



# Northeastern University

Bouvé College of Health Sciences  
School of Nursing

## Doctor of Nursing Practice (DNP) Scholarly Project Abstracts Class of 2019

Submitted in partial fulfillment of the requirements  
for the Doctor of Nursing Practice Degree

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### Doctor of Nursing Practice (DNP) Scholarly Projects Class of 2019

#### **Student Speaker:** Robert Gauvin

1. Maria Anidi, MSN, MBA, RN  
DNP Scholarly Project Title: ***Evaluation of School Nurses' Knowledge of Individual School-Aged Homeless Children (Grades K-8)***  
DNP Scholarly Project Advisor: Anne Mingoelli, DNP, RN, PHMNP-BC, APRN-BC, Affiliate Associate Professor, Northeastern University, Boston MA; South Shore Mental Health-Bayview Associates, Plymouth MA  
Expert Mentor: Kathleen Hassey, DNP, MEd, RN, Director of the School Health Academy, Northeastern University, Boston MA
2. Annmarie Baldwin, MSN, RN, NP-C, CCRN  
DNP Scholarly Project Title: ***Rethinking Reflux Management: Initiating a Clinical Practice Guideline for Infants on the Acute Care Cardiac Floor***  
DNP Scholarly Project Advisor: Jean Connor, PhD, RN, CPNP, FAAN, Affiliate Professor, Northeastern University, Boston MA; Director Nursing Research, Cardiovascular & Critical Care, Boston Children's Hospital, Boston MA  
Expert Mentor: Michelle Hurtig, DNP, RN, NE-BC, Director of Nursing/Patient Services Cardiovascular Inpatient/ICP and Ambulatory Programs, Procedural and Ambulatory Programs, Boston Children's Hospital, Boston MA
3. Nora Basile, MSN, APRN, AGPCNP-BC, WHNP-BC  
DNP Scholarly Project Title: ***Human Immunodeficiency Virus Pre-Exposure Prophylaxis Prescribing Practices of College Health Clinicians***  
DNP Scholarly Project Advisor: Meghan McManama, DNP, APRN, WHNP-BC, ANP-BC, Affiliate Associate Professor, Northeastern University, Boston MA;  
Expert Mentor: Ariel Watriss, MSN, NP-C, Tufts University Health Services, Medford MA

4. Marcy Bergeron-Noa, MSN, ANP-BC  
DNP Scholarly Project Title: ***Understanding Nurses' Knowledge and Perceptions of the Home Hospital Option for Patients Requiring Acute Level Care***  
DNP Scholarly Project Advisor: Elizabeth McGrath, DNP, APRN, AGAACNP-BC, AOCNP, AOCHPN, Affiliate Associate Professor, Northeastern University, Boston, MA; Nurse Practitioner, Medical Oncology, Assistant Professor of Medicine, Dartmouth-Hitchcock Medical Center, Nashua, NH, Dartmouth College, Hanover NH  
Expert Mentor: Bruce Leff, MD, Director for the Center for Transformative Geriatric Research, Johns Hopkins, Baltimore MD
  
5. Jocelyn Bresnahan, MSN, ANP-BC  
DNP Scholarly Project Title: ***A Descriptive Study of the Impact of Short Term Global Immersion Experiences (STGIEs) on Graduate Nursing Students***  
DNP Scholarly Project Advisor: Linda Malone, DNP, RN, CPNP, Affiliate Associate Professor, Northeastern University, Boston MA  
Expert Mentor: John Morgan, DDS, MS, Associate Professor and Director of Special Projects and Global Service Learning, Department of Public Health and Community Service, Tufts University School of Dental Medicine, Concord MA
  
6. Kendra Broussard, MSN, RN, AGPCNP-BC, WHNP-BC  
DNP Scholarly Project Title: ***An Exploration of Tuberculosis Screening Practices on College Campuses across Massachusetts***  
DNP Scholarly Project Advisor: Karen Farnum, DNP, RN, CPNP, Affiliate Associate Professor, Northeastern University, Boston MA; Pediatric Nurse Practitioner, Greater Lowell Pediatrics, Lowell MA  
Expert Mentor: Elaine Rancatore, DO, Supervising Physician, Black Bag Medical, Teledoc
  
7. Michael Butera, MS, CRNA  
DNP Scholarly Project Title: ***A Retrospective Evaluation of Student Registered Nurse Anesthetists' Preparedness to First Enter Clinical Practice after Simulated Training***  
DNP Scholarly Project Advisor: Janet Dewan, PhD, MS, CRNA, Associate Nurse Anesthesia Program Director & Assistant Clinical Professor, Northeastern University, Boston MA  
Expert Mentor: Jamie L. Musler, LPD, ATC, Director of Interprofessional Medical Simulation, Northeastern University, Boston MA
  
8. Stephanie Curtis, MS, RN, NNP-BC  
DNP Scholarly Project Title: ***Low Lactose versus Traditional Formula for Management of Gastrointestinal Symptoms in Newborns with Opioid Withdrawal***  
DNP Scholarly Project Advisor: Dorothy Mullaney, DNP, APRN, Affiliate Associate Professor, Northeastern University, Boston MA; Director of Associate Providers, Dartmouth Hitchcock, Lebanon, NH  
Expert Mentor: Mara Coyle, MD, Professor of Pediatrics, Clinical, The Warren Alpert Medical School of Brown University, Providence RI; Staff Neonatologist, Women and Infant's Hospital, Providence RI

9. Tara Doherty, MSN, RN, FNP-BC  
DNP Scholarly Project Title: ***Evaluation of a Vaccine Initiative to Increase Human Papillomavirus (HPV) Vaccination Rates in a College Health Center***  
DNP Scholarly Project Advisor: Leah McKinnon-Howe, DNP, ANP-BC, Affiliate Associate Professor, Northeastern University, Boston MA; Administrative Director and Nurse Practitioner of New England Conservatory Health Center, Boston MA  
Expert Mentor: Cecilia Briggs, DNP, RN, FNP-BC, Family Nurse Practitioner, Curry College Health Services
  
10. Kathleen Evangelista, MS, CRNA, NEA-BC  
DNP Scholarly Project Title: ***An Educational Intervention to Increase Provider Knowledge in the Delivery of Trauma-Informed Care (TIC) for Labor and Delivery Healthcare Providers***  
DNP Scholarly Project Advisor: Mary Cushing, DNP, CRNA, Affiliate Associate Professor, Northeastern University, Boston MA; Cleveland Clinic, Cleveland OH  
Expert Mentor: Annie Lewis O'Connor, PhD, MPH, NP-BC, FAAN, Founder and Director C.A.R.E Clinic, Brigham and Women's Hospital, Boston MA
  
11. Robert J. Gauvin, MS, CRNA  
DNP Scholarly Project Title: ***A Retrospective Study of Anesthesia Billing Data to Examine Anesthesia Reimbursement Practices in Massachusetts***  
DNP Scholarly Project Advisor: Donald Van Dam, DNP, CRNA, LTC, Affiliate Associate Professor, Northeastern University, Boston MA; Kimbrough Army Community Hospital, Fort Meade MD  
Expert Mentor: Ruby Hoyem, PhD, Research Associate, American Association of Nurse Anesthetists
  
12. Patricia Gedarovich, MSN, MPH, APRN, PMHNP-BC  
DNP Scholarly Project Title: ***The Effect of a Novel Transitional Care Service Program on Adult Psychiatric Patients Hospitalization Rates and Days of Hospitalization***  
DNP Scholarly Project Advisor: Ann Polcari, PhD, PMHCNS-BC, Associate Clinical Professor & Director Psychiatric Mental Health Program, Northeastern University, Boston MA  
Expert Mentor: James Sullivan, MD, PhD, Senior Vice President, Care New England Health System; Chief Medical Officer, Butler Hospital; Clinical Associate Professor of Psychiatry, Warren Alpert Medical School of Brown University, Department of Psychiatry & Human Behavior
  
13. Susan Hall, MSN, CRNA  
DNP Scholarly Project Title: ***Experiences of Critical Care Nurses Transitioning to Student Registered Nurse Anesthetists (SRNAs)***  
DNP Scholarly Project Advisor: Maria van Pelt, PhD, CRNA, Associate Clinical Professor and Director Nurse Anesthesia Program, Northeastern University, Boston MA  
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14. Piter Jules, MS, PMHNP-BC  
DNP Scholarly Project Title: ***Risk Factors Associated with Crisis Stabilization Unit (CSU) 30-day Readmission***  
DNP Scholarly Project Advisor: Lisa Duffy, PhD, MPH, RN, CPNP-PC, Assistant Professor, Northeastern University, Boston MA  
Expert Mentor: Christina Borba, PhD, MPH, Director of Research, Department of Psychiatry, Boston Medical Center, Boston MA
  
15. Heather Mortimer, MSN, RN, ACCNS  
DNP Scholarly Project Title: ***Utilization of a Hospital Discharge Lounge through Education of Adult Inpatients and Nursing Staff***  
DNP Scholarly Project Advisor: Christopher Callahan, DNP, RN, Affiliate Associate Professor, Northeastern University, Boston MA; Nurse Manager, Neuromuscular Diagnostic Center, Massachusetts General Hospital, Boston MA  
Expert Mentor: Maria Murray, MSN, RN, Nurse Director of the Access Center, Brigham and Women's Hospital, Boston MA
  
