

## **Abstract**

**Principal Investigator: Susan Brantlee Broome-Stone**

**Research Title: An Inquiry into Parents' Experiences of Caring for Young children's Severe Food Allergies**

Food induced anaphylaxis is a serious medical event and managing it can place a tremendous mental, emotional and financial burden on parents of children with severe food allergies. Indeed, parents and afflicted children often experience psychological distress, including stress, anxiety, and depression, which can have a negative impact on the family, especially when they impair the parent's ability to effectively care for their child (Cummings, Knibb, King, & Lucas, 2010). Thus, parents need strong guidance and support following a food allergy diagnosis (Williams, Parra, & Elkin, 2009).

However, to provide this support, healthcare professionals must first become aware of the challenges that parents of children with severe food allergies face. Although work in this area of research is emerging, relative to other chronic conditions, literature related to how parents experience managing food allergies and the risk of anaphylaxis remains minimal. Further, the existence of qualitative research related to this phenomenon is lacking. Qualitative research, which has an "enormous potential to make a distinctive contribution to knowledge about allergy management and to provide insights that quantitative studies cannot" would go a long way toward filling this gap in knowledge (Gallagher, Worth, & Sheikh, 2009, p. 1117).

Therefore, the purpose of this research study is to explore parental experience of caring for a child diagnosed with life-threatening food allergies utilizing qualitative methods. Grounded theory is an interpretative research method that focuses on understanding the meaning of phenomena as they are perceived and experienced by study participants. Open-ended, loosely structured interview questions will allow for the discovery of how the parents experience the phenomena of caring for a child with life-threatening food allergies without imposing the researcher's ideas. Data will be analyzed using dimensional analysis, a comparative analytic strategy designed specifically for use with narrative texts in grounded theory studies.

The findings will guide the development of a substantive theory that will assist nurses in understanding the experiences of parents, children and families managing the diagnosis of life-threatening food allergies. This understanding can provide nurses with the necessary information such that family-centered treatment plans can be developed to address the needs of the child *and* parents, improving the quality of life for the entire family.

## Abstract

**Principal Investigator: Amanda B. Brown**

**Research Title: Pediatric Nurses' Assessment of Procedural Pain in Children with Autism Spectrum Disorder**

**Purpose:** The purpose of this study is to test the reliability and validity of three pediatric pain assessment instruments previously developed for non-verbal, cognitively impaired, or neurologically impaired children and determine if pediatric nurses can accurately use these instruments to assess procedural pain in children with Autism Spectrum Disorder (ASD).

**Background/Significance:** One in 88 children in the United States has been diagnosed with ASD. Recent research demonstrates that children with ASD experience pain as much as developmentally normal children. Effective pain management has been shown to ease and speed recovery while lack of appropriate pain assessment is a major barrier to effective pain control and treatment. To date, no published research has examined the reliability and validity of existing pain assessment instruments for children with ASD.

**Methods:** A purposive sample of nine children with ASD ages 4-12 years undergoing a painful medical procedure as part of their healthcare will be videotaped during a non painful period and a painful period of their procedure. A convenience sample of 30 pediatric nurses will view these video pairs and score the pain of the children. In total, 180 observations will be performed. Three pain assessment instruments:

The Non-Communicating Children's Pain Checklist Postoperative Version, The Revised Face, Legs, Activity, Cry, and Consolability scale, and the University of Wisconsin Children's Hospital Pain Score for Preverbal and Nonverbal Children will be used for scoring. Each instrument will be assigned three video pairs. The same three video pairs will be viewed by every nurse to score pain for each instrument. The interrater reliability of each instrument will be analyzed using the intraclass coefficient, model two.

The construct validity will be examined by the contrasted groups approach and convergent validity. For the contrasted groups approach, mean values for non painful video clips will be compared to mean values for painful video clips for each tool individually by matched t-test analysis. Scores of painful events will be compared across instruments using Pearson's correlation to analyze convergent validity.

**Nursing Relevance/Implications:** Routine pain assessment is a nursing responsibility and an indicator of nursing quality. Yet, to date, it is unknown if any pain assessment instrument is reliable or valid for assessing pain in children with ASD. Clearly this is an important area of inquiry that has clinical relevance for pediatric nurses as well as this vulnerable population of children. Further investigation may lead to identifying, refining, or creating one or more pain assessment instruments that can become standard evaluation tools for nurses to assess procedural pain in children with ASD. These instruments may also be useful in determining the effectiveness of pain relief measures in this population, thus improving the overall quality of healthcare.

## Abstract

**Principal Investigator: Angela Calloway**

**Research Title: The Evolution of Health Care for Louisville's African American Community:**

It is well documented that inequality in the delivery of health care exists within the U.S. (Smedley, Stith & Nelson, 2003; Trivedi, Zaslavsky, Schneider, & Ayanian, 2006). Historically, our health care system was a segregated one in which White Americans enjoyed one system of health care privilege while Black Americans experienced another, supported by law and custom. Laws did change after the Civil Rights Act of 1964 but disparate practices lingered. Although there have been studies about the historical picture of segregated health care available to African Americans (Byrd & Clayton, 2000; Savitt, 2007), there is a lack of research about the evolution of that health care system to its current state as a fully integrated one. What continues to be needed is a study that examines the complex factors that surrounded segregated health care delivery and the transition to an integrated system. In the dissertation study currently underway, the principal investigator will conduct an examination of the evolution of health care for the African American population of Louisville, Kentucky, a mid size city of approximately 800,000 citizens situated along the Ohio River which historically served as a gateway to the south. The study *aims* are to describe 1) health care delivery over time, 2) attitudes, assumptions, perceptions and experiences of health care providers, 3) activities that influenced health care integration and 4) the quality of health care for African Americans pre- and post- integration.

