A YEAR IN REVIEW

The following pages highlight the translational research and best practice implementation projects designed to accelerate the pace of new discoveries and treatments in spinal cord injury research and care. By working on a number of coordinated fronts – innovation, collaboration, tools and resources and standards – we are already affecting change to improve the health and quality of life of those living with a spinal cord injury, in Canada and abroad.

Thanks to the support of our federal and provincial governments, the Rick Hansen Institute remains focused on galvanizing the world's best researchers, surgeons, scientists and rehabilitation practitioners to collaborate on accelerating the translation of the most promising research into practical solutions for individuals with spinal cord injury.

With ongoing support, we can continue to build on the tremendous momentum we have created in just a few short years.
VISION AND MISSION

The **Vision** of the Rick Hansen Institute is:

A WORLD WITHOUT PARALYSIS AFTER SPINAL CORD INJURY

In pursuit of our Vision, the **Mission** of the Institute articulates our objectives and key activities.

**WHAT WE DO:**
- Lead collaboration, across the global SCI community
- Provide resources, infrastructure, and knowledge
- Identify, develop, validate, and accelerate the translation of evidence and best practices
OUR OBJECTIVES

RHI’S WORK SEeks TO ACHIEVE SIX OBJECTIVES:

1. A significant reduction in the incidence and severity of permanent paralysis resulting from SCI by 2015.

2. A significant increase in restoration of physical function following SCI by 2015.

3. A significant reduction in the incidence and severity of secondary complications associated with SCI by 2015.

4. A significant increase in level of satisfaction with quality of life and community participation among people with SCI by 2015.

5. Ensuring that customized responses to priority unmet needs are available to 100% of individuals with SCI throughout their journey to full participation by 2015.

6. Establishing a world class Canadian SCI registry and data management platform by 2012.
OUR KEY STRATEGIES

TO ACHIEVE THESE OBJECTIVES, RHI IMPLEMENTS EIGHT STRATEGIES:

1. Developing and validating best practice guidelines for emergency response, treatment and access to primary health care.

2. Supporting multi-centre clinical trials in acute care, rehabilitation and community, fostering global collaboration where possible, and supporting pre-clinical research imminently ready for translation.

3. Supporting the development of a Best and Brightest program to nurture new SCI researchers.

4. Collecting and analyzing data on SCI in Canada, including acute, rehabilitation and community components and supporting research and multi-centre trials, utilizing a web-based national technology platform and collaborating globally where appropriate.

5. Facilitating the adoption and implementation of validated best practices as identified by the Translational Research Program and through properly evaluated public policy and community-based programs aimed at improving treatment, care and support and communicating these best practices directly to Canadians with SCI.

6. Working with RHI partners to enhance service delivery through the full implementation of the Solutions Model (solutions team, navigators).

7. Working with RHI partners to enhance capacity and develop initiatives that respond to the priority needs of people with SCI, utilizing collaborative funding mechanisms such as Scotiabank Wheels In Motion (S-WIM), and provincial/territorial 20th Anniversary investments, etc.

8. Providing excellence in leadership, coordination and program support at the national and international level.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message from the CEO</td>
<td>2</td>
</tr>
<tr>
<td>Message from the Board</td>
<td>4</td>
</tr>
<tr>
<td>Background</td>
<td>6</td>
</tr>
<tr>
<td>About RHI</td>
<td>7</td>
</tr>
<tr>
<td>Results Achieved, 2011-2012</td>
<td>8</td>
</tr>
<tr>
<td>Leadership and Governance</td>
<td>18</td>
</tr>
<tr>
<td>RHI network partner profile: Dr. Colleen O’Connell</td>
<td>18</td>
</tr>
<tr>
<td>Next Steps</td>
<td>20</td>
</tr>
<tr>
<td>Our Partnerships</td>
<td>21</td>
</tr>
<tr>
<td>Appendices</td>
<td>22</td>
</tr>
<tr>
<td>Appendix I: Map of Involvement, Fiscal Year 2011-2012</td>
<td>23</td>
</tr>
<tr>
<td>Appendix II: Results of RHI Projects during the Fiscal Year</td>
<td>24</td>
</tr>
</tbody>
</table>
MESSAGE FROM THE CEO

IT IS WITH GREAT PLEASURE TO SHARE WITH YOU SOME OF THE HIGHLIGHTS AND SUCCESSES FROM FISCAL YEAR 2011-2012.

Having faced challenges typically encountered by any new organization, the Rick Hansen Institute has matured into one that works effectively and efficiently with a strong focus on collaboration, outcomes and accountability.

In five short years, progress was made to improve treatment and care outcomes for people with SCI. Our focus has tightened on maximizing our impact in areas of strategic importance (restoration of function, minimizing paralysis and secondary complications), continuing the advancement of our Rick Hansen Spinal Cord Injury Registry and Global Research Platform, and accelerating progress with new partnerships and greater international collaboration.

While the name of our organization has changed over the years, collaboration remains the key to our success, as does our vision: a world without paralysis after spinal cord injury. This past year in particular has been extremely productive.

What follows is a summary review of all RHI objectives and key activities from the period of April 1, 2011 to March 31, 2012. All of our current projects are mentioned throughout this document. Here are just a few of the highlights:

- One of RHI’s key clinical research projects, CAMPER, is in full swing with two sites recruiting patients and two more expected to begin shortly. The goal of CAMPER – Cerebrospinal Fluid Pressure Monitoring and Biomarker Validation Study – is to limit secondary damage by developing a procedure to help drain the cerebral spinal cord fluid (CSF), reduce swelling and pressure build-up at the injury site. In addition, the study aims to identify and validate the expression of specific proteins (biomarkers) after injury as a possible predictor for the severity of paralysis in people with SCI.

- The Access to Care and Timing (ACT) project achieved a major milestone earlier this year when presented to the Vancouver Acute Leadership Team at Vancouver General Hospital. This project is a great example of how the Health Authority could utilize the ACT model to improve SCI care delivery.

- Significant progress was made by the Rick Hansen Spinal Cord Injury Registry (RHSCIR) study. All 31 national RHSCIR sites are now using the RHI developed electronic data capture system, the Global Research Platform (GRP), for both participant enrolment and data entry. Feedback suggests the GRP is very user-
friendly and has resulted in a decreased workload required for data entry and a concomitant improvement in data quality.

- RHI joined the Consortium for Spinal Cord Medicine and created new partnerships with the Canadian Institute for Military and Veteran Health Research, Peking University Third Hospital, China Rehabilitation Research Center, James J Peters VA Medical Center and The Miami Project to Cure Paralysis.

- RHI was an integral partner in the many events and celebrations related to the 25th Anniversary of the Man in Motion World Tour. RHI staff, family, friends and network partners were among the 7,000 participants who ran, walked or wheeled in the Relay across Canada.

At this time, I would like to express my gratitude to the Board of Directors and our Translational Research Advisory Committee for their commitment and dedication, along with Rick Hansen and the staff and board of the Rick Hansen Foundation for their critical support and collaboration.

I also gratefully acknowledge our primary funders – Health Canada, Western Economic Diversification and the Rick Hansen Foundation – for their visionary support. Finally, I would like to thank the Governments of Alberta, British Columbia, Manitoba and Ontario for their significant commitments in helping RHI further its work.

Since RHI’s beginnings in 2007, we have undertaken 67 translational research and best practice implementation projects. We have developed a pan-Canadian registry of SCI patients, and we have provided support to improving the lives and community participation of individuals across Canada.

To date, and in a modest timeframe, we believe we have achieved progress in our program areas and created infrastructure that is leading to unprecedented collaboration in the field of SCI research and care.

We look forward to keeping you up-to-date as we continue to work toward a world without paralysis after SCI and improved quality of life for those living with SCI.

We firmly believe that our best work lies ahead of us.

Sincerely,

Bill Barrable, CEO
Rick Hansen Institute
MESSAGE FROM THE BOARD

AS CHAIR OF THE RICK HANSEN INSTITUTE BOARD OF DIRECTORS, I AM DELIGHTED TO SHARE WITH YOU A FEW THOUGHTS ON THE PAST YEAR AND BRIEFLY DISCUSS WHAT LIES AHEAD FOR THIS YOUNG AND VIBRANT ORGANIZATION.

However, before I do, I am pleased to confirm the successful renewal of funding for RHI from the Government of Canada for the next five years. The Government of Canada has been a critical partner and we are extremely grateful for their continued support. This renewed federal investment will allow us to further advance our collective goal of a world without paralysis after spinal cord injury, and achieve better medical care and practical outcomes for individuals with SCI. We are now beginning the process of engaging with our partners, colleagues, staff and board to finalize our new five-year business plan in time for completion of the funding agreement in the fall of 2012.

This organization could not achieve its results without the help of many others. At this time, I would like to extend a thank you for the commitment of the Rick Hansen Institute Board members, the Translational Research Advisory Committee and the entire team at RHI. In addition, a special thank you to Daryl Rock, the inaugural Board Chair of RHI. Daryl’s leadership during the very important start-up years of RHI and his passion for its mission is clearly reflected in its early successes and accomplishments.

RHI has come a long way from its beginnings, evolving from three prior initiatives: the Rick Hansen Spinal Cord Injury Registry (RHSCIR); the SCI Translational Research Network, including its practice networks; and the SCI Solutions Alliance. In 2007, these three entities were amalgamated to form the SCI Solutions Network which was subsequently renamed the Rick Hansen Institute. While the names may have changed, our mission – a world without paralysis after spinal cord injury and our commitment to collaboration – remains the same.

RHI is a catalyzing, science-based institution leading collaboration on a global scale to help accelerate research in a wide range of clinical foci – from acute care to re-integration into the community – and encourage the application of new knowledge to improve health for people with spinal cord injury.

The objective moving forward is to refine our strategic research agenda, and focus on connecting the best researchers and caregivers in the global SCI research community. Everything we do must be focused on facilitating the translation of research results that will significantly improve the lives of people with SCI. While there may be no silver bullet for the cure, we must not be afraid to take the risks proposed by members of our network, some of the leading scientists in the field.
This was one of the main messages from Interdependence 2012: The Global SCI Conference (i2012) co-hosted by RHI and the Rick Hansen Foundation. From the opening keynote address by Dr. Charles Tator encouraging the next generation of SCI researchers and care givers to deliver on the promise of a world without paralysis after spinal cord injury, to Rick Hansen’s challenge to never give up on our dreams, i2102 proved to be an incredible experience full of knowledge-sharing, networking and collaboration. The breadth of expertise and knowledge brought together across the continuum of care was unprecedented and as many noted, critical to shaping the agenda of SCI research moving forward. With over 24 countries and 200 organizations represented, 500 delegates came together and made the world of SCI research and care a little bit smaller.

The spinal cord injury community in Canada is invigorated, focused on priority areas of research, and engaged in national and international collaborations that are improving health outcomes for individuals with spinal cord injury, while reducing health care costs.

With the recently renewed support of the Government of Canada, the Rick Hansen Institute is playing a lead role in facilitating and coordinating this ground breaking work, and enlisting the additional support of provincial governments and corporate interests across the country.

At this time of unprecedented scientific progress and transformative global communications technology, a world without paralysis after spinal cord injury is possible.

Sincerely,

[Signature]

Dr. Bernie Bressler
Chair, Board of Directors
Rick Hansen Institute
BACKGROUND

Twenty-five years ago, Rick Hansen had a dream – to make the world more accessible and inclusive and to find a cure for paralysis after spinal cord injury. Inspired by a deep-seated belief that anything is possible, Rick’s “big dream” took shape in the form of the Man In Motion World Tour. For 26 months, he and his team wheeled more than 40,000 km through 34 countries, raising awareness of the potential of people with disabilities. Following the Tour, Rick established the Rick Hansen Foundation (RHF) to continue his quest for an accessible and inclusive society and a cure for spinal cord injury (SCI).