16. Christine O'Brien, MSHI, RN-BC  
DNP Scholarly Project Title: ***From Their Own Words, The Role of the Chief Nursing Informatics Officer (CNIO)***  
DNP Scholarly Project Advisor: Claire Seguin, DNP, RN, Affiliate Associate Professor, Northeastern University, Boston MA; Associate Chief Quality Officer, Massachusetts General Hospital, Boston MA  
Expert Mentor: Rebecca Love, MSN, BA, Managing Director, US Markets, Ryalto International
  
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DNP Scholarly Project Title: ***Financial Toxicity in Oncology Patients: The Impact of an Educational Intervention for Nurses***  
DNP Scholarly Project Advisor: Melissa Taylor, DNP, MPH, RN, CEN, CPEN, Affiliate Associate Professor, Northeastern University, Boston MA  
Expert Mentor: Jill Pedro, DNP, RN, ACNS-BC, ONC, Clinical Nurse Specialist, Massachusetts General Hospital, Boston MA
  
18. Elizabeth Russet, MSN, RN, FNP-BC  
DNP Scholarly Project Title: ***Looking Upstream: Structural Competency in Nursing Students***  
DNP Scholarly Project Advisor: Sara Mosadegh, DNP, RN, CPON, Affiliate Associate Professor, Northeastern University, Boston MA  
Expert Mentor: Remercile Polynice-Pierre, DNP, FNP-BC, Affiliate Associate Professor, Northeastern University, Boston MA; Pre-Operative Nurse Practitioner, Boston Medical Center, Boston MA

19. Mary Ann Santos, MSN, APRN, NNP-BC  
DNP Scholarly Project Title: ***Impact of Nurse Re-Education Initiative on Neonatal Hypoglycemia Management***  
DNP Scholarly Project Advisor: Patricia Fleck, PhD, RN, NNP-BC, Affiliate Associate Professor, Northeastern University, Boston MA  
Expert Mentor: Laurie Hoffman, MD, Neonatologist, Women and Infant's Hospital, Providence RI
  
20. Jacqueline Tolosko, MSN, RN, ANP-BC  
DNP Scholarly Project Title: ***Knowledge, Attitude and Practice of the Pap Smear Test in College Females Attending a Global University in the United States***  
DNP Scholarly Project Advisor: Ann Stadler, DNP, RN, CPNP, Affiliate Associate Professor, Northeastern University, Boston MA  
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21. Jeffrey Vandall, MSN, APRN, CRNA  
DNP Scholarly Project Title: ***An Anesthesia Training Program in Preprocedural Ultrasound Imaging Techniques of the Lumbar Spine: Virtual Versus Traditional Training***  
DNP Scholarly Project Advisor: Mark Schierenbeck, DNP, MHS, CRNA, Affiliate Associate Professor, Northeastern University, Boston MA; Madigan Army Medical Center, Fort Lewis WA  
Expert Mentor: John Pina, MS, APRN, CRNA, Assistant Chief CRNA at St. Vincent's Hospital, Worcester MA
  
22. Allison C. Webster, MSN, RN  
DNP Scholarly Project Title: ***Continuous Virtual Monitoring of Hospitalized Patients: Barriers and Facilitators to Implementation***  
DNP Scholarly Project Advisor: Julie Cronin, DNP, RN, OCN, Affiliate Associate Professor, Northeastern University, Boston MA; Massachusetts General Hospital, Boston MA  
Expert Mentor: Leo F. Buckley Jr., MBA, Executive Director of Business Operations for Department of Nursing and Patient Care Services, Brigham and Women's Hospital, Boston MA
  
23. Jennifer M. Wilson, MSN, CRNA  
DNP Scholarly Project Title: ***Prevention of Maternal Hypothermia during Cesarean Section with Spinal or Combined Spinal/Epidural Anesthesia, Retrospective Chart Review***  
DNP Scholarly Project Advisor: Lynn Reede, DNP, MBA, CRNA, FNAP, Affiliate Associate Professor, Northeastern University, Boston MA; Chief Clinical Officer, American Association of Nurse Anesthetists  
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**All DNP Scholarly Projects receive IRB review, inclusive of quality/performance improvement projects.**

**References for DNP Scholarly Project Abstracts are available upon request.**

## *Evaluation of School Nurses' Knowledge of Individual School-Aged Homeless Children (Grades K-8)*

**Maria Anidi**

**Background and Significance:** Approximately 2.5 million children in the United States are homeless, essentially 1 out of every third child (American Institute of research, 2014). The term “School-Aged Homeless Children” (SAHC) is defined as students who lack a consistent and adequate residence. Accordingly, their primary nighttime residence consists of public or semi-private accommodations, including motels, hotels, trailer parks, shelters, or temporary foster care placement (The McKinney-Vento Act, 2016). In Massachusetts (MA), approximately 17,565 people are experiencing homelessness, including 11,298 families with children, and 469 unaccompanied youth, according to the U.S. Department Housing and Urban Development, (HUD, 2018). Studies indicate that this peak in SAHC is correlated with abject poverty (U.S. Census Bureau, 2015). Homelessness is the key predisposing factor directly affecting vulnerable children’s health and well-being. Although the increasing number of SAHC and magnitude of their needs are challenging, school nurses can be catalysts at their respective schools by collaborating with educators to develop educational strategies that shape the perception and stigma associated with SAHC.

**Purpose and Aims:** The purpose of this project is to assess school nurses’ knowledge about the diverse needs of SAHC in MA. Project aims include: 1) exploring school nurses’ knowledge of the diverse needs of SAHC in MA grades K-8 schools; 2) improving support services to assist SAHC in MA; and 3) exploring avenues and available resources to provide basic needs and educational support for SAHC attending MA schools.

**Methodology:** This study utilizes a mixed methods design encompassing: quantitative analysis of demographic data and qualitative content analysis of open-ended responses. The survey, modified from Dean (2018), is to be administered on-line via Qualtrics. The sample population includes all MA grades K-8 school nurses, approximately 2,500 subjects. Data will be utilized to gain information regarding nurses’ knowledge about the diverse needs of SAHC, including the availability and accessibility of these resources. Data will be analyzed using descriptive, quantitative, and qualitative methods.

**Results:** This project is in progress.

**Implications for Future:** Nurses adhering to professional and ethical principles are expected to be patient advocates, especially for vulnerable populations. This charge calls for school nurses to improve the welfare of SAHC and quality of life by facilitating student success both in and outside of the classroom. Evaluating the existing knowledge gaps among school nurses regarding the diverse needs impacting the lives of SAHC will also yield school program modifications that can improve support services and other resources to assist this vulnerable population. Ultimately, research outcomes, through guidelines or interventions, may support and expand upon methods that contribute to ensuring the physical, emotional and academic status of SAHC in MA.

**Key Words:** school nursing, children, homelessness



## ***Rethinking Reflux Management: Initiating a Clinical Practice Guideline for Infants on the Acute Care Cardiac Floor***

**Annmarie Baldwin**

**Background and Significance:** Gastroesophageal reflux disease (GERD) is a pathological condition associated with persistent symptoms or complications resulting from the constant refluxing of gastric contents. According to the 9th edition of the *International Classification of Diseases* GERD occurs in about 12.3% of North American infants and 1% of children 1-17 years old (De Bruyne, Christiaens, Stichele, & Van Winckel, 2014). Despite the existence of treatment algorithms that provide stepwise guidance for the treatment of GERD, studies have shown many providers are not following these algorithms. Acid suppressive medications have been the mainstay of treatment for GERD in the pediatric population. This form of therapy was previously thought to be benign, although recent literature has shown significant adverse events associated with their use. These adverse events include, but are not limited to, increased risk of necrotizing enterocolitis in pre-term infants, increased incident of pneumonia, small bowel bacterial overgrowth, gastric polyps and interference with calcium absorption leading to increased fracture risks. As a result national guidelines caution use of acid suppressive medications focusing providers on following national reflux guidelines to help with the management of GERD.

**Purpose and Goals:** To evaluate the feasibility of implementing a clinical practice guideline (CPG) for infants with congenital heart disease and GERD on the Acute Care Cardiac Floor in effort to standardize practice, increase patient safety and improve patient care. The aims of this project are to:

1. To describe the feasibility of implementing a CPG for infants with congenital heart disease and GERD on the Acute Care Cardiac Floor.
2. To describe adherence to the CPG guidelines for infants meeting criteria.

**Methodology:** This quality improvement initiative utilizes the Plan-Do-Study-Act (PDSA) framework to assess the feasibility of implementing a CPG for infants diagnosed with congenital heart disease on the Acute Care Cardiac Floor. An educational offering occurred for a 1-month period (September 2018) prior to roll out of the CPG, with initiation and assessment occurring during a 3-month period (October – December 2018). Assessment will occur via medical record review and with data documented on the CPG assessment tool. Descriptive statistics will be utilized to summarize patient demographics. CPG adherence will be measured by calculating the proportion of infants meeting inclusion criteria enrolled on the CPG by the total number of infants meeting inclusion criteria for the CPG.