*Funding is being sought from the American Nurses foundation for study aims 1-4 to examine the perspectives of African American nurses who often staffed the "black" health care facilities available to the black community during this era.*

This study is being conducted using an historical research method guided by Critical Race Theory to describe the perspective of those who were marginalized within this society, Louisville's African American nurses. Using a semi-structured interview guide developed for the study, oral history interviews (n= 10) will be conducted with African American nurses with the identified experience to provide their unique perspectives about this critical period of healthcare transition. These recorded interviews will be transcribed verbatim and analyzed using content analysis facilitated by NVivo qualitative software. An historical study such as this will add to the knowledge about an important, understudied group within the nursing profession and the impact this essential professional group had on the development of health care within this southern community.

## Abstract

**Principle Investigator: Xiaomei Cong**

**Research Title: Oxytocin Mechanism during Maternal and Paternal Contact with Preterm Infants**

**Objective:** The study will examine oxytocin (OT) mechanism in modulating infants' behavioral, autonomic, and stress responses and parental stress and anxiety during maternal and paternal skin-to-skin contact (M-SSC and P-SSC) with preterm infants. Infant behavioral states, spectral analysis of heart rate variability (HRV) (sympathetic-parasympathetic balance indicated by the ratio of low frequency [LF] to high frequency [HF] power, LF/HF ratio), and salivary cortisol will be measured as the primary outcome measures of infants' responses. Parental salivary cortisol and visual analog scales of anxiety will be measured as parental responses. Our **Hypotheses** are: **H1.** Primary: Infants' and parents' salivary OT levels will be higher during- M-SSC/P-SSC, compared to pre- and post- SSC; **H2.** Exploratory: Changes in infants' OT levels, during- vs. pre- and during- vs. post- M-SSC/P-SSC, will be positively correlated with changes in infants' quiet sleep time, and negatively correlated with changes in LF/HF ratios and cortisol levels; and **H3.** Exploratory: Changes in parents' OT levels, during- vs. pre- and during- vs. post- M-SSC/P-SSC, will be negatively correlated with changes in parents' cortisol levels and anxiety scores.

**Methods:** The study will use a 2-day, cross-over design and will be conducted in a level III neonatal intensive care unit. 30 stable preterm infants (30 0/7 – 34 6/7 weeks gestational age and 3 - 10 days old) and their mothers and fathers (triads) will be recruited. Each triad will be randomly assigned to one of the two sequences: M-SSC is conducted on day1 and P-SSC on day2; or P-SSC on day1 and M-SSC on day2. Infants' and parents' saliva samples for OT and cortisol assays will be collected pre-SSC, 30-min during-SSC, and 30-min post-SSC. Infants' behavioral state and spectral analysis of HRV, and parental anxiety will be measured pre-, during-, and post-SSC study phases. OT levels will be measured via an enzyme immunoassay (Assay Designs, Ann Arbor, Michigan) and cortisol levels will be determined by an EIA (Salimetrics, State College, PA).

**Data Analysis:** Descriptive methods will be used to generate summary statistics of study variables. Separate series of analyses will be conducted using data from the M-SSC and P-SSC conditions. For testing the hypothesis, the repeated-measures analysis of variance will be used to compare OT levels across study phases (pre-, during, and post-SSC) in infants and mothers in M-SSC and in infants and fathers in P-SSC condition. Mean differences of infants' percent time in quiet sleep, LF/HF ratios, and cortisol levels compared during- vs. pre-M-SSC/P-SSC, and during- vs. post-M-SSC/P-SSC will be calculated. Mean differences of parental cortisol levels and anxiety scores compared during- vs. pre-M-SSC/P-SSC, and during- vs. post-M-SSC/P-SSC will be calculated. Pearson's product moment correlation coefficients will be used to test the associations.

## **Abstract**

**Principal Investigator: Kerry Rae Creasy**

**Research Title: An Exploration of Nurses' Interactions with Stroke Patients and Their Family caregivers**

Stroke family caregivers have many educational needs while patients are in acute and inpatient rehabilitation facilities that are oftentimes not met. Research suggests that communication and interactions with healthcare providers are important components in preparing these families for the new caregiving role. Despite this, little is known about healthcare providers' assessment and inclusion of caregivers' needs in day-to-day care. Few studies have explored how and, more specifically, how often caregivers are assessed by providers for known risks such as strain and depression or how providers handle situations in which caregivers directly approach them with needs.

Research has also failed to discuss what kinds of training providers receive to help them identify family caregiver needs. The purpose of this qualitative study is to explore what stroke nurses believe family caregivers of stroke survivors need and how these beliefs influence their clinical practice and interactions with caregivers. Research questions will be explored using grounded theory methodology based within a symbolic interactionist perspective. Interviews will occur face-to-face, via telephone, or by email according to the preference of each participant. Data will be managed using NVivo 9 qualitative data management software and will be analyzed using dimensional analysis, constant comparison, and card sort.

The principal investigator will work closely with her academic advisor and within a qualitative data analysis group throughout analysis. Identifying stroke nurses' perceptions of caregiver needs and the actual practices implemented to meet those needs is the first step toward more collaborative and inclusive interventions for stroke family caregivers. This will not only serve to reduce caregiver burden and strain by placing responsibility back onto the healthcare teams, but it will also serve to shift healthcare practices from tertiary preventions to a more primary and secondary preventative focus. This research will also inform the principal investigator's long-term research goal of the development of standards of practice for stroke nurses in incorporating the specialized needs of informal family caregivers when working with stroke survivors along the care continuum.

## Abstract

**Principal Investigator:** Neva I. Crogan

**Research Title:** Efficacy of a New Intervention to Manage Drug-Induced Xerostomia in Nursing Home Elders

**Purpose:** The purpose of this one-year study is to test the efficacy of the Sorbet Increases Salivation (SIS) intervention on managing nursing home elder drug-induced xerostomia.

