

Hunter College
Schools of the Health Professions
Hunter-Bellevue School of Nursing
Office of Faculty Research and Project Development (“Offer”)
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***A Multidisciplinary Look
at Health***



***4th Student-Faculty Schools of the Health
Professions and School of Nursing Research Day***

May 5, 2010

ABSTRACT BOOK

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The Office of Faculty Research and Project Development (OFFER, formerly ORGS) is pleased to announce the 4rd Annual Hunter College Schools of the Health Professions and School of Nursing Student-Faculty Research Conference with the support of Deans Olden and Gebbie, Acting Senior Associate Dean Auerbach, and Associate Dean Flammino.

Thank you to our student volunteers for their contributions: Nome Edodi-Disowe of the undergraduate community health education program, Andreina Gonzalez of the undergraduate medical laboratory sciences program, Sonia Gonzales of the doctorate in public health program and Jun-Yan Tan-Ray of the undergraduate medical laboratory sciences program.

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KEYNOTE SPEAKERS

Haiti: Lessons Learned One Month After the Earthquake

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ABSTRACTS

Pedagogical Tools to Develop Clinical Reasoning: Physical Therapy Students' Perceptions

Suzanne R. Babyar (Faculty PT); Susan Pivko (Faculty PT); Elaine Rosen (Faculty PT)

Background: Pedagogical tools to help develop clinical reasoning skills of physical therapy students (PTS) differ in academic and clinical settings. Student perception of the relative value of these tools has not been studied with a national sample.

Objective: To determine: (1) if actual clinical and academic learning experiences are consistent with student preferences; (2) if actual academic learning experiences differ according to subject matter; and, (3) if actual clinical learning experiences differ according to the level of preparedness of the student.

Methods: Program representatives contacted PTS via email with an embedded link to an on-line survey during their final clinical education experiences. Open-ended and forced-choice items addressed PTS' reactions to learning experiences to develop clinical reasoning in academic and first and final clinical education experiences. Data were analyzed with frequency analysis, Chi-square and correlations of survey items.

Results: 91 respondents completed the survey (13% response rate). Most (98%) were adequately prepared for clinical reasoning from clinical education experiences as compared to 83% from their academic curricula. The frequency of use of pedagogical tools was lower than preferred use of the tools.

Conclusions: The value of clinical reasoning learning tools varied with course content and with first and final clinical education experiences. Increasing the sample size of students enrolled in doctorate-level coursework will determine the role of newer or more advanced pedagogical tools for developing clinical reasoning.

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Developing A Battery For Fitness Assessment For Children And Teenagers With Obesity

Suzanne Babyar, PT, PhD (Faculty, Hunter College, Physical Therapy); Natalie Horowitz (Graduate, Physical Therapy); Elianna Kohn (Graduate, Physical Therapy); Kate Magram (Graduate, Physical Therapy); Christynne Papincak (Graduate, Physical Therapy); Eric Schwabe, PT (Staff, New York Presbyterian Hospital, Physical Therapy)

Faculty sponsor: Suzanne Babyar, PT, PhD

Background: A standardized physical fitness battery for assessment of children/teenagers who are overweight/obese does not exist. The purpose of this study was to develop and validate that the New York Presbyterian- Health for Life (NYP-H4L) Fitness Battery reflected important dimensions of fitness.

Methods: A systematic literature review was performed and found tests and measures which were included in the fitness battery. Thirty-three children (ages 8-12) and teenagers (ages 12-18) were assessed with the NYP-H4L Fitness Battery before participating in the 10-week H4L program.

Results: Principal component analysis (PCA) verified the battery captured four dimensions of fitness: flexibility/age/body mass index (BMI); endurance; strength; and exertion. The younger group scored higher for Sit and Reach distance, Back Scratch test, Push-ups count, and 3 Minute Step Test. The older group scored higher for curl-up count, broad jump distance, Progressive Aerobic Cardiovascular Endurance Run (PACER), and Pictorial Children's Effort Rating Table (PCERT) following PACER. Scores were similar for PCERT following 3 Minute Step Test, and 2 and 4 minute recovery rates.

Conclusions: The NYP-H4L Fitness Battery was a valid measure of fitness for children/teenagers with obesity. Further testing of its responsiveness to change is indicated.

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Exploring a Predictive Model for Elderly Depression in the Brookdale Demonstration Initiative in Healthy Urban Aging

William Cabin (MPH Candidate, UPH)

Faculty Sponsor: Mimi Fahs, PhD, MPH, UPH & Brookdale Center for Healthy Aging and Longevity.

