

Collette Loftin.

(2011)

Diversity in Texas Nursing Programs: A Study of the Relationship between Supportive Characteristics and Graduation of Underrepresented Minority Nursing Students

Susan Newman, PhD, RN, CRRN, Chairman, Advisory Committee

Like the national nursing workforce, the Texas nursing workforce is on a demographic collision course with an increasingly diverse population. Recruiting, retaining, and graduating racially and ethnically diverse nurses, who mirror the diversity of those for whom they care, is essential for nursing programs in Texas. Increasing minority representation in the nursing workforce is an important strategy in decreasing the considerable health disparities that exist in racially and ethnically diverse populations. Manuscript I presents an integrative review of the literature to identify the barriers to successful program completions for underrepresented minority nursing students. Manuscript II reports the results of a comprehensive review and critical appraisal of interventions utilized by nursing programs to increase the success of their diverse students. Manuscript III reports the findings of a descriptive study designed to explore the perceived supportive characteristics of pre-licensure nursing programs in Texas and their relationship with graduation rates of underrepresented minority (URM) students. All Texas nursing programs were invited to participate ($n = 77$). A supportive characteristics score was calculated for each responding program ($n = 59$) based on the *Healthcare Profession Education Program Self-Assessment Survey*. Data for calculating graduation rates was obtained from the Texas Higher Education Coordinating Board (THECB). The Adapted Model of Institutional Support (2010) and the Social Ecological Model informed and guided this study. Variations in graduation rates were identified with rates for URM students being significantly lower than White students. Variations in graduation rates were also identified between ADN and BSN programs. ADN programs have significantly lower graduation rates for URM, Hispanic, White, and Asian students. Correlations were identified between the financial support construct and graduation rates of Hispanic students ($r(38) = .279, p = .041$) and the emotional and moral support construct and the graduation rates of URM students ($r(47) = .326, p = .011$). Finally, conclusions and directions for future research are presented. The results of this study will provide a basis for future researchers by making comparative data available on PSA scores and graduation rates for Texas nursing programs.

Theresa Gunter Lawson.

(2011)

Exploring the Role of Chlamydia Trachomatis and Neisseria Gonorrhoea in Acute Pharyngitis in Young Adults

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Oral sex as a means of the transmission of *Chlamydia trachomatis* and *Neisseria gonorrhoea* is well established: however, this has primarily been studied in high-risk populations such as commercial sex workers and men that have sex with men. Undiagnosed and untreated pharyngeal infection with *C. trachomatis* or *N. gonorrhoea* may lead to unfortunate sequelae and continued transmission to sexual contacts. A study was conducted to determine the prevalence of these infections in college women, aged 18-25 years, presenting to a Student Health Services clinic with a complaint of sore throat or odynophagia. While small sample size limits the generalizability of the study's findings, the need for definitive research is highlighted in order to determine the burden of disease among college women and to explore advantageous strategies to promote primary, secondary, and tertiary prevention through the use of condoms during oral sex and via screening and treatment programs within college health facilities.

Melissa Batchelor Aselage.

(2011)

Feasibility of Implementing a Web-Based Dementia Feeding Skills Training Module for Nursing Home Staff

Elaine Amella, PhD, RN, FAAN, Chairman, Advisory Committee

Background: For an event that occurs three times daily and offers the most opportunity for socialization, mealtimes warrant careful hand feeding implementation by NH staff. PWD may exhibit aversive feeding behaviors that are misinterpreted. This vital misinterpretation can lead to malnutrition in the PWD and increase the risk of mortality.

Objective: The goal of this two-month study was to test clinical feasibility and collect pilot data for an intervention to train nursing home (NH) staff via a web-based dementia feeding skills training module with group coaching. The goal of training was to alleviate mealtime difficulties in persons with dementia (PWD) who require mealtime assistance.

Methods: Two southeastern US nursing homes were randomized by cluster for implementation of the training module. Pre- and post-tests assessed NH staff knowledge and self-efficacy via web-based module. Meal observations assessed staff feeding skills and PWD behaviors during meal times at baseline, 2 and 8 weeks.

Results: Baseline knowledge and self-efficacy scores were similar for both groups. Post-intervention, these scores showed a significant improvement within the intervention group. Feeding skill behaviors trended toward improvement for both groups. Despite increased aversive feeding behaviors in the intervention

PWDs, more time was spent feeding and the food intake for the PWDs increased. In the control, aversive feeding behaviors also increased but less time was spent feeding and food intake decreased.

Discussion & Conclusions: NH staff increased knowledge and self-efficacy after training. While feeding skill behaviors did not change in either group, with NH staff training, the intervention PWDs were given more time to eat and consumed more food; despite an increase in aversive feeding behaviors. The opposite occurred in the control group. This finding has the potential to negatively impact the morbidity and mortality in this vulnerable population that requires careful hand-feeding. Continued work is needed to test and implement the current clinical practice guidelines in the nursing home setting.

Brian Thomas Conner. (2011)

Exploring Factors Associated with Nurses' Adoption of an Evidence-Based Practice to Reduce Catheter-Associated Urinary Tract Infections

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Issues critical to health care reform in the United States involve escalating demand for producing high-quality, cost-effective, and safe health care. Inclusion of evidence-based practices (EBP) related to patient safety is vital for healthcare organizations and their patients, and nurses play a pivotal role in the translation of evidence into clinical practice. Hospital-acquired urinary tract infections are well-documented adverse events that constitute the most common type of healthcare acquired infections around the world. In spite of long-standing catheter protocols, the incidence of hospital-acquired, catheter-associated urinary tract infections remains high (CAUTI). This body of work is comprised of three separate studies that build upon one another to answer the evolving research questions. The three specific aims of this inquiry were to explore the current evidence with regard to CAUTI prevention strategies, to implement a pilot study using a urinary tract infection prevention bundle protocol, and to determine the level of translation of EBP related to CAUTI prevention among practicing clinical nurses. Rogers' Diffusion of Innovation Theory was identified as a guiding framework for exploring nurses' adoption of an EBP to reduce duration of catheterization among hospitalized adults. The first of the three dissertation manuscripts sought to critically appraise and synthesize the available literature on current strategies and interventions to reduce or prevent the incidence of CAUTI. The integrative review appraised 15 studies that were placed into one of two major categories of prevention strategies: types of indwelling urinary catheters used and the management of indwelling catheters. The implications from the study indicate that nurses are in prime positions to contribute to the development and implementation of EBP to prevent CAUTI.

The purpose of the second manuscript was to report the results of a pilot study of an evidence-based protocol aimed at reducing duration of catheterization among

a sample of patients in a rural hospital setting. The urinary tract infection prevention bundle protocol included several prevention measures bundled together with the primary purpose of monitoring catheter usage on a daily basis and utilizing a physician reminder system for removal of unnecessary catheters as soon as possible. The results of the pilot study indicated nearly 100% compliance with the daily monitoring and physician reminder measures and a 25% reduction in duration of catheterization.

The third manuscript reported the results of a pilot study to explore factors associated with nurses' adoption of an EBP to reduce duration of catheterization in hospitalized adults. The purpose of the study was to explore nurses' perceptions of EBP generally and specific to the use of a nurse-driven early catheter discontinuation protocol. Rogers' diffusion theory was useful in determining other factors associated with the nurses' adoption of the protocol including relative advantage, compatibility, and complexity. The results from this study suggest that education coupled with practical application of an evidence-based intervention will increase nurses' perceptions and attitudes of EBP and contribute to successful adoption of the intervention.

Lee Horton.