**Results:** This project is in progress.

**Implications for Future:** Despite the existence of treatment algorithms providing a stepwise guidance for the treatment of GERD studies have shown many providers are not following these algorithms. As a result, there is no standardized treatment approach to treating patients with GERD. Standardizing practice is essential to improve patient safety and care. Standardizing practice eliminates provider biases and individual preferences, and implements evidenced based practice into direct patient care.

**Key Words:** pediatrics, clinical practice guideline, gastroesophageal reflux disease

## *Human Immunodeficiency Virus Pre-Exposure Prophylaxis Prescribing Practices of College Health Clinicians*

Nora Basile

**Background and Significance:** Human Immunodeficiency Virus (HIV) remains a significant health burden within Massachusetts and the United States. There were approximately 38,500 new HIV infections nation-wide in 2017, with over 600 of those cases in Massachusetts (CDC, 2018b; DPH, 2017b). Research shows that daily use of the well tolerated drug emtricitabine/tenofovir disoproxil fumarate (Truvada®) as HIV Pre-Exposure Prophylaxis (PrEP) reduces the risk of acquiring an HIV infection by over 90% (Anderson, et al., 2012). The Centers for Disease Control and Prevention (CDC) recommend the use of daily PrEP for all individuals, regardless of sexual orientation, who have substantial risk for HIV acquisition (CDC, 2017b). Despite an estimated 1.2 million people in the U.S. eligible for PrEP, less than 10% are treated prophylactically as recommended under the CDC guidelines. As of 2017, 21% of all new HIV infections in the United States occurred in individuals ages 13-24 years of age (CDC, 2018). Thus, college-age adults make up a significant portion of the US high-risk population that may not be receiving adequate prophylactic therapy. With nearly 50% of eligible students receiving care at their college health clinics, this provides college health clinicians (CHCs) with an opportunity for education and intervention with PrEP, potentially reducing the new infection disease burden on the US adolescent population (ACHA, 2010). Previous research has outlined the barriers to prescribing PrEP faced by primary care providers. This includes lack of training/awareness, logistical concerns, or possibility of increasing risk behaviors (Turner et al., 2018). CHCs may face many of the same barriers, but no studies have been identified specifically looking at the prophylactic treatment of this at-risk age group.

**Purpose and Aims:** The purpose of this project is to describe the current HIV PrEP prescribing practices of CHCs in Massachusetts. The aims are to: identify common barriers and facilitators to prescribing HIV PrEP experienced by CHCs and to improve adherence to the CDC's current HIV PrEP guidelines.

**Methodology:** This descriptive project utilized snowball convenience sampling to recruit approximately 10-15 college health providers from a variety of college settings in Massachusetts. Eligibility criteria included: age  $\geq 18$  years of age; English-speaking; either licensed nurse practitioner, physician assistant, doctor of medicine, or doctor of osteopathic medicine; currently working in a college health clinic in the Commonwealth of Massachusetts for  $\geq$  one year; and with prescriptive authority in the state. A brief demographic survey and an investigator-developed semi-structured interview guide modified from Hoffman et al. (2016) with permission is used to lead all interviews conducted in person or via an online video conference program, lasting 30-60 minutes. Descriptive statistics will be used to describe demographic data. Content analysis will be used to analyze the interview data until saturation. Themes will be generated that describe the current HIV PrEP prescribing practices.

**Results:** This project is in progress.

**Implications for Future:** An understanding of the barriers and facilitators faced by CHCs with regards to prescribing PrEP and improved adherence to the CDC's PrEP guidance may help increase the use of PrEP among the student population.

**Key Words:** college health, pre-exposure prophylaxis, STI prevention

## *Understanding Nurses' Knowledge and Perceptions of the Home Hospital Option for Patients Requiring Acute Level Care*

**Marcy Bergeron-Noa**

**Background and Significance:** A growing body of evidence has shown that many conditions previously thought to require an inpatient hospitalization can safely and effectively be treated in the home (Shepperd et al., 2009). This approach, often referred to as Home Hospital (HH), is a care delivery model that provides treatment and management of conditions usually requiring inpatient hospitalization in the home. Evidence suggests it can be a viable alternative for patients who require hospitalization for certain conditions. Dr. Bruce Leff, a recognized pioneer in this area, found in a 2005 multi-site study that HH care met quality standards at similar rates as those of acute level care. He showed, patients treated using the HH model had shorter lengths of stay and possibly fewer complications. In terms of cost, he and his team found the mean cost was lower for HH acute level care than for acute level care delivered in the hospital (Leff et al., 2005). Many studies have shown that patients consistently report higher satisfaction with the option to receive acute level care at home, when compared to an inpatient stay (Fried, van Doorn, O'Leary, Tinetti, & Drickamer, 2000; McCurdy, 2012). Although there is large body of work demonstrating the feasibility and safety of providing acute level care in the home for specific patient populations, little is known about clinicians' knowledge and familiarity with this option or their perceptions of the HH model of care.

**Purpose and Aims:** The purpose of this scholarly project is to describe the knowledge and perceptions of nurses regarding the Home Hospital (HH) model of care. The aims of the study are to: 1) Measure nurses' knowledge and perceptions by surveying a sample of nurses practicing at a single large urban tertiary care hospital; and 2) Examine the relationships between nursing characteristics (including roles, education level, specializations) and their knowledge and perceptions of HH.

### **Methodology:**

This quality improvement project will use quantitative survey methodology to ascertain nurses' knowledge and perceptions of the HH care model. The sample will include Licensed Practical Nurses (LPNs), Registered Nurses (RNs) and Nurse Practitioners (NP's) who work at a single large urban tertiary acute care hospital in the Northeast United States. Target sample size is 300 nurses. All nurses who have computer access, that are employees of the designated hospital (with no restrictions by age, gender or race), and are proficient in English will be eligible to participate. Nurses who are not employees of the participating hospital or are non-English speaking will be excluded from participation.

**Results:** This project is in progress.

**Implications for Future:** This project has important implications for the development of educational efforts designed to raise nurses' awareness and expand their knowledge regarding the HH option while potentially uncovering false perceptions of this new acute level care delivery model. Understanding trends among the various roles and demographics of the nurse participants will facilitate creation of targeted awareness efforts for specific groups.

**Key Words:** Home Hospital, Nurse Perceptions, Survey

*A Descriptive Study of the Impact of Short Term Global Immersion Experiences (STGIEs)  
on Graduate Nursing Students*

**Jocelyn Bresnahan**

**Background and Significance:** With a rapid increase in globalization, Advanced Practice Nurses (APNs), who are educated at the graduate level, need to be prepared to provide care in multicultural environments with skills and knowledge to practice with cultural competence (Creech et al., 2017, Kohlry, 2016 & Loftin et al., 2013). Short term global healthcare immersion experiences (STGIEs) may be a means for nursing students to gain proficiency and global awareness to meet this demand (Czandera, 2013). There is no consensus on the definition of STGIEs. This project will define the experience as *being deeply engaged in a location outside of the United States or one's personal culture for a brief duration of one to four weeks*. The impact of STGIEs has been demonstrated in baccalaureate nursing and other health professional students but there remains a gap in current literature on the role they play in graduate nursing education (Kohlry, Creech & Issacson, 2014). Thus, there is an increased need to understand their role in graduate nursing student's professional and personal growth, as well as their impact on the development of global awareness and cultural competence (Budd et al., 2015).

**Purpose and Aim:** The purpose of this quality improvement project is to explore graduate student nurses' experiences with STGIEs. The aim is to inform stakeholders of the impact of STGIEs for graduate nursing students upon entry into their practice by conducting focus groups.

**Methodology:** This descriptive design, quality improvement project utilizes semi-structured focus groups conducted by the student investigator. There will be 3-4 groups, each with 4-5 participants. To be eligible, participants will be current M.S. nursing students or recent M.S nursing student alumni that have participated in a STGIE that took place during their graduate nursing education or within one year of graduation. A semi-structured interview guide developed by the project team and validated by 3 experts for content validity will guide the discussion. Demographic data, collected from a demographic survey, will be exported into the Statistical Package for the Social Sciences (SPSS) and descriptive statistics will be used to summarize the data. Data collected from the focus groups will be audiotaped, transcribed and examined using conventional content analyses.

**Results:** This project is in progress.

**Implications for Practice:** There is an anticipated demand for APNs who possess the skills and knowledge to care for an increasingly global patient population to optimize patient safety and satisfaction. The approach to assuring that graduate nursing students acquire these skills and knowledge has not been fully recognized. New knowledge generated from this study may benefit APNs, and graduate nursing educational strategies, by helping to understand both the professional and personal impact experiential learning through STGIEs may provide.

