

# CANN Abstracts 2017

## **Plenary Sessions**

**P1: Patient Advocacy and the Neuroscience Nurse – Heather Thiessen**

**P2: TBD – Dr. Susan Shaw**

**P3: Neuromodulation and the future of stem cells - Dr. Ivar Mendez**

**P4: Best Practice Guidelines Update for Depression in Parkinson's disease – Kimberly Singian**

**P5: Canadian Stroke Best Practice Recommendations Update – Patrice Lindsay**

**P6: Advance in Epilepsy Care – Dr. Jose Tellez-Zenteno**

**P7: Pathologically Benign, Clinically Significant: Nursing Care of Challenging Benign Brain Tumors – Christi DeLemos**

**P8: Neural Prostheses Research – Dr. Jonathan Norton**

## **Concurrent Sessions**

### **A1**

**Concurrent: Understanding the symptoms of patients with Kennedy Disease: a case study**

Getjeda Becy Seet RN CNN(c)

This presentation will help nurses understand the symptoms and related pathology of their patient with Kennedy disease. Kennedy Disease is an X-linked, recessive genetic disorder affecting 1 in 50,000 males. Most patients present between 30-50 years of age, although onset had been detected as early as 18 years of age. Kennedy disease is also known as Spinal Bulbar Muscular Atrophy (SBMA) or X-linked Spinal Bulbar Muscular Atrophy. It is often mistaken for Amyotrophic Lateral Sclerosis (ALS) or Multiple Sclerosis (MS) because of the similar presentation of the disease early stages. All three are progressive degenerative disorders affecting the lower motor neurons. The difference is in the mechanism by which the neurons are destroyed. While ALS and MS are demyelination of neurons, SBMA is caused by the toxic effect and the loss of function of the androgen receptor (AR) protein that kills the cell.

This presentation will look at a case study, explore some mechanisms of the disease process, new findings that describe the functional involvement of the somatosensory system, and gray matter and white matter changes using MR tensor imaging and magnetoencephalographic study. Most literature studies of the Kennedy disease consisted of small samples, from a single case study to 40 SBMA patients. The largest study in Korea by Song, Kim, Min, et al (2015) which consisted of 40 confirmed SBMA patients for which they studied the genotype-phenotype correlation. It showed that the longer the CAG repeat, the younger is the onset of the disease. This study also noted that the earlier the onset, the slower the progression, leading to disease not being diagnosed for a long time from the onset of symptoms or misdiagnosed.

## **A2**

### **Concurrent: MAID in Manitoba- case study review of patients receiving MAID on a Palliative Care unit.**

Jodi Dusik Sharpe RN BN CNNC

Bill C-14, legislation on medical assistance in dying (MAID), received royal assent on June 17, 2016 by the Supreme Court of Canada. MAID in Manitoba will review several of the cases that occurred on a Palliative Care Unit. The process, the challenges and the learning moments will be shared. Exploring conscientious objection and the reported impact on the multidisciplinary team will be reviewed. The nursing implications to provide quality end of life care in the midst of moral and ethical distress will be presented.

## **A3**

### **Concurrent: TARGET ZERO: A Multidisciplinary Approach to Pressure Ulcer Prevention and Treatment within the Neurosciences Population**

Andrew Kwan RN BSc BScN CNN(C)

Nadine Moniz RN BScN MN

Pressure ulcers (PUs) cause considerable harm to patients, hindering functional recovery, causing considerable pain and the development of serious infections. Pressure ulcers have also been associated with an extended length of stay, sepsis and increased mortality and morbidity.

Neurosciences' patients are among the highest risk for developing a pressure ulcer. The need for a standardized process to ensure pressure ulcer prevention in any program is essential to its success. From admission to transition, the UAH Neurosciences program has effectively implemented numerous strategies that have created a zero tolerance culture regarding pressure ulcers and in doing so decreased the incidence of pressure ulcers within the program, from 2.3% to 0.9%.

As part of a concurrent session, we will review how our multidisciplinary strategies were developed and how together pressure ulcers are prevented, identified and treated in our program. This session will be appropriate for all audiences that work with an in-patient Neurosciences population.

## **A4/B4**

### **1 hour Concurrent: Quantifying Patient Acuity on a Neurorehabilitation Unit**

Ivonne Abes RN

Andrea Cole-Haskayne RN BN

Magda Mouneimne MScOT

In 2014, neuro rehabilitation nursing staff began noting that patients admitted to the unit were increasingly complex, required a higher level of medical management, were more physically demanding and had an increasing need for psychosocial support. Unfortunately, there was no accurate method to measure this perceived increase to their patient care load. To address this, frontline nursing staff gathered suggestions from their peers with the goal of improving patient and staff safety, quality care, work efficiency, and distribution of workload. This feedback resulted in the development of a tool that was designed to more objectively assess the level of patient care. The tool was divided into several categories which represented the various areas of patient care. Scores were assigned to each category and added together for an overall score.

The tool underwent several iterations over the following two years and in September 2016, the unit implemented the Patient Acuity Scale. Currently, scores are used to help classify patients based on their level of required care which helps measure the overall unit acuity and distribute the workload amongst staff. The tool also contributes to a better understanding of our patient population. Staff report improved patient assignments, workload and satisfaction.

