

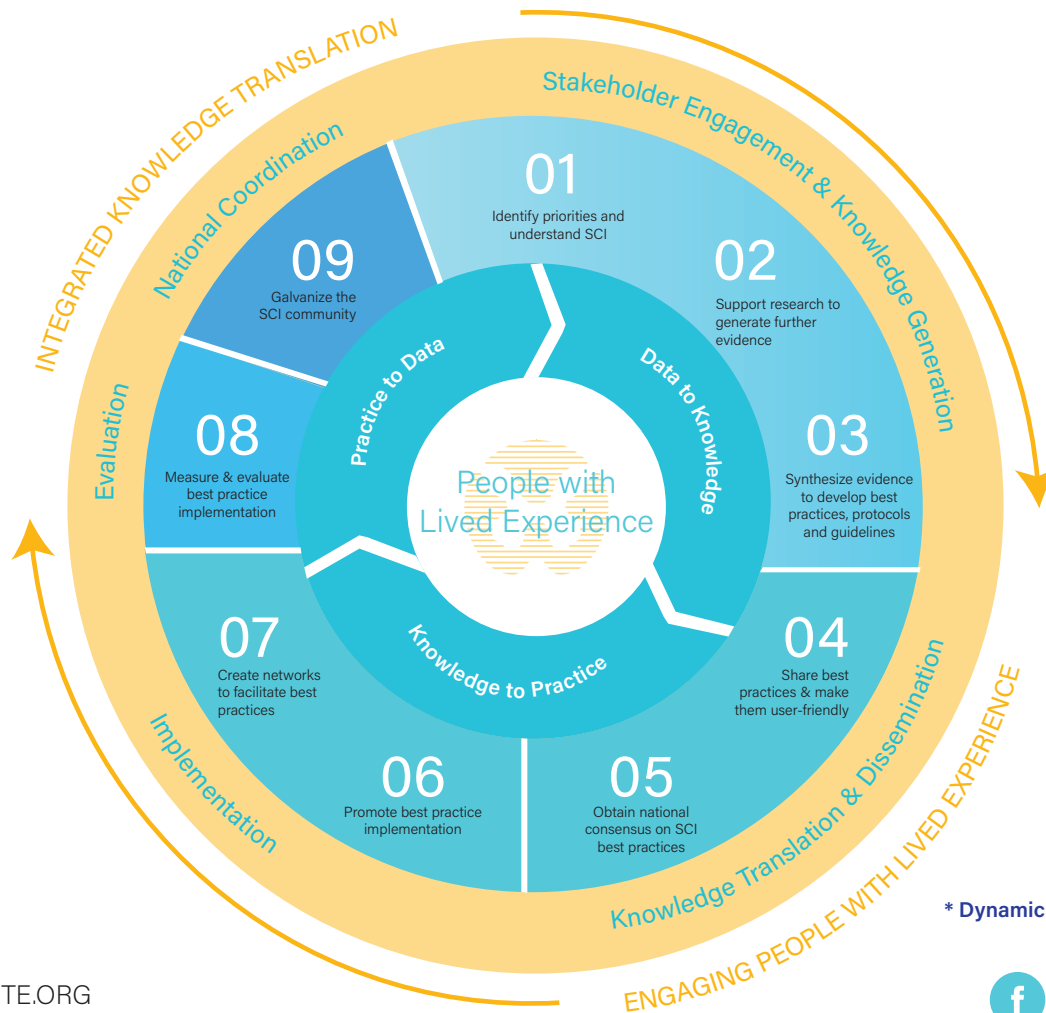
Achieving Evidence-Informed Equitable Care

Applying a learning health systems approach to change the future of spinal cord injury care

Praxis Spinal Cord Institute works with a diverse range of partners on multi-disciplinary projects and initiatives to help improve access and quality of spinal cord injury (SCI) care.

We engage people with lived experience in our research and best practice implementation initiatives using **Integrated Knowledge Translation** (IKT) throughout the research cycle. Through this people-centred lens, we then apply it to a learning health system approach (data to knowledge to prac-

tice) to achieve evidence-informed, equitable, and optimal care. The approach starts with **stakeholder engagement and knowledge generation** (1-3), followed by **knowledge translation and dissemination** (4-5) **implementation** (6-7), **evaluation** (8), and **national coordination** (9).