**Key Words:** globalization, STGIE, graduate nursing student

## *An Exploration of Tuberculosis Screening Practices on College Campuses across Massachusetts*

**Kendra Broussard**

**Background and Significance:** Tuberculosis is a highly contagious airborne bacterial disease that affects the lungs but can spread to other areas of the body; potentially leading to a fatal systemic infection (American Lung Association, 2018). It is one of the top ten causes of death worldwide (World Health Organization, 2018). In Massachusetts, there were 210 active tuberculosis cases reported in 2017, 184 (88%) of these being in non-US born individuals (Massachusetts Department of Public Health, 2018). In April 2014, the American College Health Association (ACHA) released updated guidelines recommending tuberculosis screening and targeted testing of students on college campuses, owing to the large percentage of international students at colleges across the United States.

Few studies exist that have examined university tuberculosis screening practices and the implementation of the ACHA recommended screening guidelines. Even fewer studies have examined facilitators and barriers to screening college age students for active tuberculosis. It would be helpful to learn more about the various policies implemented at the diverse colleges and universities in Massachusetts to identify what schools are doing to help promote the health of students and prevent the spread of tuberculosis and other communicable diseases on college campuses.

**Purpose and Goals:** The purpose of this scholarly project is to explore the practices of providers regarding tuberculosis screening in a sample of college health centers in Massachusetts. The aim is to identify facilitators and challenges to providers' adherence to the American College Health Association (ACHA) tuberculosis screening guidelines.

**Methodology:** This quality improvement initiative utilizes an investigator-developed semi-structured interview guide to query college health providers regarding current practices in tuberculosis screening. Data will be obtained through purposive sampling of 10-15 providers of college and university health centers across Massachusetts. Inclusion criteria will be any English-speaking healthcare provider, working either part or full time, in a university health center in MA for a minimum of one year. Participants will be recruited from published university and college websites. The audiotaped interviews are anticipated to last 30-60 minutes and will be conducted using Bluejean technology. Quantitative data will be used to summarize demographic data. Qualitative content analysis will be used to identify themes until saturation is reached.

**Results:** This project is in progress.

**Implications for Future:** The results of this study will provide an assessment of tuberculosis screening practices at colleges in Massachusetts, as well as identify overall adherence to the ACHA's tuberculosis guidelines. Findings of this project may also help guide future discussion and support for practice changes amongst Massachusetts colleges and universities, as well as spread awareness regarding the national guidelines released by the ACHA.

**Key Words:** Tuberculosis, College Health, ACHA

# *A Retrospective Evaluation of Student Registered Nurse Anesthetists' Preparedness to First Enter Clinical Practice after Simulated Training*

**Michael Butera**

**Background and Significance:** Registered nurses training to become Certified Registered Nurse Anesthetists face a challenge of beginning a new clinical practice in Nurse Anesthesia. Most nursing educational programs have embraced simulation as a teaching pedagogy. There is little evidence when evaluating the transfer of clinical judgment and critical thinking based on performance in simulated training. It is the responsibility of the academic institution to provide education that is related to success in the clinical environment (Greiner & Knebel, 2003). Nurse anesthesia programs are required to utilize evaluation data to monitor and improve program quality, effectiveness and student achievement (Council on Accreditation, 2004).

**Purpose and Aim:** The purpose of this quality improvement (QI) project is to evaluate simulation for pedagogical effectiveness in preparing student registered nurse anesthetists (SRNA's) to first enter clinical practice. This project's aim is to evaluate the perspectives of students, faculty and clinical preceptors to identify methods that predict and improve student success, via transfer of skills and knowledge gained from simulation as they enter the reality of clinical practice.

**Methodology:** This QI project utilizes a retrospective design to evaluate SRNA's journey from the simulation clinical laboratory into their first clinical practice setting. A retrospective review includes all standard SRNA evaluations using a convenience sample of 27 first year students enrolled in the Nurse Anesthesia program at Northeastern University. Data is reviewed retrospectively from May 1, 2018 to October 1, 2018. Four evaluations are to be considered:

- 1.) Students' reflective self-evaluation upon completing their simulated training
- 2.) Northeastern faculty evaluations on each student after completing the simulated training
- 3.) Clinical preceptors' daily evaluations compiled from the students first month of clinical training
- 4.) Clinical preceptors' secondary evaluations to reflect how well students were prepared to begin clinical training and how this process could be improved

Descriptive statistics will be used to describe the students' self-evaluations and the preceptors' reflective evaluation. Comparative statistics will be used to compare differences between surveys. Data from the reflective questions will be coded to identify major themes.

**Results:** This project is in progress.

**Implications for Future:** Findings from this QI project may be used to inform educational program stakeholders on methods to identify students at risk for failure in the clinical setting, and to adopt strategies to facilitate SRNA success during their first clinical assignment.

**Key Words:** SRNA, Simulation, Education

## *Low Lactose versus Traditional Formula for Management of Gastrointestinal Symptoms in Newborns with Opioid Withdrawal*

**Stephanie Curtis**

**Background and Significance:** Neonatal abstinence syndrome (NAS) is a growing problem in the United States. A recently published study from the American Academy of Pediatrics revealed the national rate of NAS in 2014, was 14.4 per 1,000 births. (Winkelman, Villapiano, Kozhimannil, Davis, & Patrick, 2018) Withdrawal from opiates manifests in those locations where the opiate receptors are located, specifically the autonomic and central nervous systems, and the respiratory and gastrointestinal (GI) systems. The Modified Finnegan Neonatal Abstinence Scoring Tool (M-FNAST) assigns a numerical value to each symptom based upon severity. (Maguire, Cline, Parnell, & Tai, 2013) The GI component of the Finnegan score accounts for between 0-9 points depending upon whether the newborn demonstrates poor feeding, excessive sucking, regurgitation, and loose or watery stools. Poor weight gain is commonly seen in newborns with NAS, as their high energy consumption can raise their metabolic demand. This, coupled with caloric loss secondary to the GI symptoms, can lead to excessive weight loss. (Fanaroff, Walsh, & Martin, 2015) When these disturbances become severe, complications such as dehydration, poor weight gain, risk of aspiration, and skin breakdown can occur, which may necessitate increased pharmacologic intervention leading to prolonged hospitalization.

**Purpose and Aims:** The purpose of this project is to determine if low lactose formula versus traditional formula reduces GI symptoms in opioid exposed newborns. The study aims are to:

- Describe the sample characteristics of newborns with opioid withdrawal GI symptoms, inclusive of M-FNAST gastrointestinal scores.
- Compare the GI scores of the M-FNAST for a sample of newborns with NAS, 24 hours before switching (from traditional) formula, through 48 hours after switching (to low lactose) formula.
- Compare the feeding-related M-FNAST scores (poor feeding, excessive sucking, regurgitation) for a sample of newborns with NAS, 24 hours before switching (from traditional) formula, through 48 hours after switching (to low lactose) formula.
- Compare number of stools and M-FNAST stool characteristic scores (consistency- loose, watery) for a sample of newborns with NAS, 24 hours before switching (from traditional) formula, through 48 hours after switching (to low lactose) formula.
- Compare medication usage (type of medication, maintenance dosage, increase maintenance dose, decrease maintenance dose, and number of boluses) for a sample of newborns with NAS, 24 hours before switching (from traditional) formula, through 48 hours after switching (to low lactose) formula.

**Methodology:** This quality improvement project uses a descriptive retrospective chart review design and is conducted at Women and Infants Hospital in Providence Rhode Island. The sample includes approximately 50 infants born between January 1, 2015 and December 31, 2017 with neonatal abstinence syndrome (NAS) that meet inclusion criteria.

**Results:** This project is in progress.

**Implications for Future:** The findings of this chart review will help determine if evidence supports the practice of changing formulas, or perhaps empirically initiating low lactose formula for this fragile population.

**Key Words:** Neonatal, abstinence, formula

*Evaluation of a Vaccine Initiative to Increase Human Papillomavirus (HPV) Vaccination Rates in a College Health Center*

**Tara Doherty**

**Background and Significance:** Human Papillomavirus (HPV) is a virus that can infect humans and cause cervical dysplasia, cervical, throat and rectal cancer, and genital warts with over 200 genotypes. (Kluwer, 2018) The HPV vaccine has been proven to target oncogenic HPV strains and reduce rates of infection by up to 90% (Garbutt, et al., 2018). There is a known need for educational initiatives nationwide that address HPV prevention, the harmful effects of persistent infection and the availability of effective vaccines that mitigate the risks associated with infection. There is currently a gap in addressing this issue at many college health centers in Boston. Further, the HPV vaccine is not mandated as a pre-matriculation requirement, although may be recommended, for incoming students.

**Purpose and Aim:** The purpose of this quality improvement project is to evaluate a proposed educational intervention on Human Papillomavirus (HPV) for its feasibility and usability in college health centers. The aim is to obtain measurement of feasibility and usability of the educational intervention on HPV in college health centers, and to identify facilitators and barriers to implementing the educational intervention.

**Methodology:** The quality improvement project utilizes a focus group design of 5-7 college health nurse directors or administrators who are experts in college health. The System Usability Scale (SUS) is utilized after the presentation of the proposed educational intervention in addition to a four question investigator developed semi-structured interview guide. The SUS is a validated ten-item Likert scale and has been described in the literature as a reliable, low-cost usability scale. This scale was modified by changing one word in every question from “system” to “program” (Brooke, J., 1996). The surveys in the educational intervention packet were validated using the content validity index (CVI). Three experts in college health with expertise in providing care for those eligible to receive the HPV vaccine reviewed the survey. The experts’ responses for each question were averaged resulting in a content validity index of 0.76. According to Polit & Beck & Owen (2016), a content validity of 0.78 or higher is considered as having excellent content validity. Minor revisions to the final survey were made at the recommendation of the three expert nurse reviewers.