(2011)

Community Factors Influencing Premature Labor and Birth: An examination of Two Southern Counties and Select Zip Codes

Elaine J. Amella, PhD, RN, FAAN, Chairman, Advisory Committee

Throughout the world each year it is estimated 13 million infants are born prior to 37 completed weeks gestation. Although many survive, they continue to experience lives of severely short and long term compromised health with tremendous cost incurred. In the United States, significant disparity can be noted for preterm labor and birth for women of color, specifically Black women. This disparity has been attributed to the increase in low birth weight and extremely preterm births (< 1500 grams and <32 completed weeks gestation) commonly occurring among Black women. Causes of preterm birth are multifaceted, and are theorized to include ethnicity, age, economic, education, marriage status, gestational risks (LaVonne, Simmons, Rubens, Darmstadt, Gravett, 2010; Kennedy, Ruth, Martin, 2009; Moos, 2004). Greater risk is attributed to preterm labor or birth if there are risks that predate pregnancy, such as chronic medical conditions, previous pregnancy related risks as well as maternal genetic factors (LaVonne, Simmons, Rubens, Darmstadt, Gravett, 2010; Kennedy, Ruth, & Martin, 2009; Moos, 2004). Growing evidence suggests preterm labor and birth risks are increased with environmental/behavioral/psychosocial insults (LaVonne, Simmons, Rubens, Darmstadt, Gravett, 2010; Kennedy, Ruth, & Martin, 2009; Moos, 2004).

The primary aim for this study was to examine the rates of preterm labor and birth from a geographically coded area in South Carolina using an existing data

base (Perinatal Information System, PINS) used at a 600-bed academic health sciences center. Exploring the rates of preterm labor and birth by racial group was to be accomplished using a Life Course Model (LCCM). LCCM is a guiding framework for program planning. For the purpose of this study, LCCM was used to evaluate life course risk and protective factors that influence preterm labor and birth. This framework was then placed within the overall epidemiologic lens of the Social Ecologic Model (SEM). The placement of LCCM within the SEM domains of individual, relational, community, and society allows for a multi-dimensional view of factors that influence health (Bronfenbrenner, 1994; Kuh, Ben-Shlomo, Lynch, Hallqvist, Power, 2003). The goal of this research was to identify pathways of risk and protection within the counties of interest that were nurse/provider modifiable to guide future tailored interventions and programs using the LCCM and SEM.

This exploratory descriptive study of two Southern counties and select zip codes showed a difference in locations where preterm labor and birth are more prevalent. Unadjusted data had shown Berkeley County, one of the two counties examined and largely suburban/rural, to have a higher percentage (26.2%) of women having had preterm birth in contrast to Charleston County (19%), which is largely urban/suburban. Unadjusted Zip code analysis had also shown both interesting and surprising results in Charleston County. Zip code 29404 representing Charleston Air force Base (AFB) revealed a staggering 36% preterm birth rate.

Regression models were fashioned with LCCM variables within the domains of the SEM (Individual, Relationship, Community, Society). The results of this analysis revealed the classic known risk pathways to preterm labor and birth, however, the study population in Charleston County was shown to be at higher risk for adverse birth outcomes and specifically if the mother had preeclampsia (OR 14.8, 95%CI 7.6-28.8, $p=.000$), toxemia, or one episode of preterm labor (OR 14.1, 95%CI 10.5-18.6 $p=000$) in the present gestation when adjusting for covariates in each SEM/LCCM cluster.

County Health Rankings and Domestic Violence Rankings (DVR) also supported that although Charleston County has slightly more positive health care outcomes (morbidity and mortality with a higher weight for birth outcomes) and health factors (#5 of 46 counties in the state), health behaviors, clinical care, social (#12 of 46), and economic factors and physical environment (#39 of 46), it ranks higher in the negative aspects of social, economic, physical environment, and domestic violence factors (DVR of #3 among 46 counties). Berkeley County was shown to have a more positive ranking for social (#7 of 46), economic, and physical environment (#12 and 18 of 46). Narrowing the view further, select zip areas revealed women living within Zip code 29404 US Air Force Base were almost 3 times more likely to give birth prematurely compared to women living in other zip codes (OR 2.92, 95%CI 1.54-5.553). It should be mentioned that women from the Air Force Base who deliver at the hospital where the PINS database is kept are referred from local hospitals where more complex

obstetrical care is not routinely delivered.

Although these results were congruent with past studies and known pathways of risk, an unexpected rate for preterm birth within a US government population (AFB) is disconcerting. The United States Government is noted for exemplary evidence based practices. There are several support systems within a Federal compound for military personnel and their families. Further exploration of this phenomena is warranted.

Julius Oluwole Kehinde.

(2011)

Structure and Process-Related Fall Risks for Older Adults Living with Dementia in Nursing Homes

Elaine J. Amella, PhD, RN, FAAN, Chairman, Advisory Committee

Background: There has been a steady increase in fall prevention research involving older adults living in Long-Term Care Facilities. Methodological issues inherent in some of these studies have limited comparisons among studies and their usefulness for evidence-based practice (EBP). Also, the influence of structure and process-related fall risk factors on fall rates in nursing homes (NHs) has not been reported.

Purpose: The purpose of the systematic review in this dissertation was to critically appraise methodological issues in extant fall prevention research. Using Donabedian's Model, the aim of the two pilot studies aim was to examine the feasibility of investigating the relationships between fall rates, organizational (structure and process-related factors) fall risk factors in NHs and to determine the effect size of instruments and variance in this setting for future falls outcome research.

Design and Methods: This systematic review used the five stages of Whittemore and Knalf (2005) review methodology to extract data from the databases, to summarize, and to synthesize the findings of the 10 studies included. The pilot studies used a survey design method to conduct two studies among: Study 1) 55 nursing staff from three NHs; and Study 2) 12 Directors of Nursing (DONs). Additionally, an environmental observation was performed in eight (n=8) of the NHs in the second study. Descriptive statistics, non-parametric tests, and linear regression analysis were used to estimate variations of organization and environmental fall risk factors on fall rates.

Results: There were inconsistencies in fall definitions, methods of data collection, and standards for reporting fall rates were apparent across the studies reviewed. Based on our findings, we conclude that larger studies are feasible among DONs and nursing staff, and environmental observation would be well supported by NHs. In the study involving the DONs, a moderate-to-strong statistically significant relationship was found among fall rates, clinical policies, and administration policies. However, the relationship between fall rates and staffing

was a low negative and non-significant ($r=-.293$, $p=.330$). The study involving nursing staff in three NHs revealed no difference in mean scores among the five independent variables across the three NHs. Findings in the pilot studies are limited by small sample sizes.

Implications: Standardized fall definition, methods of collecting data and reporting fall rates are necessary to make comparisons among studies as well as for EBP. DONs may be able to improve the rate of falls by targeting staffing and NH policies, further research is warranted.

Lisa Marie Sternke. (2011)

Women Veterans and Gender Differences in the Measurement of Combat Exposure and Posttraumatic Stress Disorder

Charlene A. Pope, PhD, RN, MPH, CNM, Chairman, Advisory Committee

The relationship between combat exposure level and the subsequent development of posttraumatic stress disorder (PTSD) is well established; however, this relationship has primarily been established in men who have experienced combat. Research on gender differences in combat exposure and its psychological consequences in relation to women Veterans requires investigation. This study examined combat exposure measurement instruments utilized since the Vietnam War to determine how these instruments were developed and psychometrically tested and the appropriateness of their use with women Veterans exposed to combat.

Eight instruments in the instrument review were retained for critical appraisal, the majority of which were developed and validated based on Male Veteran combat experiences from the Vietnam War through the Gulf War. Instrument analyses showed women Veterans are underrepresented in the development and validation of exposure instruments, indicating a systemic gender bias in combat exposure instrumentation requiring further investigation. Only two instruments utilized women Veterans in their validation samples, and six instruments were gender neutral.

One instrument, the Combat Exposure Scale (CES), was chosen to examine gender differences in the prediction of PTSD as it is utilized with both male and female Veterans, yet is solely based on the experiences of male Veterans who were in Vietnam. A sample of 172 Veterans (72 women, 100 men) from different eras was obtained through social networking, email, and Internet-based recruitment methods. CES scores and resultant scores on the PTSD-Checklist Military (PCL-M) and Patient Health Questionnaire-9 for depression were compared by gender and era. Results indicate that combat exposure levels differ by both gender and era and that the CES is a significant predictor of PTSD in both men and women; however, its variable relationships with both PTSD and depression indicate it may not adequately represent the experiences of women

Veterans.