Issue: The results of an extensive literature review found only five studies in the last 50 years regarding the relationships among individual and neighborhood-level variables and elderly depression in the U. S. This poster presents the results of an initial exploration into the inter-relationship between neighborhood and individual-level variables and elderly depression, using a database of over 1800 senior citizen enrollees in New York City.

Methods: Relevant variables were identified from the literature review. Using data from the Brookdale Demonstration Initiative in Healthy Urban Aging (BDI), a stepwise linear regression was conducted to determine predictors of depression (measured by the PHQ-9).

Results: The following eight variables emerged as significant (r -square = .18): low neighborhood satisfaction; little leisure-time physical activity; lower income; visual impairment; hearing impairment; frequent falling; arthritis/rheumatoid arthritis; and presence of a physical disability. These potential predictors of depression require more attention in designing interventions to reduce the risk of depression and improve quality of life among the growing older adult population.

Conclusion: The findings suggest the need for evidence-based models of community-based care to cost-effectively provide early identification, treatment of chronic conditions which increase depression risk among older adults. Limitations include reliance on self-reported data and cross-sectional nature of study. Implications include greater policy, practice and research focus on early preventive interventions relating to sensory impairment and conditions related to falls.

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Logo-Autobiography and Its Effects on Korean Immigrant Women suffering from Depression

Sunhee Cho (Graduate Student, School of Nursing); Kunsook S. Bernstein (Faculty, School of Nursing); Soonhee Roh (Clinical Social Worker, Elmhurst Hospital)

Background: There are limited culturally appropriate interventions studied targeting Asian immigrants tend to suffer from depression. This study explored Logo-Autobiography (LA) and its effectiveness as existential counseling for the Korean immigrant women suffering from depression.

Methods: A non-randomized control trial was conducted targeting a total 40 Korean immigrant women in New York. Quota sampling was used to control the effects of anti-depressant medication which could be a confounding variable. Four subgroups which were assigned each 10 subjects equally were as follows: experimental group with medication, experimental group without medication, control group with medication, and control group without medication. All subjects were assigned conveniently. Sampling criteria were Korean immigrant women residing in NYC who are over 21 years old, Center for Epidemiologic Studies Depression (CES-D) Scale with a score of 16 or higher, able to speak, read, and write Korean fluently. Intervention was LA which was composed of six sessions; sixty minutes once a week for six weeks. Korean versions of CES-D and Purpose in Life test were used as instruments to measure depressive symptoms and individual's perception of meaning of life. Subjects were recruited a local community hospital, mental health clinics, and Korean community organizations in NYC.

Results: The score of depressive symptoms were significantly lower in the experimental group than the control group at post test and one month follow-up test. The scores for meaning of life were significantly higher in the experimental group than the control group at post-test and one month follow-up test. There was no significant difference between medication and non-medication groups.

Conclusions: LA as therapeutic modality may be beneficial to treat depressive symptoms and enhance meaning of life for Korean immigrants women. Therefore, this modality may provide another therapeutic option for practitioners to use to help this vulnerable population.

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Impaired Number Word Production: A Bilingual Chinese-English Case Study

Nancy Eng (Faculty, COMSC); Giulia Bencini (Faculty, COMSC); Carlo Semenza (Faculty, Department of Neuroscience, University of Padova, Italy)

Background: Behaviors of a bilingual subject who, following brain damage (CVA) makes selective errors in both languages on number-naming are reported. RC, a 62 year old right-handed bilingual female, arrived in the US from Hong Kong thirty years ago. Pre-morbidly, RC worked as a shop-keeper, using English and Chinese. RC sustained a mid-cerebral artery occlusion in July, 2006 resulting in a significant non-fluent aphasia. After extensive speech therapy, a residual deficit in terms of naming numbers in both languages is observed. Calculation skills are intact.

Method: Tasks were devised to assess number access capacity tapping spoken number recognition and printed number identification across three written systems: Arabic numbers, English number words and Chinese number words. Data were analyzed to establish whether orthography and the corresponding number system contribute to this category-specific deficit.

Results: Category-specific errors are observed in number reading and number identification across all scripts whereas ability to match written numbers across scripts is intact. Object-naming deficits were minimal.

Conclusions: Category-specific naming and identification deficits are circumscribed to number-naming phonology, given intact number semantics; i.e., computational skills are intact. Because deficits are noted across three orthographic systems, relative transparency of the Chinese number orthography cannot account for performance. Instead, cross-script errors suggest a number lexicon that serves all scripts. Dissociation between number and non-number naming supports the existence of a number lexicon and in this case, not subject to orthographic advantages. Future studies should examine this category-specific deficit across other writing systems to explore whether an orthographic bias exists.

