Kingston **N**ursing **R**esearch **C**onference

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NETWORK

Thursday, 2018 March 08
Donald Gordon Centre
421 Union Street
Kingston, Ontario

KNRC

The Kingston Nursing Research Conference provides an opportunity for nurses to be engaged in the nursing research process. We are honoured to have nurses from clinical practice, academia, and leadership positions as well as nursing students joining this forum. The goal of this conference is to provide a symphony of informative talks, networking opportunities and invaluable professional development.

We welcome more than 20 speakers and poster presenters to share some of the exciting and innovative nursing research taking place in the Greater Kingston Area and we anticipate your experiences today have the potential to transform your practice.

This annual occasion allows participants to immerse themselves in a wide variety of topics, including the latest developments and challenges, such as Substance Abuse. Colin MacRae will offer our keynote lecture *Substance Use – What Works?* and will participate in the panelist session *Legalization of Marijuana* which will enable the exchange of both current clinical practice and innovative research.

Thank you for joining us in what promises to be a most rewarding and extraordinary event.

Nicole Chenier-Hogan & Barb Patterson
2018 KNRC Co-Chairs

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Acknowledgements

Collaborating organizations are acknowledged for their significant financial contribution in support of this conference as well as support of planning committee members.

Planning Committee

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The planning committee wishes to acknowledge and thank those who have provided displays and exhibits of interest to conference participants.

Displays

Canadian Nurses Association
Hill-Rom Canada
KCCU Wealth Solutions
KFL&A Public Health
Otsuka Canada Pharmaceutical Inc.
Queen's School of Nursing Graduate Programs

Educational Grants

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0800 am Registration, Continental Breakfast & Poster Viewing - *please arrive early to ensure a prompt start*

0830 am Welcome & Opening Remarks
- *Janet Giroux*

0840 am
Developing Nursing Competencies for Disaster Preparedness Through Simulation
- *Heba Al Jelban*

0855 am
Health Literacy Concept Analysis – A Scoping Review
- *Carolina Jimenez*

0910 am
Incongruence in Perception: Health Literacy in People Receiving Hemodialysis
- *Darlene Bowman & Delanya Podgers*

0940 am
Do Coping Strategies Mediate Relationships between Psychological Job Characteristics and Symptoms among Female Hospital Employees
- *Abigail Hain*

0955 am
Refreshment Break & Poster Viewing

1025 am
The Role of Self-Regulation and Shift Schedules to Counter the Slow Violence of Shift Work: Notes from the Front Line
- *Ruhi Snyder*

1055 am
The Effects of a Forensic Community Treatment "At Risk" Program on Re-Hospitalization and Re-Incarceration Rates
- *Kyal McCallum*

1110 am
Keynote Presentation: Substance Use – What Works?
- *Colin MacRae*

Colin has been involved in the field of Mental Health Nursing for over 25 years; initially in child and adolescent psychiatry, then in a variety of roles in the mental health and substance misuse nursing field; most recently as a Professor in under-graduate nursing within Ontario's community college sector. In addition, Colin is a trainer with the Motivational Interviewing International Network of Trainers and has published on developing motivational interviewing skills courses and on Group Psychotherapy and Addictions.

1155 am Lunch Break

1255 pm
Panel Discussion: Legalization of Marijuana
- *David Campbell, Carol Lynch, Colin MacRae, Daphne Mayer, Kristy Mikolich*
- *Moderator – Janet Giroux*

1345 pm
Comprehensiveness of Primary Care Follow-up: Perceptions of the First Cohort of Early Discharge Breast Cancer Survivors at One-Year Follow-up
- *Dr. Marian Luctkar-Flude*

1400 pm
Lessons Learned in International Research
- *Dr. Renee Berquist & Donna Clarke-McMullen*

1415 pm
Engaging Undergraduate Nursing Students in Learning using Classroom Response Systems: A Survey of Student and Instructor Perceptions
- *Alexandra Palmeri & Ruixi Sheng*

1430 pm
Exploring the Effect of Neurofeedback on Post-Cancer Cognitive Impairment and Fatigue: Preliminary Results of a Pilot Feasibility Study
- *Dr. Marian Luctkar-Flude*

1445 pm Refreshment Break & Poster Viewing

1500 pm
Building Capacity for Stroke Endovascular Thrombectomy (EVT) at Smaller Volume Sites: Lessons Learned in Starting an EVT Program (Almost) From Scratch
- *Kelly Bodie & Cally Martin*

1530 pm
A Study of Coping with Fear of Cancer Recurrence Among Ovarian Cancer Survivors Living Outside of Large Metropolitan Centres: The FEARLESS Study
- *Jacqueline Galica*

