



CONCENTRIC

Spinal Cord Injury
ANNUAL
EDUCATION
DAY
2022



REPORT

**CONnecting and Coordinating an Enhanced Network for
TRansitions In Care:
A New Model for Spinal Cord Injury Care in Alberta**



www.concentricproject.com

Content

- 01 Introduction
- 02 Event Summary
- 03 Session Topics
- 04 Participants
- 05 Administration
- 06 Poster
- 07 Certificate of Attendance
- 08 Evaluation
- 09 Sponsors
- 10 SCI Topics
- 11 Concentric at a glance
- 12 Conclusion



Introduction

The CONCENTRIC project team hosted the first SCI Annual Education Day which was held virtually on March 17 2022 with the support of colleagues from The Universities of Alberta and Calgary, Foothills Medical Centre, Glenrose Rehabilitation Hospital and AHS operational leaders. With the virtual Education Day, the team hoped to contribute to improved knowledge of SCI-related issues, care and innovation and to create opportunity for SCI stakeholders to develop relationships with one another.

The need to improve SCI-relevant knowledge and improve stakeholder collaborations is cogent to achieving successful transitions in care for persons with SCI across the care spectrum and in the community. Failure in this regard leads to an array of unwanted outcomes that ultimately threatens the potential for persons with SCI to experience a meaningful life when back in the community.

The central question for the Education Day was how to manage different SCI manifestations using evidence-based and best practice methods. Focus was placed on the 5 most rated topics derived from a survey sent to over 100 SCI stakeholders in November 2021.

From the presentations at the Education Day, we now know that; providing prognostication for persons with new SCI is strategic to having an effective and quick rehab plan; quick rehab plan is critical to conversion to a different ASIA category in the early days of sustaining a SCI; 80% of persons with SCI are at increased risk of experiencing psychological conditions in comparison to people without it; it is important to aid persons with SCI in challenging cognitive distortions associated with their injury; the shoulder should be assessed holistically to identify patterns that causes overuse problems; focus should be extended beyond tissues that cause shoulder pain to include the faulty movement strategies that account for it as well; avoid limiting focus on the intensity of pain alone and include functional and psychological impact of pain as well; persons with SCI are at risk of chronic hypotension; a stable blood pressure is important for conversion rate and the ability of persons with SCI to do more in rehab.

In sum, the CONCENTRIC project team was pleased to host the Education Day. We thank all those who participated for their contributions to the success of the event.

Concentric Project Team



Event Name

SCI Annual Education Day 2022

Event Date & Time

March 17 2022, 1pm to 4pm

Event Venue

Virtual using Zoom videoconferencing platform

Number of Registrants [excluding duplicates]

216

Number of Attendees [using Zoom log-ins]

265

Event Overview

The first SCI Annual Education Day was held virtually on 17 March 2022. The event is an outcome of knowledge translation activities planned within the CONCENTRIC project – a CIHR funded project with core team members across University of Alberta, University of Calgary, Alberta Health Services, Foothills Medical Centre and Glenrose Rehabilitation Hospital.

This year's event focused on 5 topics selected from a list of 28 grouped topics. For three hours, care professionals made presentations to increase learning on health challenges and best practices relevant to the care of persons with SCI. The presentations ran for 25 to 30 minutes with additional 10 minutes of questions that were read out at the end of each session.

The goal for the 1-day Education Day was two-fold:

1. To build knowledge relevant to improving the care of persons with SCI
2. To facilitate the development of a community of practice among persons with SCI, provincial SCI clinicians and community partners

The event attracted 216 registrations, 138 google invites and 265 Zoom account log-ins [maximum of 183 and minimum of 111 log-ins recorded per time]. Attendees included persons with SCI lived experience, caregivers, community partners, healthcare providers, researchers, healthcare leaders/decision makers within (95%) and outside (5%) the province of Alberta with the majority located in the Calgary Zone (59%).

Event Format

The 1-Day event comprised of 5 sessions, with mostly 1 speaker per session except for one that was a 2-speaker session [a physician with lived SCI experience and an expert in SCI-relevant novel therapies]. Two sessions ran for 25 minutes each and three for 20 minutes each. Ten minutes was set aside at the end of each session to address questions. Participants used the chat box to put forward questions which were collated, grouped and read out by the master of ceremony.