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Building Skill through Service: Joining Public Health to Service Learning

Hayley Figueroa (Graduate, DPH)

Faculty sponsor: Deborah Hecht, CASE

Issue: During this economic downturn, social service agencies and CBOs have cut budgets and reduced services while the demand for health care workers and public health professionals has increased. Although unemployment increases, the population grows and baby-boomers age, students in Science, Technology, Engineering and Math (STEM), and particularly minority students, are not pursuing health careers, and many evidence a limited knowledge of the range of potential health career opportunities. A project is proposed that will simultaneously deal with current service shortages and entry of minority students into the health professions.

Description: Promoting Health and Wellness Project (PHWP) engages STEM-talented college students in service learning (SL) projects that address health issues in underserved and marginalized communities. The 3-year project will a) engage STEM-talented minority students in delivery of health-based SL in high needs communities; b) create mentoring and working partnerships among STEM-talented minority college students and graduate students in Public Health, c) increase students' civic engagement, and exposure to a variety of health career options; and d) study the impact of this model.

Lessons Learned: Preliminary data demonstrate that there are strong connections between public health and service learning. Health promotion-based SL helps students to contextualize what they have learned in coursework and apply it within a community setting. Health promotion-based SL projects must be meaningful to students and responsive to the culture of the college and community.

Next Steps: To develop a training curriculum and workshop materials for implementing health promotion-based SL projects that can be used by colleges, nationwide; prepare case studies and develop best practices for integrating health promotion into SL.

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Young Women of Color HIV/AIDS Coalition (YWCHAC): A Youth Empowerment Approach to HIV Prevention

Sonia K. González (DrPH Student, Community, Society, & Health Track; GC); Bianca Lopez (DrPH Student, Community, Society, & Health Track; GC); *Jacquel Clemmons (MPH; Cornell U. Project KISS)*

Faculty Sponsor: *Beatrice Krauss, Ph.D.*

Issue: Young women of color in New York City (NYC) are disproportionately infected with HIV. In an effort to identify youth friendly, and effective approaches to address HIV prevention, YWCHAC was established to incorporate young women of color in efforts to address elevated incidence rates of HIV in a program that was driven by and for young women of color.

Description: YWCHAC builds partnerships with individuals and organizations that serve and empower adolescents. The impetus for the creation of YWCHAC was in response to the rising HIV incidence rate of this group and the needs of young women of color not being addressed or acknowledged by policy makers. Our poster will summarize our activities and lessons learned since 2006.

Lessons Learned: A youth development program that is driven by youth has yielded innovative methods and approaches to educate other youth about HIV prevention and testing options. The WE SPEAK advocacy model is a potential Participatory Action Research (PAR) model that can be replicated in other communities.

Next Steps: The YWCHAC project is setting out to conduct a well-designed evaluation that would compare the impacts of different program components in hopes of influencing future research, clinical or programmatic intervention, increasing participation of Alumni participants through mentoring, and securing funding to expand program practices.

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Microdialysis in the Neurointensive Care Unit

Gary M Gutierrez (Student, School of Nursing)

Sponsoring faculty member: Lorraine Sanders

After a traumatic brain injury (TBI) it is important to prevent secondary brain damage and recently has been identified that injury occurs in axonal area of the brain. Monitoring intracerebral physiology in neurointensive care unit (NICU) is aimed at preventing secondary injury to patients with brain traumatic injury.

Microdialysis in the neurointensive care mainly focuses on markers of ischemia and cell damage in the brain. The glucose, lactate, and pyruvate are important metabolites to monitor, for these are essential biochemical markers. Fluctuations in levels of these markers can significantly change in the reduction state caused by brain ischemia. The microdialysis equipment is a unique and delicate monitoring device that is currently being use in NICU. Basically, a microdialysis catheter can be place emergently at the bedside through a bolt via a burr hole or in surgery during a routine craniotomy. The catheter is inserted into the brain parenchyma brain tissue in patients with traumatic brain injury and/or in the region of the parent vessel at risk for vasospasm in patients with subarachnoid hemorrhage (SAH). Perfusion fluid is pumped through the catheter, which has 10mm semi-permeable membrane at the distal end which functions similar to a blood capillary allowing molecules to diffuse into perfusion fluid, enabling collection.