Under Rick’s leadership, the Foundation functions as a social innovator, finding collaborative solutions to challenges in the community and the resources necessary to implement those solutions. Rick also nurtured a dream of true collaboration across the SCI community. Seven years ago, his dream began to be realized when the SCI Network was established as a program with funding from the federal government (Western Economic Development) and the Rick Hansen Foundation. Three initiatives evolved — the SCI Solutions Alliance, the Rick Hansen SCI Registry, and the SCI Translational Research Network, the latter funded by a $30 million investment from Health Canada. In April 2008, these three entities combined into a single organization in order to more effectively address priority needs and generate solutions for people with SCI. The Rick Hansen Institute (RHI) was incorporated in March 2009. We received charitable status from Canada Revenue Agency (CRA) in January 2010 and now operate as an independent organization.

The figure to the left shows the timeline of events from Rick Hansen’s vision to the evolution of today’s RHI.
ABOUT RHI

RHI exists to move research into action and ultimately to find a cure for paralysis after SCI. It does this through its two, inter-related core business areas: Translational Research and Best Practice Implementation. Our national network supports both business areas.

The goal of Translational Research is sometimes described as moving research “from bench to bedside”. At RHI, we take promising treatments and technologies from basic science or other research disciplines and advance them to larger-scale human studies, and ultimately into the real world of clinical practice. RHI has played a vital role in clinical research in Canada: since 2007, RHI has fully supported half of the Canadian-sponsored clinical trials on SCI.

Part of the Translational Research Program’s role is to identify best practices: those interventions, services, strategies or policies that are most suitable for enhancing the health of people with SCI, according to available evidence. Once identified, RHI works to implement these best practices. The focus of our Best Practice Implementation Program is to influence practice level changes – by altering clinicians’ behaviour and in some cases patients’ behaviour – that will improve care for people with SCI.

The key to RHI’s success is its network. Our pan-Canadian network of researchers, clinicians, people with SCI and others, accelerates research and helps turn knowledge into action on the ground.

One Day... I hope to see a world where those who sustain a spinal cord injury in every country get the best possible care and treatment for recovery.

- Regina Colistro, Acute Spine Physiotherapist
RESULTS ACHIEVED, 2011-2012

According to a recent survey commissioned by RHI, the vast majority of Canadians support the objectives of RHI, although most Canadians underestimate the impact a spinal cord injury has on an individual, or on the healthcare system as a whole.

New research is revolutionizing the treatment of SCI in the hospital and the community. In addition, new breakthroughs and discoveries, progressive drug therapies, and advanced surgical techniques are improving people’s ability to manage quality of life issues associated with SCI, such as chronic pain, bladder and bowel complications, pressure ulcers, sexual dysfunction, and increased susceptibility to respiratory problems.

What follows is research related progress made by the Institute.

BY THE NUMBERS

In fiscal year 2011-2012, RHI supported 51 translational research, best practice implementation, community participation and networking projects, which together have leveraged more than $2.7 million in additional funding from other sources.

The following are highlights from our activities over the past five years:

1 National survey findings released by the Rick Hansen Institute, November 2011

2 Note that the figures provided in these tables for the year ending March 31, 2011 are different in some cases from the numbers shown in the 2010-2011 annual report. RHI’s performance measurement system was still in development at that time, leading to some adjustments in the figures provided. The revised numbers reflect the new performance measurement system.
An analysis of RHI’s past projects, completed in March 2012, demonstrates the following results:

- **8 out of 13 (62%) planned projects have accelerated new research.** For example, data from the STASCIS study on timing to decompression surgery was used to perform the Economic Evaluation of Early Surgical Decompression for Traumatic Cervical SCI.

- **9 out of 11 (82%) planned projects have documented evidence of stakeholder satisfaction with the products or services produced.** For example, the majority of professionals attending the course on autonomic dysreflexia agreed that the quality of the course was either good or excellent.

- **11 out of 11 planned projects (100%) have documented evidence of improving collaboration and cooperation across disciplines and across the continuum of care.** For example, the development of the SCI-U e-learning modules involved collaboration across many health and academic institutions as well as community organizations and others.

- **5 out of 12 planned projects (42%) have documented evidence of affecting clinical practice.** For example, a survey conducted three months after the Wheelchair Skills Training for Manual Wheelchair Users found that many of the training participants were able to implement the skills into their own practice.
The Summative Evaluation of RHI’s Initiative Funded by Health Canada was underway in the fiscal year and, while a final report is still forthcoming, early results show some promising findings for RHI. For example, the evaluation demonstrates that RHI’s initiatives continue to address a demonstrable need, and that they are consistent with Government of Canada priorities, roles and responsibilities. Furthermore, the evaluation has shown evidence that RHI has made impressive progress in key areas, including the following:

- **Generating engagement and support for RHSCIR:** More than 90% of SCI practitioners surveyed agree with the idea of RHSCIR, and more than 80% agree with its protocols and procedures.

- **Contribution to knowledge generation and improved access to knowledge:** Three quarters of key informants agreed RHI has made significant contributions to knowledge generation. 88% agreed that RHI improved access to SCI research.

- **Adoption of knowledge into practice:** 75% of rehabilitation and community practitioners are aware of SCIRE; and of those, 51% have adopted its material into practice. 91% of key informants agreed RHI’s products have improved collection, management and use of evidence, and 81% agreed RHI’s initiatives have resulted in adoption of new technologies, infrastructures, standards or measures.

The evaluation report also highlights several areas for improvement for RHI, including the need for greater consistency, transparency and accountability within the organization. Recommendations from the forthcoming final report, which is due in July 2012, will inform our multi-year strategy for the coming strategic period.
Objective 1: Reduction in Paralysis

Time into surgery: Clinicians agree that surgery is often necessary following a spinal cord injury (SCI). However, there was some uncertainty about how important it is to perform this surgery as soon as possible after the injury occurs. Over the past fiscal year, RHI supported a number of efforts that have improved our knowledge on the effects of timing into surgery.

As part of a series of systematic reviews on acute SCI treatments published in the *Journal of Neurotrauma*, RHI supported a review of the literature on the impact timing to surgery has on neurological and functional outcomes. The review found evidence that early surgical intervention is safe, feasible, and can improve patient outcomes. This systematic review also contributed to the development of the RHI-supported STASCIS study, a multi-centre clinical research study on time into surgery. According to recently published findings, this study has demonstrated that individuals with a cervical spinal cord injury who have surgery within 24 hours have a higher likelihood of showing significant neurological improvement than individuals who have delayed intervention. “It is still not a home run and far from a cure, but what it means is that one in five individuals is walking away from an injury they wouldn’t normally walk away from,” says principal investigator Michael Fehlings, MD, PhD.

RHI entered these results into its Access to Care and Timing (ACT) model, a sophisticated simulation model describing the stages of clinical care through which SCI patients flow. Although not yet finalized, preliminary results show improvements to a patient’s quality-adjusted life years and to financial costs to the healthcare system.

Stem cells: The promise of stem cell therapies for spinal cord injury is reflected in its growing focus at the pre-clinical stage of research. However, are we ready for translation to human subjects? In a previous fiscal year, RHI supported an international meeting of experts, consumers and stakeholders on stem cell research and translation. According to the soon-to-be published manuscript, the vast majority of these stakeholders see stem cells becoming a therapeutic option for SCI, and a large number believe it will happen within the next 10 years. The results of this

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meeting contributed to an RHI-supported systematic review of the available pre-clinical literature on stem cells and other cell types, to assess evidence supporting their translation to human SCI patients, published this fiscal year.³ This review found that important gaps exist, but the evidence of research to date shows that the greatest benefit from cell transplantation occurs during sub-acute and acute stages, rather than during chronic stages of SCI. However, according to a recent RHI-supported survey of people with SCI,⁴ the acute stage is the time when a person with SCI is most vulnerable, most poorly informed about the condition and is unlikely, therefore, to make an informed decision about participation. The study suggests potential solutions to address this disparity.

**Neuroprotective agents:** In addition to time into surgery and stem cell transplantation, RHI’s activities in fiscal year 2011-2012 were oriented towards reduction in paralysis including support for two studies examining potential neuroprotective agents: riluzole and minocycline. The phase I trial of riluzole is coming to an end this coming fiscal year (2012-2013). For minocycline, RHI supported the development of a paper that has been accepted into a peer-reviewed journal, and plans to have the multi-centre study open for recruitment by the end of the coming fiscal year (2012-2013).


OBJECTIVE 2: RESTORATION OF PHYSICAL FUNCTION

**Hand function:** Some SCI clinicians believe that motor improvement plateaus at 12 to 18 months after SCI. However, according to a recently completed, RHI-supported project on the benefits of functional electrical stimulation (FES) therapy, participants receiving FES as part of their rehabilitation therapy saw significant improvements in hand movement after six months compared to a control group. The study provides preliminary evidence that these improvements translated into greater independence for the patient, as well as overall physical and psychological well-being.

The FES study uses the RHI-supported Graded and Redefined Assessment of Strength, Sensibility and Prehension (GRASSP) measure, as one of its outcome measures. Based on these promising findings, the project team has created a start-up company and submitted a patent application for the device. RHI is also supporting a larger, multi-centre trial using the same protocol on sub-acute patients (Restoration of Upper Limb Function in Individuals with Sub-Acute SCI).

The RHI-supported Rejoyce project also uses FES therapy. Rejoyce is the first multi-centre trial of in-home tele-rehabilitation in the world and is showing promising results in improvements to hand function in individuals with SCI.

**Other:** Other projects supported by RHI targeting restoration of physical function include project and data management support provided to the Canadian Spine Society to enable data collection on the GRP for their national registry of degenerative spinal conditions, and a study of sitting pivot transfers.

One Day...I hope everyone reaches their full potential with full access to rehabilitation services.

- Catherine Le Cornu Levett, Acute Spine Physiotherapist
OBJECTIVE 3: REDUCTION IN SECONDARY COMPLICATIONS

Pressure ulcers: In recognition of the damaging and preventable effects of pressure ulcers on people with SCI and others, RHI has been instrumental in supporting the development of Canadian guidelines for prevention and treatment of pressure ulcers. Building on an earlier literature scan, RHI supported collaboration among researchers and clinicians to develop the guidelines, through funding provided to the Ontario Neurotrauma Foundation. To be finalized soon, RHI is already working towards the adoption of these guidelines through other projects. RHI is building capacity to adopt these standards through support of a Knowledge Mobilization Network (KMN). RHI supported the development of a KMN infrastructure, identification of pressure ulcer guidelines for implementation, and the development of a monitoring and evaluation framework to measure success of this implementation.

RHI partnered with Accreditation Canada to develop national standards for SCI, which included standards for pressure ulcers among a number of other issues. This year, draft standards were developed based partly on a literature review conducted for RHI’s Access to Care and Timing project, and pilot sites were identified to validate the draft standards.

Also in the area of pressure ulcer prevention and treatment, RHI is supporting a feasibility study on the integration of tele-health information technologies from practices associated with the clinical management and prevention of pressure ulcers in persons with SCI.

Other secondary complications: RHI is supporting a number of other projects aimed at secondary complications including a study of the drug pregabalin, as a pre-emptive treatment for neuropathic pain and the development of an online course about sexual health and SCI for healthcare professionals. In addition, two studies on mechanical ventilation have the potential to reduce the incidence of respiratory infections.

One Day...I hope to have no neuropathic pain.
- Lynda Braden
OBJECTIVE 4: INCREASE IN QUALITY OF LIFE AND COMMUNITY PARTICIPATION

Physical activity: Physical activity is a key contributor to quality of life for people with SCI. However, due to the nature of the injury, maintaining appropriate levels of physical activity can be a major challenge for many individuals with SCI.

Following the successful release of the Physical Activity Guidelines for people with SCI last fiscal year, in 2011-2012 RHI supported the development and release of the Get Fit Toolkit: a resource to help adults with SCI meet physical activity guidelines. A major campaign was undertaken to promote the guidelines and toolkit, including a national launch, press release, mass mail-outs, road shows, and videos. The RHI-supported Get in Motion telephone service is one venue through which the guidelines and toolkit continue to be disseminated.

The guidelines for physical activity have been used for other RHI-supported projects, for example: the content of the guidelines are contributing to the update of the SCI Actionable Nuggets©, informational cards disseminated to primary care physicians, with the help of the Canadian Medical Association. RHI will support wider dissemination and implementation activities to encourage the adoption of these guidelines, including through projects such as the Knowledge Mobilization Network and SCI-U.