Event Summary



Each session at the SCI Education day focused on one of the top 5 highly rated topics by SCI Stakeholders. The sessions and speakers are;

- ➔ Prognosis after SCI – Chester Ho, MD
- ➔ Mental Health & SCI – Marc Ross, PhD
- ➔ Common Shoulder Injuries – Mary McEwen, PT
- ➔ Neuropathic Pain following SCI – David J. Allison, Ph.D
- ➔ Neurorecovery/Neuromodulation – Richdeep Gill, MD PhD + Aaron Phillips, PhD

Summary of the content and lessons learnt from the sessions are as follow;

Prognosis after SCI – Chester Ho, MD

From the session, participants learnt about what prognostication is and why neurologic evaluations are important after sustaining SCI. The speaker elaborated on the components of ISNSCI [ASIA classification] and presented a sample of the ISNSCI scale and worksheet. Presenting an example and what the evidence suggests regarding newly injured individuals converting to a different ASIA classification, emphasis was placed on the different times ISNSCI is conducted and recommendations were provided. Participants were made aware of what can be predicted from the ISNSCI examination and its usefulness for sensory and motor function and in rehab and discharge planning. At the end of the session, a larger proportion of participants (64%) acknowledged that it was their role to provide prognostication to individuals with new traumatic SCI in comparison to 27% who did so at the start of the session.

Mental Health & SCI – Marc Ross, PhD

At this session, participants were presented different potential mental health problems that persons with SCI may experience and reminded that they may affect others such as their spouses or families, as well. The speaker highlighted that persons with SCI were at 80% increased risk to experience psychological conditions in comparison to people without it. The need to develop social and psychological support and access available tools was emphasized. Among the over 400+ approaches to psychotherapy, the speaker centred his discussion on cognitive behavioural therapy (CBT) and provided a quick summary of several potential cognitive distortions or thinking traps that individuals are prone to. This was followed by discussion on how to overcome them and a reminder that CBT was not positive thinking but about questioning assumptions that underpin thinking distortions. The goal of CBT was said to be aimed at reorienting our thinking and existing apps [e.g. moodnotes for ipone, mindshift for android], books, courses [see <https://thiswayup.org.au/>], and therapist that aid challenging cognitive distortions were expressed to exist.



Common Shoulder Injuries – Mary McEwen, PT

This session highlighted the strategic importance of the shoulder and identified shoulder pain as the most frequent secondary complaint of people following SCI and as more prevalent among women. Using the image of the shoulder complex which reflected a total of 3 bones and 4 joints, the speaker emphasized that the shoulder is more than the ball and socket joint and thus requires looking beyond the glenohumeral joint when assessing and writing assessment regarding the shoulder. She went further to highlight questions to ask and things to observe before starting and during physical assessment. Care providers were asked to watch for patterns of restriction, fatigue, what is happening, how it is happening, and ways persons with SCI are compensating for given actions/movement. They were advised to look beyond treating symptoms to address causes such as faulty movement strategies and reminded that there is “no good exercise but only the right exercise for the right patient”. This, the speaker expressed, called for the need to be picky about choice of treatment, avoiding giving too much, and keeping treatment specific and functional. For persons with SCI, the speaker recommended spending time in various positions while at the acute phase, identifying and utilizing a neutral sleeping position and to pursue general fitness which helps both pain and shoulder health. All participants were advised to avoid learning or teaching a right technique the wrong way as its hard to unlearn a technique than it is to learn it right the first time.

Neuropathic Pain following SCI – David J. Allison, Ph.D

This session focused on a formal guideline for neuropathic pain. The session addressed why the guideline was created, how, key recommendations, how to use it, who to use it, when and how regularly to perform reassessment. Care providers were advised to look for any red flag conditions [i.e. any serious underlying conditions that can aggravate or mimic neuropathic pain] and yellow flag ones [e.g. psychosocial factors like depression and anxiety tied to neuropathic pain that can contribute to distress and disability] when diagnosing and prescreening for neuropathic pain. The speaker stressed that while the goal was to have a standardized guidance on how to manage neuropathic pain after SCI, there is still the need for a degree of subjectivity regarding options to consider in choosing which treatments to recommend based on factors such as patient preference, clinician experience, and accessibility to different treatment options. In concluding the session, four recommendations were put forward; a. don't focus only on pain intensity but also on functional and psychological impact of pain as well b. take a team approach c. consider alternate communication methods when distance is a barrier d. recognize when best to discharge patient from hospital [stable plateau and maximal gains achieved].