**Results:** This project is in progress.

**Implications for Future:** Under vaccinated college students are at increased risk for HPV related illness and cancers due to higher risk sexual practices that may contribute to transmission of HPV infection. HPV vaccination has been shown to prevent HPV related cancers by targeting oncogenic strains of HPV. Vaccine recommendation and education by healthcare providers are strong predictors of successful and effective vaccination practices.

**Key Words:** Human Papillomavirus (HPV), educational initiatives, college health



## *An Educational Intervention to Increase Provider Knowledge in the Delivery of Trauma-Informed Care (TIC) for Labor and Delivery Healthcare Providers*

**Kathleen Evangelista**

**Background and Significance:** Trauma is recognized as a public health crisis. Trauma is a pervasive, detrimental, and financially burdensome problem. Trauma has been defined as “an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being (SAMHSA, 2014)”. The negative effects of trauma on a patient’s health can be long lasting. After an initial experience with trauma, patients may become highly susceptible to re-traumatization especially when seeking healthcare. To mitigate the adverse effects of trauma, healthcare providers need to recognize the concept of Trauma-Informed Care (TIC) as an essential tool in caring for patients. The literature identifies a gap in the knowledge regarding the implementation of TIC frameworks within the workforce. Specific barriers perceived by the healthcare provider surrounding the implementation of TIC programs are the provider’s lack of knowledge, lack of education, production pressure, and ineffective systems or protocols. When examining the perspective of the healthcare provider in delivering TIC, the concepts of Compassion Fatigue (CF) and Secondary Traumatic Stress (STS) should be considered as a consequence of provider exposure. Along with the psychosocial implications associated with CF and STS, the financial burdens related to job retention can be catastrophic to a healthcare system.

**Purpose and Aims:** The purpose of this scholarly project is to improve provider knowledge as it relates to TIC in order to increase provider confidence and decrease compassion fatigue in delivery of TIC. The specific aims are to: (1) identify providers' knowledge gaps regarding TIC; (2) educate providers on TIC and improve their knowledge base; (3) increase providers’ confidence in the delivery of TIC; and (4) decrease provider compassion fatigue related to TIC.

**Methodology:** A convenience sample of approximately 150 healthcare providers in one of the following roles; obstetric physician, certified nurse midwife, anesthesiologist, certified registered nurse anesthetist, nurse, surgical technologist or patient care assistant, working on the Labor and Delivery Unit at Brigham and Women’s Hospital are being recruited to participate in this quality improvement educational session pertaining to TIC. Provider knowledge of TIC is measured through an investigator designed pre and post survey. The Professional Quality of Life Survey is used to assess provider compassion fatigue and burnout. The surveys are administered as a pre and post web-based questionnaire to measure baseline and post intervention changes in provider knowledge and compassion fatigue as it relates to providing TIC. Descriptive and comparative statistics will be utilized to analyze data.

**Results:** This project is in progress.

**Implications for Future:** Improving health outcomes for trauma survivors starts with education of the healthcare professionals. Some of the distrust survivors have for healthcare providers come from providers’ lack of understanding for the kinds of problems abuse survivors’ experience when seeking healthcare. Inadequate knowledge regarding TIC can be a barrier to both patient care as well as provider wellness. Improving the providers TIC knowledge base by establishing specialty specific TIC education will improve outcomes for patients who have experienced trauma as well as provider confidence and satisfaction when delivering TIC.

**Key Words:** Trauma Informed Care (TIC), education, compassion fatigue

*A Retrospective Study of Anesthesia Billing Data to Examine Anesthesia Reimbursement Practices in Massachusetts*

**Robert J. Gauvin**

**Background and Significance:** Examining trend analysis of anesthesia billing can provide insight into variations anesthesia reimbursement practices and can be utilized to educate key stakeholders in understanding its complexity. As the healthcare marketplace changes it is imperative stakeholders understand how future demand and access to surgical services will be affected by trends in anesthesia reimbursement. Research examining geographic variation of anesthesia procedures and billing modifiers based on state data and perceived barriers in state and federal regulations may help eliminate confusion that exists when trying to utilize all anesthesia providers to their full scope of education and training.

**Purpose and Aims:**

The purpose of this project is to conduct a retrospective study of anesthesia billing data to examine anesthesia reimbursement practices in Massachusetts.

Aim 1: To identify variation in anesthesia reimbursement practices.

Aim 2: To use the data gathered to educate key stakeholders in understanding the complexity of anesthesia reimbursement practices and how these practices impact financial planning within the healthcare system.

**Methodology:** A retrospective review of anesthesia billing data utilizes the Center for Health Information and Analysis All-Payer Claims Database (CHIA, APCD). The sample includes all Massachusetts anesthesia billing data contained in the APCD from January 1, 2012 to December 31, 2016. For identification of anesthesia procedures, Healthcare Common Procedure Codes (HCPCS) and Current Procedural Terminology codes (CPT) 00100-01999 are analyzed in relation to Specific billing modifiers.

**Results:** This project is in progress.

**Implications for Future:** The results of this study will be compared to the literature to help identify variations in anesthesia reimbursement practices. Data gathered will help educate key stakeholders in understanding the complexity of anesthesia reimbursement practices and how to maximize available resources. The data will also provide insight into future financial planning within the healthcare system.

**Key Words:** Anesthesia Reimbursement, Anesthesia Billing, Key Financial Stakeholders

*The Effect of a Novel Transitional Care Service Program on Adult Psychiatric Patients  
Hospitalization Rates and Days of Hospitalization*

**Patricia Gedarovich**

**Background and Significance:** Hospital readmissions represent complex inefficiencies in care delivery systems that impact national cost structures. Reducing readmissions is a key policy initiative embedded in the Patient Protection and Affordable Care Act (PPACA) and now constitutes a major focus of health care systems nationwide. Adults hospitalized for serious and persistent mental illness (SPMI) experience high rates of rehospitalization. Transitional care models (TCMs) are innovative programs that utilize commercial insurance to link this high-risk population with after care services in order to reduce hospital readmission rates and days hospitalized. Evidence shows programs such as TCMs intended to support individuals during critical transition points appear to have an enduring positive impact on reducing rehospitalization and other adverse outcomes (Tomita, 2012). TCMs have the potential to bring forward the aims of the PPACA for the commercially insured patient.

**Purpose and Aims:** This project evaluates the effect of a specific TCM on hospital rates and days hospitalized among a targeted number of patients.

Its aims are to:

- 1.) Describe program participant demographics for a specified time period.
- 2.) Evaluate selected statewide psychiatric hospitalization rates and days hospitalized for a specified time period.
- 3.) Measure dropout and completion rates to assess patient participation in the program over a specified time period.

**Methodology:** This project employs a retrospective chart review using a consecutive sampling method that includes all clients that have agreed to participate in the program from January 1, 2016 through December 31, 2016. Program participant's hospitalization rates and days hospitalized will be assessed at 6, 12, and 18 months during and up to a 1-year post-entry period.

**Results:** This project is in progress.

**Implications for Future:** Results from this project will inform best practices for advanced practice nurses (APNs), utilizing TCM as a cost-saving support strategy for commercially insured SPMI patients as they re-enter the community. APNs utilizing this approach are philosophically, ethically, and educationally poised to help integrate, collaborate, and expand care and services for this high-risk population.

**Key Words:** Serious persistent mental illness (SPMI), Transitional Care Model (TCM), advanced practice nurse (APN).

*Experiences of Critical Care Nurses Transitioning to  
Student Registered Nurse Anesthetists (SRNAs)*

**Susan Hall**

**Background and Significance:** The minimum requirements to apply to an anesthesia program in the United States (US) include a baccalaureate or graduate degree in nursing or compatible major, a valid unrestricted registered nurse (RN) or advanced practice registered nurse (APRN) license and one year of fulltime clinical experience in a critical care setting (AANA, 2018). Critical care settings are defined as intensive care units and emergency rooms. The peri-operative areas, including the actual operating room (OR), are not considered critical care and function quite differently. For most anesthesia students, clinical anesthesia training is their first exposure to the complex OR environment. The OR environment coupled with the challenges of learning anesthesia theory and application to practice can present challenges and create role transition stress. Evidence shows student nurse practitioners (SNP) and student registered nurse anesthetists (SRNA's) experience significant role transition stressors that impact physical and psychological wellness and success in the clinical environment (Chipas et al. 2012). However, there is no data that specifically describes factors that impact the transition from critical care registered nurse (CCRN) to SRNA. Gaining understanding from the perspective of the SRNA will likely provide invaluable data to prepare and provide pre-emptive support to future nurse anesthesia students as they enter the clinical environment.

**Purpose and Aim:** The purpose of this foundational study is to gain a better understanding of the student registered nurse anesthetists' (SRNA) experiences as they transition into their new role, to provide anticipatory guidance to future students. The study aim is to describe the experience of a SRNA's transition from critical care nurse (CCRN) to SRNA.