In addition to the guidelines, RHI is supporting a project aiming to develop a model to integrate physical activity into SCI rehabilitation programs. With 4 sites and 50 research participants enrolled to date, this study is expected to be completed by October 2012.

Other: Other initiatives related to quality of life and community participation include a national survey on the needs of people with SCI, currently taking place across Canada that has received over a thousand responses to date. RHI also supported an evaluation of the “Discovering the Power in Me” program in New Brunswick, which shows the impact of consumer involvement in self-management. This evaluation reported that most participants experienced a greater sense of control over their own lives, an improvement in their judgment of their own capabilities, greater resiliency and improved self-confidence and self-esteem.
OBJECTIVE 5: CUSTOMIZED RESPONSES TO UNMET NEEDS

RHI is actively helping to provide customized responses to the unmet needs of people with SCI across Canada. RHI’s “Wheels in Motion” grants played a large part in meeting these needs.

In 2011-2012, RHI disbursed 58 community grants and 31 individual grants worth a total of $890,417.

These grants contributed to the following:

- Support for sports events and teams
- Sports equipment
- Wheelchairs and walkers
- Support for conferences
- Lift systems
- Accessible public spaces
- Accessible home renovations
- Home furnishings
- Automotive accessibility

These grants were successful in meeting the needs of people with SCI. In feedback provided in fiscal year 2011-2012 on these grants, 81% of grant recipients rated the project a success (i.e., rating it at least 3 out of 5). 81% of individuals with SCI said the grant improved their health (i.e., rating the grant 4 out of 4 on the impact on their health) and 86% said it influenced their self-care (i.e., rating the grant 4 out of 4 on self-care).

One Day...I hope to prevent spinal cord injuries in sports, using novel helmets and other safety equipment.
- Dr. Peter Cripton, SCI Researcher
OBJECTIVE 6: A WORLD CLASS REGISTRY AND DATA MANAGEMENT PLATFORM

Following the development of our RHI Global Research Platform (GRP) in the previous fiscal year, this year saw data collection from the Rick Hansen Spinal Cord Injury Registry (RHSCIR) successfully migrated onto GRP, with all facilities utilizing this web-based platform to enter new data. RHSCIR encompasses 31 facilities in nine provinces, and now has 2,399 patients enrolled.

RHSCIR has fostered fundamental changes in clinical care and research on SCI in Canada. It has helped to improve and standardize clinical care provided across Canada through promotion and training clinicians on how to conduct the International Standards for Neurological Classification of SCI. Health units and hospitals have examined trends in traumatic SCI patients admitted to their facilities over time, using this data to justify staffing requirements.

The network developed by the RHSCIR Study, and the standardized practice and measurement encouraged across sites, were essential in the development of RHI’s first multi-centre studies, CAMPER and Minocycline. Other RHI projects, such as Rehabilitation E-Scan and the SCI Community Survey, leverage the network for their own purposes. In addition, researchers are using national RHSCIR data across the country for their own research purposes.
LEADERSHIP & GOVERNANCE

Reviews: RHI has had a number of audits and evaluations, including a performance audit, an ongoing summative evaluation, and a privacy impact assessment.

RHI underwent a Performance Audit of the design and operational effectiveness of RHI’s financial and management controls and practices, to assess our compliance with the terms of our agreement with Health Canada. This audit did not identify any significant deficiencies, but did reveal some areas for improvement for which RHI has developed an action plan in order to address these areas.

The summative evaluation of RHI is well underway, with the framework approved by Health Canada. The majority of data collection is complete and the final report is due July 2012.

In November of 2011, RHI commissioned KPMG to carry out a Privacy Risk and Impact Assessment of the entire organization. KPMG concluded in their report that the management and governance of privacy risk at RHI is generally mature. Administrative controls and technical and physical safeguards are in place and breach management appears to be well managed. The review identified many good privacy practices within all scope areas and provided recommendations for improvement in non-critical areas. In the upcoming fiscal year, recommendations from the assessment will be implemented and the effectiveness of the remediation measures will be reassessed.

Securing new funding: RHI, working jointly with RHF, has been successful in securing new funding from the federal government, a number of provincial and territorial governments, corporate partnerships and private donations.

Dr. Colleen O’Connell is a physiatrist at the Stan Cassidy Centre for Rehabilitation, specializing in neurorehabilitation. She works with interdisciplinary teams for both inpatients and outpatients with spinal cord and brain injury and other diseases. She is primarily a clinician, with both research and academic responsibilities. As Research Chief, she is involved in a number of clinical trials predominantly in the area of pain, mobility and spasticity evaluation and treatment.

In high school, she was a lifeguard and swimming instructor, and taught individuals with SCI and other mobility impairments how to swim as part of a Red Cross program called Adapted Aquatics. Recognizing the positive impact of physical activity on a person’s well-being, and the unique challenges faced by persons with SCI in participating in such activities, she says was a motivating factor to pursue a career working with persons with paralysis.

On a personal note, Dr. O’Connell is deeply involved in the Healing Hands clinic and outreach programs, which serve thousands of patients annually, in Haiti and elsewhere. The focus of her volunteer work is in establishing training programs and...
As part of an integrated campaign for funding renewal, RHI executed a number of initiatives to reach stakeholders and opinion influencers in government and business. Of note, RHI organized “RHI Showcase” events in Ottawa, Toronto, Edmonton and Victoria to expose politicians and key government influencers to specific work and projects undertaken by RHI, nationally and in three key provinces. The events attracted an estimated 460 people, including 138 elected officials.

**Partnerships and Network building:** RHI joined the Consortium for Spinal Cord Medicine and created new partnerships with the Canadian Institute for Military and Veteran Health Research, Peking University Third Hospital, China Rehabilitation Research Center, James J Peters VA Medical Center and the Miami Project to Cure Paralysis.

A survey commissioned by RHI revealed the need for greater public awareness about the health and economic costs of spinal cord injuries in Canada. The primary objectives of the organization received strong levels of public support.

**Interdependence 2012 and RHI Clinical Research Network meeting (May 15-17, 2012):** This upcoming conference, which includes the participation of RHI’s Clinical Research Network, marks an exciting milestone for RHI. It is the first time we have assembled our valued scientific leaders and collaborators together. More than 400 delegates from our Network in Canada and individuals from 22+ countries have registered to attend the three-day event in Vancouver.

facilities for rehabilitation professionals such as therapists and prosthetic/orthotic technicians and rehabilitation nurses, as well as providing ongoing medical education in areas of SCI, stroke and pediatric rehab.

Her international work is a family affair, as her husband, Jeff Campbell, organizes many of the logistics, communications and volunteer orientation activities. They had decided after their experiences in Africa after meeting with many homeless children to eventually include a child who needed a home to become part of their family through adoption. Members of one of their medical teams working in a hospital in Haiti expressed concern about one particular boy who was living in the hospital with no family, and so they started the process of adoption, which then became two adoptions with another boy they met at an orphanage. Samuel and Venel have been in Canada since 2006, are great kids – and hockey players – and have truly made their family complete.

The Rick Hansen Institute, she says, has brought focus to priority areas of research, determined through collaborative processes to ensure meaningful work is being done, with the greatest potential for results that will impact both people living with SCI, and in finding cures. This is an exceedingly challenging task, but has given community direction as well as focus, which is greatly needed. She says she hopes her experiences with SCI internationally across many cultures and realities, coupled with her clinical expertise, will allow her to make meaningful, practical contributions to further improve the lives of persons living with SCI.

O’Connell says the future of SCI research and care is expedient, efficient and effective translation of research into practice, combined with greater communications between consumers, clinicians and researchers.
**NEXT STEPS**

Although this fiscal year was to be the final year of the RHI 2009-2012 Strategic Plan, after discussion with donors, this strategic plan will now extend into the next fiscal year (2012-2013). RHI will continue to carry out its projects in the eight strategies of this plan, aiming to achieve the six objectives by 2015. In fiscal year 2012-2013, RHI will begin the development of a new strategic plan, covering the next five-year period.

The following are some of the major deliverables expected in fiscal year 2012-2013 (sorted by strategy):

- **Strategy 1**: the end of Phase I of the Access to Care and Timing project, culminating with knowledge dissemination events to encourage use of the models developed.
- **Strategy 1**: dissemination of the SCI Community Survey results which includes feedback from over 1,200 people with SCI.
- **Strategy 2**: new patients recruited to the CAMPER study, and the Minocycline trial open for recruitment.
- **Strategy 4**: publication of peer-reviewed papers presenting results of research undertaken on national RHSCIR data.
- **Strategy 5**: a final set of standards for SCI by Accreditation Canada.
- **Strategy 5**: release of the Rehabilitation E-Scan Atlas, a publication of current SCI rehabilitation service delivery, care providers and research capacity, across Canada.
- **Strategy 8**: the Interdependence 2012 Conference in Vancouver in May 2012, bringing together stakeholders in SCI research from around the world; and the final report of the Summative Evaluation of RHI’s initiatives funded by Health Canada, which will provide valuable information on successes to date and how to better meet RHI’s objectives.
OUR PARTNERSHIPS

Our partnerships are key for the development and implementation of our programs and in advancing the care for Canadians living with spinal cord injuries.

The Rick Hansen Institute would like to thank our federal, provincial, corporate and foundation partners for their contributions to support essential advancements in research for a cure for paralysis after spinal cord injury, and make a positive difference by promoting the translation of promising research discoveries and best practices into real practical benefits. The institute would especially like to thank Health Canada, Western Economic Diversification and the Rick Hansen Foundation for their generous contributions and visionary support.

Federal Partners

Provincial Partners

Corporate Partners

Foundation Partners
Appendices

I. Map of Involvement, Fiscal Year 2011-2012

II. Results of RHI Projects during the Fiscal Year
Appendix I

MAP OF INVOLVEMENT, FISCAL YEAR 2011-2012

The map below shows RHI’s engagement of facilities and key stakeholders all over Canada in fiscal year 2011-2012. For each province and territory, the table shows the number of facilities involved in: 1) active translational research or best practice implementation projects; 2) the RHSCIR Study; and 3) community participation projects during fiscal year 2011-2012. It also shows the number of new team members added to RHI-supported projects during the fiscal year, and the estimated total number of people with SCI engaged through our projects in fiscal year 2011-2012.

BC
- 33 facilities involved in RHI projects
- 45 new project team members
- 1,000 people with SCI engaged

AB
- 9 facilities involved in RHI projects
- 37 new project team members
- 300 people with SCI engaged

SK
- 6 facilities involved in RHI projects
- 6 new project team members
- 130 people with SCI engaged

MB
- 4 facilities involved in RHI projects
- 4 new project team members
- 75 people with SCI engaged

ON
- 49 facilities involved in RHI projects
- 123 new project team members
- 3,600 people with SCI engaged

QC
- 11 facilities involved in RHI projects
- 36 new project team members
- 490 people with SCI engaged

NL
- 4 facilities involved in RHI projects
- 6 new project team members
- 10 people with SCI engaged

NS
- 5 facilities involved in RHI projects
- 11 new project team members
- 100 people with SCI engaged

NB
- 3 facilities involved in RHI projects
- 13 new project team members
- 100 people with SCI engaged

PEI
- 1 facility involved in RHI projects
- 9 people with SCI engaged

YK
- 1 facility involved in RHI projects

TOTAL
- 126 facilities involved in RHI projects
- 282 new project team members
- 5,829 people with SCI engaged
Appendix II

RESULTS OF RHI PROJECTS DURING THE FISCAL YEAR

The tables below show all RHI projects undertaken in fiscal year 2010-2011, along with the results achieved this fiscal year.

STRATEGY 1
DEVELOPMENT AND VALIDATION OF BEST PRACTICE GUIDELINES FOR EMERGENCY RESPONSE, TREATMENT & ACCESS TO PRIMARY HEALTH CARE

Access to Care and Timing

Status: Ongoing
Funder(s): Health Canada
Grant number(s): 2011-14

Purpose:
To examine the clinical care for people with traumatic SCI using computer simulation models of the health care delivery system, and to enable the long term costs and patient outcomes to be evaluated (from time of discharge into the community until end of life).