1545 pm
Poster & Student Awards
- *Marian Luctkar-Flude*

1550 pm
Closing Remarks & Evaluation
- *Janet Giroux*

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Presenters

- **Dr. Renee Berquist, RN, BScN, MN, PhD,** Faculty, BScN School of Baccalaureate Nursing, St. Lawrence College
- **Kelly Bodie, RN, CON(C), BSN, MN,** Manager, Emergency Department, Chemotherapy & IVR, Lennox & Addington County General Hospital
- **Darlene Bowman, RN, BN, CNN(C),** Health Literacy Specialist, Kingston Health Sciences Centre (KGH site)
- **David Campbell, ,** Ethicist, Kingston Health Sciences Centre
- **Donna Clarke-McMullen, BScN, RN,** MN, Faculty, BScN School of Baccalaureate Nursing, St. Lawrence College
- **Dr. Jacqueline Galica, RN, PhD, CON(C),** Postdoctoral Fellow, McGill University
- **Abigail Hain, RN, MScN,** PhD Nursing Student, Queen's University
- **Heba Al Jelban, BScN, MScN(C),** Queen's University
- **Carolina Jimenez, RN, MPH(C),** Registered Nurse, Emergency Department, Kingston Health Sciences Centre & Research Program Manager, Queen's University
- **Dr. Marian Luctkar-Flude, RN, PhD,** Assistant Professor, Queen's University School of Nursing
- **Carol Lynch, BScN,** Nurse Practitioner, Street Health Centre
- **Colin MacRae, RN, CPMHN(C), MA, PGDIP (Ed), FHEA,** Professor of Nursing
- **Cally Martin, BScPT, MSc,** Regional Director, Stroke Network of Southeastern Ontario
- **Daphne Mayer, BASc, MPH, GDip, HSPR,** Manager, Substance Use, Mental Health and Injury Prevention Program, Chronic Disease and Injury Prevention Division
- **Kyal McCallum, RN, CPMHN(C),** Registered Nurse, Forensic Outreach Program, Providence Care Mental Health Services
- **Kristy Mikolich, RN, CPMHN(C), CARN,** Concurrent Disorder Specialist, Assertive Community Treatment Team, Providence Care
- **Alexandra Palmeri,** Nursing Student, Queen's University
- **Delanya Podgers, RN(EC), MN, CRE,** Nurse Practitioner for Asthma & COPD, Kingston Health Sciences Centre (KGH site)
- **Ruixi Sheng, BNSc,** Research Assistant, Queen's University
- **Ruhi Snyder, RPSGT, CCSH,** Sleep Disorders Lab, Kingston Health Sciences Centre (KGH site)

Poster

1. Do Coping Strategies Mediate Relationships between Psychological Job Characteristics and Symptoms among Female Hospital Employees? –*Abigail Hain*
2. Comprehensiveness of Primary Care Follow-up: Perceptions of the First Cohort of Early Discharge Breast Cancer Survivors at One-Year Follow-up –*Dr. Marian Luctkar-Flude*
3. Designing and Implementing a Virtual Simulation Game for Nursing Students to prepare them for a Live Respiratory Distress Simulation – *Dr. Marian Luctkar-Flude*
4. Exploring the Effect of Neurofeedback on Post-Cancer Cognitive Impairment and Fatigue: Preliminary results of a Pilot Feasibility Study –*Dr. Marian Luctkar-Flude*
5. Faculty Development in Design, Delivery and Facilitation of Clinical Simulation for Health Professional Students: A systematic review of the literature – *Dr. Marian Luctkar-Flude*
6. Home First: Inter-professional Discharge Planning in the Emergency Department –*Heather Jenkins*
7. Implementation of a Radial Lounge: A cost effective strategy to decrease wait times, improve bed utilization and patient care – *Louise Snider*
8. Incongruence in Perception: Health Literacy in People Receiving Hemodialysis –*Darlene Bowman & Delanya Podgers*
9. Lessons Learned in International Research –*Dr. Renee Berquist & Donna Clarke-McMullen*
10. The Current Use of Human Patient Simulation Manikins in Saudi Arabian Nursing Schools: A Sequential Exploration Study –*Hibah Bahri*
11. Wake Up and Smell What's Brewing: Is Untreated Sleep Apnea Increasing Our Patients' Cardiac Risk? – *Pam Branscombe*

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Oral Presentation
Abstracts

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Developing Nursing Competencies for Disaster Preparedness Through Simulation

Problem: Healthcare providers' preparation and response to natural or man-made disasters are becoming increasingly important in our society. A disaster can be defined as an event that might end the lives of 10 or more people; impacts the lives of 100 or more people; necessitates assistance from local, national or international authorities; or creates chaos and destruction. Disasters can easily overwhelm healthcare services and registered nurses (RNs) situated in emergency departments are often the first point of contact for victims of disaster. Therefore, it is important for nurses to possess disaster response competencies as outlined by the International Counsel of Nurses (ICN). These competencies focus on 1) recognizing potential critical events and implementing initial actions; (2) applying principles of management; (3) demonstrating safety principles; (4) understanding institutional emergency operations plan; (5) demonstrating effective communications; (6) understanding the incident command system and; (7) demonstrating knowledge and skills needed to fulfill role requirements.

Unfortunately, previous research has demonstrated that RNs often feel unprepared to manage disasters in practice and this is largely due to a lack of education and training in this area. In fact, willingness to respond to a disastrous event is highly correlated with the knowledge a nurse possesses. However, education, training, experience and previous exposure are the most important factors found in the literature that are contributing to disaster preparedness.

Many Authors agree that pre-licensure undergraduate nursing education is the perfect time to increase the students' exposure to disaster experience and to develop disaster response competencies. This can be achieved through a variety of teaching modalities. To date, it is unknown which modality is best. However, real life scenarios showed a significant improvement in knowledge, preparedness, hence increased in confidence to carry out these skills. Simulation based approaches may be the most effective compared to face to face method or traditional written instructions method, as they bridge the gap between classroom learning and real-life clinical experience. Moreover, they are accessible to large number of learners. Simulation methods range from low fidelity (e.g. task trainers) to high fidelity (e.g. high fidelity simulators or virtual reality simulations); which refers to the level of realism embodied by the learning approach. There is evidence that VRS reinforce retention which enhances safe nursing practice. The utilization of VRS is very practical in terms of time and cost which make it a valid replacement for traditional disaster drills. Furthermore, the performance of participants could be monitored and assessed for quality improvement.

Methods: This is a scoping review that aims to answer the following questions: 1) What are the types of simulation approaches used among pre-licensure undergraduate nursing students to learn disaster response competencies. 2) Is high fidelity simulation the best method to deliver disaster preparedness competencies?
This literature review will be utilizing information from three data bases: The Cumulative Index to Nursing and Allied Health Literature, Ovid MEDLINE and Google Scholar. Keywords included: "Nursing undergrad*", nursing student", "disaster", "Casualty", "simulation".