By attending this presentation, nurses will see how the Acuity Scale will provide a more accurate picture of the nursing workload, enable more equitable distribution of patient assignments and increase patient safety and job satisfaction.

## **B1**

### **Concurrent: Improving the Discharge Process**

Andrea Cole-Haskayne BA RN MN

Paul Wright RN BscN CNN(C)

Jill Congram

Discharge is an important part of patient care and often stressful for patients and families. Information regarding appointments, medications, things to watch for and contact information need to be reviewed and given to patients to ensure a successful transition.

Patients are admitted to our unit in one of three teams, Spinal Cord Injury (SCI), Brain Injury (BI) or Stroke. Previously, our unit had a common discharge template to add information that is important for patients to know at discharge. Nurses had to write many details on the discharge sheets and at times critical pieces of information were not transcribed. New staff expressed that they often did not know what was important to include. Staff noted for specific teams that they were writing a lot of the same

information on every patient's discharge sheet and asked for a process change for consistency and increased time management.

Focus groups were held with staff and Patient advisors to determine what information was important for all patients to know upon discharge. Discharge teaching sheets specific to SCI, BI and Stroke were developed with specific information to ensure a successful discharge.

Staff have expressed improved efficiency and increased confidence in the discharge process.

This presentation will explore the process to create and implement injury-specific discharge teaching instructions and explore how nurses can improve the discharge teaching process to enhance both the efficiency and effectiveness of discharge teaching.

## **B2**

### **Concurrent: Women Are From Venus: Stroke Risk Factors Unique to Women of All Ages.**

Brammiya Sivakumar, RN BScN CNN(C)

Aline Bourgoin, RN BScN CNN(C)

With stroke, there is a higher frequency of occurrence in women as well as a higher rate of stroke mortality. Since women's hormonal and structural biology is different than men, distinctive prevention strategies are required to address unique, yet demographically common risk factors.

The objective of this clinical presentation is to review current evidence and best practices unique to women in regards to risk factor management and education in stroke and transient ischemic attack from a nursing perspective.

Case study examples will be shared to highlight some of the common and unique risk factors as well as prevention strategies for women. Sex-specific topics will be discussed including migraine, hormonal factors, reproductive factors, atrial fibrillation and cerebral venous thrombosis. Implications for nursing practice and patient education will be discussed.

An improved understanding of stroke risk and prevention for women is needed to enhance stroke risk assessment and treatment among women across their lifespan. Neuroscience nurses play a pivotal role in promoting awareness and provide health teaching to support this endeavor.

## **B3**

### **Concurrent: Missed Care in Acute Care Neuroscience Nurses' Perspective on Decision-making, Prioritizing and Assigning Direct Care Activities**

Trudy Robertson RN MSN CNN(c)  
Sue Kadyschuk RN, MSN, CNN(c)

This study explored neuroscience nurses' perceptions of the importance direct care activities have to patient care and factors within the acute care clinical practice environment which influence decision-making, prioritization, and completion of direct care activities.

This descriptive, mix methods study involved 140 neuroscience nurses, at five acute care institutions in a large Canadian city. Data collection tools for this study included an anonymous survey and personal interviews.

Nurses reported they believe direct care activities are an important element of quality patient care and to nursing practice, but are commonly missed. Nurses identified specific elements within the clinical practice environment which influence decision-making, prioritization and completion of direct care activities.

Findings suggest that in acute care neurological settings, nurses remain committed to providing direct care activities for their patients, believing it essential to knowing patients from both a clinical and personal perspective, developing caring nurse-patient relationships and critical in the provision of quality patient care. However, several direct patient care activities are often missed, and nurses' decision making, prioritization and assigning related to direct care activities is influenced by several challenges in acute neurological environments.

\*\* This research study was funded by the Marlene Reimer Research Award in 2014. A manuscript will be submitted for publication in CJNN in 2017\*\*

## **C1**

### **Concurrent: Presurgical Mapping with fMRI and DTI: Achieving a New Standard of Care at RUH**

Layla Gould, Michael Kelly, Marla Mickleborough, Chelsea Ekstrand, and Ron Borowsky

Functional MRI (fMRI) is a neuroimaging technique that detects changes in cerebral blood flow in order to map brain activity. The clinical fMRI team at RUH uses fMRI to localize functional brain regions near the surgical resection plane in patients undergoing surgery for various conditions, including temporal lobe epilepsy, tumours, cortical and vascular malformations, and other lesions in order to avoid disrupting these processes as much as possible. Given that each patient type presents unique challenges with respect to developing cognitive tasks that will activate regions near their surgical margins, our work involves designing individualized fMRI paradigms to suit each patient's specific needs. We have created paradigms for mapping speech production, attention, perception of objects, faces, and places, semantic memory, emotion, as well as motor and sensory functions. Our team also uses Diffusion Tensor Imaging

(i.e., fiber tracking) to visualize specific white matter tracts, which can help to identify changes in the tracts that may be due to tumours or other malfunctions. This presentation will discuss specific cases in which presurgical fMRI helped neurosurgeons select their surgical approach, thus highlighting the utility of pre-surgical planning in localizing functional processes in order to maximize surgical outcomes on a case-by-case basis. Overall, the presentation should serve to educate neuroscience nurses about the value and implications of presurgical fMRI assessment, as well as how to identify candidates for this procedure.