This study shows that instruments developed and validated with male Veterans for specific military conflicts may not reflect the combat experiences of women, and that the use of the CES with women Veterans should be re-evaluated. Further research of combat exposure measurement instruments from a gender perspective, specifically the CES, will ensure the combat experiences of both men and women are appropriately measured. Prospective research addressing the validity of using the CES with women Veterans is also recommended utilizing a baseline assessment of combat exposure and PTSD.

Ruth S. Conner. (2010)

Religious Practices and Resources for Caregivers of Persons with Dementia

Elaine J. Amella, PhD, RN, FAAN, Chairman, Advisory Committee

This dissertation captures the results of two studies and an integrative review that explore the perceptions held by community and faith-based key informants (n=13) and caregivers of persons with dementia (CPWD) (n=22) regarding valuable older adult community and faith-based resources for persons with dementia (PWD) and CPWD; the barriers associated with utilization of these resources; and religious practices and resources among CPWD. Primary among this innovative exploration was the role of the faith community in addressing the needs of CPWD.

Using content analysis, themes that emerged from both groups included the following: there is a role for the faith community in alleviating caregiver stress, caregivers have a strong belief in God which influences their commitment to caregiving, and although caregivers could identify meaningful resources from the faith community, they were often not using these support options. The impact of this work elucidates the lack of research exploring the potential role the faith community could have on CPWD stress; the importance of informing the faith community of the critical role they could play in alleviating CPWD stress; and the need to direct future research on possible partnerships between the faith community and resource organizations and agencies for PWD.

Key Words: Alzheimer's disease, dementia, caregivers, faith community

Catherine Ling.

(2010)

Gait, Function and Class III Obesity

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Mobility is a critical component of participation in daily life. Routine physical activity (PA) is a component of disease prevention and treatment. People with Class III obesity (at least 100 pounds over recommended weight for height) experience mobility differently than lower weighted cohorts. However, current guidelines and recommendations treat all people with obesity the same. An integrated review of the literature found a scarcity of research examining PA interventions with this population. The studies that were found differences between Class III and a lower weight group in anthropomorphic, mobility and activity capacity measures. The findings with the Class III group more closely resembled measures of pathologic conditions rather than normative values. The study also found two gait and one anthropomorphic measures (velocity, cadence and hip circumference) that were predictive of gait capacity as measured by the Timed Up and Go test. The study used the International Classification of Functioning, Disability and Health (ICF) as a conceptual model. Post hoc analysis found high theoretical fidelity and translatable validity with the instruments used.

Lucy Megginson.

(2010)

Exploration of Nursing PhD Admissions Process and Performance Outcomes: A Journey Toward Evidence-Based Practice and Process

Gail A. Gilden, ScD, RN, Chairman, Advisory Committee

This collection of manuscripts presents a state of the science report on nursing PhD admissions process and performance outcomes. The first manuscript provides foundational information via an integrative review of nursing doctoral education in the United States. Historical perspectives, a detailed literature review of admissions criteria and performance outcomes, and gaps in the literature are provided. The second manuscript is an integrative review of instruments used in the admission process that measure more abstract and less quantitative candidate attributes such as motivation and creativity. Only two of the seven instruments were adequately psychometrically tested for validity and reliability. The third manuscript is original research rooted in the gaps identified in the two integrative reviews. A descriptive exploratory design and Tinto's Longitudinal Model of Doctoral Persistence (1993) provided a framework for a national survey of all nursing PhD programs recognized by the AACN (2009) to determine current admission criteria and performance outcomes. A 51% response rate from the 110 PhD programs revealed 6 consistently identified admission criteria (GGPA, GRE scores, interview, writing sample, letter of recommendation, and research match with faculty). Performance outcomes were

largely quantitative with measures of achievement revealed in both programmatic and post-graduate criteria: ongoing GGPA, time to candidacy, comprehensive exam, dissertation, time to degree, degree attainment, and type of employment post-graduation. Predictive validity and internal reliability were both lacking in admission criteria. Finally, associations between admission criteria, performance outcomes, and institutional attributes indicated no associations other than the tendency for Research-Intensive institutions to require a higher admission GGPA of >3.0.

Leslie Parker.

(2010)

Benefits of Breastfeeding and Evidence-based Interventions to Increase Milk Volume in Mothers of Very Low Birth Weight Infants

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Delivery of breast milk to infants weighing less than 1500 grams is associated with improved health outcomes (Sisk et al., 2007; 2008; Vohr, Poindexter, & Dusick, 2006), but mothers of these very low birth weight (VLBW) infants are at risk for producing an insufficient milk supply (Furman, Minich, & Hack, 2002). Additional information regarding benefits of breast milk and strategies for enhanced milk supply and delivery to these infants is necessary to optimize health benefits.

Currently, confusion exists regarding appropriateness and effectiveness of strategies to enhance milk supply, but some evidence shows promise for timing of initiation, frequency of milk expression, type of breast pump used, and provision of kangaroo care (Hill et al., 2005b). In the first manuscript, an analysis was performed to critique the strength of evidence regarding these expression interventions. Earlier initiation of milk expression, increased frequency of milk expression and provision of kangaroo care were found to increase milk supply.

In the second manuscript, knowledge was expanded about the benefits of providing breast milk to VLBW infants. The primary purpose was to assess whether provision of at least 50% breast milk feeds during hospitalization affected days to discharge and cost of hospitalization. Provision of at least 50% breast milk feedings did not decrease time to discharge or cost of care. However, the sample size may not have been sufficiently robust to detect differences in morbidities positively affected by breast milk feedings and known to increase cost of care and length of stay (Cotton, et al., 2005).

Earlier initiation of milk expression was found to increase milk volume in mothers of VLBW infants; however, impact of initiation within one hour following delivery has not been investigated (Hill & Aldag, 2005). The purpose of the third manuscript was to evaluate the feasibility of initiation of milk expression ≤ 60 minutes following delivery and to provide preliminary information on the effect of early initiation on timing of lactogenesis stage II and milk volume. Results support

the feasibility of this intervention. Although the sample size was small, data supports initiation of milk expression within one hour to increase milk volume and decrease time to lactogenesis stage II.

Jodi Protokowicz. (2010)

Exploring the Relationship between Mental Illness and Pre-eclampsia

Gail A. Gilden, ScD, RN, Chairman, Advisory Committee

Pre-eclampsia and mental illness during pregnancy can negatively impact maternal and neonatal outcomes. The literature indicates that while mental illness during pregnancy and its effects on outcomes has been widely explored, the possible relationship between mental illness and pre-eclampsia has been minimally investigated. The relationship between mental illness and pre-eclampsia is not purely speculative. There is a biologic plausibility of such a relationship in that both those with a mental illness and those with pre-eclampsia have abnormally elevated pro-inflammatory cytokine levels as well as abnormally low anti-inflammatory cytokine levels. The final research of this dissertation indicates that women who have a mental illness during pregnancy are at increased odds of developing pre-eclampsia. Additional research is needed to further explore the relationship between mental illness and pre-eclampsia.

Suzanne DeVandry. (2010)

A Pilot Study to Determine the Feasibility of Using Faith Community Nurses to Recruit and Collect Data from Church-Going African Americans

Elaine J. Amella, PhD, RN, FAAN, Chairman, Advisory Committee

Researchers must develop new venues to access and recruit larger African American (AA) populations for better generalization of study results and reduced health disparities. We proposed using Faith Community Nurses (FCNs) to access church-going AAs for recruitment into cancer clinical trials. The *primary aim* of this study was to determine the feasibility of recruiting and training at least one FCN from 3 churches in the Northeastern United States to recruit and collect survey data from AA church members. The *secondary aim* was to determine if there is a relationship between barriers and willingness of church-going AAs to participate in cancer clinical trials. An *exploratory aim* was to determine what role the clergy plays in AA church-members' willingness to participate in cancer clinical trials. *Manuscript I* reports the results of a critical literature review using the Social Cognitive Theory (SCT) framework to identify personal, environmental, and behavioral determinants of AA willingness to participate in cancer clinical trials. Key personal determinants including trust, gender, health status, and others identified in this review must be addressed in the context of a comfortable, familiar, and accessible environment that empowers self-efficacy to participate in

cancer clinical trials. AA churches provide a comprehensive venue to address many SCT determinants that influence AA participation in cancer clinical trials. *Manuscript II* presents the results of a survey among 42 church-going AAs to identify barriers to participation in cancer clinical research and explore a relationship to willingness to participate (secondary aim). Results suggest that the 42 church-going AAs surveyed were willing to participate in cancer clinical trials, but needed some assurance of personal and communal benefit. *Manuscript III* addresses the primary and exploratory aims of this study using process evaluation to evaluate the feasibility of using 3 FCNs in AA churches to recruit 42 church members for participation in a survey study. Five Key Informants participated in follow up interviews. This study demonstrates that it is not only feasible, but also beneficial to use FCNs serving AA churches to recruit and collect data from church-going AAs.