**Background/Significance:** Malnutrition is a significant problem in nursing homes, with up to 85% of residents suffering from this disorder.<sup>1</sup> It can result in compromised quality of life and lead to chronic disability, functional decline, increased health care utilization and health care costs, and even death.<sup>2</sup> A multifaceted problem, malnutrition can be caused by poor appetite, chronic disease, sensory loss, poor oral/dental health, and polypharmacy. Malnutrition is ultimately due to inadequate food intake.<sup>3</sup> One of the most common problems that negatively impacts food intake is xerostomia, or dry mouth. Persons with xerostomia have difficulty in forming a food bolus or swallowing, and have a decreased ability to taste food. In the elder population, xerostomia is most likely drug-induced and the risk increases with greater numbers of drugs taken.<sup>4</sup> In an extensive review of the literature (using Medline, CINAHL and the Cochrane databases), no empirical studies (except for PI's pilot study) were found on alleviating the effects of drug-induced xerostomia in the nursing home population. Thus, easy to implement interventions aimed at decreasing xerostomia by increasing salivation are greatly needed for elders in nursing homes.

**Methods:** Using a two-group, switching replications design, forty nursing home residents (20 from two nursing homes) will receive 2 ounces of sorbet prior to lunch and dinner meals x6 weeks. A coin toss (flip of a coin) will determine which nursing home receives the intervention first. Participants at the control nursing home will be offered a non-citrus drink prior to the lunch and dinner meals x6 weeks. The specific aims are to: 1) Test the effects of SIS on resident food intake using a validated plate-waste procedure; and 2) Test the effects of SIS on body weight. This proposed study will establish efficacy of the intervention with a sample of nursing home elders from two eastern Washington nursing homes.

**Analysis Plan:** Data analyses will include descriptive and bivariate statistics to describe and find differences within and between groups using a two factor within subject design with the main independent variable tested being sorbet before meals. Covariates introduced in the statistical model will include MMSE scores at baseline, xerostomia screening variables, body weight, age, and gender.

**Nursing Relevance/Implications:** Nursing home based clinical research is needed to test interventions that transform the "care-as-usual" approach to care. The general public is clamoring for change within nursing homes. Baby boomers expect quality and person-centered care, all provided within a homelike environment. The intervention proposed in this study meets these expectations.

## Abstract

**Principal Investigators:** Barbara Delmore & Jill Cox

**Research Title:** Differentiating a Pressure Ulcer from Acute Skin Failure in the Adult Critical Care Patient

**Purpose:** The aim of this research is to identify the predictors of acute skin failure (ASF) in the critically ill patient and to develop and validate a method of predicting whether a patient admitted to a hospital will develop ASF during their intensive care unit stay (ICU). The hypothesis is that there is a difference between predictors of acute skin failure and pressure ulcers (PU) in the adult critical care patient.

**Background/Significance:** According to the National Quality Forum, the occurrence of a hospital-acquired PU is considered an adverse patient safety event. Consequently, the Centers for Medicare and Medicaid Services has reduced reimbursement to acute care facilities for care associated with a Stage III/IV PU, adding to the financial burden faced by these institutions. An ongoing debate exists however as to whether all PUs are truly preventable especially when optimal care is provided. Experts agree that the occurrence of a PU differs from an ulcer due to skin failure, however, no formal diagnostic criterion currently exists to identify skin failure. Lack of empirical evidence has resulted in skin failure being defined retrospectively rather than prospectively, without clear and substantial predictors.

**Methods:** A retrospective case-control approach will be used in this two-phase study. In phase 1: the case-control approach will be used with cases, (patients who had ulcers) and controls (patients who did not) selected at the ratio of 1:2, respectively. In phase two, validation of the findings in phase 1 will be undertaken. The validation portion will test the predictive accuracy of the final model. Logistic regression modeling will be employed to select a set of patient characteristics that, independently and in combination, predict ASF development in the critical care population. Receiver operating characteristic (ROC) curves will be used to assess the adequacy of the models.

**Nursing Relevance/Implications:** Lack of objective criteria to define ASF presents a clinical conundrum for practitioners- the acknowledgment that skin failure exists, but no clear-cut diagnostic criteria in which to support its existence as a result of a paucity of empirical evidence. In certain populations, such as the critically ill patient, the phenomenon of skin failure may be occurring and with the current level of evidence, these ulcers may be incorrectly identified as PUs. As healthcare costs associated with PUs continue to escalate, institutions strive to maintain high quality care to patients based on contemporary evidence. Accurately distinguishing risk factors that lead to a PU from factors that result in a lesion due to skin failure is crucial in the quest to provide evidence-based practice to our patients.

## Abstract

**Principal Investigator:** Rose Ann DiMaria-Ghalili

**Research Title:** Body Composition Changes and Late Health Outcomes in Older Adults Undergoing cardiac Surgery

**Purpose:** The purpose of the study is to examine the impact of the changes in body composition (fluid, fat, muscle) on quality of life (QOL) and health outcomes at baseline and 12 months after cardiac surgery and test the validity of bioelectrical impedance analysis (BIA) with dual-energy X-ray absorptiometry (DXA).

**Background/Significance:** Unintentional weight loss in the first six-weeks after cardiac surgery in older adults is related to 30-day readmissions and lower physical health. Unintentional weight loss occurs during a period of continued inflammatory response and worsening functional status. Older people who lose muscle mass after surgery are at risk for functional decline, hospital readmission, and frailty. The long-term impact of changes in body composition on QOL and health outcomes one year after cardiac surgery has not been fully appreciated in older adults and warrants further investigation.

**Methods:** This research is a quantitative follow-up study of participants who had enrolled in a study on body composition changes in older adults.  
Design: Descriptive, longitudinal, prospective, follow-up study. Data will be prospectively collected 12 months after cardiac surgery at T3 with telephone interviews and in person data collection and compared to previously collected data at T1 (baseline) and T2 (4-6 weeks postdischarge).

**Setting/Sample:** The two Philadelphia settings are: 1) Drexel University for telephone follow-up and data analysis; and 2) University of Pennsylvania's Clinical Translational Research Center for in person follow-up. With an initial cohort of 70 adults, 60-95 years of age, and assuming an attrition rate as high as 30%, we expect to collect follow-up data on at least 49 participants to be adequately powered.

**Key Eligibility Criteria:** Inclusion criteria: English speaking, community-dwelling older adults with no documented history of dementia who underwent cardiac surgery (CABG, CABG and valve, open valve repair, percutaneous valve repair). Exclusion criteria: cancer other than basal cell skin cancer within the past 5 years; weight > 551 lbs; height < 3 ft. 1.4 inches; a missing hand, thumb, or foot; a pacemaker or automatic implantable cardiac defibrillator.  
Procedures: At T3 data will be collected via telephone survey (QOL and health outcomes) and in person (BIA and DXA).

