

Neurosciences, Rehabilitation & Vision

Email	Key Partners	
neurorehabvision scn@ahs ca	Alberta Multiple Sclerosis Network	Hotchkiss Brain Institute (University of Calgary)
nou or of this noise	<u>Campus Alberta Neuroscience</u> <u>Eye Institute of Alberta (University of Alberta)</u> <u>Faculty of Rehabilitation Sciences (University of Alberta)</u> <u>Neuroscience & Mental Health Institute (University of Alberta)</u>	Parkinson's Association of Alberta
		Praxis Spinal Cord Injury Institute Spinal Cord Injury Alberta

Major milestones and achievements, 2023-2024

Over the past year, the Neurosciences, Rehabilitation & Vision (NRV) Strategic Clinical Network (SCN) has continued to co-design evidence-based solutions, harness innovation and drive clinical excellence across the care continuum. Our commitment to improving how Albertans see, think, and live and enhancing equitable access to quality care is demonstrated through collaborations and provincial initiatives that span multiple health sectors, highlighted below.

Preventing pressure injuries for adult patients in Alberta hospitals

Approximately one in six patients in Alberta hospitals has a pressure injury, with over 71% of these developing in hospital. Pressure injuries cause pain, infection and contribute to disability and longer stays in hospital. SSKIN+ is an acronym to help staff remember the bundle of interventions that can help prevent pressure injuries in acute care settings: Skin assessment, Support surface, Keep moving, Incontinence management, Nutrition & hydration, Risk assessment, Patient and family education and Engagement. Pressure injury prevention is one of the eight areas of focus for the Acute Care Bundle Improvement (ACBI) work introduced at Alberta's 14 largest adult hospitals. The NRV SCN also seeks to support pressure injury prevention and SSKIN+ specifically in all hospitals in Alberta, a goal supported by the Quality, Safety & Outcomes Executive Committee.

Many resources have been co-developed to support SSKIN+ implementation and pressure injury prevention provincially. These include: a clinical pathway that guides key care practices; Connect Care resources, order sets and documentation; algorithms to support frontline staff in selecting therapeutic support surfaces, preventing and managing pressure injuries; and online resources for clinicians including educational videos, an audit guide, and prevention strategies.

During the last fiscal year, one urban site actively began implementing SSKIN+ as part of ACBI. Staff at this early-adopter site focused on ensuring that skin inspections are done; patients are on the correct support surface mattress; conducting risk assessment on admission and repeating per patient risk; mobilizing patients and repositioning; ensuring skin is clean and dry; ensuring patients have proper nutrition and hydration; and educating patients and families about risk of pressure injury. Early results show that implementation of SSKIN+ is feasible and can have significant impacts on patient outcomes. This site has seen a 24% decrease in the incidence of pressure injuries; a downward trend in major trauma patients developing a pressure injury (3% to 1%); 65% of major trauma patients assessed for risk of pressure injuries within 24 hours of admission; and pressure injuries being caught earlier (i.e., a lower stage) by nursing staff.

Economic impacts of innovations in wound care: Catalytic Advanced Wound Care Treatment Matrix

Chronic skin ulcers are chronic wounds that do not heal as expected and primarily include diabetic foot ulcers (DFUs), venous leg ulcers (VLUs), and pressure injuries (PIs). These wounds are associated with significant morbidity, higher mortality risk, and increased management needs, burdening both patients and the health system. The NanoSALV Catalytic Advanced Wound Care Treatment Matrix developed by NanoTESS is a nanostructure cellulose matrix that supports the management of chronic, acute, and minor wounds, burns, and minor skin infections and irritations. NanoSALV promotes healing and offers a broad-spectrum antimicrobial effect. The NRV SCN, Alberta Health Services (Health Evidence & Innovation, clinical sites), W21C Research & Innovation Centre, and NanoTESS (funded by CAN Health West) pursued an Alberta-based innovation trial of NanoSALV. The trial involved four long-term care centres, two outpatient clinics, and one inpatient unit collectively across two urban centres. An



Strategic Clinical Networks™ interrupted time series compared standard-of-care protocol plus best-in-class dressings (i.e., silver or iodine dressings or other ointments and technologies) to standard-of-care protocols plus NanoSALV treatment (n=25). The Institute of Health Economics conducted a trial-based economic evaluation to estimate the impact of NanoSALV and standard-of-care protocols on per-patient treatment cost and overall cost-effectiveness.

Based on early results, patients who received standard-of-care protocols plus NanoSALV showed a significant improvement in time to wound closure compared to standard-of-care with best-in-class dressings. For PI, DFU and VLUs, time to wound closure reduced about 41%, 31%, and 29%, respectively. A forecast of province-wide cost reduction is substantial, and next steps are to engage clinical communities and operational leaders within AHS and Continuing Care to share these findings.

Impact on health, care, quality or performance

The NRV SCN continues to advance care delivery and innovation of NRV services in Alberta and positively impact the health of individuals affected by neurological and vision conditions, and those with rehabilitation needs. The work has involved extensive collaboration with key partners. For example, over the past year the network:

- Co-led a redesign of the provincial long COVID model of care, consolidated long COVID pathways into a single provincial pathway, and co-sponsored AHS Health Evidence & Innovation to complete an evaluation of the provincial long COVID Interprofessional Outpatient Programs (IPOPs)
- Sponsored and contributed to national evidence reviews focused on using artificial intelligence applications to support patient flow, as well as post-COVID-19 condition treatment and mangement
- Supported a provincial working group to develop recommendations on the diagnosis and treatment of spontaneous intracranial hypotension in Alberta
- Co-led an environmental scan on the care and resources available provincially to support persons multiple sclerosis in Alberta with the Kaye Edmonton Clinic
- Co-led led the completion of a current state review of provincial spinal cord injury (SCI) care in acute care settings and developed recommendations to improve the quality and consistency of SCI care across Alberta

Supporting innovation in health care through collaboration



"Working with patient partners, frontline clinicians, academic investigators, patient/advocacy organizations, and funding bodies has been a profoundly fulfilling experience. Together, we have amplified the voices of those impacted by chronic neurological diseases and in need of neuro-rehabilitation, as well as of their clinicians. The NRV SCN has done extensive work to identify and prioritize gaps in care and to bring experts together to address them....Through pursuing common goals with clinicians and interested groups, the NRV SCN has been at the forefront of translating evidence into practice, nurturing innovations, and having a significant impact on patient outcomes."

> Dr. Elisavet Papathanassoglou, Scientific Director, NRV SCN and Professor, University of Alberta, Faculty of Nursing

NEUROSCIENCES, REHABILITATION & VISION SCN

Publications & Grants		Engagement		Outcomes and Impact
	29 Peer-reviewed Publications		30 Workshops & Presentations	24% decrease in the incidence of pressure injuries following adoption of SSKIN+ at an early-adopter site
\$	\$183K Research Grants		281 Research Members	Improved time to wound closure using standard-of-care protocols with NanoSALV treatment for chronic skin ulcers

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