Planned results:
Level I mapping completed for 22 facilities (total of 27)\(^1\), level II mapping completed in four sites (total of five). A meeting with clinicians and researchers in Vancouver to begin translation of the knowledge developed in the pilot project. A course on the use of the ACT model provided to participants of the ASIA/ISCoS conference on June 4, 2011. Four papers will be submitted for peer review. RHI will continue working with Accreditation

\(^1\) Note: these numbers are based on a count of integrated acute/rehab facilities as two facilities. RHI now considers these to be one facility. Therefore, the total number of facilities is now considered to be 24.
Canada to develop an accreditation program for sites serving people with SCI, based on results of the ACT project.

**Results achieved in the fiscal year:**
Level I process mapping surveys have been completed for all planned facilities, and the ACT team completed data cleaning. Draft level I site toolkits are expected to be completed and content approved by sites before May 11, 2012. Level II mapping and site visits were completed in five sites (total of six). Draft process maps are completed and content will be approved by sites before May 4, 2012.

The meeting with the VCH Leadership Team took place on January 13, 2012. Follow-up meetings will be arranged between administrators and the ACT team this fiscal year (2012-2013). The ACT course took place on June 4, 2011.

Two papers were accepted for publication: one describing the conceptual framework for the project and one on the course provided at the ASIA/ISCOS conference. The remaining two papers are anticipated to be complete before December 2012. The delays in these two papers are due to limited capacities of external co-authors, and the data cleaning process.

Alignment with Accreditation Canada is ongoing. A literature review conducted by the ACT team was shared with affiliates of Accreditation Canada. (See Accreditation Canada, Strategy 5, below).

Overall feedback received from completed site visits to date has been positive. Many of the stakeholders expressed interest in having follow-up information sent to them, as well as being provided the end results of the project. The novel methodologies developed within this project have also sparked interest with other provincial and national organizations, such as the BC trauma group and the Canadian Paraplegic Association.

**New knowledge created:**
The ACT team has begun using the model to create scenarios. Among the scenarios developed to date are the following:

By entering the results of the STASCIS project (see STASCIS, Strategy 2, below) and others on the clinical benefits of early decompression surgery versus late surgery, the model can show potential improvements that early surgery can have on a patient’s life in terms of quality-adjusted life years (QALYs), and the savings to the health care system over the long term.

The model can provide evidence for the optimal number of new beds needed to accommodate a changing patient demographic, due to the aging population, over the next 15 years.
The model can compare the lengths of stay at two sites by running the same patient population through both. This simulation can show if the differences in length of stay are due to the nature of the patients entering those sites, or due to other factors related to the mandated health care delivery system.

**Awards won:**
Second place Poster Prize at the 2011 Canadian Association of Physical Medicine and Rehabilitation (CAPM&R) for the poster “Modelling the provision of care for patients with traumatic SCI in British Columbia”; June 2011.

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
</table>
| 12          | Engagement and support of key researchers, people with SCI and others          | Number of stakeholders engaged, by type                                                                                                    | 7 new team members (21 total)  
40 new collaborators (54 total)  
6 new people with SCI engaged (6 total)  
Estimated 60 new people reached through KT (165 total)  |
|             | ASIA/ISCoS course on ACT project is useful to participants                   | Level of self-declared usefulness of the course, from a post-course questionnaire                                                           | This workshop generated high interest among attendees in the ACT model.                                                                                             |
| 16          | Validated science: ACT literature review used by Accreditation Canada to inform development of SCI standards | Evidence of use of literature review in SCI standard development                                                                         | Feedback from Accreditation Canada Representatives has suggested that information from the ACT literature reviews has helped inform their Accreditation process with sites. |
| INT3        | Adoption and adaptation of validated science: Usefulness of Vancouver simulation model in informing administrative decisions and policy in clinical settings | Level of self-declared usefulness, from feedback received at a local stakeholders meeting                                                   | Feedback from the meeting has been positive. Meeting participants have requested additional workshops for specific scenarios as a result of this meeting. |
Can Pregabalin prevent the development of neuropathic pain following spinal cord injury?

**Status:** Grant ended Oct 2011; project currently on hold

**Funder(s):** Health Canada

**Grant number(s):** 2009-40

**Purpose:**
To determine if pregabalin is effective in preventing the onset of neuropathic pain in individuals with SCI.

**Planned results:**
The objective of this study is to determine if the development of pain following SCI can be prevented by giving Pregabalin shortly after the injury. The current project is for a feasibility study.

**Results achieved in the fiscal year:**
This study did not meet its recruitment target, enrolling only six study subjects out of a targeted 30, and therefore did not have the sample size needed for a definitive analysis. Using a case-based approach, the project team maintains its premise for pain management, and is in the process of using this feasibility data to explore setting up and funding a multi-centre trial in order to obtain the number of subjects needed to answer definitively, the research question.

The project team is currently exploring options for continuing the project with use of other funds.
Effect of locomotor training on children with incomplete spinal cord injuries

**Status:** Cancelled

**Funder(s):** Health Canada

**Grant number(s):** 2009-38

**Purpose:**
To study how well children with incomplete SCI of greater than 6 months duration who remain non-functional ambulators improve through body-weight assisted treadmill training (BWATT).

**Planned results:**
To provide a baseline protocol for the development of a BWATT program for children with SCI.

**Results achieved in the fiscal year:**
The promise of the study led to discussions with the Shriners Hospital Canada in SCI, and with researchers at the University of Alberta and Toronto. Publicity for the study was nationwide, increasing awareness of paediatric SCI. Unfortunately, the study was cancelled due to not being able to enrol sufficient numbers of patients.

Unspent funds were redirected towards funding of new projects.

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FES Therapy: Restoring voluntary grasping function in chronic SCI

**Status:** Completed Dec 2011

**Funder(s):** Health Canada

**Grant number(s):** 2009-36

**Purpose:**
To validate FES therapy and to assess its capacity to improve hand function in individuals with chronic SCI.

**Planned results:**
To demonstrate if FES plus
conventional occupational therapy is superior compared to conventional occupational therapy alone in individuals with chronic C4 to C7 SCI.

**Results achieved in the fiscal year:**
The project experienced early delays due to the unanticipated need to reapply for a new ethics approval at the site. In addition, RHI requested the use of the newly developed GRASSP assessment (Strategy 2, below) be included in the study, which required a delay while waiting for the measurement tool to be finalized. On October 31, 2011, the project was successfully completed.

The protocol developed for the FES study is currently being used for sub-acute patients in the project “Restoration of Upper Limb Function in Individuals with Sub-Acute SCI” (Strategy 2, below).

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**From Research to Clinic: The translational step with functional magnetic resonance imaging of the human spinal cord (spinal fMRI)**

**Status:** Completed Mar 2012

**Funder(s):** Health Canada

**Grant number(s):** 2009-32

**Purpose:**
To test a new method for using MRI (called functional MRI or fMRI) to show how a spinal cord is working, even in areas below an injury.

**Planned results:**
Activities for FY 2011-2012 include ongoing data collection and clinical assessments, followed by group analyses to characterize the consistent features of the observed spinal cord function as a function of the level/extent of each person’s injury.

**Results achieved in the fiscal year:**
This study is completed, and has resulted in a peer-reviewed article and 14 conference presentations (two this fiscal year).
The RHI funded research achieved its objective of demonstrating the clinical value of spinal fMRI in SCI cases, and has resulted in significantly improved methods, and hardware, for functional MRI assessment of the effects of spinal cord injury. The result obtained during the research has demonstrated that spinal fMRI is sensitive to changes in neural function of the spinal cord because of traumatic injury. Specific changes related to the location and severity of injury has been demonstrated. The results obtained have also led to significant improvements in the data acquisition and analysis methods, and in our understanding of human spinal cord function.

Global blueprint for stem cell innovation, translation and commercialization

**Status:** Ongoing until Sep 2012

**Funder(s):** Health Canada

**Grant number(s):** 2010-90

**Purpose:**
To host a two-day meeting among 100 international stem cell stakeholders (researchers, clinicians, policy makers, industry, consumers and others) regarding stem cell innovation, translation and commercialization.

**Planned results:**
Publication of peer-reviewed publication. Although originally considered complete in 2010-2011, this grant was extended to allow for additional analysis of conference data and to support publication of findings.

**Results achieved in the fiscal year:**
The expected publication of a peer-reviewed paper has been delayed, but is expected to occur, along with the release of videos of the conference that took place in 2010, in September 2012. The results of the international meeting contributed towards the cell transplantation systematic review, one of the RHI-supported Acute Systematic Reviews, which was published in the Journal of Neurotrauma this fiscal year (Strategy 2, below).
**New knowledge created:**
The vast majority of respondents (98%) foresaw stem cells becoming a therapeutic option for SCI, and many (42.7%) believed that this would happen in the next 10 years. The meeting identified major barriers, and developed strategies to overcome them.

**Innovative approaches to mechanical ventilation in SCI**

**Status:** New, ongoing until Jan 2013

**Funder(s):** Health Canada

**Grant number(s):** 2012-11

**Purpose:**
To compare the Neurally-Adjusted Ventilatory Assist (NAVA) mode of ventilation with conventional Assist-Control Ventilation (ACV) practices.

**Planned results:**
Completion of equipment setup with inclusion of Respitrace and capnograph devices by May 2012. In-service and training at the Toronto Western Hospital neuro-ICU, June 2012. Patient recruitment starting June 2012.

**Results achieved in the fiscal year:**
Ethics approval was obtained for this project in January 2012.
The project team purchased an Acquisition System with 16 isolated channels, acquisition software and attestation of electrical testing (TUV).

A Health Canada application for the study was submitted and approval is anticipated in May 2012. Patient recruitment will commence thereafter.
Internal RHI research

**Status:** Ongoing

**Funder(s):** N/A

**Grant number(s):** None

**Purpose:**
To carry out research as needed on issues of relevance to SCI, in order to help RHI set strategic direction or to inform the direction of supported projects.

**Planned results:**
Carry out research in areas relevant to RHI priorities, such as incidence and prevalence of SCI, secondary complications and other areas.

**Results achieved in the fiscal year:**
Research conducted by RHI in fiscal year 2011-2012 has resulted in the following conference presentations:


In addition, two papers produced from internal RHI research were accepted for publication in 2011-2012, and are expected to be published shortly.

<table>
<thead>
<tr>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-peer reviewed articles</td>
<td>3</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>7</td>
</tr>
<tr>
<td>Awards won</td>
<td></td>
</tr>
</tbody>
</table>

**Awards won**

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*Note: The table above shows the number of new and total conference presentations and non-peer reviewed articles produced from internal RHI research in FY 2011-2012. The awards won section is not detailed in the provided text.*
SCI Community Survey

**Status:** Ongoing until Mar 2013

**Funder(s):** Health Canada

**Grant number(s):** 2010-03

**Purpose:**
To conduct a survey on the needs of people with SCI, the access and barriers to the utilization of services within the community and the associated outcomes.

**Planned results:**
The primary deliverable to be achieved by the end of the upcoming fiscal year (i.e., by March 2012) is the completion of data collection for the survey, with a target of 3,000 respondents. Data analysis and development of survey findings will commence, and will continue beyond the end of the fiscal year.

**Results achieved in the fiscal year:**
Recruitment began for the Community Survey in May 2011, with an e-blast carried out by RHI, and advertisements by provincial chapters of the Canadian Paraplegic Association (CPA).

Data collection is ongoing until August 2012, delayed due to a lower than expected response to the survey. As of March 2012, the survey has obtained 1,219 responses. This large number is due to a number of initiatives, including the participation of RHSCIR sites; the Rick Hansen 25th Anniversary Relay; collaboration with the CPAs; and advertisement in RHI’s Solutions magazine and Spinal Cord Injury BC's Spin magazine, as well as Quebec newspapers.

Based on data collected to date, initial analyses started in November to support conference presentations submissions (e.g. ASIA in April 2012 and Interdependence 2012), and continued in February to contribute towards the Summative Evaluation of RHI’s initiatives funded by Health Canada.