**Instruments:** QOL will be measured by the physical and mental component summary score of SF-36 health status survey. Complications, death, and hospital readmission will be determined by review of medical record, self-report, or by proxy. Body composition (fluid, fat, muscle) will be measured with the InBody520 BIA and GE Lunar densitometer.  
Analysis Plan: Statistical procedures to test hypotheses ( $\alpha = 0.05$ , two-sided) include: Pearson correlation; analysis of variance (ANOVA) using the GLM procedure; logistic and regression analysis.

**Nursing Relevance/Implications:** Findings from this study can help design interventions (education, nutrition, exercise) to improve QOL and health outcomes.

## Abstract

**Principal Investigator:** Jessica Eileen Draughon

**Research Title:** Sexual Assault and Protocol Adherence in Post-Exposure Prophylaxis (nPEP) for HIV

**Purpose:** The purpose of this dissertation research is to identify predictors of acceptance and adherence to nPEP and to explore male and female sexual assault survivors' perceptions of the nPEP process.

**Background:** HIV continues to be pandemic with an estimated 48,000 infections in the United States (US) in 2009. The number of new HIV infections due to sexual assault is unknown, but young women, especially of color, are among the fastest growing groups contracting HIV. These same young women are most at risk for sexual assault. Sexual assault presents several factors making transmission of HIV more likely such as: lack of condom use; infliction of genital and/or anal trauma; concurrent sexually transmitted infections (STIs); and multiple and/or unknown assailants. A 28-day course of antiretroviral therapy (nPEP) beginning within 72 hours of the sexual assault may be an effective intervention. Nonoccupational post-exposure prophylaxis (nPEP) for sexual assault remains controversial in the US. However, nPEP is recommended as standard practice internationally, especially in areas of high sexual assault with greater rates of HIV such as in South Africa.

**Methods:** This study will use a prospective triangulated, convergence mixed methods design in which complementary quantitative and qualitative will be collected regarding nPEP in the context of sexual assault. Participants will be recruited from sexual assault nurse examiner (SANE) or forensic nurse examiner (FNE) programs. The SANE/FNE will recruit the participant and obtain written informed consent. The participant will be contacted by the PI with instructions for completing the online data collection. Participants will complete both T1 and T2 web-based surveys regarding factors which may impact their decision to complete the 28 day course of nPEP medications. A purposively selected portion of the sample will also be selected for qualitative interviews (T3). Associations will be determined via chi-square analyses. Those variables significant at the  $p < .05$  level will be retained for inclusion in the multiple logistic regression. A qualitative descriptive approach to thematic analysis will be utilized for transcripts from the qualitative interviews. The qualitative data will complement the quantitative data, providing a more complete picture of patients progression through HIV nPEP care.

**Nursing Relevance & Implications:** The intersection of HIV and gender based violence requires greater understanding and scrutiny as young men and women of color are among the fastest growing groups infected by HIV; these same groups are also at highest risk for sexual assault, which may increase HIV transmission. The purpose of this mixed methods dissertation research is to identify predictors of patient acceptance and adherence to non-occupational post-exposure prophylaxis (nPEP) and to explore sexual assault survivors understanding of the nPEP process. This study will increase the knowledge base from which to improve and create future interventions in this vulnerable population.

## Abstract

**Principal Investigator: Ginette G. Ferszt**

**Research Title: An Innovative Intervention to Improve Sleep and Decrease Anxiety of Incarcerated Women**

Being arrested and incarcerated is a major life event posing many challenges for women. The numerous constraints imposed by prison life have a major impact on overall health including sleep problems, anxiety and stress. It is estimated that up to 40% of prisoners seek medical consultation for sleep problems (Elger, 2007). Although insomnia is one of the most frequently encountered health problem in prisons (Elger, 2007, 2009), there is a paucity of research examining treatment approaches.

**Purpose and Specific Aims:** To improve sleep, decrease stress and anxiety of incarcerated women, a 12-week Mindfulness Meditation Group incorporating the use of MP3Players to practice meditation skills in-between sessions will be developed and pilot tested.

**Methods:** Sixty women from the Rhode Island Department of Corrections will be recruited and complete the Pittsburgh Sleep Quality Index, Hamilton Anxiety Scale and The Perceived Stress Scale one week prior to the intervention, one week post-intervention and one month post-intervention.

**Analysis:** Descriptive statistics and multivariate analyses will be conducted to examine mean changes of sleep quality, anxiety, and stress across time while controlling for the effects of age, length of incarceration, and medication use. Qualitative data from participants' sleep diaries will be analyzed using content analysis.

## Abstract

**Principal Investigator: Katherine Kaiser**

### **Research Title: Expanding the Typology of Life Transitions in Women Using a Clinical Data-Based Approach**

Expanding the Typology of Life Transitions in Women Using a Clinical Data-Based Approach  
Transition is a concept central to nursing practice, research and education. Meleis' middle range transition theory maintains that developing transition-specific "nursing therapeutics" is a critical part of nursing. Transitions affect physical, mental, environmental and social health outcomes. The purpose of this proposed study is to validate the current typology of life transitions for pre-menopausal women and determine if there are additional types, or sub-types of life transitions.

The proposed study will use an existing clinical nursing data set (1999-2011) of community-dwelling women receiving public and community health nursing (P/CHN) care to validate, amplify and potentially expand this classification or typology. These data are unique for studying transition as they represent an extensive time period that could potentially capture transition data in the context of significant historical social change (i.e. economic downturn).

The research approach is a retrospective qualitative method of content analysis design using existing nursing clinical data collected from 1999-2011. One of the methods of content analysis planned to accomplish the aims of the study is a deductive directed method that uses a theory-based category formation. Additionally, an inductive "data mining" content analysis approach will also be used to determine patterns, themes and inferred categories within the data that are different from the existing typology.