Anticipated results: 16 studies identified and examined the effectiveness of simulation based learning. The following simulation approaches were identified and investigated further. Disaster simulation drills and VRS are the most practiced simulations.

Anticipated conclusions: High-fidelity simulation approaches are well suited to develop disaster preparedness competencies among pre-licensure undergraduate nursing students. Increasing preparedness for disaster response in this group will enhance entry to practice skills among new RNs engage them in future planning and leadership.

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Health Literacy Concept Analysis – A Scoping Review

Aim. This paper clarifies and complements the prevailing understanding of health literacy in the literature.

Background. There are several conceptual models and definitions of health literacy in the literature. Struggles among professionals to clarify the meaning of health literacy continue. A well-defined understanding of the concept within various outlets is essential as health literacy has extensive implications for the patient, health care professional and policy-maker.

Method. This scoping review was conducted to develop a concept analysis for health literacy. The method used for this concept analysis was that of Walker and Avant (2005).

Findings: Three predominant concepts were found in both academic and grey literature: clinical health literacy, functional health literacy, and the public health model of health literacy. Clinical health literacy contains an exclusive focus on the individual's numeracy, reading and writing skills in the health care environment and is classified as clinical literacy. Functional health literacy builds on core concepts of clinical literacy and has a focus on the individual's *functioning* both within and outside of the health care environment. Functional health literacy has behavioral science underpinnings and highlights health-informed decision making across the individual's life course. Newer models of health literacy, such as the public health model, highlight notions of health equity, accessibility of health services and critical self-appraisal. This public health model of health literacy emphasizes transcends clinical environments and highlights health literacy across sociocultural contexts. Notably, through this lens, health care providers and health systems are held accountable for health literacy as an outcome of health promotion practices.

Conclusion: This is the first paper to include grey literature in its review. The burden of inadequate health literacy among individuals and society are well-defined in the literature. Health literacy is a fluid and multidimensional. Critical attributes of health literacy are reading, writing, numeracy, comprehension of health information, capacity to use this information, and informed decision-making in and out of the health care setting. Newer ideologies incorporate a public health perspective, as seen by health promotion literacy. This paper suggests using the public health model of health literacy is incumbent towards promoting equity and sustainable results. A deficiency is seen in health literacy research in nursing literature; qualities of functional health literacy and the public health model of health literacy are scarce.

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Incongruence in Perception: Health Literacy in People Receiving Hemodialysis

Problem/issue

The prevalence of chronic kidney disease (CKD) is rising due to an aging population and increasing presence of multiple comorbidities. There is currently a paucity of literature that addresses the health literacy skills of patients with CKD receiving hemodialysis, despite the fact that this patient population typically has frequent contact with the healthcare system. The purpose of this study was to gain insight into patient perceptions regarding their health literacy skills and their experiences with health information.

Methods

Using a mixed method approach interviews were conducted with 46 patients (caregivers and families) who receive hemodialysis in the renal unit at Kingston General hospital (KGH). The interviews considered the patient's perceptions of their health literacy skills using three approaches.
Validated health literacy tools were employed to assess the health literacy skills in this population. The BRIEF Health literacy assessment tool uses four multiple choice questions to give a general understanding about patients' self-identified ability to independently understand their health information. Use of the Newest Vital Sign (NVS) health literacy instrument identifies the level of health literacy using a nutrition label, and gives a quantifiable health literacy level according to correctly answered questions.
Finally, the patient interviews included qualitative semi-structured interviews to further explore patients' experiences with health information.

Results

The BRIEF tool identified that in general, patients receiving hemodialysis perceive little difficulty understanding health information. Results from the NVS indicated an average score of 2.0 out of 6.0 (or 34%), with a median score for responses of 25% which suggests a high likelihood of limited health literacy in the sample population. Qualitative Interviews revealed four major themes: education, social support, experience and decision making.
Overall this study identified an incongruence between patients' perception of their health literacy skills and health literacy scores using a validated tool.

Conclusions

There is an incongruence in perception of health literacy skills amongst patients receiving hemodialysis at KGH. These patients have a high likelihood of limited health literacy despite frequent contact with the healthcare system. Equipping providers with the tools to meet the health literacy needs of this population may be beneficial. Strategies to address this incongruence are in development. Further research to understand this phenomenon is suggested.

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Do Coping Strategies Mediate Relationships between Psychological Job Characteristics and Symptoms among Female Hospital Employees

Purpose: To explore the influence of coping strategies on the relationship between psychological job characteristics and depressive symptoms in female hospital employees.

Design: A secondary analysis of previously collected data from a cross-sectional study designed to explore the relationships between work environment characteristics and cardiometabolic risk. Study participants included female hospital employees from 2 hospitals in Ontario (n = 307). The following measures were obtained: depressive symptoms using the Clinical Epidemiological Society –Depression (CES-D) questionnaire, coping using the Brief –COPE scale and psychological job characteristics using brief Job Content Questionnaire.

Analysis: The associations between psychological job characteristics and coping were first determined with multiple regression modeling. Hierarchical linear regression analyses using Baron and Kenny's (1986) model of mediation and the Sobel test were performed to determine the mediating role of coping on the relationship between psychological job characteristics and depressive symptom scale scores (CED-S).

Results: 61 % of this sample reported mild to moderate depressive symptoms (CES-D > 16/60). Significant predictors of depressive symptoms in this sample included: younger age, nursing job position, decreased decision latitude, job insecurity, decreased use of instrumental support, self-blame and less use of positive reframing as a coping mechanism; these variables accounted for 34% of the variance in overall depressive symptoms. Mediation testing found that the coping strategy of positive reframing partially mediated the relationship between decreased decision latitude and depressive symptoms.

Conclusion: Stressful psychological job characteristic associated with job insecurity and lower decision latitude may contribute to diminished mental health well being. Strategies to engage in positive reframing as a coping mechanism may mitigate some these effects.