Although the two conducted clinical studies regarding TBI using microdialysis denoted some promise of captivating results, it still left clinicians skeptical and unsure if the novel modality is useful for clinical setting. At present, microdialysis is undoubtedly an invaluable research tool in clinical practice setting. Traditionally, these include intracranial pressure (ICP). Novel monitoring with the microdialysis technique provides additional physiologic data at the cellular level. In collaboration with other intracerebral parameters, (brain tissue oxygen (PbtO₂), jugular venous saturation, cerebral blood flow (CBF), cEEG), we are provided with tools we need to determine goals for neurologic clinical conditions and bedside nursing checklist during neuromonitoring.

The physiological process that occurs following brain injury is complex and still fairly unknown regarding the pathophysiological progression. Neuromonitoring with the use of microdialysis technique and other cerebral parameters may allow clinicians to individualize an integrated approach to patient care. The knowledgeable and skilled neuroscience nurse plays a pivotal role as a member of the ICU team. The ability to discern information and communicate changes in the patient's clinical and physiological presentation may lead to early interventions that can limit and/or prevent secondary injury.

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Barriers to Public Health Education: Increasing Latino Professionals in the Field

Elena Hoepfner (Graduate, UPH); Diana Romero (Faculty, UPH); Anahi Viladrich (Faculty, UPH)

Faculty Sponser: Diana Romero, PhD, MA

Background: Latinos in the US face a disproportionate burden of health challenges, and are underrepresented in higher education programs in the health professions. This project seeks to identify the barriers and incentives that influence Latino students' academic success, and elucidate how these factors might be addressed to improve recruitment and retention strategies in higher education programs.

Methods: The first phase of this study involved a comprehensive literature review, which informed a Focus Group Question Guide. This instrument has been designed to promote discussion of known and unknown influences on academic and professional success among Latino students. Focus groups (FGs) and in-depth interviews (IDIs) will include current and former Latino, Hunter students in the health professions. FGs will be comprised of 8-10 students, and be stratified by academic discipline and level of study (undergraduate or graduate) (n=64). IDIs will be conducted with a subsample (n=16) of FG participants.

Results: Phase One of the study revealed three predominant barriers to health-related education: structural factors (familial experience with poverty, education, and employment; discrimination/segregation; cultural insensitivity), informal mentorship channels (presence or absence of significant role models/mentors and influential positive peers; information on resources), and institutional dimensions (presence of formal mentorship support, academic incentives, financial aid; previous educational experiences; recruitment efforts). Data pertaining to these constructs will be collected in Phase Two of the study via the FGs and IDIs by June 2010.

Conclusion: The initial findings suggest possible obstacles that Latino students face in the health field. Final results will inform development of policy guidelines for academic institutions pertaining to these obstacles in order to produce more supportive, enabling educational environments for Latino students.

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Mental Health Screening Tools for Immigrant Adolescents

Elizabeth M. Jones, Hunter-Bellevue School of Nursing

Sponsoring faculty member: Lorraine Sanders

Issue: The growing number of immigrant adolescents in the United States and the unique mental health stresses they face create a need for a culturally sensitive mental health screening tool. A review of the literature seeking such a screening tool found that few recent studies directly addressed this topic.

Description: Immigrant adolescents may be at greater risk for mental health problems than indigenous adolescents. The emigration, immigration and acculturation experience bring unique stresses to immigrants, which add to the stresses of poverty, violence and other hardships they may have faced in their countries of origin. As there are few research studies testing the validity of mental health screening tools for use with immigrant adolescents, the literature search was expanded to include 'multi-cultural' and 'cross-national' studies. The article search focused mostly on psychological databases.

Results: Among the tools more extensively evaluated among multi-cultural and cross-national populations are the Strengths Difficulties Questionnaire (SDQ) and the Achenbach System of Empirically Based Assessment (ASEBA). Overall, the research supports the use of both the SDQ and ASEBA for multi-cultural and cross-national populations. The major limitation to the research is that use of the tools was extensively studied with adolescents in the home countries, whereas immigrant adolescents may have a different mental health profile. Other limitations are that the tools had a low response rate and/or were found to be less valid in some cultures, especially non-Western populations.

Conclusions and recommendations: Both the SDQ and the ASEBA show multi-cultural and cross-national validity and could be used as mental health screening tools for immigrant adolescent populations if practitioners consider the limitations. Further research possibilities exist, especially to test the validity of these tools with adolescent immigrants.