The setting from which these data were originally collected is an education-service enterprise between a college of nursing and the primary care services associated with an academic health sciences center. The sample for the proposed study was drawn from a data set of over 2000 clinical nursing records with clinical assessments that were completed from 1999-2011. The instrument used to collect the original data is the Community Health Intensity Rating Scale (CHIRS). The CHIRS is a quantitative tool that provides a holistic index of client need for care or intensity, and has been used in community-based research. The CHIRS is also used as a comprehensive nursing assessment tool.

The unit of analysis for the content analysis is women's CHIRS who perceive that they are experiencing a life transition. These data were collected during the admission period of the care provided. A directed deductive content analysis approach uses theory *a priori* to guide the analyses around the theoretical concepts. To determine if there are other types, sub-types or new patterns and themes, we will review the CHIRS data a second time and inductively analyze the data for new transitions.

This study of transition in premenopausal women will assist researchers and practitioners to develop better specified transition-related preventive (e.g. health enhancement; primary and secondary prevention) and therapeutic (e.g. health-seeking, self-management) nursing interventions for premenopausal women prior to the older adults years

## Abstract

**Principal Investigator:** Mary Bronwyn Long

**Research Title:** Quality of Life in Chronic Obstructive Pulmonary Disease (COPD) by Integrating Palliative Approaches to Dyspnea, Anxiety and Depression

**Purpose:** Chronic obstructive pulmonary disease (COPD) is the third-leading cause of death in the United States. As COPD progresses, patients' quality of life (QOL) diminishes. This pilot study will evaluate the feasibility of implementing a palliative care intervention delivered by an advanced practice nurse (APN) to COPD patients. Aims: (1) implement a palliative care intervention and assess its usefulness using qualitative and quantitative methods, and (2) determine recruitment rates, participant retention, and completion rates of survey measures.

**Background/Significance:** COPD is a debilitating, incurable chronic illness. This study will use an APN to provide direct patient care and collaborate with treating physicians. While some studies have addressed the use of opiates for dyspnea, and others treatments for anxiety and depression, none have focused on improving the triad of dyspnea, anxiety, and depression using both non-pharmacologic and pharmacologic methods.

**Methods: Design.** Prospective, longitudinal, single-arm clinical trial. Study outcome measures administered at baseline and after 3 months. Qualitative methods will examine the feasibility of integrating palliative care into the care of people living with COPD. **Setting/Sample.** COPD clinic at National Jewish Health (NJH) in Denver, Colorado. Inclusion criteria: (1) NJH patient, (2) diagnosed with GOLD Stage III or IV COPD, (3) hospitalized for at least one COPD exacerbation in the last 12 months, and (4) screened using MSAS-SF and PHQ-4. A convenience sample of 5 patients per month will be enrolled for a total of 15 subjects. **Procedures.** Participants will meet with the APN for one intake and a minimum of 2 follow-up palliative care clinic visits over the 3-month study period. APN will evaluate and treat participants' dyspnea, anxiety, and depression according to algorithms.

**Instruments.** Participants will complete instruments at baseline and after 3 months: **SGRQ** or St-George Respiratory Questionnaire; **MDP** or Multidimensional Dyspnea Profile; **PHQ-9** or Patient Health Questionnaire-9; **GAD-7** or Generalized Anxiety Disorder scale; and **QUAL-E** or Quality of Life at the End of Life. Participants will complete a brief survey and qualitative telephone interview about the intervention. **Outcome Measures and Analysis Plan**

Descriptive statistics will summarize changes in the instruments' scores across the two visits. All measures analyzed as continuous variables. Completion rates for each of the items on the survey measures will be described. Descriptive statistics will summarize changes in dyspnea and QOL scores across the two visits. Permutation methods for related samples will assess whether changes are statistically meaningful.

**Nursing Relevance/Implications:** Anticipated implications from the pilot study include: APN to provide care for dyspnea, anxiety, and depression.

Using the information gathered on the feasibility of conducting this pilot study to conduct additional palliative care research with COPD patients.

## Abstract

**Principle Investigator: Ruth Lucas**

**Research Title: Maternal Assessment of Infant Breastfeeding Behaviors**

**Purpose:** The purpose is to 1) to describe maternal perceptions of infant breastfeeding behaviors weekly from birth to 1 month of age and 2) to determine how infants' breastfeeding behaviors and breastfeeding behavior type changes from birth until 1 month after discharge.

**Background/Significance:** Although the goal for mothers and infants is to exclusively breastfeed for six months, barely half of all mothers exclusively breastfeed their infants beyond two weeks of age. The most commonly reported maternal reasons for breastfeeding cessation, lack of infant satiation, milk insufficiency, and ongoing cracked and bleeding nipples, may actually be an outcome of an infant's breastfeeding behaviors. Developing a maternal self-report instrument that describes different types of ineffective latch and inefficient breastfeeding patterns would assist mothers to seek professional assistance and clinicians to identify mothers and infants at risk for early breastfeeding cessation.

**Methods:** A prospective longitudinal study will be utilized to describe mothers' perception of their infants' breastfeeding behaviors and their selection of their infants' breastfeeding behavior type during hospitalization, at 1-, 2-, 3- weeks and 1 month after hospital discharge.

**Setting/Sample:** Fifty mother-infant breastfeeding dyads will be recruited from the Birthing Center of Duke Hospital, a regional referral center with 3300 births per year. Infants > 34 weeks gestation will be recruited from the Well-Baby Nursery and Special Care Nursery

**Procedures:** Data will be collected via chart review, maternal self-report instrument, and audio taped semi-structured interview at enrollment in the hospital, and audio taped semi-structured interview telephone calls and maternal self-report instrument at 1-, 2-, 3- weeks, and 1 month after hospital discharge.

**Analysis plan:** Analysis of research questions will include simple number and percentages to describe infant breastfeeding behaviors and behavior types and a Generalized Linear Mixed-Effects Models applying Generalized Estimating Equations to examine infant breast feeding behaviors over time. In addition, a set of 2 x 2 Fisher's Exact Tests will be performed to examine the association between the absence (0) and presence (1) of each type of breastfeeding behavior at each assessment point based on maternal perceptions, and a set of bivariate logistic regression analyses will be performed to examine the influence of potential explanatory variables on breastfeeding cessation by 1-month, controlling for maternal and infant characteristics.

