



CRITICAL CARE

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Major initiatives and achievements, 2021-2022

Understanding critical illness & critical care services use among Indigenous Peoples in Alberta: A partnership between the Critical Care SCN (CC SCN) and Indigenous Wellness Core (IWC)

The CC SCN and IWC embarked on a health system transformational journey in 2021. The intergenerational trauma endured by Indigenous Peoples has impacts across the healthcare continuum, with limited insight in critical care (ICU) settings. The CC SCN™ and IWC™ have identified an urgent need to build relationships and tools to close knowledge gaps in ICU care for Indigenous Peoples. The key output is to understand the ICU needs of Indigenous Peoples, enhance culturally safe care, and direct health system transformation.

In the past fiscal year, in collaboration with the IWC, we have undertaken a systematic review (SR) and meta-analysis of the incidence and outcomes of critical illness in Indigenous Peoples. The published SR Protocol is available [here](#), and the larger program of work is being developed. The team is currently working to establish an Indigenous Advisory Committee (IAC) and building relationships with Indigenous communities. The IAC will involve co-design, using a Two-Eyed Seeing approach, which requires Ethical Space be created in partnership with Indigenous communities.

This work will help close existing knowledge gaps regarding the ICU care needs of Indigenous Peoples. Indigenous Peoples will directly benefit from improved knowledge of AHS' ICU services, increasing cultural safety in ICU care, and voicing needs to improve lived experiences. An intangible impact will be the trust built between AHS and Indigenous communities through mutual actions and respect.

Implementing clinical best practices that improve patient safety, outcomes, quality and value

DIALYZING WISELY: Improving the delivery of acute dialysis to critically ill Albertans

The SCN Scientific Office is collaborating on a PRIHS-funded research study led by Dr. Oleksa Rewa (University of Alberta) to address substantial variability in practice across clinicians and Alberta ICUs for acute dialysis. This variability contributes to care that is inconsistent and not provided in a way that optimizes patient experience or outcomes. DIALYZING WISELY aims to address this care-gap by implementing harmonized performance indicators and best evidence-based practice standards provincially to improve acute dialysis across Alberta. Partners in this work are extensive and include patient and family advisors, multiple SCNs, the University of Alberta, and the Alberta Kidney Care program (North and South).

Continuous improvement and adoption of clinical best practices is a key deliverable. Implementing an acute dialysis pathway in ICUs across Alberta is expected to positively impact quality of life and patient-centered outcomes for survivors of critical illness treated with acute dialysis (reducing dialysis utilization and long-term chronic dialysis therapy); enhance health system efficiency (standardizing acute dialysis therapy); and achieve healthcare cost savings.

This innovative, stakeholder-informed and evidence-based clinical pathway builds on and scales Dr. Rewa's prior work on the development of key performance indicators (KPIs) for acute dialysis therapy. In the past fiscal year, work has progressed on the development of KPI reports and a data dashboard, knowledge translation strategies, and audit and feedback tools. Work will continue in fiscal year 2022-2023.

"Dialysis is hard physically and mentally. You feel exhausted all the time...it would be absolutely amazing to have my life back and not be on dialysis. It would improve my quality of life 100%."
AB chronic dialysis patient

DON'T MISUSE MY BLOOD – This PRIHS-funded work focuses on appropriateness by reducing avoidable blood component transfusions and daily blood tests for patients admitted to critical care and high-risk surgical units. Initiation and implementation of this project was placed on hold during the COVID-19 pandemic. Work resumed in April 2022, with the blood transfusion arm of the project scheduled to rollout January 2023.

VENTING WISELY – This HIIS-funded work focuses on implementing a comprehensive, evidence-informed care pathway for critically ill patients with respiratory failure who require mechanical ventilation. The aim is to improve outcomes for these patients

by optimizing and standardizing mechanical ventilation strategies and practices.

Provincial implementation progressed over the past year at all adult critical care units in Alberta. Implementation occurred at 15 adult ICUs and 2 cardiovascular ICUs, with the remaining 4 units completed by June 2022.

Critical care work during and after COVID-19: Exploring changing identities and practices associated with recovery from burnout

Critical care clinicians (CCC) face alarmingly high rates of burnout, ranging from 40% to 70%, which was further amplified by COVID-19. These high rates of burnout are associated with moral distress, long work hours, and the burdens of end-of-life decision-making, which is unique to critical care work. Mitigating CCC burnout is identified as an **area of focus and tied closely to the strategic direction of System Transformation in the CC SCN Transformational Roadmap.**



In 2021, the CC SCN collaborated with Dr. Tanya Mudry (University of Calgary), on a program of work related to burnout in ICU. Dr. Mudry was awarded a SSHRC Insight Development grant for 2021-2023 on this program of work. In the past fiscal year, Dr. Mudry's team conducted a survey examining the impacts of COVID-19 on the wellbeing of CCCs in Alberta, including factors that contributed/protected clinicians from burnout and those that supported/interfered with recovery. Findings will help identify areas of improvement in the work environment for CCCs and areas of support for preventing burnout.

The impact and effects of burnout are far-reaching and experienced by patients (quality of care, medical errors, suboptimal attitudes), critical care settings (reduced safety climate, decreased job satisfaction and retention), and our health system (economic loss). Phase 2 is underway and involves interviewing CCCs, focusing on mitigation and recovery from burnout.

Actions and areas of focus

- Improving care of critically ill patients through evidence-based research, innovation, and collaboration
- Growth as a learning health system by supporting evidence-informed decision making, including mobilizing data for QI
- Implementing clinical best practices to optimize care and improve patient safety and outcomes for critically ill Albertans
- Reducing unwarranted variation in the health system to support sustainability of critical care resources
- Building critical care research capacity to address gaps in knowledge and foster innovation

Impact on health and care in Alberta

System transformation, clinical best practices, and evolving as a learning healthcare system aim to positively impact patient care in Alberta ICUs and areas upstream and downstream from critical care. Achieved and anticipated impacts focus on:

- Building relationships with Indigenous Peoples and contribute to closing knowledge gaps in ICU care needs of Indigenous Peoples.
- Improving the delivery of acute dialysis to critically ill Albertans by implementing harmonized performance indicators.
- Improved accountability and quality of care through use of key performance indicators and audit and feedback.
- Mitigating health care practitioner burnout in the ICU to improve patient, family, and healthcare provider experience and satisfaction

CRITICAL CARE

Grants and Publications



29

Peer-reviewed Publications



35

Workshops & Presentations



\$1.62M

Research Grants



113

Research Members

Outcomes and Impact

Full-scale implementation & evaluation

of clinical best practices for mechanical ventilation (VENTING WISELY) progressed at

all adult critical care sites in Alberta

www.ahs.ca/ccscn