Christy Miller Smith.

(2010)

The Relationship Between Academic and Professional Dishonesty in Online RN-BSN Students

Barbara Edlund, PhD, RN, ANP, Chairman, Advisory Committee

Awareness is growing that academic dishonesty is a serious problem in nursing programs across the country. With this awareness, there is mounting concern about the relationship of academic dishonesty and its potential transference to professional dishonesty in nursing practice. This series of manuscripts presents the current state of the science regarding academic dishonesty in nursing students, an exploratory analyses of academic dishonesty policies in schools of nursing, an integrative review of instrumentation to measure academic dishonesty, and the results of a novel research to explore relationships between academic dishonesty and professional dishonesty in a national sample of RN-BSN students.

The first manuscript presents a cross-sectional, exploratory study that describes the examination of academic dishonesty policies in schools of nursing and definitions used for academic dishonesty. The majority of nursing schools define academic dishonesty as simply cheating or a combination of cheating and plagiarism, not taking into account various other types of academic dishonesty. The second manuscript is an integrative review of existing instruments that measure self-reported academic dishonesty behaviors. Results show that none of the existing instruments were developed using a specific theoretical framework as a guide and the majority of the instruments were not adequately tested for reliability and validity. The third manuscript describes the reliability and validity testing for a new instrument measuring academic and professional dishonesty in online RN-BSN students. The final manuscript presents a descriptive exploratory study examining the relationship between academic and professional dishonesty in online RN-BSN students using the newly developed self-report instrument, the Perceptions of Academic and Professional Integrity Scale. This study utilized

Ajzen's Theory of Planned Behavior as the guiding framework. The hypothesis that there is a relationship between academic and professional dishonesty was supported ($r=.4386$, $p<.0001$) and preliminary testing of the theory of planned behavior as a model for academic and professional dishonesty shows the theory may be a good predictor of both types of behaviors. This study has far-reaching implications for nurses and nurse educators.

This research highlights the need for a consistent, universally accepted definition of academic dishonesty in nursing education. Further, there is a call to action for nursing leaders to generate intervening actions and policy on academic dishonesty as it appears to be a predictor of future unprofessional, and sometimes illegal, nursing practice.

Berry S. Anderson. (2009)

A Comparison of the Observation of Movement Method and Electromyography Method of Determining Motor Threshold in Transcranial Magnetic Stimulation

Gail W. Stuart, PhD, RN, FAAN, Chairman, Advisory Committee

Clinicians are using transcranial magnetic stimulation (TMS) as a noninvasive tool to treat depression; however, standards for determining the motor threshold (MT), which often determines the final location of the TMS coil and the intensity of stimulation for the depression treatment, are not clear. This study compared the observation of movement (OM) method and electromyography (EMG) method of determining motor threshold in a group of experienced TMS administrators and nurses with no previous MT knowledge. We hypothesized that between methods and groups the MT estimates would vary by $\leq 5\%$ of stimulator output and the ideal motor scalp location between methods would vary by ≤ 1 cm.

TMS administrators determined the MT twice with each MT method on one subject in a randomly assigned order. The subject and administrators were blind to TMS machine output. After determining the ideal motor scalp location, each TMS administrator then used the 5 cm rule to locate the optimal prefrontal treatment site. The scalp position over the anatomical hand knob and the EEG F3 position were located for comparison.

There was no significant difference in the motor threshold estimates between the OM and EMG MT methods ($t(14)=0.659$, $p=0.521$). The mean EMG and OM MT estimates were (61.8% (sd=7.25) and 63.1% (sd=9.05). There was no effect for the interaction between estimation method and experience level ($F(1,13)=0.036$, $p=0.851$) on MT estimates. The mean distance between the MT sites and the hand knob was 21.25 (sd=8.98), while the mean distance between the treatment sites and F3 was 36.16 (sd=12.15).

The wide range of MT estimates and motor scalp locations reveals several problems with the MT procedure for the OM and EMG methods. The standard EMG or OM methods along with the 5 cm rule may position the coil posterior and medial to the intended treatment location.

This study shows that nurses with minimal MT training can determine the MT and localize the treatment site as effectively as experienced TMS operators. Information obtained from this study can be used to establish MT protocols and to institute training programs that test each participant's ability to master the TMS procedure.

Sharon M. Bond. (2009)

Prevention of Cervical Cancer: Challenges to Implementing HPV Vaccine Strategies among Medically Underserved Populations

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Cervical cancer is a major health problem and the second leading cause of cancer deaths among women worldwide. The purposes of this dissertation are threefold; to examine cervical cancer screening methods used in developing countries, evaluate prevailing attitudes toward new human papillomavirus (HPV) vaccines, and share results from a pretest of two instruments designed to measure knowledge, attitudes and beliefs about cervical cancer, HPV infection and the new vaccines among medically underserved populations.

In manuscript I, direct visual inspection (DVI) is examined as a method used to screen for cervical cancer in developing countries where population-based Papanicolaou (Pap) screening is unaffordable and incidence and death rates from cervical cancer are exceedingly high. In this manuscript, 22 studies of DVI, published between 2002 and 2006, are compared using authors' estimates of sensitivity, specificity and efficacy. International efforts to standardize DVI have resulted in significant improvements in its practice, generating comparisons to Pap testing in the United States. However, wide variations in sensitivity and specificity cause concern and expansion of DVI in low resource settings may be justified only if global health leaders cannot reduce political, financial and cultural barriers impeding introduction and acceptance of HPV vaccines.

In manuscript II, prevailing attitudes about HPV vaccine acceptability, stemming from its potential to theoretically eradicate cervical cancer on a global scale, are explored. However, research currently demonstrates that life-saving, anti-cancer vaccines are not inherently acceptable to some segments of the population and that beliefs among those most at risk for cervical cancer have not been adequately explored. Several studies reviewed in manuscript II lack findings regarding barriers and facilitators to vaccine use among medically underserved, diverse populations, thereby uncovering a significant gap in existing literature.

In manuscript III, the Preventive Health Model was used as a framework, to develop and pretest two instruments designed to measure knowledge, attitudes and beliefs about cervical cancer, HPV infection and the new vaccines among medically underserved African American, Hispanic and White populations. Using cognitive interviewing, results show that changes in language and format may reduce response errors, improve comprehension and quality of data.

Pamela Kaelin Murphy.

(2009)

Postpartum Depression and Vitamin D.

Teresa J. Kelechi, PhD, GCNS-BC, CWCN, Chairman, Advisory Committee

Determining biological markers such as 25-hydroxyvitamin D (25[OH]D), a measurement of vitamin D, that could predispose women to postpartum depression is essential for the prevention and early identification of this mood disorder, and mounting evidence exists correlating other mood disorders with serum 25(OH)D. Therefore, the main objective of this dissertation is to explore whether a correlation exists between postpartum depression and serum 25(OH)D. Three manuscripts are included: the first, an integrative review of the research literature comparing mood disorders and vitamin D status in women; the second, a concept analysis using the Walker and Avant (2005) method to identify a conceptual definition of postpartum depression; and the third, an original research report on the results of the exploratory study conducted to determine whether a correlation exists between postpartum depression and vitamin D status.