## **C2**

### **Concurrent: The Brain on Fire: A Case Study on Anti-N-methyl-d-aspartate Receptor Encephalitis at Toronto Western Hospital**

Grissel Crasto RN BScN

Anti-NMDA receptor encephalitis is a rare disease that occurs when antibodies produced by the body's own immune system attack the N-methyl-d-aspartate receptors (NMDAR) in the brain (Anti-NMDA Receptor Encephalitis Foundation, 2017). For a condition that is relatively rare, Toronto Western Hospital (TWH) witnessed a staggering four cases of anti-NMDA receptor encephalitis in 2016 alone. Patients develop a multistage condition that progresses from psychosis, memory deficits, seizures, respiratory difficulties, abnormal catatonic movements and language disintegration into a state of unresponsiveness (Dalmau, Lancaster, Hernandez, Rosenfeld and Gordon, 2011). This case study will focus on the pathologies and medical journeys of three female patients diagnosed with anti-N-methyl-d-aspartate receptor encephalitis at TWH. Nurses will learn about the unique presentations of each of the cases and the individualized nursing care plans developed to address the unique needs of this patient population. More specifically, it will highlight the importance of ensuring patient and staff safety in the development of these care plans. It will also discuss the need for implementing ongoing evaluations of these nursing care plans to address the developing needs of patients as they proceed through the diverse and complex phases of the condition.

## **C3**

### **Concurrent: What's New in Headache Management in Calgary: Updated TOP Headache Guidelines for Alberta and New Headache Management Strategies in the Calgary Zone**

Suzanne Marie Basiuk, RN, MN

In Calgary we have two headache programs dedicated to assisting and managing patients with a wide range of headache types and severities: The Calgary Headache Assessment and Management Program (CHAMP) and the Chronic Pain Centre. Despite these services, the wait-time to see a neurologist is lengthy and problematic for providing support to patients and family physicians. Thanks to collaboration between headache specialists and primary care physicians, Calgary now has several new strategies available to improve access and appropriate treatment for patients with headache.

These strategies include: Central Access and Triage for all neurological conditions, “Specialist Link” - a new telephone consult service provided by specialists to family physicians providing quick answers to patient care questions while the patient is still in the office, the updated “TOP” Headache Guidelines for managing headache in primary care will be available in 2017 and a new APP called “HeadachePro” developed for and with Alberta Health Services that will assist family physicians to diagnose and treat headache patients. I will review the new TOP guidelines and describe the other three strategies in order to provide an overview of headache treatment available in Calgary and to stimulate discussion around the use of similar strategies in other centers in Canada where headache treatment and management are a challenge.

## **C4/D4**

### **1 Hour Workshop (max 20 attendees): Update on Burnout & Burnout Syndrome**

Nancy Thornton RN MScN CNN(C)

Beverly Irwin RN BN

Sonia Rothenmund RN BN CNN(C)

Burnout is a psychological syndrome that develops after a long period of occupational stress (Geuens, et al. 2015). Nursing has long been recognized as a profession with a high risk of burnout, and new reports suggest that it has reached epidemic proportions. A recent call to action by our critical care colleagues puts the incidence of burnout at greater than 50% amongst their members, which includes critical care nurses (Critical Care Collaborative, 2016).

Burnout leads to increased absenteeism, reduced job performance and turnover intention (Hultell, 2010), and ultimately can have a negative effect on teamwork and the quality of patient care. Burnout comes with many costs – to the individual sufferer; to a particular work unit; to an organization and to taxpayers who fund our national healthcare system.

Despite decades of research into this phenomenon, including the development of burnout measurement tools, it has only been in recent years that research-based prevention and treatment strategies have been presented and discussed in the literature. Such strategies are aimed at the personal, organizational and larger systems levels.

The purpose of this workshop is for participants to gain an understanding of the current state of knowledge about this phenomenon. Emphasis will be placed on group participation.

Learner Objectives:

At the end of this workshop participants will be able to:

1. Differentiate burnout from depression
2. List the three dimensions of burnout syndrome
3. Identify the relationship between “feeds” into burnout such as compassion fatigue, moral distress and incivility
4. Appreciate evidence-informed strategies regarding prevention & mitigation of burnout

## **D1**

### **Concurrent: You Are Not Alone – The Development and Institution of Canada’s First “Joe Niekro Foundation” Hemorrhagic Support Group**

Aaron Gardner, RN, BSN, CNN(c)

Social support is exceptionally important in any recovery process and social isolation is considered to be a risk factor for a poor outcome after having a brain aneurysm/arteriovenous malformation (AVM)/Hemorrhagic Stroke. The Joe Niekro Foundation (JNF) mission statement is that they are “committed to supporting patients and families, research, treatment and awareness of brain aneurysms, AVMs and Hemorrhagic strokes. We provide education on the risk factors, causes and treatments of these conditions, while funding the advancement of neurological research”. With the support and mentorship of JNF, Saskatoon hosted its first monthly hemorrhagic stroke in October, 2016.

This presentation will outline the formation and implementation of a local hemorrhagic stroke support group that provides both survivors and family/caregiver resources and ongoing support post hospital discharge. How the JNF was founded, the mentorship and formal training provided to local facilitators, resources for group attendees and meeting format/content will be discussed.