**Methodology:** This qualitative descriptive study utilizes focus group methodology to describe the experiences of critical care registered nurses (CCRN) as they transition into the role of student nurse anesthetist. A convenience sample is comprised of Northeastern University (NU) nurse anesthesia students. Demographic and practice data collected include: Gender, age, past primary critical care nursing and/or operating room experience, and year in the anesthesia program. Inclusion criteria include students who are in the clinical environment which equates to the second and third years of the program. Exclusion criteria include students in the first year, didactic portion of the program who are not in clinical.

**Results:** This project is in progress.

**Implications for Future:** Describing the student experience will allow students and educators to anticipate common role transition factors that impact students in the clinical environment. These factors may be incorporated in to a curriculum to prepare students for the challenges and rewards of successful transition.

**Key Words:** nurse anesthesia students: stressors, role transition

## *Risk Factors Associated with Crisis Stabilization Unit (CSU) 30-day Readmission*

**Piter Jules**

**Background and Significance:** Frequent readmissions to health care facilities remain a burden on the US health care system and constitutes a major driver of health care costs as well as being emotionally disruptive and costly to patients (Allaudeen, Vidyarthi, Maselli & Auerbach, 2011). The Agency for Healthcare Research and Quality (AHRQ) estimates the annual costs of hospital readmissions to be over \$41 billion (Hines, Barrett, Jiang & Steiner, 2014). Several risk factors have been associated with hospital 30-day readmission including homeless individuals with co-occurring mental illness and substance disorder (Lin et al, 2015), diagnoses of psychotic disorders and alcohol use disorder as well as multiple readmissions (Kim, et al, 2015), younger age (Roque, Findlay, Okoli & El-Mallakh, (2017), (Rosen et al., 2017) and medication non-adherence.

The CSU is an unlocked unit that renders voluntary psychiatric treatment to Massachusetts Medicaid members who are 18 years old or older for an average length of stay (LOS) of 3-5 days. The CSU is part of the Boston Medical Center (BMC)'s Boston Emergency Service team (BEST), which is a 24-hour emergency services program for people requiring acute psychiatric intervention. The CSU was created to help divert patients from the emergency department (ED) as well as to decrease unnecessary inpatient psychiatric admissions (Sussman, 2017). Zeller, Calma and Stone (2014) indicated that transferring ED psychiatric patients to a CSU reduces the length of boarding by less than two hours as well as decreasing the number of admissions to inpatient psychiatric units by at least 75%. CSU patients can also be referred from the community or a psychiatric urgent care center after a psychiatric evaluation thus decreasing the burden on EDs. However, like other health care facilities, the CSU struggles with the issue of frequent readmissions, although risk factors for Crisis Stabilization Unit (CSU) readmissions have yet to be identified.

**Purpose and Aims:** The purpose of this scholarly project is to inform key stakeholders of potentially modifiable CSU readmission risk factors. The specific aims of this project are to characterize a sample of patients that were readmitted within 30 days from the time of CSU discharge, and to identify factors predictive of a CSU 30-day readmission.

**Methodology:** This is a retrospective chart review of 293 patients who were readmitted within 30 days from the time of CSU discharge from May 1, 2017 to April 30, 2018. Data will be analyzed using descriptive statistics and multivariate regression.

**Results:** This project is in progress.

**Implications for Future:** The outcomes of this project will provide a clearer understanding of the risk factors associated with CSU readmission. They will help stakeholders determine if more resources can be directed towards developing systems, services and preventative strategies to reduce readmissions, to improve quality of care and well-being, and to reduce costs.

**Key Words:** Crisis Stabilization Unit, Readmission, Risk Factors

## *Utilization of a Hospital Discharge Lounge through Education of Adult Inpatients and Nursing Staff*

**Heather Mortimer**

**Background and Significance:** In recent years, there has been a significant increase in patients presenting to the emergency department (ED) resulting in extreme hospital capacities and suboptimal working conditions for patients and staff. This poses a serious problem as high volumes can lead to delays in assessment and treatment. In addition, overcrowding creates a domino effect resulting in ambulance diversion, decreased disaster preparedness, and less credibility of the emergency care system (Trzeciak & Rivers, 2003).

**Purpose and Aims:** The purpose of this project is to explore the utilization of a dedicated discharge lounge and its effect on patient throughput following implementation of education for both nursing staff and inpatients on medical-surgical units in a large urban hospital.

This project's aims are to:

- 1.) Identify nurses' knowledge of the discharge lounge including perceived facilitators and barriers to implementation
- 2.) Educate staff nurses and patients about the discharge lounge through development of informational marketing material
- 3.) Explore patients' understanding of and satisfaction with use of the discharge lounge
- 4.) Measure lounge utilization through a retrospective review of patient throughput data over a period of 2 months

**Methodology:** This quality improvement scholarly project utilizes a combination of nursing and patient surveys, educational material, and a retrospective review of patient throughput data.

**Results:** This project is in progress

**Implications for Future:** Increased utilization of a discharge lounge may improve patient throughput and lead to decreased overcrowding of ED's. Overcrowding can negatively impact patients and resulting in adverse events. It is critical that a solution to this problem be implemented immediately. The discharge lounge is one approach that could help to decompress ED's so that patients can receive safe, high quality care.

**Key Words:** discharge lounge, emergency room overcrowding, ED crowding

*From Their Own Words, The Role of the Chief Nursing Informatics Officer (CNIO)*

**Christine O'Brien**

**Background and Significance:** Few developments have occurred within healthcare organizational leadership structures to accommodate the new hi-tech landscape that has resulted from technological advances. A strong nursing informatics leader, who understands the spectrum of factors facing nurses in an organization, accompanied by a strong comprehension of the interconnectivity of these issues is critical. The Chief Nursing Information Officer's (CNIOs) role is said to provide strategic direction and oversight for clinical informatics programs and is aligned with the vision and goal of nursing operations (Swindle & Bradley, 2010).

The role of CNIO has been in existence since the 1990's yet, according to the Health Information Management Systems Society (HIMSS) Nursing Informatics Workforce Survey conducted in 2017, 60% of respondents reported that their organization did not have a CNIO. This is concerning because the majority of healthcare information technology (HIT) end-users are nurses. In this dynamic era of healthcare reform, strong nursing informatics leadership at the senior executive level is needed to provide oversight and strategic decision-making relating informatics, to how nurses use data to enhance patient care. At a time when billions of dollars are spent on the adoption of HIT, it would be advantageous to gain insight by exploring the CNIO from the perspective of CNIOs themselves. A better understanding of the role and its utility may help facilitate expansion of the role.

**Purpose and Aim:** The purpose of this scholarly project is to inform the nursing profession and other relevant stakeholders of the role of Chief Nursing Informatics Officer. The aim of this study is to characterize the preparation, skills, functions, and reporting structures surrounding this role through interviews with nurses employed as CNIOs.

**Methodology:** This is a qualitative study using interviews and content analysis methodology. Using the snowball recruitment technique, participants meeting the inclusion criteria participate in semi-structured open-ended interviews in order to elicit information related to the role of CNIO.

**Results:** This project is in progress.

**Implications for Future:** It is anticipated that findings from this study will make a significant contribution to the nursing informatics literature in that it will be the first known qualitative study aimed at better understanding the role of CNIO. Insights gained from this research may be used to inform future studies aimed at further defining this role.

**Key Words:** Nursing Informatics, Nurse Executive, Nurse Leader

***Financial Toxicity in Oncology Patients:  
The Impact of an Educational Intervention for Nurses***

**Erika M. Rosato**

**Background and Significance:** Oncology patients are living longer with their cancer disease. This is the result of new pharmaceutical agents introduced to the market during the last decade that have changed the lives for so many from palliative treatment to cure. However, these pharmaceutical agents are expensive and many oncology patients do not have the financial means to cover the cost of their care, placing their financial well being in disarray. This financial disarray is called financial toxicity and it has potentially life-threatening consequences. Financial toxicity describes the harmful personal financial burden faced by patients and families receiving costly medical care (Zafar, 2016). Oncology patients are at greater risk for treatment-related financial harm. Oncology patients pay more out of pocket for care than those with other chronic illnesses (2016). Ramifications of financial toxicity range from emotional distress to personal bankruptcy. Common concerns include loss of earnings for the patient and family members; and out-of-pocket costs including coinsurance, deductibles, copays and premiums (McDougall, Ramsey & Shih, 2014). In a study done by the Fred Hutchinson Cancer Research Center, cancer patients were 2.7 times more likely to claim bankruptcy compared to those without cancer (Ramsey, Blough, Kirchhoff, et al., 2013).

**Purpose and Aims:** The purpose of this scholarly project is twofold. First, it is to educate oncology nurses on the impact of financial toxicity on oncology patients. Second, it is to enhance the role oncology nurses play in helping to ease the burden of financial responsibility. The aims of the study are to 1) Develop and implement an educational program for registered nurses regarding financial toxicity, 2) Describe nurses' knowledge of financial toxicity through a pre-and post-education survey measurement tool and 3) Describe nurses' confidence levels in addressing financial toxicity through a pre-and post-survey measurement tool.