<table>
<thead>
<tr>
<th>Participating Organizations</th>
<th>New in FY 2011-2012: 24</th>
<th>Total to Date: 25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conference presentations</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Mass media/social media campaigns</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>RHI Outcome</td>
<td>Project Outcome</td>
<td>Indicator</td>
</tr>
<tr>
<td>-------------</td>
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<td>-----------</td>
</tr>
<tr>
<td>i2</td>
<td>Engagement and support of key researchers, people with SCI and others</td>
<td>Number of stakeholders engaged, by type</td>
</tr>
</tbody>
</table>

Upper Limb Rehabilitation in Acute SCI: Piloting a novel computer and robotic assisted rehab device

**Status:** Completed Jun 2011

**Funder(s):** Health Canada

**Grant number(s):** 2009-34

**Purpose:**
To investigate the design of a future rehabilitation program that uses the Armeo (registered by CSA and FDA) assistive device to improve arm and hand function in individuals with tetraplegia.

**Planned results:**
This is a pilot study to support the implementation of a larger study that would be necessary to determine the effectiveness of the Armeo and to achieve widespread application in rehabilitation centers that would ultimately improve the lives of individuals with SCI.

**Results achieved in the fiscal year:**
Preliminary results indicate improvements in quality of life and community participation as a result of the Armeo device. This study has contributed towards numerous peer-reviewed articles, conference presentations, abstracts and invited talks.

<table>
<thead>
<tr>
<th>Facility</th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>Team members</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Research participants</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Peer-reviewed articles</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Abstracts</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Invited talks</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
Utility of synoptic reporting to improve operative reports for SCI patients

**Status:** New, ongoing until Jun 2012

**Funder(s):** Health Canada

**Grant number(s):** 2012-10

**Purpose:**
To study the use of an electronic template for synoptic operative reporting when reporting on surgery involving SCI patients, and how this may improve the quality of data for research purposes.

**Planned results:**
Activities for fiscal year 2011-2012 include design of the template, implementation of the template using a web interface, adaptation of instruments required for the study, data collection, and analysis.

**Results achieved in the fiscal year:**
In fiscal year 2011-2012 the project was launched and instruments required for the study were adapted. There were delays with this project due to low subject recruitment and the design of templates was delayed until Feb 2012. In the new fiscal year, completed templates will be implemented using a web interface, and data collection will begin.
STRATEGY 2

SUPPORTING MULTI-CENTRE CLINICAL TRIALS IN ACUTE CARE, REHABILITATION AND COMMUNITY, FOSTERING GLOBAL COLLABORATION WHERE POSSIBLE; SUPPORTING PRE-CLINICAL RESEARCH IMMINENTLY READY FOR TRANSLATION

Access to clinical trials

Status: Ongoing until Jun 2013

Funder(s): Private donation


Purpose:
To provide funding for SCI patients to take part in clinical studies, to which they would otherwise not have access.

Results achieved in the fiscal year:
In FY 2011-2012, Access to Clinical Trial grants were disseminated for trials on bone quality, enhancing walking, and restoration of hand function.

In the news:
Among the studies supported by this initiative is a trial testing the “Smart-e-Pants” device, customized undergarments that help in the prevention of pressure ulcers. This promising innovation has received national media attention:

“A new way to banish bedsores”, Globe and Mail, 1 February 2012

“Technology helps patients with limited mobility”, Calgary Herald, 2 February 2012
Acute practice network systematic reviews

**Status:** Completed in previous fiscal year (Jan 2011)

**Funder(s):** Health Canada

**Grant number(s):** 2008-16

**Purpose:**
To conduct a systematic review of acute SCI issues.

**Planned results:**
A set of 16 papers were developed in the previous fiscal year (2010-2011). In fiscal year 2011-2012, the contributing authors developed a plan to revise the papers and suggest turning them into a special issue of a peer-reviewed journal.

**Results achieved in the fiscal year:**
The 16 systematic reviews, along with an introductory article, were published together in a special issue of the Journal of Neurotrauma (volume 28, issue 8, August 2011). These systematic reviews have proven to be influential, having together garnered 125 citations in a short span of time. The most highly cited of the papers include a review of cellular transplantation therapies, and a review of pharmacologic neuroprotective treatments for SCI.

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
<th>Target for Mar 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team members</td>
<td>-</td>
<td>54</td>
<td>-</td>
</tr>
<tr>
<td>Peer-reviewed articles</td>
<td>17</td>
<td>17</td>
<td>16</td>
</tr>
</tbody>
</table>
The Canadian Multicentre CSF Pressure Monitoring and Biomarker Study (CAMPER)

**Status:** Ongoing until Aug 2014

**Funder(s):** BC, Health Canada

**Grant number(s):** 2011-16

**Purpose:**
1) To characterize the changes in intrathecal pressure, in order to provide more advanced practice guidelines on the management of blood pressure in acute SCI, and 2) to obtain and analyze CSF samples to validate a series of biomarkers (specific proteins produced during SCI) and to independently confirm their ability to predict injury severity and neurologic outcome.

**Planned results:**
Three sites to become operational, ready to recruit participants and enrolment of the first study subject(s), noting that enrolment rates are unpredictable due to the very specific inclusion criteria for this study.

**Results achieved in the fiscal year:**
In fiscal year 2011-2012, the CAMPER study opened four new sites to enrolment in Vancouver, Calgary, Montreal and Halifax. This included study specific training and meetings with site investigators, research nurses, research coordinators and research assistants.

In addition, the first four subjects have been enrolled in the study.

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Engagement and support of key researchers, people with SCI and others</td>
<td>Number of stakeholders engaged, by type</td>
<td>15 new team members (39 total) 4 new research participants (4 total)</td>
</tr>
</tbody>
</table>
Canadian Spine Society

Status: New, ongoing

Funder(s): N/A

Grant number(s): None

Purpose:
To provide project and data management support to the multi-centre Canadian registry study that seeks to track specific outcome measures of different surgical and non-surgical techniques used to treat degenerative spinal conditions in the revised national health data registry.

Results achieved in the fiscal year:
Beginning in July of the past year, a new project manager at RHI was appointed to work on the CSS Registry Project. In working with the CSS Registry Study Executive Team, a significant amount of time and effort was applied to create and finalize the study protocol and the data collection forms to be used in this newly revised national registry. Following the finalization of the data collection forms, the data fields were incorporated in RHI’s GRP system (see RHI GRP, Strategy 4, below). At the annual CSS meeting in March 2012, a project update was provided to CSS members and potential investigators were asked to participate. In the upcoming year, work will focus on assisting sites in the project initiation (ethics approvals), data collection, data sharing agreements and use of the GRP system.

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
<th>Target for Mar 2012</th>
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<tbody>
<tr>
<td>Facilities</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Team members</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
Coordination of IHT activities across Canada directed towards persons with SCI

**Status:** Completed Dec 2011

**Funder(s):** Health Canada

**Grant number(s):** 2010-02

**Purpose:**
To support coordinated telehealth activities conducted in collaboration with the RHI Information Technology Team.

**Planned results:**
Platform development, April 2009 – December 2011.
Facilitation of partnership and leveraging opportunities, April 2009 – December 2011.

**Results achieved in the fiscal year:**
Extensive support for three projects has been provided as a result of the coordination grant during this period: *Online Physical Activity and Nutritional Counselling* (Strategy 7, below), *SCI-U* (Strategy 5, below), and *Feasibility of an Internet Pressure Ulcer Clinic* (Strategy 5, below). Each project has had independent platform evaluation (pre-project launch) and development relevant to the execution of individual projects.

The IHT Coordination grant extends beyond the scope of facilitating the three projects, to act as liaison and expert in the realms of telehealth and eHealth. In general, efforts have been made through this grant to facilitate formal and informal connections and partnerships with telehealth relevant stakeholders.

Potential collaboration with Canada Health Infoway, originally planned for this project, was cancelled when it was recognized that RHI could provide the infrastructure needed for this project (i.e., SharePoint resources).
Minocycline

**Status:** Ongoing  
**Funder(s):** N/A  
**Grant number(s):** None  

**Purpose:**  
To examine the neuroprotective effects of administering an IV formulation of Minocycline, a tetracycline derivative, within 12 hours after spinal cord injury.

**Planned results:**  
By March 2012, the power analysis for the study will be completed; an accredited manufacturer to supply the study drug will be located; and a determination will be made of whether to continue with study.

**Results achieved in the fiscal year:**  
The power analysis for the study was completed April 2011. In September 2011, RHI identified an accredited manufacturer to supply the study drug in an IV-formulation. The determination to continue with study was made in December 2011. Additionally, RHI hired a Project Manager for the Minocycline project in February 2012.

RHI also provided statistical analysis support for the preparation of the paper for the earlier, Phase II pilot of Minocycline. This paper has been accepted into a peer-reviewed journal, with the expected publication date of April 2012.

**In the news:**  
“Spinal cord breakthrough with acne drug”, *Calgary Sun*, 11 October 2011.

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
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<tbody>
<tr>
<td>I2</td>
<td>Engagement and support of key researchers, people with SCI and others</td>
<td>Number of stakeholders engaged, by type</td>
<td>2 new team members (3 total)</td>
</tr>
</tbody>
</table>
Phase I trial of Riluzole in patients with acute SCI

**Status:** Completed Dec 2011

**Funder(s):** Health Canada

**Grant number(s):** 2008-16

**Purpose:**
To evaluate safety and possible preliminary efficacy data related to the use of Riluzole in patients with acute traumatic SCI.

**Planned results:**
RHI supported the one Canadian site (Toronto) of this multi-centre trial, which also ran in six sites in the United States.

**Results achieved in the fiscal year:**
RHI’s funding has come to an end. The Phase I trial is ongoing, expected to complete early in FY 2012-2013, with the possibility for a Phase II subsequent to that. The total enrolment for all sites of this study is 36 patients.

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Total to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>Team members</td>
<td>7</td>
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<tr>
<td>Research participants</td>
<td>8</td>
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<tr>
<td>National meetings</td>
<td>1</td>
</tr>
</tbody>
</table>
ReJoyce

**Status:** Ongoing until Jul 2012

**Funder(s):** Health Canada

**Grant number(s):** 2010-55

**Purpose:**
To determine if the ReJoyce system, which provides tele-supervised rehabilitative exercise therapy to individuals with SCI, can lead to improved hand function in individuals with SCI.

**Planned results:**
Deliver affordable rehabilitation and consulting services to people living with SCI on a nation-wide scale, regardless of how far they live from the large urban centres.

This project will serve as a model within Canada and internationally and will be transferable with minimal further development to other disability groups, notably stroke survivors.

Although originally scheduled to end in fiscal year 2011-2012, the grant for this project was amended to July 2012 to allow for the inclusion of 12-month follow-up of Toronto subjects in the final report.

**Results achieved in the fiscal year:**
The treatments and six-month follow-up hand function tests were completed in 7 participants. The 12-month follow-up tests are still pending.

All ARAT videos up to 6-month assessments have been received. 80% of ARAT videos have been compiled and are awaiting raters.

This project experienced delays due to the protracted set-up of the Toronto site as well as technical issues.

<table>
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<tr>
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<th>New in FY 2011-2012</th>
<th>Total to date</th>
<th>Target for Jul 2012</th>
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</thead>
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<tr>
<td>Team members</td>
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<tr>
<td>Research participants</td>
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<tr>
<td>Peer-reviewed articles</td>
<td>3</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Mass media/social media</td>
<td>-</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>campaigns</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
New knowledge created:
Hand function in nearly all participants improved by clinically significant amounts after 8 weeks of in-home, FES-assisted exercise therapy on ReJoyce workstations, tele-supervised over the Internet. These results lends further support to the idea that FES-assisted exercise, supervised remotely over the Internet, provides clinically important improvements in hand function in C5-6 tetraplegic people.

In the news:

Restoration of upper limb function in individuals with sub-acute spinal cord injury

Status: Ongoing until Apr 2013
Funder(s): Health Canada
Grant number(s): 2010-92

Purpose:
To evaluate the efficacy of upper limb therapy based on functional electrical stimulation (FES) for persons with sub-acute tetraplegia.

Planned results:
The study commenced in fiscal year 2010-2011. Plans for 2011-2012 were: training for sites on how to use the assessment tools, the FES/ReJoyce stimulators, and gain consensus on what constitutes conventional occupational therapy.