## **D2**

### **Concurrent: Sepsis and Septic shock**

Dawn Tymianski NP-A MN MA PhD CNNC

Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to an infection. Sepsis is, surprisingly, the second leading cause of death worldwide after cardiovascular disease. While hospital acquired infection leading to death account for 10-15% of all patient mortality, rates differ across populations, health state and diagnosis. Identification of the neuroscience patients at risk is paramount. At risk groups understandably include patients on immunosuppressive therapy, recent surgery, or have a history of malignancy. But at risk groups also include patients with ABI, SCI, stroke or delirium.

Through a case-based approach, the purpose of this talk is to review hospital acquired infection that leads to sepsis and septic shock in the neuroscience patient.

## **D3**

### **Concurrent: How the Headache Clinic Nurse Can Help Patients Cope with their Headaches and Adhere to the Treatment Plan**

Irene O'Callaghan RN



It is estimated that about 1 – 2% of people in Canada have chronic migraine and likely at least half of these people have medication overuse headache. These medical conditions may cause significant disability for patients due to loss of time with family, lost productivity at work and increased sick time. Medication overuse headache is a treatable medical condition but success is dependent on patient adherence to a treatment plan.

A case study of medication overuse will be presented, as well as a discussion of strategies to facilitate/improve the therapeutic alliance between patients and health care providers. The goal is to partner with patients and develop a realistic treatment plan so that they can better manage their headaches with the support of their primary medical home and ultimately improve their quality of life.

## **E1**

### **Concurrent: To Australia with Love. A multidisciplinary case study review following an Intracerebral Hemorrhage (ICH)**

Jodi Dusik Sharpe RN BN CNNC

Intracerebral hemorrhage (ICH) is the most fatal form of stroke and carries the poorest prognosis for survival and functional recovery. (Canadian Stroke Best Practice Recommendations 2015). Following an intracerebral hemorrhage, a 43 year old man is determined to return to his home and family in Australia. Facing multiple post-event complications with a tumultuous ICU stay, the multidisciplinary rehab team led by neuroscience nurses, focus' on rehabilitation and recovery while navigating both the Canadian and Australian Immigration systems. The neuroscience nursing implications will be reviewed.

## **E2**

### **Concurrent: Privately funded health care from the inside out – New perspectives in assisting clients with neurological disease.**

Lynn Joseph RN MScN

In the recently published document “Bringing Care Home” (2015), the Province of Ontario has examined how services are currently provided in the home and have committed to reshape how care in the home will be delivered across 14 Local Integration Health Networks.

The organizational framework of Home and Community Care (pg. 7) outlines that the private sector of service providers offering a “full range of services for home and community care” is unknown. Health professionals and the general public know very little about nurses in independent practice, who represent about forty percent of registered nurses in Canada (CIHI 2009). Nurses in independent practice provide a wide variety of services to patients and their families that complement publicly-funded services.

This presentation will outline how nurses in independent practice can offer neuroscience support in their role of private care manager, which includes navigation and advocacy services to promote best

possible outcomes despite the complexities of the Canadian health care system. Using a framework of client-centered care and best practice guidelines, including the knowledge gained through the Specialty Network Groups of the Canadian Nurses Association, the positive experiences and limitations of this emerging role will be presented.

## **E3**

### **Concurrent: The Evolution of a Long Term Care Behaviour Outreach Team: Helping Manage Behavioral and Psychological Symptoms of Dementia.**

Melissa Turzanski RN BScN GNC(C)  
Olga Derevyanchenko RN BScN  
Irina Sorokina RN BScN GNC(C)  
Beatrise Edelstein MHSc CHE PT reg.

The Long Term Care Behavioural Support Outreach Team (BSOT) is a mobile team that consists of 7 Registered Nurses, RN coordinator and 18 personal support workers. This team was formed in 2012 as a Provincial initiative from Behaviour Support Ontario. This team services 36 long term care facilities within the Toronto Central LHIN and works collaboratively with staff in these homes to help manage responsive behaviours associated with dementia. BSOTs main focus is helping manage responsive behaviours using non-pharmacological interventions and strategies. Throughout the last 5 years our team has encountered many cases, managing many different behaviours. In a chart review we have been able to group cases into three separate groups which include, strictly managed with non-pharmacological intervention, non-pharmacological intervention mixed with pharmacological and needing to go to specialized in-patient behavior unit. The focus of this presentation is to look at the management of responsive behaviours using case example, the growth and evolution of our outreach team and where we are today. While statistical evaluation is not yet determined for this team we can summarize resident outcomes through qualitative response from service recipients. Our lived experience throughout the last 5 years has lead us to the understanding of the importance and relevance of quantitative statistical data, which is now being built into quality improvement initiatives currently being carried out. Future steps and improvements will be discussed in this presentation as we are highlighting the evolution of our team.