**Nursing Relevance/Implications:** Development of a reliable maternal self-report instrument of infant breastfeeding behavior types will facilitate early identification of mother-infant dyads at-risk for early breastfeeding cessation. The long term goal of this research is to validate the maternal self-report instrument with the physiological parameters of nutritive sucking using the number of sucks, number of sucks per burst to quantify ineffective and inefficient infant breastfeeding behaviors to identify infants at-risk for early cessation of breastfeeding and altered neurodevelopment.

## Abstract

**Principle Investigator:** Lea Ann Matura

### **Research Title: Proinflammatory Cytokines and Symptoms in Pulmonary Arterial Hypertension**

**Purpose:** The purpose of this study is to investigate the association of proinflammatory cytokines [interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF- $\alpha$ )] with symptoms (fatigue, pain and anxiety/depression) in adults with pulmonary arterial hypertension (PAH).

**Background/Significance:** PAH is a chronic, debilitating disease affecting primarily young to middle age women. People with PAH experience impaired physical mobility, fatigue, increased pain, depression and anxiety. Biologically, inflammation can induce symptoms such as fatigue and depression. PAH has an inherent inflammatory process; however, the role of inflammation and the relationship to symptoms in PAH have not been investigated.

**Methods Design:** This is a secondary analysis of an existing data set of stored biospecimens from a National Heart, Lung, and Blood Institute funded randomized controlled trial (RCT) in PAH. **Setting/Sample:** The RCT was a multicenter trial where participants were recruited to determine the efficacy and safety of aspirin and simvastatin in patients with PAH. The sample includes 65 adults who were primarily female (86%) and Caucasian (60%). Measurements were taken at baseline, 6 weeks, 3 months and 6 months. **Procedure:** After Institutional Review Board approval, the following will be collected from the study data set at baseline and 6 month data points: socio-demographics, clinical variables and data from the Medical Outcomes Study Short Form-36 v.2 (SF-36 v.2). Analysis for IL-6 and TNF- $\alpha$  will be conducted using commercially available high-sensitivity ELISA kits at baseline and 6 months. Data will be double-data entered into a secure password protected electronic file.

**Instruments:** Socio-demographic/Clinical Data Form: An investigator-developed socio-demographic (e.g. age, sex) and clinical data form (vital signs, medications, 6 minute walk distance) will be used to collect data elements from pre-existing records. SF-36 v.2: The SF-36 v.2 is a generic measure of health status that is constructed to measure physical and mental health by assessing eight subscales. The SF-36 v.2 will serve as a proxy to measure symptoms: fatigue (measured with vitality scale), pain (measured with bodily pain scale), and anxiety/depression (measured with mental health scale).

**Analysis Plan:** Descriptive statistics will describe the sample. General linear modeling will analyze association of proinflammatory cytokines and symptoms. ANCOVA models will examine moderating effects of proinflammatory cytokines. These models examining the moderating effects of proinflammatory cytokines will be based on modeling six-month outcome as a function of baseline measure, along with IL-6, TNF- $\alpha$ , oxygenation, exercise capacity, and other factors known to affect proinflammatory cytokines. Statistical significance will be 0.05.

**Nursing Relevance/Implications:** People with PAH are facing an incurable disease with limited therapies. Symptom management is one avenue that nurses can impact care. Defining biological mechanisms and their relationship to symptoms has important implications to designing effective interventions. This study will provide preliminary evidence of the link between inflammation and symptoms in PAH.

## Abstract

**Principal Investigator: Bing-Bing Qi**

**Research Title: Nutrition, Exercise and Osteoporosis in Chinese Immigrants**

**Background:** Recent Chinese immigrants in Chinatown with low educational and income levels and older than 65 at the time of immigration, have been found to have low bone mineral density (BMD) and a high risk for osteoporosis. The benefits of lifestyle modifications are not widely recognized by Chinese immigrants due to barriers including language and limited access to care. Interventions targeting Chinese immigrants and tailored to Chinese culture, language, and specific needs that may increase adherence to osteoporosis prevention behaviors are critically needed to effectively reduce racial, ethnic, and socioeconomic health disparities related to osteoporosis and fracture.

**Purpose:** Will test the efficacy of a social ecological model and self-efficacy-based osteoporosis behavior change intervention aimed at increasing adoption and adherence to exercise, calcium-rich diet and osteoporosis medication use. The hypotheses are that foreign born, Chinese adults who participate in the Self-Efficacy-Enhanced Osteoporosis Prevention nutrition/ exercise follow-up intervention (SEOPE-NEW), in comparison to those who receive no such intervention, will have greater improvement in confidence related to osteoporosis preventive behaviors, and adherence to osteoporosis preventive behaviors at 3-, 6-, and 12-month after the intervention starts, and significantly less bone loss based on BMD at 12-month.

**Design:** Will employ a quasi-experimental design with a repeated measure pre- and post-test, experimental (TG) vs. attention control group (CG) with randomization of treatment sites.

**Method:** Participants are eligible if they are 55 years old or older; foreign-born Chinese, without reading, hearing, communication, or comprehension problems, who understand Mandarin or Cantonese; have a Mini Mental State Exam score of 26 or greater; have no medical problems. The study will be conducted at two separate Chinese senior housing facilities in downtown, Philadelphia. The estimated sample size is 200 with 100 in each group. All instruments are Chinese version with good reliability and validity. Pedometers and 3-days food record will be used. Both groups will meet twice a week for 14 weeks and once a month for 3-6 month. The TG will receive the SEOPE-NEW intervention including supervised exercise, food record review and on-going education on every meeting. The CG will receive education classes that focus on general information about different diseases. A 4 (time) X 2 (treatment) one-way repeated measure analysis will be used to detect changes over time in outcome measures.