Results achieved in the fiscal year:
Delays were experienced in this project due to ethics/legal requirements, and logistical challenges on bringing team members to Toronto from sub-sites. One of the identified sub-sites (Edmonton) dropped out due to lack of their ability to recruit. The project team is currently engaged two other Canadian sites to replace the Edmonton site.

Over the longer term, this project aims to create opportunities for KT and promote implementation of best practices for clinical care related to upper limb rehabilitation. The project team will work with RHI to best determine how this is to be done.

In the news:
“Electronic stimulation shows promise for quadriplegics”, Globe and Mail, 10 Oct 2011

<table>
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<tr>
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<th>Target for Apr 2013</th>
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</thead>
<tbody>
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<tr>
<td>Research participants</td>
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<tr>
<td>Standards/guidelines</td>
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<tr>
<td>People reached through KT (estimate)</td>
<td>10</td>
<td>10</td>
<td>-</td>
</tr>
</tbody>
</table>
SCI Home Ventilation Guidelines

**Status:** Completed in previous fiscal year

**Funder(s):** Health Canada

**Grant number(s):** 2008-20

**Purpose:**
To develop guidelines for individuals with SCI who require mechanical ventilation in their homes.

**Planned results:**
Release of guidelines, and a peer-reviewed publication

**Results achieved in the fiscal year:**
The SCI Home Ventilation Guidelines have been released, and can be found at the Canadian Thoracic Society website (www.respiratoryguidelines.ca/2011-cts-guideline-hmv). The project team has published a peer-reviewed paper in the Canadian Respiratory Journal on these guidelines.
Sitting Pivot Transfers in Individuals with a Spinal Cord Injury: Minimizing upper extremity risk exposure and maximizing performance

**Status:** Completed Mar 2012

**Funder(s):** Health Canada

**Grant number(s):** 2010-82

**Purpose:**
To identify the most effective and safest SPT technique(s) for individuals with a SCI.

**Planned results:**
This project was expected to be completed by March 2012, with peer-reviewed publications and conference presentations.

**Results achieved in the fiscal year:**
Due to delays, this project was not completed as planned. The RHIC funding has ended, and the project team will continue with internal resources until project completion, expected in the fall of 2012.

Recruitment of 45 patients was achieved as initially planned, and approximately 80% of the data analysis and interpretation has been completed to date. Detailed reviews and analyses of all data recorded among participants with SCI should be finalized by August 2012. To date, one scientific manuscript linked to the project has been published in a peer-reviewed journal and two abstracts have been presented in scientific conferences. Two additional manuscripts are in final preparation, and other manuscripts will be submitted in the fall of 2012.

The delay is largely due to the substantial amount of biomechanical data collected during the experiment and the efforts currently made to extract the most significant and relevant findings.

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<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
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<tr>
<td>Non-peer reviewed articles</td>
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</tr>
<tr>
<td>Conference presentations</td>
<td>2</td>
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<td>-</td>
</tr>
<tr>
<td>People reached through KT (estimate)</td>
<td>-</td>
<td>24</td>
<td>-</td>
</tr>
</tbody>
</table>
STASCIS: A multicentre prospective study of neurological recovery as a factor of time to decompression of cervical spinal cord injuries with spinal cord compression

**Status:** Completed in previous fiscal year (Jan 2011)

**Funder(s):** Health Canada

**Grant number(s):** 2008-16

**Purpose:**
A multi-centre clinical trial to examine the efficacy of early surgical decompression in patients less than 24 hours after injury relative to surgery 24 hours or more after injury.

**Planned results:**
This project was completed in fiscal year 2010-2011. However, publication of a paper in a peer-reviewed journal was expected in fiscal year 2011-2012.

**Results achieved in the fiscal year:**
The findings of the STASCIS study were published in PLoS One.

**New knowledge created:**
Individuals with a cervical spinal cord injury who have surgery within 24 hours have a higher likelihood (odd ratios 2.8) of showing a significant (2 or more grade change on the ASIA scale) neurological improvement than those individuals who have delayed intervention.

RHI is currently analyzing these results using its Access to Care and Timing model (see Access to Care and Timing, Strategy 1, above). When validated, this scenario should describe the effects of early surgery on a patient’s quality-adjusted life years, and on the costs to the healthcare system overall.

**In the news:**
“Spinal injury researchers urge quick surgery”, CBC, 24 February 2012

“Speedy surgery lessens chance of paralysis in cervical spinal cord injuries”, Toronto Star, 24 February 2012

“Surgery most effective within 24 hours of spinal injury”, CTV News, 24 February 2012.
The Graded and Redefined Assessment of Strength, Sensibility and Prehension (GRASSP)

**Status:** Ongoing until Dec 2012

**Funder(s):** Health Canada

**Grant number(s):** 2008-14, 2008-16

**Purpose:**
To support a multi-centre clinical trial that will ultimately bring to market a toolkit that will allow for outcomes with more sensitive measurement in future clinical trials.

**Planned results:**
Follow up data collection will continue until July 2012 with final reporting in December 2012.

**Results achieved in the fiscal year:**
Now that the cross-sectional study is completed, the project team is currently undertaking a longitudinal study to assess responsiveness, recovery profile, and minimal clinically important difference. The project is currently on track to be completed in December 2012 as planned.
STRATEGY 3
SUPPORTING THE DEVELOPMENT OF A BEST AND BRIGHTEST PROGRAM TO NURTURE NEW SCI RESEARCHERS.

**Best & Brightest Program**

**Status:** Ongoing until Mar 2013

**Funder(s):** Alberta, BC, Ontario

**Grant number(s):** 2010-87, 2012-16, 2012-21

**Purpose:**
To provide Mentor-Trainee awards to doctoral and post-doctoral students and young investigators to do research with well-established investigators.

**Results achieved in the fiscal year:**
RHI supported the Best & Brightest Program in three provinces (Alberta, BC and Ontario), which in fiscal year 2011-2012 supported several Mentor-Trainee awards to build capacity for doctoral and post-doctoral students and young investigators to do research with well-established investigators. Awards provided support for clinical trials, economic analyses, and other areas.
STRATEGY 4

COLLECTING AND ANALYZING DATA ON SCI IN CANADA, INCLUDING ACUTE, REHABILITATION AND COMMUNITY COMPONENTS AND SUPPORTING RESEARCH AND MULTI-CENTRE TRIALS, UTILIZING A WEB-BASED NATIONAL TECHNOLOGY PLATFORM AND COLLABORATING GLOBALLY WHERE APPROPRIATE

RHI Global Research Platform (RHI GRP)

**Status:** Ongoing

**Funder(s):** Health Canada, Western Economic Diversification

**Grant number(s):** N/A

**Purpose:**
To develop a state-of-the-art, web-based, data collection platform for spine-based research.

**Planned results:**
Deliverables for March 2012 include: improvements to the platform design for greater functionality for data collection; addition of reporting capabilities; and the development of a data warehouse that is optimized for reporting.

**Results achieved in the fiscal year:**
In 2011-2012, the RHI GRP platform was launched nationally for all RHSCIR sites.

Many improvements to the platform design are complete, including creation of a study builder module to enable easier import of studies and building of forms; increased flexibility with data entry forms design; addition of specific SCI-related data entry tools to streamline workflow and reduce errors. RHI GRP’s biggest study (RHSCIR) has driven some enhanced features and requirements, including improvement of data entry form capabilities (specifically for RHSCIR, but applicable to any new studies).

The addition of reporting capabilities was postponed due to prerequisite activities requiring greater effort than expected, such as legacy data cleaning and data migration. Development of a data warehouse was delayed for the same reason.

In future, RHI GRP is expected to provide the platform for a number of multi-centre studies, including CAMPER (Strategy 2, above) and Canadian Spine Society (Strategy 2, above).
<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>Engagement and support of RHIGRP by researchers</td>
<td># of studies that use the RHIGRP</td>
<td>1 study currently uses RHIGRP (the RHSCIR Study)</td>
</tr>
</tbody>
</table>
**RHSCIR Study**

**Status:** Ongoing

**Funder(s):** Alberta, BC, Health Canada, Ontario


**Purpose:** To create a national database of persons sustaining a SCI in Canada, containing demographics, injury details, diagnoses, procedures and patient outcomes. Individuals are enrolled at the time of injury and followed over their lifetime.

**Planned results:**
Deliverables for March 2012 are:

- Sustain sites
- Integration of DAD and NTR data into the RHSCIR dataset
- Three draft manuscripts based on national RHSCIR data
- Migrate Canadian sites to RHI GRP web platform
- Dataset update phase 1

**Results achieved in the fiscal year:**
As of November 2011 all RHSCIR sites are using GRP.

Integration of DAD and NTR data into the RHSCIR dataset is ongoing (approximately 40% completed). Success of this initiative depends on participation at each site. Data cleaning of the legacy data has been a long process and is mostly completed (delayed due to the need for greater attention to privacy issues). Date of final data migration expected to be April 30 2012. The dataset update is ongoing. Required consultations and edits have delayed project completion. A new target date of November 2012 has been set.
The planned three draft manuscripts have been expanded to eight, which are currently in varying degrees of revision/completion. Two national, peer-reviewed papers were produced for RHSCIR in 2011-2012.

All sites were monitored and trained on any study procedure deficiencies found. All sites have responded to the monitoring letters sent by RHI, and RHI is engaging in ongoing follow-up to ensure all deficiencies are addressed.

This fiscal year, sites have begun a process of reconciliation by comparing RHSCIR data with the hospital’s own patient records, to identify any potential patients missed. Such patients are then added to the RHSCIR registry. Approximately 60% of sites have begun this process. When completed, this process will ensure 100% of incidence of spinal cord injury at each site are captured.

**Awards won:**

Best poster award, *Classifying Neurological Impairment and Spinal Column Injuries: Does Administrative Coding Accurately Represent Clinical Diagnoses?*, NASS 2011

Best paper award, *Incidence and Impact of Acute Adverse Events in Patients with Traumatic SCI*, NASS 2011

**Training on the International Standards for the Neurological Classification of SCI (ISNCSCI):**

For more than five years, RHI has been building capacity within SCI care and treatment facilities across Canada in the assessment of SCI impairment. Recognizing the need in Canadian SCI sites for accurate, standard measures of SCI impairment, RHI has been providing training on the International Standards for the Neurological Classification of Spinal Cord Injury. Adherence to international standards will allow for more accurate diagnoses leading to better care, and greater consistency in outcome measurement across sites enabling research-ready data.

In fiscal year 2011-2012, there were nine such training sessions held in six locations across Canada (Edmonton, Halifax, Montreal, St. John’s, Calgary, London). Feedback from participants has been overwhelmingly positive: 100% of participants found the training helpful, and almost two-thirds (68%) expressed confidence in being able to perform the assessment and classify SCI per the international standards after the training.

**In the news:**

“The majority of patients with traumatic spinal cord injury have an adverse event in acute care”, *Spinal News International*, 17 November 2012
<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>Engagement and support of registry by key system actors such as hospitals, rehab centres, researchers, clinicians and people with SCI</td>
<td>Number of facilities participating in RHSCIR, by type Number of incremental individuals enrolled in RHSCIR Percentage of RHCsIr sites collaborating using “Sharepoint” software</td>
<td>0 new facilities (total 31) 646 new individuals enrolled (2,399 total) 100%</td>
</tr>
<tr>
<td>INT1</td>
<td>Increased access to SCI research and practices, and improved collection, management and use of evidence by all key system actors (INT1)</td>
<td>Percent of sites that have developed and implemented a plan to address compliance issues identified in RHI monitoring visits Level of completeness/quality of RHSCIR data</td>
<td>100% of sites have responded to the monitoring letters sent by RHI. RHI is engaging in ongoing follow-up to ensure all deficiencies are addressed. RHSCIR is estimated to have captured 50-60% of new incidences of SCI in Canada in fiscal year 2011-2012</td>
</tr>
</tbody>
</table>
STRATEGY 5

FACILITATING THE ADOPTION AND IMPLEMENTATION OF VALIDATED BEST PRACTICES AS IDENTIFIED BY THE TRANSLATIONAL RESEARCH PROGRAM AND THROUGH PROPERLY EVALUATED PUBLIC POLICY AND COMMUNITY-BASED PROGRAMS AIMED AT IMPROVING TREATMENT, CARE AND SUPPORT AND COMMUNICATING THESE BEST PRACTICES DIRECTLY TO CANADIANS WITH SCI

Accreditation Canada

Status: Ongoing

Funder(s): Health Canada

Grant number(s): None (contract)

Purpose:
To develop, in partnership with Accreditation Canada, a set of national standards and an accreditation program for spinal cord injury in Canada.