## **E4/F4**

### **1 hour concurrent: Nurse-led assessment prior to disease modifying drug initiation in relapsing onset multiple sclerosis**

Trudy L. Campbell MN RN-NP MSCN  
Michael E. Kehoe BSc BComm RN MSCN  
Melinda D. Nickerson RN MSCN  
Denyne M. Park BScN RN

Disease modifying drugs (DMDs) are effective in relapsing multiple sclerosis (MS). There are 13 DMDs available with more expected to be approved by regulatory agencies in the next twelve months. Each DMD differs by route of administration, reimbursement criteria, treatment emergent adverse events, and contraindications. Allowing patient input on DMD selection improves treatment persistence and adherence but the options presented should only be those that are appropriate. We developed an assessment algorithm for DMD initiation, escalation/de-escalation that allows proactive selection of DMDs at the outset of the DMD treatment discussion and when a treatment switch is considered. This type of nurse-led assessment allows for the appropriate selection of a DMD regardless of where the patient is in the treatment trajectory from first-line treatments to more aggressive ones. This can assist us to better customize treatment options and discuss only those that are relevant to the individual. Our algorithmic approach also allows for a more rapid escalation of treatment when required thus making higher efficacy DMDs accessible in a timely manner. Presentation of our algorithmic approach will include review of the mechanism of action, efficacy, patient counseling, monitoring requirements, and side effects and risks associated with each DMD.

## **F1**

### **Concurrent: Post Hospitalization Stroke Follow Up: case studies showing the need.**

Brenda Kwiatkowski RN BSN MN

Patients being discharged from hospital following a stroke are thought to have had all the testing done to establish the cause of their event and that the results of these tests have been reviewed by the neurologists in charge of the patient care and that this information has been shared with the patient. It is believed that while the patient has been hospitalized, they have had the opportunity for education and understand the causes of stroke, why their specific stroke investigations have been done and what that means for their care plan. The reality of nursing challenges in today's healthcare systems limits their control over the amount of time allowed for education and discharge planning which may be a contributing factor in the need for follow-up. Medications are reviewed, changed as required and the patient is sent home with written instructions. This gives the appearance of good patient care, but the evidence from several case studies shows where patients may encounter gaps in care.

Case studies show where follow up provides a safeguard in the provision of adequate patient education, reduction of medication errors, assurance that testing has been completed and interpreted, stroke deficits are being addressed with therapies and that screening is being completed for depression. Three case studies will be discussed to demonstrate the need for follow up visits to ensure patient safety and satisfaction.

The data collected on patients seen in follow up during the test phase are currently being analyzed and the results will be available April 30, 2017.

## **F2**

### **Concurrent: Online Learning Development for Registered Nurses: 5-4-3-2-1 Take-Aways**

Beverlie Johnson RN

Meagan LaRiviere RN MA EdD(C)

The purpose of this presentation is to provide a case example of a Registered Nurse Regulator experience in the transition from face to face education programming to a predominantly online format. Roughly 36000 plus registered nurses (RN) of Alberta need a way to translate regulatory knowledge into their practice so they can maintain safe, competent and ethical nursing care. The eLearning team considered in their development of online modules how professional RNs learn in complex and diverse environments. The objective was to provide online modules that are accessible and interactive. This case example describes the process of eLearning program implementation and highlights the lessons learned. The eLearning team at The College and Association of Registered Nurses of Alberta share and present their experience through a 54321 presentation model. The “5” level of the model explains the five key points of RN learning. The “4” level of the model discusses four lessons learned in preparing online learning. The “3” level gives three steps that eLearning designers should always remember. The “2” level presents two challenges and two opportunities.

Participants will hear about our team experience in development of a new eLearning program for Registered Nurses and take away the crucial points for success.

The talk finishes with one inspiring thought.

### **F3**

#### **Concurrent: The S-Patient: A mobile App of surgical simulation for neuromodulation procedures for preoperative patient teaching.**

Cheri Derksen LPN

The nature and technical aspects of neurosurgical procedures such as, deep brain stimulation or spinal cord stimulation, could be difficult to grasp by patients. Visualization of the procedure by using a mobile App that simulates the surgery could enhance the understating of the procedure and decrease the apprehension of the patient prior to surgery.

Forty patients assessed by our Neuromodulation Program and scheduled for surgery were randomized to two groups. In the experimental group, the clinician used the S-Patient App to explain the surgical procedure. In the control group the clinician explained the procedure verbally or with the aid of drawings. Both groups of patients filled a questionnaire that assessed their level of anxiety and understanding of the surgery before and after the preoperative teaching.

The S-Patient App was very user friendly and the simulation graphics were clear. Analysis of the collected data showed a statistically significant decrease in the level of anxiety in the patients exposed to the S-Patient App when compared to the control group. Patients also expressed a greater understanding of the surgical procedure with the use of the App although this did not achieve statistical significance.

There is a high degree of anxiety that comes with neurosurgical interventions, and as nurses we can improve patient/family education to help alleviate some of this anxiety with better education tools.

### **G1**

#### **Concurrent: Donation after Cardiocirculatory Death**

Mark Bonin RN BSN CNN(c)

The need of organs for transplantation is ever increasing due to the prevalence of vital organ failure, in particularity kidneys. In an effort to increase the supply of organs available for transplantation, donation after cardiocirculatory death (DCD) is attempting to bridge that gap. This presentation will provide an overview of DCD from a Nova Scotia perspective and its positive impact on the supply of organs available for transplantation. A comparison of DCD and neurological determination of death (NDD) and the DCD process in Nova Scotia will be reviewed. The essential role of the Critical Care Nurse and the Organ Donor Coordinator will be discussed. Ethical controversies related to DCD will be explored.