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School Food in New York City: Research for Advocacy

Amy Kwan (DPH student, Graduate Center, Public Health); Nicholas Freudenberg (Faculty, Hunter College, UPH)

Faculty sponsor: Nicholas Freudenberg, DrPH

Issue: The school food system is large and complex, feeding over 31 million kids daily nationwide, and almost 1 million in NYC alone. Given the rise in childhood obesity and hunger, there is a new spotlight on school food and its potential to reduce persisting health inequalities. However, while there is a growing movement aimed at improving school food, the efforts are fragmented and undocumented. There exists no place for advocates to learn about school food reform in NYC or successful ongoing models, leading to gaps in understanding the complex system and how people can effect change.

Description: This poster will detail the process of researching the school food movement for an advocacy report that describes the current situation of NYC school food, connects ongoing efforts at local, state, and national levels, and highlights where New Yorkers can act to improve school food.

Lessons Learned: The process of creating an advocacy report required key partnerships with diverse stakeholders (e.g. policymakers, students, parents, teachers, school officials, health professionals), evaluating and building on existing work, and an iterative process of information gathering and sharing.

Next Steps: The report will serve as a guide to understanding and improving NYC school food. Future plans include a website and tailored messages for stakeholders.

Improving Emergency Preparedness in New York City's 65 Adult Care Facilities

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Faculty Sponsors: Marianne C. Fahs, PhD, MPH Hunter College & Kristine M. Gebbie, DrPH, RN

Issue: New York City's Adult Care Facilities (ACFs) provide housing for nearly 10,000 residents, individuals who are unable to live on their own. ACFs are vulnerable to such emergencies as blackouts, storm surge from coastal storms and pandemic flu. The city's 65 ACFs are widely geographically dispersed throughout the five boroughs. Many have a limited number of staff, making coming together for training and meetings difficult.

Description: A five-year grant-funded program developed by Hunter College's Brookdale Center for Healthy Aging & Longevity is funded by the New York City Department of Health and Mental Hygiene. The program's central goal is to increase ACF's emergency preparedness capability and capacity. The program, ACF EP Central, has assessed the emergency preparedness needs of the city's ACFs through focus groups, capacity surveys and site visits: and has developed a series of monthly audio conferences that provide timely access to emergency preparedness subject matter expertise. Audio conference content is complemented by a website that provides a centralized gateway to preparedness and training resources as well as emergency notification and alert networks. Twelve calls have been held to date and 32 facilities have attended at least one conference call.

Lessons learned: ACFs have come to utilize such local agencies as DOHMH, OEM and FDNY as valuable resources. The innovative use of teleconferencing, a dynamic website and direct outreach have empowered the ACFs to build their capacity and have provided an accessible forum that addresses their emergency preparedness needs.

Next steps: Years Four and Five will see the rollout of an Emergency Preparedness Toolkit for Adult Care Providers and distance-learning opportunities tailored to serve the Adult Care provider community.

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Reducing Central Line Associated Blood Stream Infections (CLABSI) in the Bone Marrow Transplant (BMT) Population.

Aion Lumbley (Undergraduate, Hunter College, MSN; and Staff Nurse, NYPH); Teresa Bissen, RN, MPA, Clinical Nurse Manager, NYPH)

Faculty sponsor: Diana J. Mason, PhD, RN, FAAN, Rudin Professor of Nursing

Background: No official CDC benchmark exists for central line associated blood stream infections (CLABSI) rates among the bone marrow transplant (BMT) population, but some hospitals report close to a 100% rate in this population. The BMT population experiences significant prolonged neutropenia. Blood stream infections (BSI) and sepsis increase this population's morbidity, mortality, and lengths of hospital and ICU stays.

Methods: A quality improvement study was undertaken to reduce the incidence of CLABSI in the BMT patient population on one hospital unit. The CLABSI rate was documented by the hospital's Department of Epidemiology beginning in October 2008 and continuing to present. Data were collected daily during patients' neutropenic and non-neutropenic days.

Existing policies/procedures related to dressing changes and blood draws were reviewed in relation to protocols set by a hospital in Germany that subsequently were associated with a 35% reduction in CLABSI rates. Observation checklists were created, followed by education and re-observations. New recommendations were implemented, including stricter handwashing, a reduction in the frequency of dressing changes, and the use of chlorhexidene-impregnated dressings. One nursing staff position was added to support the focus on improved management of central lines in BMT patients.

Results: A 25% decrease in the CLABSI rate was noted over 12 months after re-education of staff and implementation of the recommendations. Continued enforcement of the new protocol is expected to produce greater reductions in this rate, with an expectation of matching or exceeding the Germany rate.