The integrative review reveals four of six identified studies (each examining a different mood disorder) show a significant association between mood disorders and low vitamin D levels. The concept analysis reveals the following conceptual definition of postpartum depression; postpartum depression can be diagnosed if a woman experiences anxiety or panic attacks, unstable emotions, weight loss or gain, insomnia or hypersomnia, fatigue or loss of energy, feelings of worthlessness or inappropriate guilt, difficulty concentrating, or recurrent thoughts of death with or without plans for suicide up to one year postpartum (number and duration of symptoms remains unclear). The exploratory study finds weak, non-significant, negative correlations between elevated EPDS scores and chronic exposure to decreased levels of serum 25(OH)D; and specific EPDS statements, evaluating for depressed mood and alterations in sleep patterns, and decreased levels of serum 25(OH)D. In conclusion, this exploratory study demonstrates that vitamin D may be a weak force in the incidence of postpartum depression, particularly influencing mood and sleep patterns. The results of this study show a weak correlation between vitamin D and postpartum depression when using the EPDS, warranting future rigorous research in this area using larger sample sizes comparing vitamin D to confirmatory methods of diagnosing postpartum depression while controlling for confounding variables.

Sarah Ann Johnson.

(2008)

Healing in Silence: Black Nurses in Charleston, South Carolina, 1896-1948

Susan Benedict, DSN, CRNA, Chairman, Advisory Committee

This dissertation examines the experiences and the roles of black nurses in Charleston, South Carolina, from 1896-1948 against the backdrop of Post-Reconstruction America and leading up to the Civil Rights Movement. This study further examines the early transition of healthcare in Charleston from the domain of religious and benevolent organizations to intersection with mainstream healthcare in the United States. The study questions examined are: 1) What was the origin and experience of black nurses in Charleston, South Carolina? 2) How did the experience of black nurses of the era compare with their antebellum and post-bellum nurse predecessors at large? 3) What impact did the cultural and political climate in the South have on the transformation of nursing practice of black nurses? 4) What impact did black nurses have on healthcare delivery in Charleston from 1896 to 1948? and 5) What influence did early black nurses have on the evolution of and the integration of professional nursing? Primary and secondary sources from the United States, Great Britain, Canada and the West Indies were analyzed using a social history framework. The education and practice of black nurses in Charleston was developed and sustained under the umbrella of religions and philanthropic organizations. Though their Fourteenth Amendment political rights and their voices were subdued, black nurses utilized nursing work as a conduit through which black women forged a message of inclusion in professional nursing and by which they were introduced to limited benefits of citizenship. Black nurses in early Charleston articulated their citizenship and the need for social justice in healthcare through nursing work.

Susan Dunreath Newman.

(2008)

Evidence-based Advocacy: Using Photovoice to Identify Barriers and Facilitators to Community Participation of Individuals with Spinal Cord Injury

Carolyn H. Jenkins, DrPH, RN, FAAN DSN, Chairman, Advisory Committee

Disability scholars have called for disability research to follow critically oriented or emancipatory research paradigms (Oliver, 1992). Individuals with disabilities have expressed a need for inclusive, action-based research methodologies in which people with disabilities function as partners and consultants, not as research subjects (Kitchin, 2000). Community-based participatory research (CBPR) processes promote shared ownership of research projects between researchers and participants, provide for community-based analysis of social problems, and support interventions that involve community action (Kemmis & McTaggart, 2005). The study reported here used a qualitative design, with a CBPR approach through Photovoice methods to examine environmental barriers

and facilitators to community participation of 10 participants who have a spinal cord injury (SCI).

Photovoice, entails providing study participants with cameras, allowing them to record, discuss, and communicate to others, the realities of the participants' lives as seen through their eyes (Wang & Burris, 1997). Photovoice is gaining popularity as a participatory research method, yet there is no published critical review of the method using specific criteria for evaluation of participatory methods. The primary purpose of the first manuscript is to present a model for the critical appraisal of the use of Photovoice as a participatory research method using Green and colleagues' (1995, 2003) *Guidelines for Participatory Research in Health Promotion*. The second manuscript provides a report on a project that implemented Photovoice to identify barriers and supports to community participation of individuals with SCI in partnership with the Disability Resource Center, an independent living center in North Charleston, South Carolina. The taxonomy of environmental factors in the World Health Organization's (2001) *International Classification of Functioning, Disability and Health* provided the framework for organizing the participant's photographs and their discussion of the photos. Results of the analysis indicated the primary occurrence of barriers and facilitators in the physical environment, with the developed outdoor environment being most problematic. In the third manuscript, the participants provide an assessment of the utility of Photovoice as a tool for disability advocacy. Their photographs and stories support the development of locally relevant, evidence-based advocacy efforts to address issues of access to services and resources in the Charleston community.

Cheryl Ann Carlson. (2007)
Inflammatory Mediators in Premature Infants with Surfactant Deficiency and Dysfunction

Gail W. Stuart, PhD, RN, FAAN, Chairman, Advisory Committee

The inflammatory process is the response of the body to defend against pathogens and toxic substances, and repair damaged tissue. In the lungs, damage to the pulmonary capillary endothelium and epithelium results in capillary leak, exudation of plasma and plasma proteins into the alveolar space and the release of pro-inflammatory mediators. The acute inflammatory response associated with secondary respiratory failure can lead to severe lung injury resulting in impaired gas exchange, and possibly death. Surfactant administration in premature infants who develop a secondary respiratory decompensation may decrease the inflammatory cascade and protect the lungs from fibrosis and edema. A prospective, pilot study was done to study the effect of surfactant on cytokine response in tracheal aspirates. A secondary data analysis was performed looking at respiratory severity scores and the inflammatory mediators. Entry criteria included infants who were > 7 days of age, qualifying if they had a

secondary respiratory decompensation, after recovery from primary RDS. Infants meeting all entry criteria received either Curosurf or Survanta within four hours of the qualifying decompensation and again 12 hours later. Oxygen, ventilatory parameters, blood gas results and tracheal aspirate samples were collected prior to, and 12 and 24 hours after dosing. Twenty neonates qualified for secondary surfactant administration and 10 had tracheal aspirates collected at the 3 time points. There were trends toward decreasing pro-inflammatory cytokines after surfactant administration. Surfactant dosing seemed to disrupt the correlation of pro-inflammatory cytokines, suggesting that inflammatory cytokines are affected differently. The Respiratory Severity Score (RSS) and Modified Ventilatory Index (MVI) have been studied in this group of infants. The ability to use clinical data in an objective scoring system that correlates with the inflammatory process in the lungs would be advantageous in deciding when and which treatment options were most appropriate. Based on this study, MVI scores seemed to be a better indicator of changes in inflammatory mediators, and maybe a better predictor of on-going inflammation and risk of CLD. Further randomized controlled trials are needed to confirm these preliminary results.

Robin Louise Bissinger.

(2007)

Secondary Surfactant Dysfunction and Deficiency

Gail W. Stuart, PhD, RN, FAAN, Chairman, Advisory Committee

Based on literature in Adult Respiratory Distress Syndrome in humans and evidence of surfactant activation in vitro and vivo, and our clinical observations of secondary respiratory decompensation in premature infants recovering from RDS, a study was designed to look at the possibility of benefit from secondary surfactant administration in premature infants with secondary decompensation after recovery from respiratory distress syndrome (RDS). A prospective pilot study was performed to study the effects of secondary surfactant administration on oxygenation, ventilation and pulmonary function of neonates who had respiratory decompensation after recovery from RDS. A secondary data analysis was performed looking at pulmonary function related to ventilatory efficiency index (VEI), modified ventilatory index (MVI) and respiratory severity score (RSS).

Entry criteria included infants admitted with RDS who were 7 days to 3 months of age, with birth weights ≥ 500 grams. Infants qualified if they demonstrated recovery from RDS with a secondary respiratory decompensation defined prospectively as an acute pulmonary decompensation after 6 days of age, which was non-cardiac in origin and accompanied by diffuse parenchymal lung disease on chest x-ray, in conjunction with sustained increase in fraction of inspired oxygen (FiO_2 ; $\geq 20\%$) and mean airway pressure (MAP; ≥ 2 cm) above base-line for at least 4 hours prior to surfactant administration. Infants meeting all entry criteria received surfactant within four hours of the qualifying decompensation

and again 12 hours later. Oxygenation, ventilation and pulmonary function were compared before and after administration at 12 and 24 hours.