Keywords: Depressive symptoms, female hospital workers, High Demand-Low Control Job Content Model, positive reframing, mediation.

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The Role of Self-Regulation and shift schedules to Counter the Slow Violence of Shift Work: Notes from the Front Line

Introduction & Objectives: The term "Slow Violence" to describes the catastrophic effects of environmental deterioration and its invisible trauma on human beings. As shift-workers we commit this slow violence against ourselves. Shift work is associated with circadian rhythm and mood disorders, metabolic disorders, diabetes, obesity, heart disease, and cancer. In Canada 28% of the working population are shift-workers; therefore, practical methods that help make shift work more sustainable are needed. This longitudinal 5-year field self-case study looked at real life interventions created over 3 years and based on shift schedules, exercise, meditation and diet as aids to cope with shift work.

Methods: A health care worker working 12-hour nights kept a log of sleep timing, total sleep time, shift schedule, sick days, mental health days, vacation days, exercise and food intake during nightshifts and days off work over three years. Shifts varied from 4 nights/week to 3 and then 2 nights/week with an 8-hour dayshift every two weeks. Timing and type of exercise and timing and type of diet was modified over the three years to include cardio, strength training and yoga done in minimal space in less than 40 minutes.

Results: A regular schedule including four or more recovery days after 2 consecutive night-shifts, and a flexible dayshift in conjunction with timed exercise, meditation and meals reduced sick time from 9 days a year to zero and increased productivity. High intensity exercise on night shifts optimally timed around 02h00, regular intensity exercise on days off between 15h00- 18h00 with food intake 45-60 minutes pre and post-exercise and a 12 hour fast timed to include the sleep period.

Conclusion: Regular consecutive night shifts followed by at least 4 days off and a flexible day shift on a two week cycle reinforced with self-regulation in terms of daily timed exercise and meals, and a 12 hour fast led to better mental and physical health, reduced sick days, increased productivity and improved work life integration.

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Effects of a Forensic Community Treatment "At Risk" Program on Re-Hospitalization and Re-Incarceration Rates

Problem/Issue: A subgroup of mentally ill people who are neither incarcerated nor under a review board but who have frequent contact with the law are at an increased risk of not obtaining services necessary to help them integrate into the community. This led to the development of a multidisciplinary and individualized At-Risk Program that addresses the complex needs of this population in Kingston, Ontario, Canada. The objective of this study was to measure the effectiveness of the At-Risk Program in reducing rates of re-hospitalization and reoffending, and, by extension, to determine whether it is cost-effective.

Methods: A cohort of clients (n=69) was identified from referrals to the service between January 1st 2014 and December 31st 2015. Number of hospital visits and number of contacts with law enforcement in the 12 months prior to referral and 12 months post-referral were collected from electronic patient records at Providence Care Hospital and Kingston General Hospital and Ontario Probation and Parole Offices. Pre- and post- involvement indicators were compared using paired-samples t-tests.

Results: Results showed a significant reduction in number of hospitalizations (t[68]=3.517, p=0.001) in the 12 months following enrolment (M=5.14, SD=6.85) in the At-Risk Program compared with the 12 months prior to enrolment (M=8.23, SD=9.65). Reoffending data is not yet available.

Conclusions: The findings suggest that participation in the At-Risk Program effective in reducing rates of re-hospitalization. We expect reoffending results to mimic those of re-hospitalization, and, thus, prove cost effectiveness by reducing healthcare and re-incarceration costs.

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Substance Use – What Works?

Colin MacRae, RN, CPMHN(C), MA, PGDIP (Ed), FHEA

Colin has been involved in the field of Mental Health Nursing for over 25 years; initially in child and adolescent psychiatry, then in a variety of roles in the mental health and substance misuse nursing field; most recently as a Professor in under-graduate nursing within Ontario's community college sector. In addition, Colin is a trainer with the Motivational Interviewing International Network of Trainers and has published on developing motivational interviewing skills courses and on Group Psychotherapy and Addictions.

As a Torontonian, Colin is an advocate for the Toronto Overdose Prevention Society fund which supports Overdose Action Toronto and its efforts to draw attention to the escalating overdose epidemic. Overdose Action Toronto consists of key stakeholders in harm reduction including people who use drugs, peers, frontline harm reduction workers and advocates. This fund also supports direct action aimed at increasing awareness among citizens of Toronto about the preventable nature of overdose deaths.
This fund also supports the work of the Toronto Harm Reduction Alliance and Toronto Harm Reduction Worker's Union, as well as Overdose Action Toronto.

https://www.gofundme.com/torontooverdosepreventionsociety

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PANEL DISCUSSION

Legalization of Marijuana: Implications for Healthcare Professionals

Bill C-45, an act respecting cannabis and the amendment of the Controlled Drugs and Substances Act, the Criminal Code and other acts is proposed to come into effect in July 2018. Significant debate and discussion has ensued regarding the legalization of marijuana. An overview of the important considerations for legalization of marijuana and discussion of the impact on nursing practice will be covered.