Planned results:
By Mar 2012, two sites will be identified for the pilot survey, and the draft standards and self-assessment will be completed. A survey of the pilot will be undertaken from March to June 2012.

Results achieved in the fiscal year:
The development of SCI standards was completed on schedule. Many sites have applied to participate in the standards pilot test, and four of these sites have been selected. Two educational webcasts were developed for the pilots. National consultation on the draft standards has received 38 reviews, which will help inform revision and finalization of the standards.
CMA Education Credits

Status: Ongoing until Oct 2012

Funder(s): Health Canada

Grant number(s): 2010-56

Purpose:
To implement best practices guidelines for clinical care related to spinal cord injury in a primary care setting.

Planned results:
The following deliverables will be achieved by the end of the upcoming fiscal year (i.e., by March 2012):

- The pilot test will be completed and the impact of the nuggets evaluated.
- SCI Actionable Nuggets© contents will be finalized
- Nugget promotional campaign will be implemented, including revised website and marketing materials.
- Nuggets content will be submitted for accreditation.
- Beginning in December 2011, nuggets will be distributed to CMA members.

Results achieved in the fiscal year:
There have been delays in this phase of the project, due to the need for a review of capacities of grant recipients, and an analysis of the optimal knowledge translation methodology to be used for this content and audience. This has been finalized and implementation will begin early in the fiscal year.

The pilot evaluation of the nuggets has completed, involving 49 physicians in three geographic areas (Ontario, Newfoundland, and Australia). SCI Actionable Nuggets© were sent to these physicians weekly for a 20-week period, with email prompts. The pilot sample rated the SCI Nuggets as excellent on a variety of important dimensions, such as

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Note: This project was previously titled “Action Nuggets”.

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<table>
<thead>
<tr>
<th>Facilities</th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
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<tbody>
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<tr>
<td>Team members</td>
<td>17</td>
<td>19</td>
</tr>
<tr>
<td>Research participants</td>
<td>-</td>
<td>49</td>
</tr>
<tr>
<td>People with SCI engaged</td>
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<td>86</td>
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<tr>
<td>Conference presentations</td>
<td>3</td>
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</tr>
<tr>
<td>People reached through KT (estimate)</td>
<td>-</td>
<td>169</td>
</tr>
</tbody>
</table>

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content, professionalism, relevance and scientific rigour. They also offered a number of comments that provided the necessary information for revision and improvement of the nuggets.

**New knowledge created:**
The evaluation of the pilot showed that: 1) knowledge of SCI health issues and complications improved from fair to very good; 2) Practices changed to include more comprehensive assessment, increased awareness of accessibility, improved referral patterns, better attention to prevention and health promotion for SCI patients.

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Validated approaches, practices and measures</td>
<td>Number of clinicians who received cards as part of the pilot, by location</td>
<td>49 physicians received nuggets, in Ontario, Newfoundland, and Australia.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Level of satisfaction among clinicians as to nugget contents</td>
<td>The physicians taking part in the pilot were highly satisfied with the nuggets, rating them as excellent on a variety of dimensions, such as content, professionalism, relevance and scientific rigour.</td>
</tr>
</tbody>
</table>
Evaluation of the Power in Me NB

**Status:** New, ongoing until Aug 2012

**Funder(s):** Health Canada

**Grant number(s):** 2011-34

**Purpose:**
To pilot a multi-media based education program, entitled “Discovering the Power in Me” to people with SCI and other mobility disabilities in New Brunswick.

**Planned results:**
Delivery of Discovering the Power in Me (DPM) seminars, in English and in French, throughout New Brunswick. Training of facilitators. Disseminated pre- and post-seminar surveys to participants.

**Results achieved in the fiscal year:**
To date, 15 DPM facilitators have been trained, and a total of 55 people have taken the DPM course. Nine DPM seminars were conducted in fiscal year 2011-2012.

**New knowledge created:**
According to the evaluation, the majority of respondents were satisfied with the seminar. The majority of participants indicated an improvement in locus of control (the extent to which a person believes they have control over their own lives), an improvement in self-efficacy (a person’s judgment in their own capabilities) and resiliency, self-confidence and self-esteem.

Furthermore, an application of the learning of DPM was evident after 5 months: more people enjoy their work, more people do volunteer work, and people on average feel they possess more employment skills.

<table>
<thead>
<tr>
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<tr>
<td>People with SCI engaged</td>
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<tr>
<td>Workshops</td>
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<tr>
<td>Courses</td>
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<tr>
<td>People reached through KT (estimate)</td>
<td>70</td>
<td>70</td>
<td>-</td>
</tr>
</tbody>
</table>
Feasibility of internet pressure ulcer clinic

**Status:** Ongoing until Dec 2012

**Funder(s):** Health Canada

**Grant number(s):** 2010-79

**Purpose:**
To investigate the feasibility of integrating several information technologies from practices associated with the clinical management and prevention of pressure ulcers in persons with SCI.

**Results achieved in the fiscal year:**
A service agreement with Telus Health Solutions has been completed to acquire the Telus Remote Patient Monitoring Software necessary for the project. Members of the interdisciplinary care team (MD, OT, PT, RD, and RN) and research team have been identified. There have been a number of preliminary discussions with SCI clinicians to develop a protocol for the research study. An online web-based assessment tool has been developed that can be utilized on a patient’s home PC. An online web based assessment tool is cost effective and feasible as a long-term solution.

Delays experienced in this project are due to obtaining regulatory approvals, which required a Privacy Impact Assessment, and in negotiating a contract with a suitable technology vendor to deliver services to the project so as to remain in compliance with the original overall budget request.
Get in Motion:
Physical activity counselling for Canadians living with SCI

**Status:** Ongoing until Dec 2012

**Funder(s):** Health Canada

**Grant number(s):** 2011-43

**Purpose:**
To provide a telephone-based information service entitled “Get in Motion”, which helps people with SCI start and maintain a physical activity regimen.

**Planned results:**
(1) Increase the number of clients using the Get in Motion Service, (2) Increase consumer involvement, and (3) Expand partnerships.

**Results achieved in the fiscal year:**
In fiscal year 2011-2012, 36 new consumers were enrolled in the Get in Motion service, for a total of 125 to date. The network of individuals with SCI fostered by Get in Motion has helped other RHI-supported projects. For instance, it has provided a new avenue for patient recruitment for the *Online Physical Activity and Nutritional Counselling project* (Strategy 7, below). It also has been a venue through which the Physical Activity Guidelines and Toolkit have been disseminated (*Physical Activity Guidelines*, Strategy 5, below).

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
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<tr>
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<td>Team members</td>
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<td>People with SCI engaged</td>
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<tr>
<td>People reached through KT (estimate)</td>
<td>36</td>
<td>159</td>
</tr>
</tbody>
</table>
Incorporation of physical activity into the rehabilitation process after SCI

**Status:** Ongoing until Oct 2012

**Funder(s):** Health Canada

**Grant number(s):** 2010-80

**Purpose:**
To develop a model to integrate physical activity to spinal cord injury rehabilitation programs.

**Results achieved in the fiscal year:**
There have been some delays in this project due to a number of factors, including site start-up at two of the sites, and patient recruitment. A total of 50 people have been enrolled in this study to date, in two sites (Hamilton and Vancouver). A third site, in Kingston, is awaiting ethics approval, and the fourth, in St. Catherine’s, has recently been added.

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
<th>Target for Oct 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Team members</td>
<td>-</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Research participants</td>
<td>30</td>
<td>50</td>
<td>60</td>
</tr>
<tr>
<td>Peer-reviewed articles</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

Knowledge Mobilization Network (KMN)

**Status:** Ongoing

**Funder(s):** Health Canada

**Grant number(s):** 2012-13, and contract

**Purpose:**
To develop a Knowledge Mobilization Network in the area of spinal cord injury best practices, with short-term focus on bladder management, pain and pressure ulcers.

**Planned results:**
The following deliverables will be achieved by the end of the upcoming fiscal year (March 2012):

- Priorities for pressure ulcer guidelines to be implemented through the network will
be identified, via a Delphi process;

- Six sites will be trained on the implementation process; and
- Three guidelines will be implemented.

**Results achieved in the fiscal year:**

All sites recruited a spectrum of participants for the Delphi process. All sites have recruited staff to implement the best practice initiatives, and developed implementation teams to support the staff.

A dedicated team at Parkwood Hospital (the Delphi Team/DT) with experience in consensus exercises, has been initiated that conducted a 6-Round Delphi process to obtain consensus about pressure ulcer best practice target identification and developed corresponding performance measures; developed and maintained a collaborative research platform and facilitated working groups for the consolidation of performance measures and operationalization of best practices.

Through its Delphi process, the SCI KMN decided on two non-negotiable best practices for implementation at all sites: risk assessment, and patient education. Performance measures have been identified, and are being translated to operational measures.

All sites have been trained and have participated in Exploration Stage Implementation Activities. All sites will have undergone a full implementation cycle (4 stages) by Q1, 2013.

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I8</td>
<td>Network capacity built for knowledge translation</td>
<td>Number of people who receive guidelines, by jurisdiction</td>
<td>27 team members</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of patients affected by the guidelines</td>
<td>N/A</td>
</tr>
</tbody>
</table>


Physical activity guidelines for adults with SCI

**Status:** Ongoing until Jan 2013

**Funder(s):** Health Canada

**Grant number(s):** 2010-51, 2011-43

**Purpose:**
To develop and implement physical activity guidelines and a guide for people with spinal cord injury.

**Planned results:**
The following deliverables will be achieved by the end of the upcoming fiscal year (March 2012):

- Get in motion telephone based support
- Website development support

**Results achieved in the fiscal year:**
Get in Motion telephone support has been provided (see Get in Motion project, Strategy 5, above).

The Get Fit Toolkit, a resource to help adults with SCI meet the physical activity guidelines, was finalized in Fall 2011. The Toolkit was uploaded to SCI Action Canada’s website.

The physical activity guidelines are being used to update the action nuggets developed as part of the CMA Education Credits project (Strategy 5, above), and will be used by the Knowledge Mobilization Network in building capacity on SCI at six sites across Canada (Strategy 5, above).

**In the news:**
“Guide helps people with spinal injuries get fit”, Hamilton Spectator, 12 November 2011

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Note: This project was previously titled “Physical Activity Guidelines for Canadians with SCI”.

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<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
<th>Target for Mar 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Team members</td>
<td>8</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Collaborated/Consulted</td>
<td>-</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Research participants</td>
<td>47</td>
<td>107</td>
<td>-</td>
</tr>
<tr>
<td>People with SCI engaged</td>
<td>3,359</td>
<td>3,375</td>
<td>-</td>
</tr>
<tr>
<td>Peer-reviewed articles</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Non-peer reviewed articles</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Standards/guidelines</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>1</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Invited talks</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Workshops</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>National meetings</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Mass media/social media campaigns</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>People reached through KT (estimate)</td>
<td>4,896</td>
<td>4,961</td>
<td>-</td>
</tr>
</tbody>
</table>
Rehabilitation E-Scan

**Status:** Ongoing until Oct 2012

**Funder(s):** Health Canada

**Grant number(s):** 2012-07

**Purpose:**
The Rehabilitation Environmental Scan (E-Scan) project is the first-ever national survey of Canadian SCI-related rehabilitation practice. The purpose of the E-Scan survey is to obtain a snapshot of current SCI rehabilitation service delivery, care providers and research capacity.

**Planned results:**
The inaugural product from the E-Scan project team is *The Rehabilitation Environmental Scan Atlas: Capturing Capacity in Canadian SCI Rehabilitation* practice. The Atlas will inform the future development of best practices for rehabilitation, identify gaps in services and highlight regional disparities in rehabilitative care. The E-Scan database will support future SCI initiatives, including best-practice modelling of rehabilitative resources, practices and outcomes. In addition to the 13 participating rehabilitation facilities, the project team engaged additional Canadian rehabilitation professionals to contribute to the Atlas. The atlas will be finalized and released to the public by March 2012.