Conclusions: Continue staff education and maintain technique compliance. Maintain and further reduce the CLABSI rate.

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New Word Learning in 3-year-old Children who were Late Talkers

Michelle MacRoy-Higgins (Faculty, COMSC)

Background: This study examined how three-year-old children with a history of expressive language delay or *late talkers*, learn new words. Children who are late talkers at age two are at risk for having lasting language impairments, which can impact academic learning in school.

Methods:

Ten children with typical language development and ten children who were identified as late talkers at age two completed this study. Children were exposed to four, novel, nonsense words, which referred to unique, toy-like items. New words consisted of either common or rare sound sequences. Each word was presented five times in a *fast-mapping* procedure (e.g., “Look it’s a pite”). Then, they were asked to identify (point to) and label (name) each new object.

Results: Typically developing children were more accurate at labeling and identifying novel words containing common sound sequences as compared with words containing rare sound sequences. Children who were late talkers were overall less accurate at labeling and identifying novel words than their peers. Additionally, they did not show a preference for words containing common sound sequences.

Conclusions: Although children who were late talkers demonstrate language skills in the average range, they are not comparable to their peers without a history of early expressive language delay. Therefore, language skills in this population should continue to be monitored, as they may have difficulty acquiring language-based academic skills such as reading and writing. Future research in this population should focus on treatment efficacy in acquiring early linguistic forms, which may facilitate later literacy skills.

Risky Sexual Behaviors Related to HIV Infection Among African American Adolescents

Robert Morrison (Student, School of Nursing)

Faculty Sponsor: Lorraine Sanders

Issue: African American adolescents are disproportionately affected by HIV/AIDS. Risky sexual behaviors account for some of the disparate rates of HIV infection.

Description: The HIV/AIDS epidemic has been a major issue in our society for over 2 decades. Over the years large strides have been made to educate the population on transmission, prevention and treatment of the disease. HIV/AIDS continues to grow rapidly in incidence among African American adolescents at a rate disproportionate to any other race. According to the Centers for Disease Control and Prevention (CDC) (2007), African Americans only accounted for 17% of adolescents 13 to 19 years old, however 72% of HIV/AIDS diagnoses in 13 to 19 year old adolescents were in African Americans.

Results: It is evident that when it comes to risky behaviors as it pertains to HIV a greater effort needs to be made to understand the various reasons that influence risky behavior. Each population has specific factors to rationalize participating in behaviors that negatively affect their health and increase their chances of contracting HIV. Further research needs to be done to unearth more factors that cause the African American adolescent populations to engage in risky behaviors. Research Studies have been mainly focused on the African American population as a whole it may prove to be beneficial to look at different sub-cultures within the African American community and address those individually. In addition interventions that address broader social issues such as race relations, economic disparities, access to condoms, and education level among African American youth may be influential in changing sexual behavior.

Conclusion: Despite the advancements and increased sophistication in our society there is still an overwhelmingly large amount of misinformation, myths, and ignorance about HIV/AIDS. This epidemic poses great threats to our society and has far reaching implications. Nurses are at the forefront of this issue and can play a big role in educating and ultimately helping to prevent HIV infection, ultimately there is still a great deal of work to be done.

Reducing Surgical Site Infections in Adult Post-Operative Cardiac Surgery Patients: A Literature Review

Kristie Murphy (Student, School of Nursing)

Sponsoring faculty member: Lorraine Sanders

Issue: Surgical site infections (SSI) are complications that occur in two to twenty percent of adult post-operative cardiac surgery patients. This number may be able to be dramatically reduced by specific nursing interventions, but currently little information is available.

Description: The most current guidelines for the prevention of SSIs was published in 1999 by the Centers for Disease Control and Prevention (CDC), and were not specific to cardiac surgery. The purpose of this literature review was to identify significant risk factors associated with SSIs specific to cardiac surgery patients, and to identify evidence-based practice protocols.

Results: Findings from various research studies proved to be conflicting and inconclusive, and most studies revealed a need for replication. There were some studies where decreases in SSI rates were found, and these studies revealed similar strategies including the use of education to staff members, which led to consistency when dealing with patients. Specific gaps noted in the literature included lack of information on nursing research regarding cardiac surgery patients and the presence of SSIs.

Conclusions and recommendations: More nursing research would be beneficial in reference to SSIs. It could clear up gaps and conflicting findings so evidenced-base practice can be set in place.