Panel Participants

- ❖ David Campbell, Ethicist
  Kingston Health Sciences Centre
- ❖ Carol Lynch, Nurse Practitioner,
  Street Health Centre
- ❖ Colin MacRae, Professor of Nursing
- ❖ Daphne Mayer, Manager
  Substance Use, Mental Health and Injury
  Prevention Program
  Chronic Disease and Injury Prevention Division
  KFL&A Public Health Unit
- ❖ Kristy Mikolich, Registered Nurse
  Concurrent Disorder Specialist, ACTT
  Providence Care

Moderator

Janet Giroux,
Nurse Practitioner
Kingston Health Sciences Centre

A Framework for the Legalization and Regulation of Cannabis in Canada
https://www.canada.ca/en/services/health/marijuana-cannabis/task-force-marijuana-legalization-regulation/framework-legalization-regulation-cannabis-in-canada.html

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Comprehensiveness of primary care follow-up: Perceptions of the first cohort of early-discharge breast cancer survivors at one-year follow-up

*also a poster

Issue: The Cancer Centre of Southeastern Ontario has moved forward with earlier discharge of stable early-stage breast cancer survivors to primary care follow-up. Many breast cancer survivors continue to experience physical and psychosocial healthcare needs following treatment. As a result, it is important to understand the perspectives and satisfaction of breast cancer survivors as this new initiative is undertaken to provide appropriate education and support to both breast cancer survivors and primary care providers

Objectives: To describe satisfaction of the first cohort of early-discharge breast cancer survivors with their primary care follow-up, and their perceptions of the quality and comprehensiveness of their survivorship care at one-year follow-up.

Methods: A descriptive survey was administered to early-discharge breast cancer survivors upon discharge from oncology follow-up, and at 6 and 12-month follow-up. Outcome measures on the 12-month follow-up survey were: (1) Edmonton Symptom Assessment System (ESAS), (2) Canadian Problem Checklist (CPC), and (3) Patient Satisfaction Questionnaire (PSQ-18). Participants also described their usual physical activities, and indicated if and who initiated discussions related to key guideline recommendations for breast cancer survivorship care in the primary care setting. Survey participants were invited to participate in a semi-structured interview to provide more detailed feedback. Thematic analysis of interview transcripts was undertaken in order to describe general themes in participant experiences and perspectives on post-treatment primary care follow-up.

Results: Sixty-one participants, aged 44-88 years (mean 66.2) were recruited between January 2015 and July 2016 from the Cancer Centre of Southeastern Ontario. Participants generally rated their transition to primary care follow-up highly. Of these, 43 (70%) completed the one-year follow-up survey, and 12 (20%) completed a follow-up interview. Fatigue (63%), pain (51%) and anxiety (47%) were the most prevalent symptoms reported on the ESAS, with symptom severity rated as high as 10/10 for fatigue and pain, and 7/10 for anxiety. Thematic analysis revealed 5 positive themes (self-management, activity, back to normal, satisfaction with care, alternative therapy) and 4 challenges (ongoing side effects, lack of confidence with primary care, survivorship issues ignored, uncertainty).

Conclusions: Many breast cancer survivors are satisfied with their follow-up care in the primary care setting; however, a subset have identified gaps and concerns that will inform development of targeted knowledge translation interventions for primary care providers and breast cancer survivors to improve health and quality of life.

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Problem/Issue: Does school based nutrition and nutrition education influence gardening and nutrition practices in the family home in the Lower Moshi Region of Kilimanjaro, Tanzania?

Methods: 3 schools in the Lower Moshi area, were approached for school garden development. Tanzanian students were to be educated over a 5 year period in effective gardening methods and healthy eating.

An existing global health nutrition survey was adapted to address local needs and collect appropriate indicators for health monitoring by the research team.
Health professional program students were used to collect the survey data and provide the health education in Tanzania.

Results:

- Literature review completed;
- Nutrisurvey health & nutrition survey adapted for local needs;
- Nutrition education & resources developed;
- Pilot informed future nutrition education;
- 1 school garden started & another in planning stage;
- Tanzania REB approval was not gained;
- Partnerships were formed which resulted in other health care initiatives in the Lower Moshi community;
- Faculty & research team learned lessons around the challenges of managing an international research project.

Conclusions: Researchers gained experience in applying for grants, preparing a budget, logistics of international work, developing culturally appropriate health materials, state of nutrition in Tanzania, working as a research team and managing a research project. Differences between the REB approval processes in Canada versus a developing country provided greater insight into the challenges of global health research. Although this initial attempt at international nutrition and health research was unsuccessful, it will inform nutrition education being delivered by students in the region in the future. The research team gained experience which will be applied to future research projects in Tanzania.

KNRC

Engaging undergraduate nursing students in learning using classroom response systems:
A survey of student and instructor perceptions

Problem/issue

There are currently a number of classroom response systems (CRSs) available on the market to support interactive learning in the classroom. Simple "clicker" systems have evolved into more sophisticated multi-platform software that interface with multiple operating systems and devices including smart phones, tablets and laptops. Features vary by system; different question and response types are available to enhance interactions in the classroom.

Objective

The study aim was to evaluate student and instructor perspectives of a multi-platform mobile CRS (i.e. Top Hat™) in the classroom for undergraduate nursing students. Specifically, we evaluated benefits and limitations of CRS technology and impact on learning.

Methods

This descriptive study utilized survey methods to obtain quantitative and qualitative data. Participants were instructors (n=4), and students enrolled in the four-year (n=160) and two-year (n=75) accelerated BNSc program. The breakdown of the four year stream included second (n=45), third (n=58), and fourth (n=57) year students, while the accelerated program included third (n=36) and fourth (n=39) year students. Learner perceptions were measured using the *Classroom Response System Perceptions (CRiSP) Questionnaire* which evaluated usability, engagement, and learning. Instructor perceptions were measured using the *Perceived Usefulness and Perceived Ease of Use Scale*. Open-ended questions were also included on both the instructor and learner surveys to capture qualitative feedback related to the perceived benefits and limitations of using the CRS in the classroom lecture.

Results

The mean *CRiSP* score was significantly higher ($p>0.05$) for the four-year stream (102.64; SD 12.87) than the two-year stream (100.29; SD 14.08). The mean *Learn* score for the four-year stream was 44.22 (SD 7.14), $p>0.05$. Several prominent themes emerged from both the instructor and learner surveys. Many students reported that CRS in the classroom was easy to use, added value to learning, increased participation and attendance, and provided a formative assessment. Perceived limitations include associated cost, practical drawbacks, use of CRS as a grading tool, a disruption to classroom time, and inaccurate reflection of learner's knowledge and attendance. Instructors (n=4) felt similarly to students, with the added benefit of identifying and addressing knowledge gaps almost instantly.