**Results achieved in the fiscal year:**
There have been delays in completing the Atlas, since the project team engaged additional Canadian rehabilitation professionals to co-author and validate evidence, using a scoping review, to contribute to the Atlas. Engagement process and capacity were key barriers.

The data cleaning was completed in June 2011, and data analysis completed in January 2012. The atlas will be released in October 2012.

### Table: RHI Outcome

<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
</table>
| I8          | Network capacity built for knowledge translation | Number of media outlets that receive the Guidelines press release  
Number of hits on SCI Action Canada’s web pages related to the Guidelines | The guidelines were sent to a newswire rather than to individual media outlets.  
The Guidelines were viewed 26,000 times from people in over 80 countries. |
<table>
<thead>
<tr>
<th>RHI Outcome</th>
<th>Project Outcome</th>
<th>Indicator</th>
<th>Achieved FY 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I2</td>
<td>Engagement and support of key researchers, people with SCI and others</td>
<td>Number of stakeholders engaged, by type</td>
<td>1 new team member (7 total) 55 people reached through KT (involved in data collection, analysis and writing, and/or workshops)</td>
</tr>
</tbody>
</table>
SCI-U

Status: Completed Dec 2011

Funder(s): Health Canada

Grant number(s): 2010-77

Purpose:
To develop and evaluate a new approach to online patient education in SCI, branded “SCI-U”, which is comprised of five e-learning modules that are individualized, problem-based and accessible using the Internet.

Planned results:
Results from the evaluation will be used to make improvements to the SCI-U modules.

Results achieved in the fiscal year:
In addition to the three e-learning modules created in fiscal year 2010-2011, an additional two modules were developed in 2011-2012, relating to nutrition and skin care. The evaluation phase of the project has been completed.

New knowledge created:
Preliminary analysis of participant feedback indicated general effectiveness for the existing e-learning modules in terms of general satisfaction, usability, relevance of content and potential for self-management. In addition, participants provided constructive feedback for improving these and future eLearning modules. Increased post-module scores and one month post-module scores indicated participants had improved knowledge and content retention as compared to baseline. Qualitative feedback has been generally positive, both from study participants and those accessing modules through the spinalcordconnections.ca website.
Spinal Cord Injury Rehabilitation Evidence (SCIRe)

Status: Ongoing until Jun 2012

Funder(s): BC, Health Canada

Grant number(s): 2010-57, 2011-42

Purpose:
To develop a web-based synopsis and critical review of existing scientific literature on a broad range of topics in SCI rehabilitation.

Planned results:
Provide consistent and timely updates to the core foundational platform. Update the SCIRe Project in stages, with new topics developed in each chapter.

Develop an outcome measurement toolkit for clinicians working in SCI.

Results achieved in the fiscal year:
The SCIRe team is currently updating the platform to its fourth version, reviewing published articles of 2010-2011 inclusively. They are adding a systematic review section to the current chapters and are redesigning various sections of the website. The new updated version will be launched in May 2012.

The main objective of the outcome measures toolkit was to create an easy to use package, which could be implemented in practice settings to enhance the use of the most appropriate, validated measures in the evaluation of patients with SCI. The outcome measures toolkit was developed in partnership between researchers and clinicians to ensure relevance for practice. To facilitate the translation of this information into practice and implementation of the toolkit, an implementation guide was created and will be available online once the redesign of the outcome measure section is finalized.

Content from SCIRe has been critical to the development of many other RHI-supported

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
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<th>Target for Mar 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Team members</td>
<td>16</td>
<td>84</td>
<td>7</td>
</tr>
<tr>
<td>Research participants</td>
<td>-</td>
<td>110</td>
<td>-</td>
</tr>
<tr>
<td>People with SCI engaged</td>
<td>5</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Peer-reviewed articles</td>
<td>2</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Non-peer reviewed articles</td>
<td>-</td>
<td>31</td>
<td>-</td>
</tr>
<tr>
<td>Conference presentations</td>
<td>17</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>Abstracts</td>
<td>8</td>
<td>29</td>
<td>-</td>
</tr>
<tr>
<td>Workshops</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Website hits</td>
<td>98,521</td>
<td>393,521</td>
<td>-</td>
</tr>
<tr>
<td>Awards won</td>
<td>2</td>
<td>7</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: This project includes all RHI grants to the SCIRe project. In previous reports, RHI reported on each grant separately.
projects. For instance, data from SCIRE has been used to help develop the *Access to Care and Timing* simulation models (Strategy 1, above), and contributed towards the *FES study* (Strategy 1, above), and the development of SCI standards for the *Accreditation Canada* project (Strategy 5, above). The SCIRE team helped in the development of SCI best practices in primary care, as part of the *CMA Education Credits* project (Strategy 5, above), and was an important source of information for the Rehabilitation Atlas as part of the *Rehabilitation E-Scan* project (Strategy 5, above). SCIRE was also consulted in the development of the RHSCIR rehabilitation dataset (*RHSCIR Study*, Strategy 4, above).

**Changing clinical practice:**
SCIRE has been instrumental in changing practice in a number of ways. SCIRE was used at Vancouver General Hospital to inform the development of the hospital’s autonomic dysreflexia guidelines. The Alberta Health Services Board utilized SCIRE to determine whether best practices were being utilized in SCI rehabilitation, and to identify potential areas requiring improvement. The Royal College of Physicians and Surgeons of Canada utilizes SCIRE as required reading for physical medicine specialists. BC occupational therapy students utilize SCIRE case studies and educational modules as for a learning module on spinal cord injury. BC physical therapy students utilize the SCIRE outcome measure chapter as core learning material on standardized assessments.

**Awards won:**
Top Poster Award, *Un fractionated Heparin vs Low Molecular Weight Heparin as prophylaxis against venous thromboembolism post SCI: A Meta Analysis*.

The development of a sexual health rehabilitation online based education curriculum for health care professionals: Phase 1

**Status:** New, ongoing until Jun 2013

**Funder(s):** Health Canada

**Grant number(s):** 2012-24

**Purpose:**
To develop two 3-credit, online courses in sexual rehabilitation and fertility for registered nurses, undergraduate nursing students in the final year of their degree program, and allied health-care professionals such as physicians, medical students in the latter part of their degree program and occupational therapists and physiotherapists.

**Planned results:**
Course 1 completed, and evaluation of course content, by Mar 2012

**Results achieved in the fiscal year:**
The development of Course 1 was completed March 31, 2012 as planned (includes content creation and online platform). Enrolment is set to begin May 2012, with the course start date scheduled for September 2012.

This is the first time in Canada that Sexual Health Rehabilitation content and practice guidelines are being offered. This on-line education will be available to a range of health care disciplines, including those who work in the field of spinal cord injury. Therefore, we expect extensive knowledge translation and impact on current best practice across the province, nationally (and potentially internationally) once interdisciplinary students have completed the course and brought specific skills back into their respective practices.
STRATEGY 6

WORKING WITH RHI PARTNERS TO ENHANCE SERVICE DELIVERY THROUGH THE FULL IMPLEMENTATION OF THE SOLUTIONS MODEL (SOLUTIONS TEAM, NAVIGATORS)

Solutions Alliance / Solutions model

Status: Completed

Funder(s): Alberta, Health Canada, Ontario, Nova Scotia

Grant number(s): 2009-22, 2012-16, 2012-21

Purpose:
To fund coordinator positions for the SCI Solutions Alliance in Ontario, Alberta and Nova Scotia. In each province, the SCI Solutions Alliance is a collaborative network working toward optimal integration of health care and community service elements, eliminating duplication of services, identifying and addressing service gaps, and ensuring the needs of individuals with SCI are met efficiently and effectively.

Results achieved in the fiscal year:
The funds were used to fund coordinator positions that led to the creation of expert committees (SCI Solutions Alliance) that identify regional systemic issues, such as transportation and housing inaccessibility, and work toward regional solutions. Some areas report that the Solutions programs have helped raise local awareness of issues important to people with SCI.
STRATEGY 7
WORKING WITH RHI PARTNERS TO ENHANCE CAPACITY AND DEVELOP INITIATIVES THAT RESPOND TO THE PRIORITY NEEDS OF PEOPLE WITH SCI, UTILIZING COLLABORATIVE FUNDING MECHANISMS SUCH AS SCOTIABANK WHEELS IN MOTION (S-WIM), AND PROVINCIAL / TERRITORIAL 20TH ANNIVERSARY INVESTMENTS, ETC.

Provincial / Territorial initiatives

Status: Ongoing until Mar 2013

Funder(s): Alberta, BC, Manitoba, PEI, New Brunswick, Ontario, Nunavut


Purpose:
To support network building, collaboration and capacity building at the community level by supporting key activities of partner organizations in communities across Canada.

Results achieved in the fiscal year:
RHI partners with a number of organizations in each of the provinces and territories of Canada in support of its Community Partnerships objectives. These initiatives are of vital importance to RHI’s work for the following reasons:

- They help recruit researchers and clinicians into the national SCI network;
- They facilitate collaborations by accelerating provincial participation in RHI’s national projects (for example, Manitoba’s involvement in the online pressure ulcer clinic);
- Capacity building and researcher development initiatives (scholarships, fellowships, research coordinator positions, travel funds, grants to new researchers) help ensure skills exist to carry on SCI research in the future.

While each province is able to set their own priorities, they are encouraged to align their priorities with RHI’s national priorities, thereby maximizing opportunities for collaboration, leveraged funding, and research impact.

The following are a few examples of the results of the provincial and territorial initiatives in fiscal year 2011-2012:

- In BC, support provided to the Neil Squire Society enabled one-on-one computer
instruction, refurbished computers, and assistive technology equipment to clients. Support to ICORD contributed to their Annual Research Meeting and their Trainee Meeting.

- In New Brunswick, community-based rehabilitation counselling services were provided to 97 clients, including 35 new referrals, and a leadership team was formed to lead development of the New Brunswick SCI Registry.

- In Nunavut, individual and community grants provided essential equipment and services for Nunavut residents with mobility impairments. These grants provided adaptive computer equipment and software, hospital beds, bathlifts, ramps and other home renovations, attendant care, wheelchairs and other mobility devices.

Online physical activity nutritional counselling demonstration project

**Status:** Completed

**Funder(s):** Private donation

**Grant number(s):** 2011-06

**Purpose:**
To offer online physical activity and nutritional classes and counselling service for persons with SCI with a primary objective of assessing the feasibility of Internet-based (i.e., videoconferencing) physical activity service delivery.

**Planned results:**
Project completion by March 2012.

**Results achieved in the fiscal year:**
Multiple program delivery models were evaluated and ooVoo, a consumer-accessible web videoconferencing product, was determined as the best (in terms of user experience and ease of use) for physical activity instruction online.

Partnership with the Get in Motion project (Strategy 5, above) has allowed for a unique avenue of participant recruitment and has resulted in the provision of the program’s physical activity packages to study participants.
Wheels in Motion

**Status:** Completed

**Funder(s):** Private donation

**Grant number(s):** Various

**Purpose:**
To support individuals with SCI and their communities by awarding grants for targeted, small-scale projects to help improve their quality of life and better integrate into their communities.

**Results achieved in the fiscal year:**
In FY 2011-2012, RHI disbursed 58 community grants and 31 individual grants worth a total of $890,417.

These grants have been largely successful. In feedback provided in fiscal year 2011-2012 on these grants, 81% of grant recipients rated the project a success (i.e., rating it at least 3 out of 5). 81% of recipients also said the grant improved their health (i.e., rating the grant 4 out of 4 on the impact on their health) and 86% said it influenced their self-care (i.e., rating the grant 4 out of 4 on self-care).

<table>
<thead>
<tr>
<th></th>
<th>New in FY 2011-2012</th>
<th>Total to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities</td>
<td>34</td>
<td>68</td>
</tr>
<tr>
<td>People with SCI engaged</td>
<td>317</td>
<td>1,317</td>
</tr>
</tbody>
</table>