The Lived Experience of Dominican Women Diagnosed with Stage IV Breast Cancer

Alsacia L. Pacsi DNSc, RN, FNP, CCRN, CEN (Student, Graduate Center, Nursing)

Sponsoring faculty member: Keville Frederickson (Lehman College, CUNY)

This phenomenological study explored the lived experiences of Dominican women diagnosed with Stage IV breast cancer (advanced breast cancer) using a purposive sample of convenience. To illuminate the perceptions of Dominican women living with advanced breast cancer a purposive convenience sample was utilized. Six second-generation US born women of Dominican immigrants, residing in New York (NY) Metropolitan Area, underwent face-to-face in-depth interviews. Each participant was interviewed once and data analyzed using the descriptive phenomenological method of Amadeo Giorgi (1985, 1997).

The four essences that unfolded in this study were uncertainty, coping, loving, and believing. The overall meaning of the experience of Dominican women with Stage IV breast cancer is described as one of uncertainty and unknowing, accepting the diagnosis so that thinking results in positive changes and healthy choices, enjoying life through the meaningful participation in the lives of others and accepting support and trusting in God through prayer, faith and hope to create ever lasting memories for their children. The synthesis of the overall structure for these women is to 'leave a legacy of love.'

Interpretation of the overall meaning of the experience and structure led to the concepts of Humanism and veritivity, philosophic principles of the Roy adaptation model (RAM). The overall meaning of the experience, as expressed by the participants was translated to and aligned with these principles. The resulting statement of their experience was: The common goal and purpose that gave meaning to their life through faith and participation in the lives of others, was to provide for the good of their children and leave an everlasting legacy of love.

Deactivation of Implantable Cardioverter-Defibrillators (ICDs) at End-of-Life: An Exploration of Healthcare Provider Attitudes, Patient Attitudes, and Clinical Practices

James E. Russo, R.N., B.S.N., C.C.D.S. (Graduate Program, Adult Nurse Practitioner, Hunter-Bellevue School of Nursing)

Issue: To identify the approach to deactivation of implantable cardioverter defibrillators (ICDs) in end-of-life care. To identify ways to promote timely deactivation discussions.

Description: A terminally ill patient with an ICD can experience a compromised quality of death should their ICD deliver shocks to treat an arrhythmia. This can be averted by device deactivation yet discussions regarding deactivation often do not occur. Without discussions, patients are not able to consider this in planning their end-of-life care.

Results: Deactivation discussions are not commonplace or approached proactively. Discussion delays occur due to:

- discomfort with end-of-life discussions,
- providers feeling ill-prepared to engage in deactivation discussions,
- viewing ICDs differently from other therapies in end-of-life planning,
- lack of providers' knowledge regarding ICD function and deactivation, and
- patients lack sufficient knowledge about ICD functions its role in their health.

Device deactivation is most often performed by an industry representative and occurs more often as a result of patient demise. Deactivation is more apt to occur when formal policies or guidelines for deactivation discussions are present or when a comprehensive interdisciplinary approach is used

Conclusions and Implications: Patients and providers need increased knowledge of device options at end-of-life. Patient attitudes regarding ICD deactivation need further research. Formal ICD deactivation policies should be developed to guide providers. A comprehensive and interdisciplinary approach should be considered for deactivation discussions.

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“You are part of our lives:” Effects of an HIV destigmatization training for adults in a high HIV seropositive community in New York City

Jacqueline Syrus (Graduate, UPH) and Beatrice Krauss (Faculty, UPH)

Background: A parent training was designed to enhance parents’ skills as HIV educators of their children and to ameliorate the stigmatization attendant on HIV. The current analysis determines the trainings’ effects on parents’ reported comfort in interacting with persons living with HIV (PLWHIV) and to ascertain if this comfort was uni- or multi-dimensional.

Methods 222 parents were randomly recruited from dwelling units in public housing in a high HIV-seroprevalence neighborhood in New York City. Parents were randomly invited to a parent training. A social distance measure of comfort in interacting with PLWHIV was administered. Factor analysis revealed three subscales (accounting for 69% of variance): 1) instrumental and social support (highest loading item: “linked him/her with community resources”); 2) integration into daily joint activities (“let him/her babysit your kids”); and 3) participation in intimate or recreational activities (“gone to the movies together”).

Results ANCOVA techniques revealed no differences between groups (trained, invited to training but declined, uninvited) in Instrumental and Social Support at six month post-intervention. However, group and training effects were found for Joint Daily Activities (e.g., $F(1,219)=13.02$, $p<0.001$, $Beta=0.59$, $p<0.001$; $M=38.61$, $sd=7.62$ for Trained; $M=35.37$, $sd=9.89$ for Not Trained) and for Intimate and Recreational Activities (e.g., $F(1,219)=7.26$, $p=0.008$, $Beta=0.43$, $p<0.001$; $M=41.18$ $sd=6.12$ for Trained; $M=39.06$, $sd=7.59$ for Not Trained). Training remains a predictor of increased comfort for these subscales even when parent age, gender, ethnicity, number of PLWHIV known, and baseline HIV knowledge are taken into account.