Neurorecovery/Neuromodulation – Richdeep Gill, MD PhD + Aaron Phillips, PhD

The session started with the first speaker with lived experience of SCI providing insight into his experience on neuromodulation, specifically epidural stimulation [ES]. The speaker highlighted how it had helped to regulate blood pressure and spasm, to be more efficient and functional, not sleeping too much, address fatigue, fogginess and improved Quality of Life. ES is said to help stimulate nerves that you are not normally able to – hence helps maintain bone health, reduce pressure sores, and do more in rehab than would have otherwise been. In his concluding talk, he stressed however that ES currently doesn't help with significant functional recovery but hope its later versions will be able to do so one day.

The second speaker, who focused on the cardiovascular system (hemodynamics), started off by enlightening the audience on the science of neuromodulation. He spoke on how SCI disrupt the signal that goes to the brain to maintain blood pressure and the effect of unstable blood pressure on consciousness, performing daily tasks and conversion rate. He further pointed out the lack of effective therapies for chronic hypotension, and lack of awareness of the condition. From his presentation, participants learnt about the hemodynamic hotspots that offer powerful sites of blood pressure control [important locations in the spinal cord, precisely the lower thoracic spinal cord segments T11, T12 and T13]. The participants were made aware of how safe it was to use ES for SCI and ongoing clinical trial. In response to a question asked after the presentation, the speaker highlighted that in addition to its effect on blood pressure, ES also instigate some voluntary movements as it likewise affects thoracic muscles which gives people more control over their torso.

Session Topics



Participants

Registration and Attendance

Registration was free and open to the entire public, including persons with SCI, their caregivers, students, care providers, and community organizations. In total, 216 people (excluding duplicates) registered for the event. However, attendance at the event was not limited to only registered individuals. The Zoom invite for the event was made publicly accessible via the Event page created on the CONCENTRIC's website. The invite could also be forwarded directly by anyone who already had it. This led to participants at the event comprising of both registered and non-registered attendees.

For those who registered, individuals identifying as Occupational Therapists and Nurses were the largest group that registered for the event [See Table 1].

Table 1: Top 10 Occupations of registrants for the SCI Annual Education Day 2022

Occupation	Number Registered
OT	50
Nurse	45
Physiotherapist	39
Therapy Assistant	10
Social Worker	9
AHS Leader/Clinical Leader	8
Clinical Nurse Educator	6
Psychologist	5
Respiratory Therapist	4
Retired	4

Zoom log-on report revealed that a total of 265 unique accounts logged on to the event. Breakdown of number of participants that logged on to Zoom per time during the 3-hour event (Fig. 1) show a maximum of 183 log-ins was achieved.

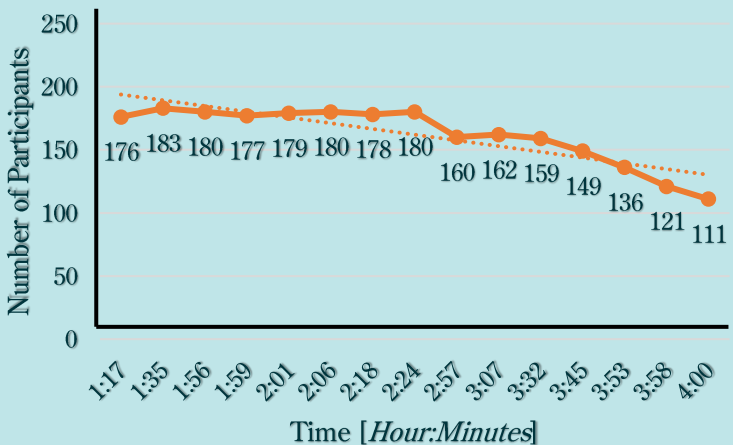


Figure 1: Zoom log-on tracking across time at SCI Annual Education Day 2022



Participants

Prior to the event, the Education Committee were intimated that some units at Foothills Medical Centre would provide a space for their staff to collectively watch the event. This implied that the number of individuals attending the event would be more than the number of recorded Zoom log-ins.