## **G2**

### **Concurrent: Creating a Palliative Care Plan for the Stroke Patient**

Elissa Bravo RN BSN

Kim Davy

Shelley Jolly RN

K. Ruth Whelan RN MN CNS CNN(c)

The Heart and Stroke Foundation maintains that stroke is a leading cause of disability and the third leading cause of death in Canada. With a high mortality rate, it is surprising to find that very little exists in the way of palliative care resources specific to stroke. A variety of palliative care tools exist for other diseases; few can be found that guide neuroscience nurses in providing a palliative approach specific to the stroke patient. At Royal University Hospital, stroke patients are rarely transferred to the palliative care unit; neuroscience staff provide palliative care. Medical residents from a variety of services rotate through the neuro service which can result in a lack of consistency in palliative physician orders. Additionally, no patient focused resources existed to inform patient's families of what they might expect while accompanying their loved one through the dying process. By creating a palliative care brochure for families, a nursing care plan and preprinted physicians orders; we have aimed to decrease the discontinuity in palliative care provided.

## **G3**

### **Concurrent: Disorders of Serum Sodium in the Neuroscience patient: Kayexalate to the rescue**

Dawn Tymianski NP-A MN MA PhD CNNC

Patients with neurological injury or disease frequently experience changes in their serum sodium levels. Research suggests 45% of all brain injury patients acquire sodium-disorder syndromes, including a hyponatremia (SIADH) or hypernatremia state. Understanding of the sodium disorders is paramount, for insufficient or incorrect treatment can be risky.

The objective of this case-based presentation is to:

1. Review diagnostic tests: serum/urine values
2. Differentiate between common sodium disorders
3. Provide insight into patient populations at risk

4. Provide insight into management, including appropriate intravenous or medication requirements

In summary, not all hyponatremic states are created equal. Improved understanding of patients at risk, standard investigations and management strategies will empower nurses to remain vigilant when caring for this population.

## **G4**

### **Concurrent: What do you NEED?**

Elizabeth Murphy-Lavallee BSc(N)

Geneviève Tousignant BSc(N) MSc(A) CNN(c)

Helen Fong, BSc(N) MSc(A) CNN(c)

The MNI is renowned worldwide for its epilepsy patient care and surgical procedures. Organizational change and budget constraints have forced administrators to make some major changes. These included the restructuring of an epilepsy monitoring unit (EMU) and the merger of two neuroscience units with diverse neurology and neurosurgery patient populations. Consequently, two nursing teams with varying degrees of epilepsy nursing expertise have been rotating into the EMU. With differences in the level of nursing knowledge and practice as well as limited time for education prior to these transitions, variations were observed in the cross-training experience. The NEED (Nursing Education Epilepsy Department) project was created to palliate these gaps. The goal of this quality improvement initiative was to improve overall epilepsy nursing knowledge and skills which would ultimately increase global patient experience, clinical outcomes and reduce costs. The major steps of the program were to: 1) evaluate general nursing knowledge related to epilepsy 2) educate nurses with didactic presentations 3) practice with different case simulations 4) re-test the nurses with a second knowledge exam 5) compare pre-post care evidenced on telemetry videos. The focus will be to share the planning, organization, education and training challenges and strategies involved in this project.

## **H1**

### **Concurrent: Releasing Time to Care's impact on change with neuro staff and patients: a 'bottom-up' initiative**

Jessica Wike RN, BScN

Releasing Time to Care (RT2C) is a Vancouver Coastal Health Authority wide initiative. RT2C is an opportunity to engage teams in leading change to improve patient care through a module-based, self-directed quality improvement program. The aim is to increase efficiency so that team members have more time from "direct patient care" so staff can re-invest their time to improve patient/family experiences on the T5/6 Neurosciences wards at Vancouver General Hospital. It is not a "top-initiated" program. Front line staff knows what works and does not work on T5/6. RT2C puts staff in control of making decisions that can influence themselves and patients on a day-to-day basis. RT2C is the voice of the staff. It is not about reducing staff or cutting costs. It is about changing our work environment for

the better via improving health outcomes, increasing staff/patient satisfaction and enhancing efficiency. Through completing foundational work we have been able to target key areas to focus our efforts in order to satisfy both patient and staff concern. Units from other areas may use this as an inspiration for change in order to motivate staff to communicate their ideas and take responsibility for their ward. RT2C is an initiative lead by proactive front-line staff members in order to create sustainable change.

## H2

### **Concurrent: What Lies Beneath: Neuroscience Nurses Clinical Awareness and Traumatic Brain Injury**

Susan Kadyschuk RN MSN CNN(c)

Many neurological conditions and injuries have well known complications that neuroscience nurses learn to be vigilant for when caring for certain patient populations. For example, subarachnoid hemorrhage patients are at high risk of developing vasospasm during a certain period post aneurysmal rupture and neuroscience nurses are clinically aware and vigilant for signs of vasospasm during this period. Developing clinical awareness of potential complications that traumatic brain injury patients may suffer presents challenges for nurses because multiple factors may be involved. The severity and complexity of traumatic brain injuries vary widely and many are associated with concomitant injuries and confounding concerns such as alcohol intoxication. Neuroscience nurses also must be aware of the potential for complications related to factors such as mechanism of injury, type and location of injury, level of consciousness at the scene and comorbidities. Although trauma protocols and algorithms are critical in the early identification and treatment of many traumatic brain injuries; those whose injuries are determined not to require immediate surgical intervention or transfer to a critical care unit may be deemed “stable” and transferred directly from the emergency department to a neurosurgical or medical/surgical unit for “observation.” What is beneath the skull and non-observable? What should nurses consider? Developing clinical awareness is critical in anticipating possible deterioration in traumatic brain injury patients. The objective of this presentation is to illustrate that knowledge about traumatic brain injury and basic neuroanatomy helps develop neuroscience nurses’ clinical awareness.