Conclusions Community parents may be aware of the social expectations (instrumental and social support) for treating PLWHIV as “ill” persons, but may benefit from training to be comfortable integrating PLWHIV into roles in daily social life.

Detecting A Unique HPV distribution at Mount Sinai Medical Center

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Background: Cervical cancer is the 2nd most common cancer among women. Over 100 different human papillomavirus (HPV) types exist, 40 of which are specific for agogenital mucosa. HPV is the primary etiological agent of cervical cancer and is present predominantly in cervical cancers. Thirteen high risk genotypes have oncogenic potential. The most common high risk HPV genotypes are 16 and 18, which have the greatest malignancy.

Methods: The objective of this study was to determine the distribution of high risk HPV types in patient samples received by the Mount Sinai Medical Center for routine cytology and HPV testing. In addition, the study compared the sensitivity and specificity of the Hybrid Capture II and Linear Array HPV Genotyping assays. Cytology specimens with an abnormal diagnosis were tested for HPV by both methods.

Results: Results demonstrated the Roche Linear Array HPV genotyping assay was more sensitive and more specific than Hybrid capture 2 (hc2). Additionally, specimens exhibited higher rates of HPV-59, -16, and -52 infection compared to HPV 16 and 18.

Conclusions: The results demonstrate that geographical distribution of HPV genotypes may play an important role in clinical management of HPV infection, particularly when treating cervical dysplasia and HPV vaccination. Additionally, the results confirmed the sensitivity and specificity of Roche Linear Array HPV genotyping assay as compared to the hc2 assay. Knowledge about the most prevalent HPV genotypes in a particular geographical region may influence HPV vaccination decisions. Future studies should focus on developing vaccines that include more high risk HPV types.

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Dietary Acculturation, Obesity, and Diabetes Mellitus among Chinese Immigrants in New York City

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Sponsoring faculty member: Dr. Elizabeth Kelvin

Background: Only limited and inconsistent data are available regarding the effect of dietary acculturation on diabetes among Chinese Americans. We examine the associations of dietary acculturation with body mass index and fasting glucose among Chinese immigrants in New York City.

Methods: We conducted a cross sectional study with Chinese immigrants who participated in a cardiovascular screening. Socio-demographic factors, past medical history, physical activity, dietary acculturation, media preferences and BMI were collected. A random subsample underwent blood testing for fasting glucose. Linear regression was performed to assess the relationships between socio-demographic factors, acculturation and physical activity with BMI and fasting glucose. All analyses were limited to those with plasma sample and without previous history of diabetes (N=274).

Results: In the multivariate analyses, male and dietary acculturation were associated with higher and lower fasting glucose ($P < 0.05$), respectively. Male and middle age were associated with higher BMI ($p < 0.05$), and increased BMI was associated with higher glucose level ($p < 0.01$) after adjusting for socio-demographic factors and physical activity. Physical activity attenuated the associations of gender with BMI and glucose.

Conclusions: BMI was the strongest predictor of dysglycemia. Interventions targeting weight maintenance, rather than specific dietary practices, may be most effective in preventing diabetes among Chinese immigrants.

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Nursing Interventions to Prevent Ventilator Associated Pneumonia: A Literature Review

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Issue: Ventilator associated pneumonia (VAP) is the second most common hospital acquired infection in the United States; it is associated with high morbidity and mortality rates. Practice guidelines have been developed to prevent and reduce rates of VAP in acute care settings. These interventions are dependent on nursing practice.

Description: A review of the nursing literature was conducted utilizing CINAHL and MEDLINE. Six studies were found to have implications for nursing practice.

Results: Rates of compliance for instituting VAP protocols are low. This has been attributed to the nursing shortage, lack of knowledge and expertise among staff nurses at the bedside, and resource allocation in acute care settings. Nurses can make great contributions for VAP prevention via daily nursing care by following nursing intervention and VAP prevention guidelines.

Conclusions and recommendations: Dissemination of practice protocols must improve to help reduce rates of mortality and morbidity in acute care settings. Studies to evaluate best practice at the bedside especially in resource poor settings must be conducted if rates of VAP are to decrease.

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