**Significance:** The dissemination of the findings based upon this high risk population for osteoporosis may lead to more culturally sensitive, language appropriate, individualized care from health care providers and may help direct more resources to indigent Chinese Immigrant populations. The study's findings will contribute to the body of knowledge concerning lifestyle modification related to osteoporosis prevention behavior, and potentially help to halt the increasing prevalence of this debilitating disease in the vulnerable Chinese population in the U.S.

## Abstract

**Principal Investigator: Phyllis W. Sharps**

**Research Title: Enhancing the Diversity of the Nursing Profession: Assessing the Mentoring Needs of African American Nursing Students**

**Research Team:** Phyllis Sharps, PhD, RN, PI; Beulah Teachey, PhD, RN; Daniels-Lewis, PhD, RN, Bobbye Perdue, PhD, RN; Sandra Webb-Booker, PhD, RN; Irene Terry Lee, MSN, RN; Melba Lee-Hosey, BA, LVN and Lucy Yates, PhD, RN.

**Purpose:** The National Black Nurses Association (NBNA) proposes to conduct a national web-based survey and regional focus groups of African American (AA) nursing students to identify facilitators, barriers and mentoring needs for successful matriculation and graduation from nursing programs.

**Background and Significance:** The IOM report “The Future of Nursing” recommends that nurses should achieve higher levels of education. Although AA have made progress in higher education programs with enrollment increasing to 10% in baccalaureate and 12% in master’s programs, AA nurses only represent 5.4% of the nursing workforce. Increasing AA student enrollment and successful completion is critical to obtaining the IOM’s recommendation for highly educated nurses as well as enhancing the diversity of the nursing workforce. NBNA, an organization of AA nurses, is ideally suited to provide mentoring and role-models to AA nursing students to enhance their achievement academic and career goals.

### **Methods:**

**Design:** A descriptive - correlation design using a mixed methods approach. An on-line survey of AA nurses administered through the NBNA’s website and a qualitative phase which includes eight focus groups conducted across Western, Midwestern, Eastern, Northern and Southern regions of the United States. **Setting:** The study will be a national survey of AA students attending nursing programs in all states in the United States; and focus groups from selected regions. **Sample:** Study enrollment is open to any AA student enrolled in nursing education program in the 50 United States including, practical/vocational; associate, baccalaureate, masters and doctoral (PhD or DNP). The goal is to recruit 2,000 survey participants and 75 focus group participants. **Procedures/ Study Questionnaires:** The previous pilot survey of 20 items including items on demographics; nursing program type; sources of mentoring; access to computers/smart phones; learning styles; test-taking anxiety/ learning disorders, will be expanded to 50 items to collect more in-depth information about academic successes and challenges; specific mentoring needs; goals for advanced education and resources and needed to achieve advanced educational goals. The focus group interview guide will include open –ended questions, reflecting the content of the survey but also allows students to tell their stories about their experiences, successes, challenges and mentoring needs.

**Analysis:** The quantitative analysis plan includes summary descriptive statistics of the survey and focus group samples and to describe the factors associated with successes, challenges and mentoring needs for AA students. Data will also be examined for associations between demographic characteristics, successes, mentoring needs and access to resources. The qualitative analysis will use content analysis to identify clusters of concepts/topics and themes that inform study questions related to successes; challenges; and mentoring needs.

**Nursing Relevance/Implications:** Understanding the factors related to successes and challenges for AA students will be critical for developing strategies to improve their success in nursing programs.

## Abstract

**Principal Investigator:** Amy Witkoski Stimpfel

**Research Title:** The Association between Magnet Hospitals and Patient Satisfaction

**Purpose:** The purpose of this study is to compare patients' satisfaction with hospital care in ANCC Magnet hospitals matched with similar non-Magnet hospitals. To the extent that differences are found, we will determine whether nursing organizational features can help to explain the variation.

**Background:** Patient satisfaction has been associated with the quality of the nursing practice environment. Magnet hospitals, recognized by the American Nurses Credentialing Center, are known for having superior professional practice environments compared to non-Magnet hospitals. It is possible that Magnet hospitals have more satisfied patients than non-Magnet hospitals; however, this relationship has never been tested empirically. As healthcare makes a transition to value-based purchasing, using patient-centered outcomes like patient satisfaction, understanding what modifiable factors influence patients' experience of care and overall satisfaction will become increasingly important.

**Methods:** We will conduct a secondary analysis utilizing a nurse survey linked to hospital administrative data and patient reports of hospital care on the Centers for Medicare and Medicaid Services (CMS) sponsored Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. A total of 56 Magnet hospitals will be matched to similar but non-Magnet hospitals to test hospital level effects of Magnet status on patients' experience of hospital care. Propensity scoring will allow us to account for the major non-nursing explanations for the difference in Magnet and non-Magnet hospitals. Next, using the matched sample, multivariate modeling will be used to identify potentially influential nursing factors on patients' experience of hospital care, such as the professional practice environment, staffing and education.

**Implications:** Implications of our findings will be salient to health care organizations, managers and nurses who are considering embarking on the Magnet journey or who already hold the distinction, due to the implementation of value-based purchasing in 2013. Under value-based purchasing, hospitals that perform above nationally standardized benchmarks stand to gain additional reimbursement from CMS. Striving to attain Magnet credentialing by improving the professional practice environment may produce meaningful changes in HCAHPS scores, which would be dually beneficial to patients and hospitals. The unique data from this study coupled with sophisticated analytic techniques will yield novel results that can inform research in this line of inquiry and be readily used by stakeholders. The data are currently available, facilitating timely analysis and dissemination of results.

## Abstract

**Principal Investigator: Lucille L. Travis**

**Research Title: Medication Reminder Technology for Living Alone with Heart Failure: A Pilot Study**

**Purpose:** The purpose of this study is to examine the impact of medication reminder technology on medication adherence, readmission within 30 days, time between admissions, and length of hospital stay with a unique population; of those living alone with heart failure.