## H3

### **Concurrent: Educational Stroke Videos**

Ashley Trites RN BSN

Kala Bolt RN BSN

Every year approximately 60,000 Canadians are treated in hospital for stroke or TIA. Stroke is the leading cause of disability and the 3rd leading cause of death in Canada. The Acute Stroke Unit (ASU) at Royal University Hospital in Saskatoon took on a quality improvement project and developed patient and family educational videos to help facilitate discussion and education regarding stroke.

We created six educational videos regarding the modifiable risk factors for stroke. The purpose of these videos is to ensure patients and families are receiving correct and pertinent information about stroke, stroke risk factors, post stroke care and lifestyle changes. In this presentation we will review the process and reasoning behind these educational videos. We will also compare the ASU’s previous method of stroke teaching to the new method.

With these educational videos, we are hopeful that patients and families will receive more thorough teaching regarding stroke prevention. Uploading videos online allows patients to view the information at their bedside as well as outside of the hospital. Patients can also share these videos with friends and family.

The goal of these educational videos is to improve patient's education and their outcomes post stroke.

## **H4/I4**

### **1 hour concurrent: What you see is what you get: neuroradiology and the neuroscience client**

Dawn Tymianski NP-A MN MA PhD CNNC

Each day, neuroscience clients are admitted to hospital for a variety of issues and undergo a variety of diagnostics and neurological imaging. Frequently the outcomes of these diagnostics are instrumental in confirming the diagnosis and assist in the development of treatment plans or goals of care. More importantly, diagnostic findings, support nurses in completion of a focused neurological exam and correlate functional presentation to findings. Imaging can further be instrumental in understating the process of neurological recovery or deterioration.

Objectives:

1. To understand the rationale for diagnostic imaging
2. To gain an understanding of neuropathology and patient presentation
3. To improve and foster critical thinking at the bedside

Through case presentations, the goal of this talk is to:

1. Review common radiological investigations and rationale of the CNS for the neuroscience client: Cat Scan (CT), Magnetic Resonance Image (MRI)
2. Provide an overview of basic pathological findings: brain tumour, stroke, subdural hematoma, and intracerebral hemorrhage
3. Correlate radiological findings to client presentation and neuroanatomy

## **I1**

Concurrent: NOACs vs Warfarin – The changing landscape of anticoagulants in stroke prevention

Corbin Lippert MN NP CNN(c) CRN(c)

With the introduction of Dabigatran, Rivaroxaban and Apixaban, those working in stroke prevention have more options to offer their patients when it comes to oral anticoagulation in non-valvular atrial fibrillation. Warfarin has been the gold standard for anticoagulation for more than half a century. Has it had its day? The new agents have been proven to be safe and effective in major drug trials but will they stand the same test of time? In this presentation we will explore the use of these new oral anticoagulants and examine their risks and benefits with the aim of dispelling myths and answering the hard questions that your patients may ask.



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### **Concurrent: What did we miss? Lessons learned from the deterioration of patients on a neuroscience ward.**

Charmaine Arulvarathan BScN CNN(C) MN(C)

Deterioration of the neuroscience patient is complex. Oftentimes, as nurses, we are left wondering after the fact, “Did we miss something?” “Is there something we aren’t doing?”.

A pilot study was conducted using retrospective chart review design, for 30 neuroscience in-patients. Vital sign data and clinical notes were reviewed for up to 72 hours preceding deterioration.

This presentation includes a review of: the current literature related to predicting deterioration, findings from a pilot study on a neurosciences ward, implications for neuroscience ward nurses in the prevention and recognition of symptoms of secondary medical complications including aspiration pneumonia and utility of track-and-trigger tools in this population to predict deterioration.

This information will result in increased awareness around the prevention and recognition of aspiration as a significant risk to the neuroscience patient. Additionally, this information will equip nurses to enhance their understanding of deterioration based on real-life incidents and will give them a chance to hear about aspiration screening performed by nurses in Canada. Finally, the utility of track-and-trigger tools in identifying deterioration within the neuroscience patient population will be critiqued.

Implications for ward nurses include improved practices around prevention of secondary medical complications to avoid deterioration of neuroscience patients.

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### **Concurrent: Improved Stroke Care in Saskatchewan**

K. Ruth Whelan RN MN CNN(c) CNS

Current Canadian Best Practice Recommendations for Stroke Care suggest that the optimal outcome for the hyperacute stroke patient occurs when there is rapid and efficient medical management within 60 minutes or less of patient presentation to the emergency department. A retrospective chart analysis was conducted examining assessment, imaging, diagnosis and treatment times of patients presenting to three emergency departments (ED) in Saskatoon, Saskatchewan. A statistical analysis was then conducted comparing predetermined quality of care points with those of another Canadian Stroke Program. This presentation will focus on tangible recommendations that were implemented as a result of study findings. A look at methods implemented to increase efficiency in timely delivery of treatment will be included. Provincial applications will be discussed based on learning from the Saskatchewan Acute Stroke Pathway.