Twenty neonates qualified for secondary surfactant administration. The PCO₂, pH, MAP, FiO₂, MVI, and RSS all improved significantly at 12 and 24 hours after surfactant administration. Infants who received Curosurf had improvement in pH and PCO₂ within 2 hours of surfactant administration. The rates of adverse events were low.

These findings suggest that secondary surfactant administration may be effective in reducing short term oxygen and ventilatory requirements and improving pulmonary function in neonates who have a respiratory decompensation after recovery from initial RDS. Secondary surfactant replacement may improve outcomes in this subset of patients and further randomized controlled trials are needed to confirm these preliminary findings.

Laurie Kay Zone-Smith.

(2007)

Psychometric Testing of a Nursing Intensity Workload Measurement Instrument

Gail W. Stuart, PhD, RN, FAAN, Chairman, Advisory Committee

Based on a desire to measure nursing workload for the purpose of better allocation of staffing and to apportion the cost of nursing care in the hospital bill, a study was designed to demonstrate the psychometric properties of a newly developed inpatient nursing intensity workload measurement instrument deployed in an academic tertiary care hospital setting across multiple specialty units. A review of nursing intensity instruments was conducted to examine approaches and adequacy of validity and reliability testing finding no fatal flaws and multi-method use of psychometric tests for seven tools. Three pilot studies were conducted over a six year period examining the new Medical University of South Carolina (MUSC) Nursing Intensity Database© instrument's validity and reliability, showing promising psychometrics and sensitivity to changes in nursing workload where staffing ratios do not. The research study used a retrospective longitudinal design to examine the estimates of direct hours of nursing care resources expended to provide care for individual patients as reported by the assigned registered nurse. Data were collected in 32 hospital nursing units over eight months (January 2006 - August 2006) producing 160,072 patient shift estimates. Estimates were averaged for monthly estimates and yielded a sample of 256 observations to test five study hypotheses. Contrasted groups construct validity, predictive validity, internal consistency and inter-rater reliability were established for a majority of 32 units (60%). The tool is psychometrically sound; it is sensitive to differences among units; and exposes the variability of nursing resources expended for individual patients across different nursing care units. A novel approach to inter-rater reliability consistently demonstrated agreement

between nurse's estimates for patients with the same selected All Payer Related - Diagnosis Related Groups (APR-DRGs) and for increasing higher levels of severity of illness. These findings suggest the tool can be used in an academic tertiary care hospital setting to quantify nursing resources using direct care intensity hours and optimize staffing to meet patient care demands for nursing care. This tool may also provide an independent variable that can be used in a revised DRG cost based system to quantify the nurse's contribution to care in a national nursing billing model.

James F. Lawrence Jr.

(2006)

Advance Directive Prevalence in Long-Term Care: Comparing a Nurse Practitioner and Traditional Health Care Model

Elaine Amella, PhD, APRN, FAAN, Chairman of the Advisory Committee

Background: Previous research has examined differences in end-of-life decision-making using demographic variables. However, there is limited research that exists regarding the influence of providers on their patients' decisions regarding completion of advance directives (ADs). Federal regulations passed in 1991 require ADs to be discussed in all Medicare funded agencies. Yet, national completion rates of ADs remain very low (20% to 24%), and even lower (6% to 11%) among the Black population.

Purpose: This study examined completion rates in three states – Arizona, Georgia, and Massachusetts. Associations among four variables – gender, race, education, and type of provider model, delivered to older adults living in long-term care settings were examined.

Sample: De-identified data from 11,775 older adults enrolled in the Evercare program during the last quarter of 2004 were reviewed from Arizona, Georgia, and Massachusetts. The data were compared to 91,443 older adults in long-term care settings in the same states.

Method: This study used secondary data analysis in a comparative design. AD completion rates from Evercare data were compared to AD completion rates from the federal Minimum Data Set (MDS) data. Chi-square analysis was used to examine any differences in gender, race, education, and type of provider model associated with completion rates of ADs in /Arizona, Georgia, and Massachusetts.

Findings: The Evercare provider model that used nurse practitioners consistently had significantly higher ($p < .001$) completion rates of ADs compared to the traditional MDS provider model. Blacks and Whites enrolled in the Evercare program had similar rates of AD completion ($p < .001$), which is contrary to previous findings where Blacks had a lower rate. Males and females enrolled in the Evercare program had similar rates of AD completion ($p < .001$), which is also contrary to previous findings where females had a higher rate. Finally, older adults with high school education or less and older adults with greater than a high school education enrolled in the Evercare program had similar rates of AD

completion ($p < .001$), which is contrary to previous findings where individuals with increased education had a higher rate.

Gayenell Smith Magwood. (2006)

Evaluation of Two Health Related Quality of Life Instruments for Use with Older African Americans with Diabetes Mellitus

Carolyn Jenkins, DrPH, FAAN, Chairman of the Advisory Committee

The purpose of this methodological qualitative study was to examine sources of problems in comprehension, response categories and within-language cultural variations that may influence validity and reliability of two existing diabetes-specific Health Related Quality of Life (HRQOL) instruments, The Audit of Diabetes Dependent Quality of Life (ADDQoL) survey and the Diabetes Quality of Life Brief Clinical Inventory (DQOL-B). By adapting three theoretical models: PRECEDE-PROCEED, Andersen's Behavioral Model of Utilization, and Wagner's Chronic Care Model HRQOL is conceptualized as it is linked to interventions, productive interactions, and relevant outcomes. Using cognitive interviewing (CI) methods, semi-structured interviews, consisting of survey questionnaires and verbal probes, were conducted with a purposive sample of 15 older African American adults who were diagnosed with type 2 diabetes. Each respondent was interviewed twice for a total of 30 interviews. Data underwent content analysis. The sample had a mean age of 72 years. Sixty percent were high school graduates. Most had multiple comorbidities (80%) and rated their health as good (67%). Health literacy results indicated marginal levels of health literacy. Interview data showed most observed problems with the HRQOL questionnaires were related to comprehension difficulties. This study provided evidence that unfamiliar language and meaning of specific words, uncertainty as to what was being asked with some questions or instructions, and confusing or not applicable response options led to numerous response errors on both instruments. Another important theme identified was this cohort did not distinguish between certain functional limitations and/or level of satisfaction being solely associated with their chronic illness or the aging process. This study has implications for further research on the appropriateness of established and new instruments. Cognitive interviewing is resource intensive, requiring time, specialized skill, and added cost to a project. Despite these limitations, the data from this study, though small, has provided a needed systematic approach to investigating respondents' cognitive processing of an important construct closely associated with chronic illness. Furthermore, this study has used a systematic framework to identify problems and analyze the cognitive interview data.

Winnie Hennessy.

(2006)

Exploring Differences in Resources Intensity in Dying Intensive Care Patients

Gail Stuart, PhD, APRN, Chairman, Advisory Committee

Purpose: To investigate if there are differences in administrative (cost, cost per day, length of stay) and clinical outcomes (ventilator, dialysis, and artificial feeding days) between black and white patients who die in the intensive care unit (ICU) after adjusting for selected patient characteristics Instrument: Secondary analysis of routinely collected hospital administrative data. A quality assurance model (structure-process-outcome) provided theoretical guidance. Sample: All black and white adults (>17 years of age) who died in an ICU during a five year period (n=1446). Final sample for administrative outcomes analysis included all those patients with an ICU length of stay (LOS) of ≥ 3 days (n = 823). Final sample for clinical outcomes included all those patients with an ICU length of stay (LOS) of ≥ 3 days and had life support initiated (ventilator n = 723, dialysis n= 301, artificial feeding* n = 351 (*cases after 7/19/2001). Analysis: SPSS version 12.0. Chi-square and t test were used to describe the unadjusted sample (n=1446) and establish the final sample (n = 823). Univariate analysis of variance (ANOVA) and regression were used to establish significant bivariable associations for the multivariable analysis. Multiple regression was used for hypothesis testing. Results: Race was found to be statistically significant predictor (p = .000) accounting for about 2% of the variation in the adjusted model for total cost (R = .866, R² = .785) and cost per day (R = .479, R² = .230) however race was not found to be a significant predictor (p = .076) accounting for less than 1% of the variance in length of stay (R = .174, R² = .030). There were no proportional differences in initiation of ventilator (p = .540) or dialysis (p = .312) therapies however there are proportional differences in the initiation of artificial feeding (p = .007). Race was not found to be statistically significant predictor (p = .573) accounting for less than 1% of the variation in the adjusted model for ventilator days (R = .813, R² = .660) and not a significant predictor (p = .644) accounting for less than 1% of the variation in the adjusted model for dialysis days (R = .604, R² = .364) however race was found to be a significant predictor (p = .030) in artificial feeding days accounting for 3% of the variance in the adjusted model (R = .797, R² = .635) Conclusions: Race accounts for approximately 2-3% of the variation in cost, cost per day, length of stay and artificial feeding. Ventilator and dialysis therapies are initiated equally however differences in artificial feeding may suggest a disparate practice. Additional research is needed to evaluate the interaction of insurance, severity, ICU area and length of stay.