**Methodology:** This quality improvement project utilizes a pre-and post-educational program, web-based survey design. A convenience sample of approximately four hundred oncology registered nurses, minimum age of 21, that belong to the Boston Oncology Nursing Society (BONS) were invited to participate. Nurses were included if they speak English, are registered nurse BONS members with access to the BONS website, and can read and listen to a 15-minute educational web based presentation with voice over. Nurses were excluded from participation if they do not work in oncology and if they are not BONS members. Descriptive and comparative statistics will be utilized to analyze the data.

**Results:** This project is in progress.

**Implications for Future:** Nurses are in the best position to ask patients about their financial concerns and can mobilize the resources in effort to minimize the financial burdens they encounter. This project has the potential to help nurses become more knowledgeable and confident with addressing their patient's financial concerns and ease the burden of financial distress of oncology patients and families.

**Key Words:** Financial Toxicity, Oncology Patients, Cancer Treatment Cost



## *Looking Upstream: Structural Competency in Nursing Students*

**Elizabeth Russet**

**Background and Significance:** One of the four overarching goals of Healthy People 2020 is to “Achieve health equity, eliminate disparities, and improve the health of all groups” (CDC/National Center for Health Statistics, 2015, para 1). In fact, efforts to eliminate the disproportionate rates of illness based on racial, ethnic and socioeconomic status have been part of the Healthy People platform for decades. Likewise, the Institute of Medicine’s report released in 2001 *Crossing the Quality Chasm* names equitable care as one of its six specific goals stating that care must not “vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status” (IOM, 2001, p. 3). Unfortunately, in spite of these well-known national policy intentions, certain gaps in health outcomes not only persist but are growing wider (National Academy of Science, 2017).

Structural competency is a framework for addressing disparities by encouraging “diagnostic recognition of economic and political conditions producing and racializing inequalities in health” (Metzl & Petty, 2017, p. 354). It moves beyond its predecessor –cultural competency- in recognizing that disparities are a result of structural inequality (Donald, 2017). The historical reliance on cultural competency to address health inequity often overlooks these “upstream” factors in favor of interpersonal understanding, a shortcoming that not only leaves these structures unchallenged but risks reinforcing the stereotypes it is designed to overcome (Drevdahl, 2018). An education that includes this expanded analysis will provide another foundation for nurses to address health inequities in the clinical setting.

**Purpose and Aims:** The purpose of this study is to describe undergraduate nursing students’ understanding of factors that contribute to health disparities using the framework of structural competency. The specific aims of this study are to: 1) identify undergraduate nursing students’ knowledge regarding the impact of structural factors, including institutional racism, on health outcomes and 2) increase awareness in undergraduate education of the expansion of cultural competency to structural competency.

**Methodology:** This descriptive study explores nursing students’ understanding of factors that contribute to health disparities. This study uses a web-based Qualtrics survey distributed to approximately 100 accelerated BSN students enrolled in the online program at Northeastern University. It utilizes a modified survey, *Structural Foundations of Health Survey* © (Metzl & Petty, 2017), with permission from authors, distributed to a convenience sample of students. Inclusion criteria for this study include all English-speaking students 18 years or older enrolled in the accelerated BSN program at Northeastern who are able to read, are computer literate, and able to complete an online survey with unsigned consent form. There are no exclusion criteria. Descriptive statistics will be used to analyze survey results. Content analysis of the open-ended survey questions will be used to identify themes.

**Results:** This project is in progress.

**Implications for Future:** The current project describes how nursing students understand structural factors and the role they play in health outcomes. It uses a structural competency framework, an emerging theory in health care, that encourages a clinical response to the upstream factors that contribute to health disparities. Given nurse’s historical commitment to social justice and equity, nursing education may benefit from expanding the current focus on cultural competency to more explicitly include structural content.

**Key Words:** structural competency, health disparities, institutional racism

## *Impact of Nurse Re-Education Initiative on Neonatal Hypoglycemia Management*

**Mary Ann Santos**

**Background and Significance:** Neonatal hypoglycemia is a common finding that is associated with brain injury, neurodevelopmental delay, visual impairment and behavioral problems. (Harris, et al, 2013). The simplest method to treat hypoglycemia in the newborn period is to feed the infant formula. “However, feeding with infant formula risks disrupting the establishment and duration of breast-feeding, alters the neonatal microbiome, and increases the risk of infections and allergies.” (Harding, Harris, Hegarty, Alsweiler, & McKinlay, 2017). The AAP recommendation is that “newborns with a Point-of-Care blood sugar (POC-Blood Sugar) < 40 be treated”. (Adamkin, 2011) Glucose Gel is a recommended treatment option for neonatal hypoglycemia. “Findings show that treatment with 40% glucose gel is more effective than feeding alone for reversal of neonatal hypoglycaemia in at-risk late preterm and term babies in the first 48 hours after birth.” (Harris, Weston, Signal, Chase, & Harding, 2013)

Following the AAP recommendations, in 2015, Women and Infant’s Hospital implemented a Neonatal Hypoglycemia Guideline. If a POC-Blood Sugar was 25-40 mg/dL the infant was to receive a Glucose Gel followed by a feeding, preferably breastfeeding. In 2016 hospital investigators Rippon, et al reported “Six months post implementation, data revealed that more than 300 doses of gel were ordered. Breastfeeding exclusivity rates increased and NICU admission for hypoglycemia decreased”. However, subsequent data collected in 2018 at WIH showed that exclusive breastfeeding rates have decreased while formula supplementation has risen, multiple POC-Blood Sugars are being obtained sequentially and incomplete adherence to the guidelines was noted. In June 2018, a new Hypoglycemia Task Force was established with the following goals: 1. Make minor adjustments for ease of clarification to the guideline and 2. Create a new web-based mandatory education module for staff re-education.

**Purpose and Aims:** The purpose of this study is to assess management of neonatal hypoglycemia and breast feeding/breastmilk versus formula/formula supplementation following the hospital’s mandated re-education of the nurses in the Labor and Delivery and Mother Baby Units. The aims of this project are to compare: 1. Pre/post initial and follow up newborn POC-Blood Sugar measurements, 2. Administration rates of breastfeeding/breastmilk vs formula or formula supplementation and 3. Timing of clinical interventions for at risk neonates and low POC-Blood Sugar.

**Methodology:** The study consists of utilization of a retrospective chart review comparing pre/post data collection mainly of timing of POC blood glucose and interventions. (Newman & Bunch, 2017) Continuous variables will be analyzed using t-tests or Wilcoxon tests, depending on distributions. Categorical variables will be analyzed with the chi-square test or Fisher’s exact test. Baseline characteristics for the Pre- and Post-intervention groups will be compared to examine differences between the groups. Initial bivariate analysis will be done on to examine the main outcomes.

**Results:** This project is in progress.

**Implications for Future:** This project will inform stakeholders if the Neonatal Hypoglycemia Guideline re-education of nursing staff was successful; or if further education or changes are needed to improve patient care outcomes. It will provide important information related to continued staff education or Neonatal Hypoglycemia Guideline restructuring needs.

**Key Words:** Newborn, Glucose Gel, Hypoglycemia

*Knowledge, Attitude and Practice of the Pap Smear Test in College Females Attending a Global University in the United States*

**Jacqueline Tolosko**

**Background and Significance:** According to the World Health Organization (WHO), cervical cancer is the fourth most frequent cancer in women with an estimated 570,000 new cases in 2018 representing 6.6% of all female cancers (World Health Organization, 2018). Yearly, the population of international students attending US universities is growing. Many universities have close to thirty percent of their admissions as international students and their role is to place the student's academic, cultural, financial, personal, spiritual, and physical wellbeing as its top priority (Northeastern University, 2018). Studies suggest that various factors, including lack of knowledge, cultural beliefs and access barriers, are associated with cervical cancer screening behaviors among the global female population (World Health Organization, 2012). The Pap smear test is a screening tool for cervical cancer that begins at age 21 years, when many women are in college. The lack of Pap smear screening globally has not been clearly identified by college healthcare providers, and consequently there are no guidelines in place for clinicians to target at risk populations regarding the importance of Pap smear screening.

**Purpose and Aim:** The purpose of this quality improvement project is to describe the knowledge, attitude and practice of pap smear screening in female college students attending a global university in the United States and to identify if there is a disparity between US and internationally admitted female college students. The aim is to help clinicians working in college clinics to have a better understanding of the knowledge, attitude and practices of the pap smear test in the global female population attending U.S. Universities.

**Methodology:** A quality improvement project was conducted utilizing a web-based survey design. This project recruited 300 participants through purposive sampling of 50% admitted U.S. and 50% admitted international female college students, age 21 years and older, identified through a Qualtrics data base at a large, urban university in the northeastern United States. A quantitative questionnaire consisting of 40 questions was used to assess the knowledge, attitude and practice regarding the Pap smear test. Surveys were administered electronically using a web-based password protected survey tool known as Qualtrics. Data were exported into the SPSS statistical application for data analysis. Descriptive and comparative statistics will be used to describe findings and compare results.