Conclusions

This study addresses a gap in the nursing education research literature and contributes to the growing body of scientific knowledge related to teaching, learning and assessment strategies related to utilization of a multi-platform classroom response system in classroom settings.

KNRC

Exploring the effect of neurofeedback on postcancer cognitive impairment and fatigue: Preliminary results of a pilot feasibility study

*also a poster

Background: Cancer-related fatigue and postcancer cognitive impairment (PCCI) or "chemobrain" are distressing symptoms that linger post-treatment. EEG biofeedback or neurofeedback brain training is a non-invasive, drug-free Complementary and Alternative Medicine (CAM) therapy reported to help with a variety of conditions including fatigue and cognitive decline. This study aims to determine feasibility of a randomized controlled trial investigating the effect of neurofeedback on PCCI and fatigue in post-treatment cancer survivors.

Methods: Twenty post-treatment breast cancer survivors are being recruited for this pilot wait-list controlled study. Participants serve as their own wait-list controls and receive 20 NeurOptimal^{TM} sessions over a ten week period. Primary study outcomes are cognitive impairment as measured by an objective neurocognitive assessment, CNS Vital Signs, and a standardized patient-reported outcome (PRO) measure, the FACT-Cognition Scale. Secondary outcomes include fatigue as measured by the FACIT-Fatigue.

Results: To date, 64 individuals have inquired about the study, 20 women have met inclusion criteria, 14 have enrolled and completed or scheduled baseline testing and 7 have completed the study protocol and follow-up. Mean scores for the Total FACT-CoG increased significantly [$F(1.595, 9.570) = 11.811$, $p = 0.004$] over the treatment period as compared to the wait-list period, with a large effect size (partial eta squared = .663). Mean scores for the FACIT-Fatigue increased significantly [$F(1.554, 9.323) = 17.484$, $p = 0.001$] with a large effect size (partial eta squared = .745). Results of the CNS Neurocognition Index increased nonsignificantly [$F(1.743, 10.457) = 1.731$, $p=.224$; partial eta squared = .224].

Conclusions: Results of this pilot study have identified challenges to patient recruitment that will inform development of an RCT protocol. Statistically significant improvements in perceived cognition and fatigue levels, as well as promising trends on objective measures of neurocognition support the need for trials of neurofeedback in cancer survivors to manage debilitating symptoms.

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Building Capacity for Stroke Endovascular Thrombectomy (EVT) at Smaller Volume Sites: Lessons learned in starting an EVT program (almost) from scratch.

Issue: Endovascular Thrombectomy (EVT) has become the standard of care for select acute ischemic stroke patients with severe disabling conditions. Access to this new approach remains limited in part due to lack of neuro-interventional radiologists. We explored the feasibility of starting an EVT program for acute ischemic stroke in a tertiary academic centre without on-site neuro-interventional radiologists. This required a strong interprofessional approach with participation from Paramedic Services, Emergency, Diagnostic Imaging, Core Lab, Interventional Radiology, Critical Care, Neurosciences and the Regional Stroke Program.

Methods: An interprofessional EVT Workgroup was formed in July 2015. Planning, workflow process coordination and training took place between July 2015 and May 2016 at Kingston General Hospital. A weekday EVT pilot study was approved and launched May 2, 2016. Nurses, CT and IVR Techs and Physicians worked together to design the process so that every minute counted. *"Time is Brain"* was central to all planning. Safety checklists, process documents and new order sets were created. Real-time tele-mentorship was set up with a Hamilton neuro-interventionalist using tele-fluoroscopy. Patients were selected according to ESCAPE trial criteria. Stroke neurologists were present for all cases. Debriefs were held after each pilot case and learnings were immediately applied to improve processes. Data were collected and analyzed. Following the pilot, planning proceeded for 24/7 service delivery, launched Sept 29th 2017. Ongoing monitoring contributes to ongoing process improvement.

Results: During the pilot phase, to May 2016, ten patients with severe ischemic stroke were treated with EVT. Five further cases were treated up to Sept 29 2017 when 24/7 service was launched. IV thrombolysis was administered to two thirds of the patients. Door-to-needle times improved to under 30 minutes. During the pilot, CT to puncture time was 30.5 minutes, puncture to reperfusion time was 24.7 minutes, and CT to reperfusion time was 57.1 minutes. Process times were well within ESCAPE trial criteria. Modified Rankin Scale score at 90 days was ≤ 2 in 10/15 patients (full independence), again, comparing favorably with ESCAPE trial outcomes. A patient-centred collaborative team approach was driven by dramatic improvement in patient outcomes.

Conclusion: A successful and safe 24/7 EVT service for stroke patients was built with strong interprofessional collaboration by an experienced interventional radiology team with strong support from neurosciences, pre-hospital, emergency, diagnostic imaging and critical care teams. Tele-fluoroscopy mentorship was feasible in a tertiary academic stroke centre and helped to build expertise. A strong collaboration with neurology was essential.

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A study of coping with fear of cancer recurrence among ovarian cancer survivors living outside of large metropolitan centres: The FEARLESS Study

Problem/Issue: Fear of cancer recurrence (FCR) is a paramount concern among ovarian cancer survivors. It is suggested that cancer survivors living outside of large urban centres have higher psychological morbidity, however, no known studies have explored the methods by which ovarian cancer survivors living outside of large urban centres cope with FCR. This study's overall objective is to examine how ovarian cancer survivors living in the Kingston and surrounding area cope with FCR. Specific study objectives are: i) to explore the resources used by ovarian cancer survivors to cope with FCR; and ii) to explore ovarian cancer survivors' styles of coping with FCR.