Poll taken at the start of the event [during the first session] to obtain a breakdown based on location of participants and the stakeholder group they identify with the most reveal that most participants were from the Calgary Zone (59%), within Alberta (95%) (Fig 2) and were care providers (77%) (Fig 3). A total of 100 and 106 participants attempted the question on location and stakeholder group respectively.

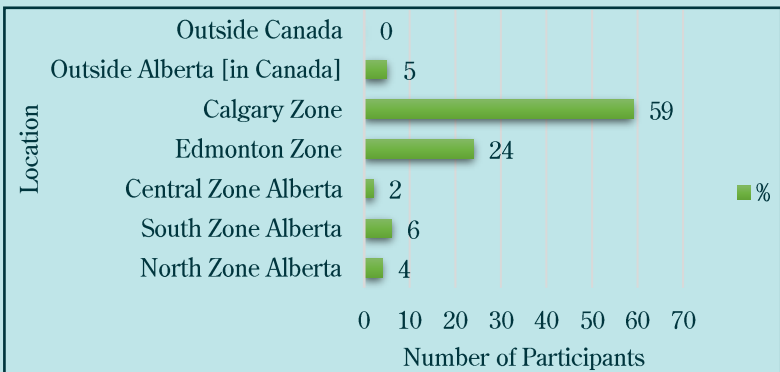


Figure 2: Number of participants based on location

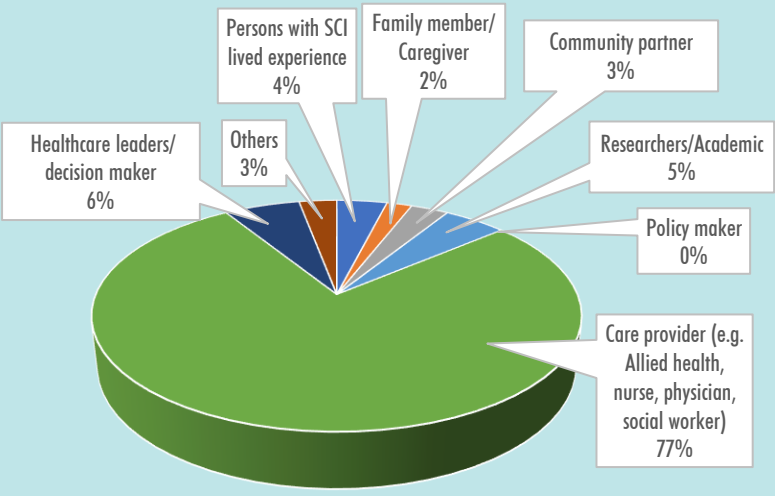


Figure 3: Breakdown of participants by stakeholder group



Event Organising Committee

The event was planned by a team of 13 SCI stakeholders led by Dr. Rebecca Charbonneau. The team comprised of individuals from the Edmonton and Calgary Zone. Two members from the team (Kasey Aiello & Dawn Miller) directed the sessions at the event as masters of ceremony.

Rebecca Charbonneau
University of Calgary; Foothills Medical Center, Calgary

Andrew Kwok
Glenrose Rehabilitation Hospital, Edmonton

Brandice Lorch
Spinal Cord Injury Alberta (SCI-AB), Calgary

Dawn Miller
Foothills Medical Center, Calgary

Dean Tumibay
Glenrose Rehabilitation Hospital, Edmonton

Hardeep Kainth
University of Alberta, Edmonton; Glenrose Rehabilitation Hospital, Edmonton

Julie Reader
Foothills Medical Center, Calgary

Kasey Aiello
Foothills Medical Center, Calgary

Marcy Cwiklewich
Glenrose Rehabilitation Hospital, Edmonton

Mary McEwen
Foothills Medical Center, Calgary

Michelle Wallace
Glenrose Rehabilitation Hospital, Edmonton

Olaleye Olayinka
University of Alberta, Edmonton

Raj Parmar
Foothills Medical Center, Calgary

Tanya McFaul
Foothills Medical Center, Calgary

Website

A separate page was created for the SCI Education Day on the [CONCENTRIC project's website](#). The web page was the major portal for information on the event and included three sections with appropriate links; [Event details](#) with link for [event schedule](#) (poster & agenda) and [program book](#), [Event archives](#) for [session recordings](#) and [slides](#) and [Event evaluation](#) for [survey](#) to evaluate the event. A [program book](#) was developed for the event and hosted using the Heyzine platform. Also, the [audio-visual recordings](#) for each session were hosted and made available to the public via the [CONCENTRIC project's YouTube Channel](#).