Marilyn Schaffner.

(2006)

Antecedents and Consequences of Work-Related Nurse Fatigue: A Preliminary Evidence-Based Model

Gail Barbosa, RN, ScD, Chairman, Advisory Committee

Despite the fact that long hours and fatigue among nurses have been identified as serious threats to patient safety, few studies have addressed this important subject. This study investigates the antecedents and consequences of perceived fatigue in nurses with a focus on the work environment and develops a statistical model for examining the contribution of variables to work-related perceived nurse fatigue. The model can be used in future studies that focus on strategies to decrease nurse fatigue and improve patient outcomes. A framework was derived from Piper's (Piper, Lindsey & Dodd, 1987) Integrated Fatigue Model (IFM). The study design was cross-sectional and multivariate and included Registered Nurses (n = 809) working in a southeastern United States academic medical center. A web-based administered Nurse Fatigue Questionnaire (NFQ) that includes the standardized Piper Fatigue Scale (PFS) and the standardized Occupational Fatigue Exhaustion/Recovery Scale (OFER15) was used. Structural equation modeling was used to determine the antecedents and consequences of fatigue in nurses working in a hospital setting. The Schaffner Fatigue Model confirms the hypothesized antecedents and consequences of perceived nurse fatigue. Antecedents have a direct effect ($\beta = .42$, $p = .001$) on perceived nurse fatigue and perceived fatigue has a direct effect on both individual ($\beta = .46$, $p = .001$) and interpersonal ($\beta = .31$) consequences of fatigue. The most compelling finding is the significant negative effect of perceived nurse fatigue on quality of interactions with peers, physicians and patients that ultimately impacts clinical errors and the ability to respond quickly to a patient who is becoming acutely ill. Findings advance knowledge about antecedents and consequences of work related nurse fatigue and provide an evidence-based practice and research model that can be tested in future studies to reduce nurse fatigue and improve patient outcomes.

Valeria Shipp.

(2006)

Effectiveness of Accumulated Counted Steps in Meeting Recommended Physical Activity Guidelines

Carolyn Jenkins, DrPH, FAAN, Chairman of the Advisory Committee

The importance of establishing objective, quantifying methods for physical activity (PA) behavior that results in healthy outcomes is essential. Although moderate intensity walking at least 30 minutes a day, 5 or more times weekly is the national PA standard, African American (AA) men are identified as a vulnerable group that self-reports limited PA and have a high incidence of

overweight, obesity and hypertension. Pedometers can assist middle age AA men to utilize goal setting and self-monitoring of daily step counts to adapt increased walking into their daily activities. Purpose: To investigate if pedometer use would be effective in increasing a common physical activity, walking, in a group of AA men ages 30-60 years living in the Charlotte, NC area. Specific Aim: To compare the effects of two PA intervention strategies, pedometer monitored goal setting and daily step accumulations and the PA standard, accumulation of at least 30 minutes of brisk walking, in AA men ages 30-60 years. Research Design and Methods: A 12 week, two-group, quasi-experimental, pretest-posttest design was used. A convenience sample of 80 AA men ages 30-60 years were randomly assigned to the Step Goal and Daily Walking Groups. Pre and post step counts, blood pressures, weights and BMI differences were compared in both groups using t-test. Results: Findings showed a mean average step count increase from 5,835 at Baseline to 7,614 (30.5 % increase) for the Step Goal Group and an increase from 5,992 to 7,351 (22.7% increase) for the Daily Walking Group. Blood pressure, weight and BMI results suggested no significant difference between the groups. Conclusion: The step counts increased for both groups. However, step count increases suggested no significant effect on blood pressure, weight and BMI.

Cindy Allen.

(2005)

Prenatal Care Utilization as a Predictor of Failure to Thrive

Tara Hulsey, PhD, RN Chairman of Advisory Committee

This case-control study used an academic health sciences center sample to examine differences in prenatal care utilization (defined by the number of prenatal care visits and gestational age at entry into prenatal care) between failure to thrive infants and healthy infants; and test prenatal care utilization as a predictor of failure to thrive. This study described maternal bonding characteristics (prenatal care utilization, infant length of hospital stay, feeding method, frequency of call/visits, and discharge teaching) of hospitalized failure to thrive infants. Using the Medical University of South Carolina Perinatal Information System, Keane System, and Practice Partner databases, a study sample (N=222) was obtained from mothers who received prenatal care service, delivered their child at MUSC, and obtained pediatric health services through the university network during 2001-2004. The conceptual model used to guide this study was Barnard and Eyres' (1979) Child Health Assessment Model; an ecological model based on the assumption that the mother, infant and environment are all in interaction. Failure to thrive often results from dysfunctional maternal-infant interactions triggered by interference. The maternal health seeking behavior of prenatal care use was utilized as a proxy for maternal-fetal/infant attachment. Maternal variables examined in this study were: adequacy of prenatal care utilization, education, age, parity, and pregnancy interval. The environmental variable was marital status and child variables were

intrauterine growth and gender. Cases and controls were matched 1 to 1 in terms of age, race, and insurance status. Preliminary data analyses found that prenatal care utilization, based on the number of prenatal care visits and gestational age at entry into care, and gender were independently associated with failure to thrive. There were no significant differences in adequate/less than adequate prenatal care utilization, maternal age, education, parity, pregnancy interval, and intrauterine growth between cases and controls. The odds for females developing failure to thrive were 1.834 times higher than for males ($p = 0.027$); prenatal care utilization was not a predictor of failure to thrive when controlling for confounding variables ($p = 0.502$). Using the Child Health Assessment Model only 2.5% of the variance of the predictive independent variables were explained.

Phyllis Bonham. (2005)

Non-invasive Assessment of Lower Extremity Arterial Disease: Determining the Validity of Using A Hand-held, Portable Doppler for Ankle Brachial Index (ABI) and Toe Brachial Index (TBI) Measurements

Tara Hulsey, PhD, RN, Chairman of Advisory Committee

Lower extremity arterial disease (LEAD) affects approximately 30% of individuals 66 years of age and older with many complications and 50% are undiagnosed. Nurses typically use unreliable methods (pulse palpation and history) for LEAD assessment despite national guidelines that have recommended ankle brachial index (ABI) and toe brachial index (TBI) to screen for LEAD. The specific aim of this comparative, within-subjects design study was to determine the validity of ABI/TBI obtained by an experienced nurse (RN/PI) with a pocket-portable Doppler compared to findings by a vascular technologist (RVT). The a priori hypotheses were that the differences between the RN/PI and RVT ABI and TBI would be no greater than 15%. ABI and TBI were performed on 30 participants, who were referred to a vascular laboratory for arterial studies. Mean age was 63.8 years. Gender was approximately equivalent and 53.3% ($n = 16$) were Caucasians and 46.7% ($n = 14$) were African Americans. Data were analyzed according to the Bland and Altman method and limits of agreement were calculated. Initial data analysis of ABI revealed an unexpected linear trend where the RN/PI value overestimated the lower values and underestimated the higher values. Simple linear regression was calculated, which explained 95% of the variation in the RVT right ABI and 94% in the RVT left ABI. The regression equation was used to predict the RVT value based on its relationship with the RN/PI value. When the limits of agreement were recalculated using the unbiased measurements, the percent difference of the RN/PI and RVT ABI were within 15% agreement, which is consistent with other investigators that have reported that 15-20% interobserver difference in ABI is acceptable. However, the differences in RN/PI and RVT TBI were quite high (35-63%) and indicate that Doppler cannot be used interchangeably with photoplethysmography or relied on to diagnose LEAD due to the difficulties in locating and hearing digital pressures,

especially if toes are cold. Therefore, in this small pilot, there is evidence that the pocket-portable Doppler can be adopted as a routine instrument for ABI assessment by nurses and other health providers but is not reliable for TBI.