Methods: A qualitative design using a focus group method will be used. Eligible participants are English-speaking women greater than 18 years of age who have had a diagnosis of ovarian cancer and were treated at the Southeast Ontario Cancer Centre. In November 2017, consenting, eligible participants will attend focus groups at Kingston Health Sciences Centre, and verbatim transcripts will be analyzed using a qualitative descriptive method. Participants will complete a demographic form and Fear of Cancer Recurrence Inventory, and clinical information will be extracted from participants' hospital charts.

Results: Results are expected in February 2018 and will be presented in March 2018. Themes will be described in alignment with a common conceptualization of coping (e.g., coping resources and coping styles), and clinical implications will be discussed. Results will be disseminated to cancer survivors, clinicians and other stakeholders living in and around the Kingston community.

Conclusions: This descriptive study will fill an important gap in the existing literature. Results are intended to serve as a catalyst for program development and/or subsequent research using integrated knowledge translation strategies. It is intended that this approach will meet the psychosocial needs of patients and survivors receiving healthcare at the Southeast Ontario Cancer Centre.

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Poster
Abstracts

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Designing and implementing a virtual simulation game for nursing students to prepare them for a live respiratory distress simulation

Issue: Pre-simulation preparation is a critical aspect of simulation education that has not been well-studied. Traditional pre-simulation activities include readings, lectures, and quizzes. We have developed a serious virtual simulation game to enhance pre-simulation preparation for a respiratory distress simulation scenario for undergraduate nursing students.

Objective: To describe development and implementation of an innovative serious simulation game to prepare nursing students to participate in a live simulation scenario focused on managing respiratory distress

Methods: A validated deteriorating patient simulation scenario focused on respiratory distress was previously implemented in a 4th year critical care nursing course, with self-regulated pre-simulation preparation guided by a scenario-specific learning outcomes assessment rubric. An innovative serious virtual game simulation was developed based on the respiratory distress scenario and incorporated five decision points designed to promote critical thinking. The learning outcomes assessment rubric was incorporated into the game as a pre/post assessment allowing learners to gauge their own readiness to participate in the live simulation scenario. The virtual game consists of video clips filmed from the perspective of the nurse interacting with the patient. At regular intervals, learners must select the best of three nursing actions in response to the video.

Results: The virtual simulation game is being implemented in the critical care nursing course. One hundred and twenty three 4th-year nursing students were randomized to traditional versus virtual pre-simulation preparation. Pre/post data from the learning outcomes rubric and a clinical knowledge test will be used to evaluate achievement of learning outcomes.

Conclusions: We anticipate the serious virtual simulation game will be an engaging pre-simulation preparation activity. The advantages to using virtual games for pre-simulation preparation could include the promotion of self-regulated learning, enhanced knowledge, decreased anxiety, and enhanced preparation and performance during a live simulation scenario. We anticipate that standardized pre-simulation preparation will reduce faculty preparation time and student assessment time, and may decrease instructional time in the simulation laboratory.

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Faculty development in design, delivery and facilitation of clinical simulation for health professional students: A systematic review of the literature

Issue: Clinical simulation has become integral to pre-licensure healthcare curricula. The International Nursing Association for Clinical Simulation and Learning (INACSL) has identified faculty development related to simulation as a research priority. While there is considerable literature on faculty development related to debriefing, there is less available to guide faculty in delivering other aspects of simulation, such as pre-instruction and prebriefing. A previous systematic review, by Nehring and colleagues (2013), examined faculty development for the use of high-fidelity patient simulation, but focused on broad high-level research in simulation faculty development. We propose to delve more deeply into faculty development specifics.

Objective: Overall, we want to examine how to best prepare faculty to design and facilitate various components of simulation. **Research Questions:** How are faculty/instructors trained or educated in the design, delivery and facilitation of simulation for undergraduate or pre-licensure health professional students? Which faculty development strategies have positive effects on faculty and/or learner outcomes?

Methods: A quantitative systematic review of the literature will be conducted using Joanna Briggs Institute (JBI) methodology to identify effective faculty development strategies for simulation. Included studies will evaluate faculty/instructor outcomes (satisfaction with faculty development strategies, and subsequent knowledge, skill, confidence and competence in delivery/facilitation of simulation) and/or learner outcomes (satisfaction, knowledge, skill, confidence and competence acquired through simulations delivered by faculty trained via different faculty development methods. Databases to be searched include: Medline, CINAHL and Embase. Kirkpatrick's Training Evaluation Model will provide the framework for analysis of review findings.

Results: The review is in progress and a total of 3155 citations were found after removal of duplicates. As with most simulation literature, it is anticipated most studies will evaluate level 1 and 2 outcomes. Review results will identify faculty development best practices that can be translated to improve simulation teaching and support student learning and performance

Conclusions: This systematic review will support development of comprehensive faculty development strategies for simulation to enhance learner outcomes and train better-prepared health professionals, as well as guide future research and policies concerning development for clinical simulation.

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Home First: Inter-Professional Discharge Planning in the Emergency Department

Problem/ Issue:
High volumes of Alternate Level of Care (ALC) patients and ALC days are impacting timely access for patients who need to be admitted into KHSC from the Emergency Department (ED). Long stays in a busy ED have negative impacts on the patient's medical, physical and cognitive condition. In August of 2016, KHSC KGH site began a refresh of the Home First Philosophy throughout the organization. Under Home First, transferring patients from hospital to a Long Term Care (LTC) home is considered only after all community options are considered.

Methods:
ED Discharge Planning Rounds began in March 2017 to address the needs of patients who do not need admission but who have challenging situations that present a potential barrier to discharge. The Discharge Team consists of a social worker, a Home and Community Care coordinator, ED nurse, Patient Flow Specialist, and physiotherapist who meet daily. We bring the patient and family into care planning and decision-making right at the outset, and offer the support of the Discharge Team to help develop a supportive plan.