**Results:** This project is in progress.

**Implications for Future:** Cervical cancer prevention is important for all women globally. Health care providers have a unique opportunity to care for a large population of international students, who are increasingly admitted to U.S. universities. The hope is that the results of this published study will educate health care clinicians to the changing demographic of female college students and gain a better understanding of the cultural beliefs and barriers female students may have regarding the Pap smear test. The ultimate goal is to improve the quality of care delivered by today's college healthcare providers so more female students will have their Pap test. Thereby, reducing the incidence of cervical cancer globally.

**Key Words:** Pap smear, college females, global

## *An Anesthesia Training Program in Preprocedural Ultrasound Imaging Techniques of the Lumbar Spine: Virtual Versus Traditional Training*

**Jeffrey Vandall**

**Background and Significance:** Epidural analgesia serves as an effective and safe pain management modality for labor associated pain (Jones, 2012), accounting for over 1 million labor epidurals placed annually in the United States (US) (NVSR, 2018). However, the failure rate for epidural analgesia ranges from 2-20%, accounting for inadequate analgesia necessitating epidural catheter replacement (Dresner, 2012). In addition, complications occur at a rate just under 3% resulting from infection, incomplete analgesia, spinal hematoma, epidural vein catheterization, and post dural puncture headache (Preidt, 2014). Ultrasound imaging can help reduce epidural failure rates (absent or inadequate analgesia) when compared with epidurals placed without ultrasound imaging (Shaikh, Brzezinski et al. 2013). Virtual training utilizing advanced web-based simulation is increasingly utilized to teach technical skill sets from a distance in a variety of fields. These innovative training modalities offer clinicians opportunities to acquire technical skills at a fraction of the cost and inconvenience.

**Purpose and Aim:** The purpose of this scholarly project is to compare virtual training versus traditional classroom training in preprocedural ultrasound imaging techniques of the lumbar spine with the aim of measuring teaching effectiveness and student learning from the two educational interventions using a pretest, post-test design followed by hands-on skills testing.

**Methodology:** This educational project utilizes an experimental pretest posttest design with quantitative hands-on skills testing. The test consists of 16 expert peer-reviewed multiple choice questions assessing an understanding of the fundamental concepts of preprocedural ultrasound imaging techniques of the lumbar spine. Three experts in nurse anesthesia education reviewed the online test questions with a content validity index of 1.00. Evaluation of skills acquisition in preprocedural ultrasound imaging of the lumbar spine is assessed using a peer reviewed skills assessment checklist. Participants are a convenience sample of approximately 30 senior Student Registered Nurse Anesthetists (SRNAs) enrolled in the clinical component of the Northeastern University's (NEU), Master of Science in Nurse Anesthesia program. Inclusion criteria are senior SRNAs within NEU's anesthesia program who have access to NEU email, are computer literate, and able to complete a web-based educational program. Exclusion criteria are senior SRNAs within NEU's anesthesia program who have received previous training in preprocedural ultrasound imaging techniques of the lumbar spine. Comparative statistics will be used to analyze pre and post educational testing results to evaluate the impact of the educational intervention on the participants, to include didactic and hands-on testing. Statistics will also include intragroup and between groups analysis of testing results.

**Results:** This project is in progress.

**Implications for Future:** Preprocedural ultrasound imaging techniques of the lumbar spine are setting a pioneering path for spinal and epidural regional anesthetic techniques. Virtual training programs in preprocedural ultrasound imaging would be instrumental in expanding this skill set to anesthesia providers and students that may not have accessibility to local training programs

**Key Words:** preprocedural ultrasound, virtual training, labor epidural

## *Continuous Virtual Monitoring of Hospitalized Patients: Barriers and Facilitators to Implementation*

Allison C. Webster

**Background and Significance:** Patients who are at risk for injury must have measures in place to protect them. Hospitals are utilizing sitters to help protect these at-risk patients. However, there is little to no reimbursement from government or commercial payers for one-to-one care (Hader, 2012). Thus, the recent surge in sitter use has crippled nursing budgets, as labor costs have escalated to over a million dollars annually per hospital (NHRMC, 2017). In response many hospitals have employed sitter alternatives, such as the telesitter or continuous virtual monitoring (CVM). This technology uses monitor technicians (staff members) to monitor patients virtually through a video monitoring system utilizing a two-way speaker system. The monitor technicians communicate with the patients and maintain safety by redirecting patients from potentially harmful or impulsive behaviors. Recent studies have examined the effectiveness of telesitters or video monitoring in comparison to one-to-one sitters in preventing adverse events such as falls and self-harm incidents. The findings have demonstrated that CVM does not impose a patient risk and some hospitals reported a decrease in patient falls when using CVM in comparison to sitters (Davis et al., 2017 and Purvis, et al., 2018). However, while CVM has been deemed a promising new technology and is currently used at Brigham and Women's Hospital, the receptivity of healthcare providers has been variable, warranting further investigation of potential barriers and facilitators to CVM.

**Purpose and Aims:** The purpose of this scholarly project is to identify potential barriers and facilitators in the implementation of continuous virtual monitoring (CVM) at Brigham & Women's Hospital. The aims of the study are to:

- understand the current perception related to CVM for hospitalized patients;
- identify barriers to safe implementation of CVM that may require additional education; and
- identify facilitators that will aid in successful implementation of CVM, such as specific inclusion and exclusion criteria, communication tools between the monitor technicians and nurses, and a process to move from CVM to an observer when needed.

**Methodology:** This quality improvement project utilizes focus group and conventional content analysis methodologies. A convenience sample of approximately 40-50 Brigham and Women's Hospital Registered Nurses (RN's) in the medical, surgical, cardiology, and oncology intermediate floors were invited to participate in the study. Focus groups are utilized to identify themes surrounding perceptions related to CVM use, barriers to safe implementation, and facilitators to successful implementation. Data collection through focus groups will continue until data saturation is achieved. Data will be analyzed utilizing a conventional content analysis method.

**Results:** This project is in progress.

**Implications for Future:** This qualitative study has important practice implications. Gaining insight on CVM barriers and facilitators, inclusion and exclusion criteria, communication tools for the nurses and monitor technicians, and the escalation of care from CVM to a constant observer has the potential to increase patient safety and improve patient care.

**Key Words:** telesitter, virtual sitter, constant observer

***Prevention of Maternal Hypothermia During Cesarean Section with Spinal or Combined Spinal/Epidural Anesthesia, Retrospective Chart Review***

**Jennifer M. Wilson**

**Background and Significance:** Perioperative hypothermia occurs in women having cesarean sections with spinal anesthesia or combined spinal/epidural anesthesia. Preventing hypothermia decreases maternal shivering, improves maternal thermal comfort, reduces post-operative wound infection and reduces delay for skin-to-skin contact between mother and baby. The Labor and Delivery Unit at the Brigham and Women's Hospital does approximately 6300 childbirth deliveries each year of which approximately 2000 childbirth deliveries are cesarean sections. The incidence of maternal hypothermia is unknown and there are minimal hypothermia preventive clinical interventions in place. It has been shown that the incidence of perioperative hypothermia is decreased with the use of warmed intravenous (IV) fluids and the use of forced warm air devices.

**Purpose and Aim:** The purpose of this retrospective review is to measure the incidence of maternal hypothermia and assess whether warming intravenous fluids and forced warm air devices in women receiving spinal or combined spinal/epidural anesthesia for cesarean deliveries on the Labor and Delivery Unit at Brigham and Women's Hospital is effective. The project aim is to determine the incidence of intraoperative maternal hypothermia before and after a change in routine clinical practice involving clinical patient warming interventions in women who have received spinal or combined spinal/epidural anesthesia for cesarean delivery.

**Methodology:** A retrospective record review is being done to determine the incidence of maternal hypothermia and assess the effectiveness of patient warming interventions at maintaining normothermia in women having cesarean sections. Fifty women will receive spinal or combined spinal/epidural anesthesia with hyperbaric bupivacaine 0.75%, 1.6-1.8 ml, opioid, and placement of a Foley catheter with a temperature probe to monitor bladder temperature. Labor and Delivery registered nurses, anesthesiologists, certified registered nurse anesthetists, residents, fellows, and student registered nurse anesthetists will receive a 10-minute education program on the risks of intraoperative maternal hypothermia and the evidence of the effectiveness of intraoperative maternal warming using warmed IV fluids and forced warm air devices. After the clinical change in practice with warming interventions, a retrospective record review of patient temperatures will be obtained of 50 women who have received spinal anesthesia for cesarean delivery. Patient temperatures pre-practice change will be compared to temperatures following the practice change.

**Results:** This project is in progress. Descriptive and comparative statistics will be used to determine if there was an improvement in intraoperative patient temperatures with the use of these patient warming interventions.

**Implications for future:** Monitoring of intraoperative temperature during cesarean sections with spinal or combined spinal/epidural anesthesia is presently not routine practice at Brigham and Women's Hospital. This project assess the value of a change in practice to improve patient outcomes. If it is shown that intraoperative patient temperatures improve with these interventions, actions will be taken to assure that this change in practice is continued.

**Key words:** maternal hypothermia, cesarean delivery, spinal anesthesia