Beverly Bradley.

(2005)

Life Stressors and Family Resources as Predictors of Psychosocial Adaptation in School-age Children and Adolescents of Mothers with Breast Cancer

Tara Hulsey, PhD, RN, Chairman of Advisory Committee

The purpose of this correlational study was to determine the association of life stressors and family resources with the psychosocial adaptation of the child whose mother has breast cancer. A convenience sample of 40 children, ranging in age from 8 to 19 years, with a mother diagnosed with breast cancer and treated at a cancer center in a middle-sized city in the southeastern part of the United States was recruited for the study. Initial contact was made with the mother during a clinic or home visit to collect information from the mother and child. The mothers completed the Life Stressors and Social Resources Inventory-Adult Form (LISRES-A) (Moos, Fenn, Billings, & Moos, 1988), Brief Symptom Inventory (BSI), (Derogatis, 1983), rated their child's behavior using the Children's Behavior Checklist (CBCL) (Achenbach, 1991), and provided demographic data. The children completed the Multidimensional Anxiety Scale for Children (MASC), (March, Parker, Sullivan, Stallings, & Conners, 1997), and Children's Depression Inventory (CDI), (Kovacs, 1980). Data from these instruments were collected, and descriptive statistics, including means and standard deviations, were computed. Pearson product moment correlations were performed to test the relationships between the independent variables (family stressors and resources as recorded on LISRES-A, as well as selected demographic, maternal illness, and maternal distress variables) and the dependent variables of child psychosocial adjustment (CBCL, CDI, and MASC). Group means for categorical variables, for which correlation coefficients were not appropriate, were examined to determine how they influenced child psychosocial adjustment. Based on the bivariate correlation coefficients, the t tests that were performed for the categorical variables, and the hypotheses of the investigation, four separate hierarchical multiple regression equations were constructed for each of the dependent variables, to determine which independent variables predicted child psychosocial adjustment. Results indicated that for mothers' ratings of child adjustment (CBCL Internalizing and CBCL Externalizing scales), women who reported less support from their spouse/partner reported greater symptoms of child internalizing behavior. Women who reported their child to be a greater source of stress reported greater symptoms of child externalizing behavior. Children, whose mothers reported more friends as a family resource, self-reported less internalizing behavior (CDI).

Charles Hossler.

(2005)

Differences in the Quality of Diabetes Care by Payer Status

Carolyn Jenkins, DrPH, MSN, RN, BC, RD, CDE, FAAN, Chair of Advisory Committee

Purpose: To examine changes in the quality of diabetes care (QDMC) that is delivered in four REACH affiliated healthcare sites in Charleston and Georgetown Counties of South Carolina. Instrument: Secondary data analysis of chart audit information collected by a REACH 2010 project. Data were collected using a REACH designed tool modeled after MEDQUEST data collection tools. Sample: Chart audit data from 899 randomly selected subjects who received diabetes (DM) care at the sites randomly selected for inclusion in the REACH study. Chart audit information collected included processes of care measures including A1C, lipid, and kidney testing and frequencies, foot examinations, and blood pressure measurements at the time of visits as well as intermediate outcomes for those with DM. The intermediate outcome measures included blood pressure, A1C, lipid, and kidney test results. Results: Multivariate logistic regression was used to predict the likelihood of a person with DM receiving a process of care measure and/or achieving desired intermediate outcomes related to DM control. Predictions for receiving QDMC are represented by an OR. The only identified significant differences in QDMC were: (1) Medicare enrollees and Medicaid recipients experienced less QDMC than those with commercial insurance for LDL-C control and, (2) Medicaid recipients received less QDMC related to annual foot exams than those with no insurance. Conclusions: Payer status had little effect on QDMC among this population. Other influences not accounted for in this study have a great impact on QDMC at the four REACH affiliated healthcare site.

Lynne S. Nemeth.

(2005)

Implementing Change In Primary Care Practice

Gail W. Stuart, PhD, APRN, FAAN, Chairman of Advisory Committee

The purpose of this research was to explore the process of change to implement clinical guidelines in primary care practices using electronic medical records. Eight primary care practices engaged within the PPRNet-TRIP II clinical trial comprised the setting for this research. Purposive sampling was used to elicit practice staff and clinicians regarding how change in practice was accomplished. Using multiple methods, an explanatory model guiding the process of change emerged. Through participant observation, interviews and a grounded theory approach to data analysis, the conceptual framework "How to Lead Improvement for PPRNet-TRIP" was modeled. Organizational cultural characteristics were identified using the Practice Staff Questionnaire (PSQ). The grounded theory "How to Lead Improvement for PPRNet-TRIP" provides a framework for

implementing evidence-based research into practice. The critical elements of this process include leaders setting a vision with clear goals for staff to embrace; involve the team, a mechanism to engage all staff in a way that buy-in to the leader's goals and vision for the practice can be achieved; enhance communication systems increases the team's ability to reinforce goals for patient care; develop the team with staff development as a crucial component of practice improvement; take small steps, encouraging practices' tests of small changes in practice; assimilate the EMR to maximize clinical effectiveness, enhancing practices' use of the electronic tool they have invested in for patient care improvement, and feedback within a culture of improvement, leading to an iterative cycle of goal setting by the leader. The conceptual framework visualizes how changes in practice settings can be implemented. Organizational culture measures from the PSQ provided metrics that added value to the emergent case studies of the practices included within this research. By triangulating the data sources using quantitative description within a qualitative framework, contextual factors were enhanced. Health care professionals are in a prime position to shape the future health care system based upon sound clinical evidence and the science of quality improvement. With practices adapted to teamwork, interdisciplinary learning and use of performance data to drive improvement leaders can shape more successful organizations.

Jennifer Lynn Elkins Shearer.

(2004)

The Process of Protection by Parents of Young Children at Risk or Exposed to Lead in the Environment

**Carolyn Jenkins, DrPH, MSN and Marilyn King, DNSc, RN, co-chairs,
Advisory Committee**

The purpose of the study was to explore the nature of protection by parents of young children at risk or exposed to lead in their environment. Grounded theory methodology guided the research design. Participants were obtained through purposive sampling of families known from previous research and by referral from a pediatric clinic where lead screening was done. Further enrollment was done by snowball sampling. Theoretical sampling provided exploration of protection along themes guided by the developing theory. Data were collected from parents with children from 0-5 years old who were exposed or had been exposed and who may or may not have been poisoned. Data were observations, medical records information, and semi-structured interviews. Twenty-two interviews from eighteen participants were analyzed using dimensional analysis methods to configure an explanatory matrix about parental protection. Data were analyzed using software for nonnumerical, unstructured data indexing, searching, and theorizing (NUD*IST, N6). Dimensions of context included uncertain risk and vulnerability of children. Conditions that influenced the process of protection were unequivocal commitment to responsibility, the likelihood of assurance, and the resources of parents and timing of awareness. The processes of protection were

the control of uncertain risk by moving and removing, and the control of vulnerability by vigilant presence and general interventions embedded with protection. The consequences of protection were assurance of uncertainty by elimination, and moderation of vulnerability by avoidance. Protection at the intersection of risk and vulnerability required control from multiple environmental levels. The overarching explanation of protection was controllability. The significance of this study was the development of a substantive theory of parental protection from lead exposure and poisoning and contribution to an ecological perspective of protection.