Results:
ED Discharge team is involved in the care planning for an average of 26 patients per month. The implementation of the team has led to the near-elimination of direct placement in LTC from ED and a discharge success rate of over 90% of patients- this number is steadily increasing! Increasing care needs and Caregiver burnout are the most frequent barriers to discharge. The most challenging cases are those who present with aggressive behaviours, often due to advancing dementia.

Conclusion:
The Emergency Department required a different approach to Home First as inter-professional case management is a new concept for them. Two things were key to the success of this initiative: early identification of challenging cases, and robust communication among team members.
Increasingly complex patients present to the Emergency Department with caregiving, social or behavioural issues that do not require admission to hospital. A coordinated effort by an inter-professional team can address their needs and ensure a safe plan for discharge. This approach assists with reducing admission for care planning or to await LTC. More importantly, patients and their families are being connected to resources that increase their ability to thrive in the community, further assisting with ED avoidance.

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Implementation of a Radial Lounge:
A cost effective strategy to decrease wait times, improve bed utilization and patient care.

Managing growing waitlists and post-procedural care for patients requiring a coronary angiogram is a challenge given our current resources. Through the implementation of a radial lounge recovery area we have the potential to improve patient flow, reduce costs, decrease complications and improve patient satisfaction. Our challenge is finding radial recovery areas towards the end of the day, forcing us to choose a procedural approach based on bed availability rather than physician preference.

Femoral access angiograms have the advantage of being faster and technically easier for physicians. The femoral artery has a larger diameter which makes it easily accessible but unfavorable for patients as they require a prolonged bed rest of 2-4 hours with an increased risk of bleeding. Using a femoral-vascular close device (cost~$200) reduces recovery time to 1-2 hours. Radial access angiograms require additional knowledge and skill from the physician but patients are more comfortable recovering in a recliner. There are fewer site complications with earlier patient recovery time of 2 hours, improved patient satisfaction, and lower cost (Radial band cost~$20).

Study data will be collected retrospectively into the Cardiac Care Network (CCN) database to compare our hospital's radial and femoral angiography statistics for the year before and after utilizing the lounge. In Addition we will monitor the effectiveness from the vascular closure devices, complication rates and wait times.

We hope to prove implementation of the radial lounge will be patient focused, improve bed utilization and patient flow, while reducing costs and wait times for coronary angiograms.

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The Current Use of Human Patient Simulation Manikins in Saudi Arabian Nursing Schools: A Sequential Exploratory Study

The use of human patient simulation (HPS) is rapidly penetrating the terrain of nursing and healthcare education worldwide. It has gained growing acceptance as an effective educational method and patient safety tool. To date, no studies have been published which explore the use and type of human patient simulation and the pedagogical principles underpinning their use in undergraduate nursing education in Saudi Arabia. This study seeks to determine how different learning theories support using simulation and explore how the practice of using clinical simulation is employed in nursing education in the Saudi Arabian context in particular.

The research uses a sequential exploratory design, with two phases. This study answers the following three research questions:

1. What learning theories are best suited for clinical simulation teaching and learning in nursing?
2. What pedagogical principles underpin the current use of simulation in clinical education in nursing?
3. What is the current state of simulation teaching and learning in undergraduate nursing education in Saudi Arabia?

To answer research questions one and two, above, Phase One involved the use of the Joanna Briggs Institute (JBI) methodology to conduct a scoping review to examine the current use of learning theories in simulation. Scoping review findings informed a critique and adaptation of the National League of Nursing (NLN) /Jeffries Simulation Teaching and Learning Framework. In Phase Two, and to answer research question number 3, we will administer a cross-sectional survey of all deans of four-years accredited undergraduate nursing programs in Saudi Arabia.

Preliminary findings suggest a combination of three learning theories are best used for simulation teaching and learning, and that the choice of which theory to use is contingent on desired learning outcomes, and the culture of simulation teaching and learning environment.
The explicit use of learning theories can help to inform teaching and learning in a manner that encourages more effective learning and potentially results in more positive learning outcomes.

The findings benefit educators implementing the NLN /Jeffries Simulation Theory in their simulation work, as they will have a better understanding of what learning theories they should be grounded in, in order to make the most of their use of the model. It is also expected that this research will develop a comprehensive picture of how simulation is being used in Saudi Arabian nursing education and promotes the best practice of simulation-based learning and teaching.

Wake Up and Smell What's Brewing: Is Untreated Sleep Apnea Increasing Our Patients' Cardiac Risk?

Obstructive sleep apnea (OSA) is a serious, underdiagnosed breathing disorder, characterized by episodes of partial or complete upper airway closure. It results in repeated periods of hypoxia and adverse hemodynamic changes. As a result, OSA poses many potential health concerns. Untreated OSA is correlated with cardiovascular (CV) morbidity and mortality. The literature on the pathophysiology of OSA suggests that frequent episodes of low oxygen levels lead to sustained sympathetic nervous system activation and vasoconstriction. This leads to increased heart rate and blood pressure, causing a predisposition to arrhythmias, cardiomyopathies, left ventricular dysfunction, heart failure, etc. Diagnosis and treatment of OSA is necessary to prevent these negative CV health outcomes.

Discussion will focus on the pathophysiological mechanisms of OSA and the potential cardiac repercussions if the condition is left untreated. Current literature on OSA and CV risk will be summarized. The positive benefits of diagnosis and treatment of OSA with non-invasive positive pressure ventilation will be emphasized.

A review of screening, diagnosis and management of OSA will be provided with attention to future research directions for prevention and cardiac treatment optimization. The end goal is to increase knowledge and awareness related to OSA, to improve the quality of life of the patient, to reduce the financial burden on the health care system and to decrease the proportion of untreated patients with this common clinical disorder.

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