{92}) In their model:</td>
<td></td>
</tr>
<tr>
<td>• Only the difference between the Tool-related ED decrease (58%) and non-Tool-related ED decrease (46%) is attributed to the IP – i.e., a decrease of 11%.</td>
<td></td>
</tr>
<tr>
<td>• Cost of an ED visit $200 (IP value)</td>
<td></td>
</tr>
<tr>
<td>• Cost of a hospital stay $500/day, and 6.3 days average stay</td>
<td></td>
</tr>
<tr>
<td>• The PBCA model uses the same assumptions as above</td>
<td></td>
</tr>
<tr>
<td>• Rolled out to 2 units of Lakeside LTC only, within 2 years</td>
<td></td>
</tr>
<tr>
<td>• Timescale for benefits: for a further 10 years; i.e., to 2035.</td>
<td></td>
</tr>
<tr>
<td>• IP implementation costs: $30,000 for additional validation, $15,000 per unit for training</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper Bound Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same as for lower bound, with the exception of:</td>
<td></td>
</tr>
<tr>
<td>• Average ED visit cost of $386 for seniors in Ontario(^{93})</td>
<td></td>
</tr>
</tbody>
</table>

---

\(^{91}\) Note that if non-Tool-sensitive ED transfers are eventually found to have actually been due to the Tool’s knock-on impacts, then all impacts would be multiplied about 5-fold (essentially by a factor of 58%/11%).

\(^{92}\) Note that the IP costing model is based on very small numbers of LTC residents in the Tool-sensitive and non-Tool-sensitive groups. A very small shift of numbers from one group to the other would cause a very significant shift in the cost savings. (In fact, hypothetically moving 2 subjects from the Tool-related to non-Tool-related groups, would increase the costs.)

Average cost of a hospital stay of $842/day94
6.3 days average hospital stay

Take-up in LHIN:
- Rolled out to entire Toronto Central LHIN of about 6,000 LTC beds.
- This will take 5 years, or 1,200 LTC beds per annum
- Likelihood of this happening is 25% (alternately, only 25% of these LTC beds are affected)

Take-up in Ontario:
- Will be rolled out provincially (75,000 LTC beds) taking 10 years
- Likelihood of this happening is 10% (alternately, only 10% of these LTC beds are affected)

Take-up in Canada:
- Will be rolled out to entire 262,000 LTC beds, taking 15 years
- Likelihood of this happening is 5% (alternately, only 5% of these LTC beds are affected)
- This is an over-estimate of the average LTC size (probably ~250 beds), but in practice the larger site would likely be addressed first.

Benefits not modelled
- Knock-on impacts of health improvements

---

**Case #8: Collaborative Management of Patients with Chronic, Complex Co-morbid Conditions.**

**Lower Bound Assumptions**
- 60% of calls avoid a face-to-face specialist visit
- 33% of calls avoid an ED visit
- Cost per specialist visit $108 (CIHI data for BC95)
- Cost per ED visit $200 (PHC poster)96
- No hospitalization costs are avoided.
- Current number of RACE calls about 5,600 per annum, assumed to grow at an average Canadian population growth rate of 1.2% per annum
- Modelled from IP start to 10 years in future; i.e., to 2024

---


### Upper Bound Assumptions
- 75% of calls result in a billing to MSP, @ roughly $100 each (FP plus specialist)
- Cost of telephone service is relatively negligible
- Unknown development costs to other partners – ideally these would be netted out
- Cost per specialist visit = $175 (PHC poster)
- Cost per ED visit = $386 (CIHI data for Ontario)
- Assume will spread to all of BC.
- Assume calls will roughly double in future – no firm estimate is possible
- 75% likelihood of this actually occurring (alternately, only 75% of these RACE calls occur)

### Benefits not modelled
- Knock-on impacts of health improvements
- Possible spread to all of Canada

---

**Case #14: Using the Resident Assessment Instrument/Minimum Data Set to Promote Continual Quality Improvement in Personal Care Homes (Nursing Homes) - The PIECES Model.**

### Lower Bound Assumptions
- Based on business case of $300,000 - $500,000 per annum savings for WRHA at full-take up, and a 10% reduction in A/P use (though they actually see 25% savings, we use 10% to be more conservative and to be in line with their business case)
- Used an average lower bound figure of $400,000 per annum savings
- Assumed WHRA take-up only (no current interest in Manitoba-wide roll-out)
- 75% take-up in WRHA at maximum take-up
- Starts at $10,000 per annum in Middlechurch facility alone
- Benefits continue for another 20 years (i.e., to year 2035)
- IP implementation costs unknown, though likely to be modest, as in Case #7.

### Upper Bound Assumptions
- Same as for lower bound, with the exception of:
  - Full 25% savings in A/P use, so roughly $1 million/year
  - Assumed no additional take-up outside WRHA

### Benefits not modelled
- Knock-on impacts of health improvements
Appendix E: Organizations Included in Identification of Current Healthcare Priorities

Strategic planning documents from the following organizations were reviewed to identify the key priorities in the healthcare sector across Canada.

- Alberta Ministry of Health and Wellness
  - Alberta Health Services
  - Alberta Quality Council
- Nova Scotia Department of Health and Wellness
  - Capital Health
- British Columbia (BC) Ministry of Health
  - Fraser Health
  - BC Patient Safety and Quality Council
- Newfoundland and Labrador Department of Health and Community Services
  - Eastern Health
- Manitoba Health
  - Winnipeg Regional Health Authority
- Government of Northwest Territories Department of Health and Social Services
- Ontario Ministry of Health and Long-Term Care
  - Cancer Care Ontario
  - North Shore Tribal Council
  - University Health Network
- Quebec Ministry of Health and Social Services
  - L’Institut national de santé publique du Québec (INSPQ)
  - Centre hospitalier de l’Université de Montréal (CHUM)
  - McGill University Health Centre (MUHC)
- Saskatchewan Ministry of Health
- New Brunswick Health
- Prince Edward Island Department of Health and Wellness
- Yukon Department of Health and Social Services
- Nunavut
- Government of Canada – Health Canada
Appendix F: CFHI Improvement Model