Marketing & Promotion

The event was primarily advertised on the CONCENTRIC project's website and via other channels such as ReYu Paralysis Recovery Centre, Spinal Cord Injury Alberta, AHS leadership, Alberta College of Social Workers, and Neurosciences, Rehabilitation & Vision Strategic Clinical Network. An event poster [Fig. 4] was created and shared as needed. Registration was managed using the Eventbrite platform and Google invite (with the event poster and Zoom details attached) was provided and made shareable to reach a broader audience.

The event was also used as a platform to bring to the attention of attendees other relevant SCI projects, initiatives or resources. These included;

- ⇒ Public review of Health Standards Organization's Integrated People-Centred Spinal Cord Injury Rehabilitation Program standard. [Click here to review or participate.](#)
- ⇒ Work currently been completed on Standardization of Nursing and Allied Health Care for Patients with Spinal Cord Injury in Alberta Hospitals. For questions regarding the initiative or to get involved contact: NeuroRehabVision.SCN@ahs.ca
- ⇒ [The Spinal Cord Injury Strategy for Alberta](#)
- ⇒ NRV SCN Initiative: [Care for Patients with Spinal Cord Injury in Hospital](#)
- ⇒ [Download printable AD pocket card](#)

Event Recordings

The event was streamed and recorded using the Zoom video conferencing platform. The session recording was divided into the five main sessions for the event and made accessible via the [CONCENTRIC project's YouTube website](#). Four of the speakers made a copy of their PowerPoint slides available to the organizing committee before the event. Based on response to the request sent out to speakers regarding making their slides accessible to the general public, the materials were made available via the [CONCENTRIC project's website](#).

Certificate of Attendance

At the end of the event, a certificate of attendance [Fig. 5] was provided to attendees based on request.

Costs

Honorarium - Amazon gift card [Total of \$125 at \$25 each] was given out to each speaker [with the exclusion of Dr. Chester Ho] in appreciation for honouring the invitation and presenting at the SCI Annual Education Day.

Program book - 1 year subscription for electronic flipbook service [Heyzine] - \$64



Poster



CONCENTRIC

presents

Spinal Cord Injury

**ANNUAL
EDUCATION**

**DAY
2022**



JOIN US

REGISTER

for Zoom link

SCAN



VISIT

www.concentricproject.com/events

**THURSDAY, MARCH
17 - 2022**

1:00 – 4:00 PM

The Education Day will create an opportunity to improve, confirm and further entrench knowledge about spinal cord injury (SCI) care.

The 5 topics chosen for the event are the most rated topics out of a total of 25 from a survey sent out to over 100 SCI stakeholders in November 2021.

The event will be an opportunity to also identify and network with other individuals engaged in care of persons with SCI.

DISCUSSION TOPICS

Prognosis after SCI

Mental health & SCI

Common Shoulder Injuries

Neuropathic pain following SCI

Neurorecovery/Neuromodulation



www.concentricproject.com



587-501-6092

Figure 4: SCI Annual Education Day 2022 Poster





CONCENTRIC

RECORD OF ATTENDANCE

IS HEREBY GRANTED TO

SCI STUDY

who participated in the following event:

SCI ANNUAL EDUCATION DAY 2022
[VIRTUAL EVENT]

March 17 2022
1:00 PM – 4:00 PM

CONnecting and Coordinating an Enhanced Network for TRansitions In Care (CONCENTRIC):
A New Model for Spinal Cord Injury Care in Alberta

Certificate

Figure 5: SCI Annual Education Day 2022 Certificate of Attendance



SCI Annual Education Day 2022 Evaluation Survey

Prior to and at the end of the session, participants were provided a link to the survey for evaluating the event. A total of 40 participants filled the survey and all acknowledged that the event met their expectations. Some other details from the survey are provided below;