* Dynamic text-web-based links



Each step in the data to knowledge to practice cycle¹ guides Praxis activities. Here are some initiatives Praxis and our partners are working on:

STAKEHOLDER ENGAGEMENT & KNOWLEDGE GENERATION

01 Identify priorities and understand the changing epidemiology of SCI

Engaging with SCI stakeholders and using data from the **Rick Hansen SCI Registry** (RHSCIR) and other sources, Praxis is updating the **epidemiology and economic burden** of SCI and identifying opportunities for impact.

02 Support research to generate further evidence to improve diagnosis of and promising treatments for SCI

Research priorities identified by our stakeholders include SCI biomarkers, activity-based therapy (ABT) and spinal cord stimulation. To improve diagnosis of SCI, Praxis supports projects examining **SCI biomarkers** including neurochemicals in the cerebrospinal fluid and blood, microbiome, and imaging. Praxis also supports the **International SCI Biobank** which provides biospecimens to the SCI community.

Promising treatments supported by Praxis includes a multi-centre study on hemodynamic management (**CASPER**) which will inform how to protect the spinal cord following injury, and studies on **ABT** and **spinal cord stimulation** to maximize neuro-recovery. These therapies will pave the way for new best practices in care.

03 Synthesize evidence to develop best practices, protocols and guidelines

Praxis supports **SCIRE**, which contains syntheses of the SCI evidence, and the development of evidence-based **Clinical Practice Guidelines** (CPGs).

Praxis supports the **Canadian SCI Practice Guideline** (Can-SCIP), which is the first comprehensive living guideline for SCI informed by existing SCI CPGs. Can-SCIP is considered the best available evidence to inform SCI care from pre-hospital phase to community care in Canada.

New CPGs are being developed on acute topics such as hemodynamic management and timing of surgery.

KNOWLEDGE TRANSLATION & DISSEMINATION

04 Share best practices & make them user-friendly

Working with SCI stakeholders, Praxis is creating **toolkits** (e.g. **Standing & Walking Assessment Toolkit**), algorithms (e.g. **ISNCSCI Algorithm**, **Can-SCIP app** for clinicians to find relevant CPGs) and hosting webinars (referred to as **Learning Circles**) to share best practices. Praxis is **supporting projects** to identify best practices on essential health services (e.g. equipment, homecare, medical supplies) to facilitate access and promote equity as well as self-management resources.

¹ Friedman C, Rubin J, Brown J, et al. Toward a science of learning systems: a research agenda for the high-functioning Learning Health System. *J Am Med Inform Assoc.* 2015;22(1):43-50. doi:10.1136/amiajnl-2014-002977



05 Obtain national consensus on best practices for SCI

Previously, Praxis supported the **SCI HIGH** project which obtained consensus on 11 rehabilitation domains, which are now being implemented by the **SCI Implementation & Evaluation Quality Care Consortium** (SCI-IEQCC).

IMPLEMENTATION

06 Promote best practice implementation in healthcare facilities

In **partnership** with the Health Standards Organization and Accreditation Canada, Praxis is supporting the implementation of the Acute and Rehabilitation SCI Standards in Canada. Praxis is also working with SCI stakeholders to develop and promote the implementation of people-centred rehabilitation SCI standards. Implementation of these standards will be supported by the best practices outlined in Can-SCIP and collaborations among teams part of SCI Networks such as the SCI-IEQCC.

07 Create networks to facilitate implementation of best practices locally or regionally

To facilitate and sustain implementation of best practices, Praxis supports the creation of **SCI networks** (regional, provincial and national) for organizations, clinicians, and people with SCI to work collaboratively (e.g. Canadian SCI Network Alliance, Circulus SCI Primary Care Network, SCI-IEQCC, ABT Community of Practice and networks in Alberta, Quebec, and the Atlantic provinces).

EVALUATION

08 Measure & evaluate best practice implementation and its impact on patients & health systems

Data (patient-reported, clinical, and system-level) is collected in the Rick Hansen SCI Registry (RHSCIR) to assess the causes and outcomes of the injury and practices at 30 acute and rehabilitation centres across Canada. Evaluation of best practice implementation using a core set of indicators is being conducted by the SCI-IEQCC at RHSCIR rehabilitation centres.

NATIONAL COORDINATION

09 Galvanize the SCI community to coordinate activities and resources

Working with the SCI community, Praxis is co-creating a **National SCI Care Strategy** to connect the strengths of Canada's research, practice, and care sectors with a shared vision to ensure impact for individuals living with SCI across Canada. **Learning Circles** and development of a **Knowledge Exchange Platform** are examples of building the Strategy and sharing the work of the broader SCI community.

For interactive content, visit the website at www.praxisinstitute.org/research-care/key-initiatives/sci-care/ or email your questions to research@praxisinstitute.org.