**Background:** Heart failure is a chronic and expensive medical condition affecting approximately 5.8 million people in the United States.<sup>1</sup> National readmission rates for Medicare beneficiaries discharged alive after HF hospitalization has approached 25% in recent years.<sup>2</sup> Reasons for these high rates are multiple; however, lack of medication adherence is considered a major cause since it is estimated that 1 in 10 visits to the hospital results from medication mismanagement.<sup>3</sup> Inadequate medication adherence is the single most important modifiable aspect of chronic disease management.<sup>4</sup>

**Method:** The design of the study is quasi-experimental with a convenience sample.

**Setting/Sample:** A heart failure inpatient unit will be used for the recruitment of subjects at time of discharge. The convenience sample will consist of 20 subjects who are age 60 years or older and living alone with a diagnosis of chronic heart failure.

**Procedures/Instruments:** Subjects will be enrolled in cohorts of four each month. The first two will receive the intervention and the other two will be placed in a control group. Group 1 will utilize the MedMinder™ also known as Maya, an electronic pill box that reminds the patient when it is time to take medications through notification by light, sound, phone call and text messaging to family. Group 2 will receive usual care. Both groups will be administered the Morisky Medication Adherence Scale pre and post intervention to measure baseline and end of study adherence. The medical record will provide data on subject readmission rate, time between admissions, length of hospital stay and medication adherence over a 30-day period. Satisfaction with the use of the MedMinder™ will be measured at the end of the study.

**Analysis Plan:** Descriptive statistics, t-tests, and ANOVA with SPSS version 18 will be used.

**Nursing Relevance/ Implications:** Medication adherence plays a key role in readmission of heart failure patients and in acute exacerbation of their disease process. There have been few interventions that effectively improved medication adherence, reduced hospital readmissions and extended the length of time to hospital readmission. The proposed intervention provides an innovative use of cloud computing to impact medication adherence with heart failure patients living alone.

## **Abstract**

**Principal Investigator: Angelia Trujillo**

### **Research Title: Perceptions and Practices of Health Care Providers Surrounding Interpersonal Violence**

Indigenous and non-indigenous peoples residing in Arctic communities share a common problem of interpersonal violence. IPV is defined as the actual or threatened physical, sexual, psychological or economic abuse of an individual by someone with whom they have or had an intimate relationship. Interpersonal violence (IPV) incorporates child sexual assault, child physical abuse, sexual assault, intimate partner violence and elder abuse.

The National Intimate Partner and Sexual Violence Survey (NISVS) reports that 1 in 5 women will be raped in their lifetime, 1 in 6 women will be stalked and multiracial and Alaska Native/American Indian women bear a higher burden of sexual assault (1:3 and 1:4) than do Black, White or Hispanic women. Alaska ranks in the top five states for domestic violence, Alaskan women are sexually assaulted at 2.6 times. Interpersonal violence adversely affects the health of individuals, relationships, communities and society.

Recommendations to aid in combating interpersonal violence include, but are not limited to, identification of health care provider screening practices, universal screening for interpersonal violence regardless of age, race, or gender, and seeking opportunities to develop interpersonal violence research in other circumpolar nations. Primary health care providers are major stakeholders and are in a unique position to recognize early signs of IPV, to report abuse and intervene proactively. Targeted efforts to improve and enhance provider practices can only be developed and implemented if based on a sound understanding of current practices, perceptions and challenges.

This two-phase research project incorporates the revision of a previously utilized tool and establishment of the tools' reliability and validity; followed by a survey of Alaskan physicians, physician assistants and nurse practitioners in order to measure perceptions, correlations and key practices surrounding interpersonal violence screening.

## Abstract

**Principal Investigator: Rula Wilson**

**Research Title: Knowledge, Practices, and Attitudes about HPV Vaccination among Ethnically Diverse Hispanic Mothers and their Healthcare Providers**

**Purpose:** The purpose of this study is to examine knowledge, practices, and attitudes about HPV vaccination among diverse groups of Hispanic mothers, in low-income urban areas. The study also seeks the views of Hispanic mothers and their healthcare providers on barriers and facilitators for HPV vaccination initiation and completion. The proposed study will address a significant gap in the literature on HPV vaccination among ethnically diverse low-income, Hispanic populations and will inform the development of culturally-appropriate interventions.

**Background/Significance:** Cancer disparities persist among Hispanics both nationally and in New Jersey. Although human papillomavirus (HPV) is a known risk factor for several cancers, completion rates for the HPV vaccine are disproportionately lower among Hispanic and low-income groups. Literature is lacking on the knowledge and views of diverse Hispanic populations on HPV vaccination, particularly regarding the vaccination of boys.

**Methods:** This is a qualitative study consisting of two arms. The first arm of the study will include 12 focus groups with mothers of HPV-vaccine-eligible adolescent children (i.e., mothers of children 9-18 year old). Each group will include 10-12 participants, for a total sample of 120-144. Women will be recruited from two sites of the Newark Community Health Centers, a federally qualified health center in Newark, and from the Outpatient Department of Trinitas Regional Medical Center in Elizabeth, NJ. Both organizations provide healthcare services to diverse, low-income and uninsured families, many of whom are immigrants and of Hispanic ethnicity. Focus groups will be stratified by Hispanic subgroup (South Americans and Spanish-Speaking Caribbeans), and by their use of the HPV vaccine. Group discussions will take 1-2 hours and will focus on women's knowledge and attitudes towards HPV vaccination. The second arm of the study will include semi-structured individual interviews (30-45 minutes) with 20 healthcare providers (physicians and nurses) in pediatrics and women's health. The interviews will focus on perceived barriers and facilitators for HPV vaccine initiation and completion as well as cultural and other factors useful for the development of targeted interventions to promote HPV vaccination among low income Hispanic populations. All focus groups and interviews will be audiotaped and transcribed verbatim. Using thematic content analysis and standard qualitative analysis procedures, study data will be analyzed for patterns, themes, and categories of responses. Measures will be used to establish rigor or trustworthiness by focusing on truth value, applicability, consistency, and neutrality. Using a qualitative approach will provide insight on misconceptions and views that may not otherwise be known to researchers and clinicians.

**Nursing Relevance/Implications:** This study will address a significant gap in the literature on cancer disparities and HPV vaccination among low-income, ethnically diverse Hispanic populations and will inform the development of culturally-appropriate cancer prevention interventions.