➔ Which parts of the event were you able to attend (Tick all that apply)

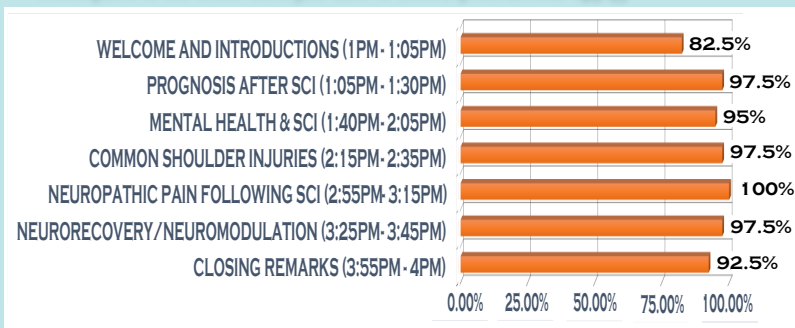


Figure 6: Evaluation Survey Question 1

➔ How helpful were the topics presented

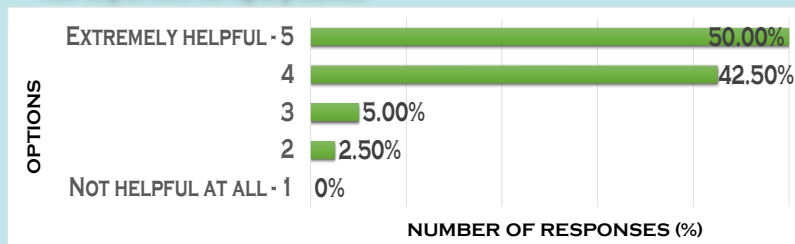


Figure 7: Evaluation Survey Question 3

*Scale - 1 to 5 with 1 indicating "Not helpful at all" and 5 indicating "Extremely helpful"

➔ Are you likely to participate in the next SCI Annual Education Day

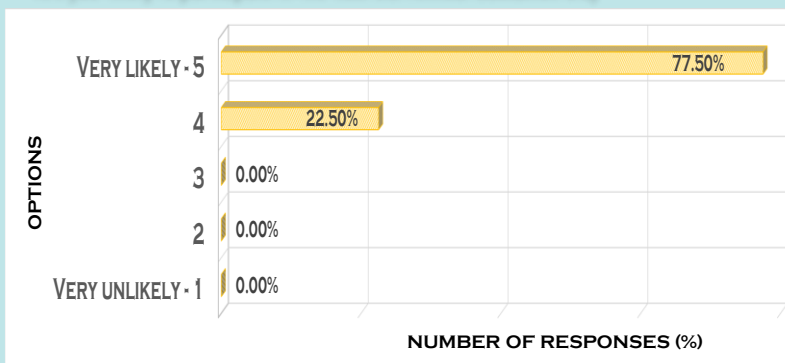


Figure 8: Evaluation Survey Question 4

*Scale - 1 to 5 with 1 indicating "Very Unlikely" and 5 indicating "Very Likely"



What would you like to change or improve for next time?

- ▶ Making sure all presentations use common language/breakdown complex topics so the general audience can understand.
- ▶ Longer time for each presentation. They felt quite rushed and many of them felt like longer presentations compressed to accommodate the time.
- ▶ More time - all day education!
- ▶ Prefer virtual as it is efficient and allows more clinicians to attend. Maybe less topics to allow for more Q and A
- ▶ Back to in-person, more engagement with the group
- ▶ I had to hunt a bit for the source information referred to in the presentations. It took little time though, and it extended the experience of the day in a positive way. Perhaps, when articles are referenced, the links can be more readily placed in the chat box.
- ▶ Inclusion of a small take home message
- ▶ More time for shoulder injury info and treatment application. Practical experience if possible.
- ▶ More practical and immediately useable knowledge and tools, lived SCI experiences
- ▶ Sessions tailored more to treatment of complications after SCI. Practical information we can put into everyday practice.
- ▶ More time for participants to chat about topics