## **Poster Sessions**

### **S1: Canadians taking primary health care into their own hands: the role of independent nurse-assisted advocacy and navigation**

Susan Hagar RN

Lynn Joseph RN MScN

Canadians need a roadmap for their complex healthcare system, and need to know how to manage their health and well-being. Nurse On Board was created to support the health, safety and rights of their clients, facilitating competent and ethical care, acting as a liaison between the client, their family, providers and community agencies.

This presentation will focus on advocacy and navigation as an approach to:

- Improved primary health care through case-management
- Empowerment of individuals and families as active partners in their care
- Promotion of health and illness prevention

Nurse On Board case studies and satisfaction survey results will demonstrate how clients and their families viewed the support received and NOB independent practice nurses examined health-related outcomes, and the evolving role of advocacy and navigation.

### **S2: The S-Patient: A mobile App of surgical simulation for neuromodulation procedures for preoperative patient teaching.**

Cheri D. Derksen, Pekka Nisula, Kaisa Orajarvi, Tammy M. Winkel, Ivar M. Mendez

Department of Surgery, University of Saskatchewan, Saskatoon, Canada

Significant advances in electronic handheld devices have promoted the rapid expansion of mobile Apps to large segments of the population globally. The adoption of Apps in health care delivery and education is growing exponentially. We have developed a surgical simulation App for mobile devices to be used as an educational tool for patients undergoing neuromodulation surgery prior to the procedure.

Surgical simulation Apps for preoperative patient teaching such as the S-Patient App are useful tools to enhance the understanding of patients undergoing neuromodulation procedures and decreases preoperative anxiety.

### **S3: The Saskatchewan Cerebrovascular Center: Telehealth Pilot Project**

K. Ruth Whelan RN, MN, Aaron Gardner RN, Lissa Peeling MD, Gary Hunter MD, Michael Kelly MD, PHD

The Saskatchewan Cerebrovascular Center (SCVC) is the only center in the province offering intra-arterial treatments for aneurysm, arteriovenous malformations and stroke. Only a fifth of the provincial population is located in Saskatoon. As a result there are many challenges involved relating to the cost and distance in receiving appropriate care. Telehealth is currently being piloted by the SCVC to conduct consults and postoperative follow up visits.

We implemented a Telehealth program for initial and follow-up patient visits in our cerebrovascular program. The amount of distance traveled and cost saved to the patient was significant. In the future we plan to implement a larger program for stroke care in Saskatchewan using this model.

### **S4: Streamlining hyperacute stroke management at Royal University Hospital**

K. Ruth Whelan<sup>1</sup>, Gary Hunter<sup>1</sup>, Lissa Peeling<sup>1</sup>, Brett Graham<sup>1</sup>, Jessica Hamilton<sup>2</sup>, Laura Schwartz<sup>2</sup>, Aaron Gardner<sup>1</sup>, Michael Kelly<sup>1</sup>

In 2013, the Saskatoon stroke program was invited to participate in the Endovascular treatment for Small Core and Anterior circulation Proximal occlusion with Emphasis on minimizing CT to recanalization times (ESCAPE) trial; sponsored by the University of Calgary. A prerequisite to involvement in the trial was proving our study site had the capacity to achieve rapid endovascular revascularization rates in keeping with the objectives of the study. During the study site initiation visit many tangible recommendations on improving door to revascularization times were suggested and tools offered to increase efficiency in timely delivery of treatment.

By participating in the ESCAPE trial, following Canadian best practice recommendations for stroke care, and adapting the Calgary stroke program HASTE project, the Saskatoon Stroke Program implemented changes to reduce times to treatment for patients experiencing ischemic stroke in our province. Our learnings and conclusions are contributing to the development of a provincial stroke pathway to improve care of all of Saskatchewan.

#### **S5: Implementation of Bullet Rounds on an Acute Stroke Unit**

K. Ruth Whelan, Jodi Copeland, Jessica Hamilton, Brett Graham, Sanchea Wasyliv, Anissa Van Dusen, Michael Kelly, Gary Hunter

Delivery of acute inpatient stroke care requires specialized expertise from a diverse group of medical professionals. Inter professional practice members must function as a team to provide coordinated care to ensure each team member is informed of patient status and their therapeutic progress. Various methods of improving communication have been explored over time.

The Saskatoon Stroke Program Acute Stroke Unit (ASU) sought to improve communication by transitioning from twice weekly patient rounds, which were time consuming and ineffective, to daily “bullet” rounds to improve communication and inter professional team dynamics.

Recognizing that team communication and patient length of stay are influenced by a number of complex factors, it is clear that bullet rounds have had a positive impact on communication, efficiency and overall patient care. There is a consensus that bullet rounds are an improvement on the previous format and they continue to be sustained on the ASU. With frequent review and process improvements, we anticipate ongoing improvements in overall delivery of care.

This system may serve other stroke units in fostering effective communication and improving patient care.