What topic(s) would you like to see covered in the next SCI Annual Education Day

- ▶ It would be cool to have a panel discussion with people to share their lived experiences: re: return to work, sex after injury, relationship changes, etc.
- ▶ Any updates in research from the year since the previous education day
- ▶ Using natural remedies for SCI complications instead of medications.
- ▶ ...more practical information to put into daily practice
- ▶ What do non-clinical social workers do that makes a difference beyond filling out forms?
- ▶ Functional Electrical Stimulation in SCI, wheelchairs/seating





Acknowledgement

Sponsors & Partners



Canadian Institutes
of Health Research

Instituts de recherche
en santé du Canada



**UNIVERSITY
OF ALBERTA**

SCI Research Chair



**Alberta Health
Services**



University of Alberta,
Faculty of Medicine & Dentistry



University of Calgary,
Department of Clinical Neurosciences



Spinal Cord Injury Alberta
Lésions Médullaires Alberta

Friends
OF GLENROSE



PRAXIS

Spinal Cord Institute
Institut de la moelle épinière



**THE ALBERTA
PARAPLEGIC
FOUNDATION**



University of Calgary, W21C

Potential SCI Topics

Identified topics covered in Professional Needs Assessment Survey sent out in 2021

Essential topics

<input type="checkbox"/>	Autonomic dysreflexia
<input type="checkbox"/>	Bladder management
<input type="checkbox"/>	Bowel management
<input type="checkbox"/>	Pressure injury prevention and management
<input type="checkbox"/>	Deep vein thromboembolism (DVT) and PE prevention/management
<input checked="" type="checkbox"/>	Mental health issues
<input checked="" type="checkbox"/>	Expected functional outcomes/prognostication/ISNCSCI
<input type="checkbox"/>	Spasticity

Additional SCI topics

<input type="checkbox"/>	Wheelchair seating
<input type="checkbox"/>	Research update
<input type="checkbox"/>	Existing clinical practice guidelines
<input type="checkbox"/>	Respiratory management and Sleep apnea
<input checked="" type="checkbox"/>	Pain management
<input type="checkbox"/>	Sexual health
<input type="checkbox"/>	Bone health, osteoporosis
<input type="checkbox"/>	Physical fitness
<input checked="" type="checkbox"/>	Neuro-recovery therapies and research
<input checked="" type="checkbox"/>	Neuro-modulation, e.g. functional electrical stimulation (FES) cycling, diaphragm pacing, spinal cord stimulators
<input type="checkbox"/>	Robotics, gait training
<input checked="" type="checkbox"/>	Overuse injuries, e.g. shoulder pain/rotator cuff impingement, Limb preservation and posture
<input type="checkbox"/>	Preventive care after SCI including age appropriate screening and barriers to screening
<input type="checkbox"/>	Aging after SCI
<input type="checkbox"/>	Vocational rehabilitation
<input type="checkbox"/>	Environmental control, Home modification
<input type="checkbox"/>	Heterotopic ossification
<input type="checkbox"/>	Nutrition, dietary and weight management
<input type="checkbox"/>	Transition in care from rehab to home
<input type="checkbox"/>	Overview of additional medical complications, e.g. syringomyelia, pneumonia, metabolic complications, thermoregulation, orthostatic hypotension

* Topics chosen for the Education Day



Concentric

Concentric at a Glance

Stage
01

Situation
Analysis



Situation Analysis:

- ➔ To understand the TiC experience of persons with SCI, &
- ➔ Identify stakeholders involved

Stage
02

SCI
Transitions
Model
Design



Model Development:

- ➔ To build partnership with SCI stakeholders and co-develop CONCENTRIC model

Stage
03

Implementation
& Evaluation
of SCI Transitions
Model



Model Implementation & Evaluation

- ➔ To implement and evaluate impact of CONCENTRIC model

For more, click links below;



www.concentricproject.com



[YouTube Channel](#)



Conclusion

The event was a successful one and this is due to the role played by the Education Committee led by Dr. Rebecca Charbonneau, the MCs, Kasey Aiello and Dawn Miller, speakers and participants that attended the event.

We look forward to having the next SCI Education Day 2023 whose date is yet to be determined/confirmed.

Conclusion



SCI Annual Education Day 2022 Report



www.concentricproject.com