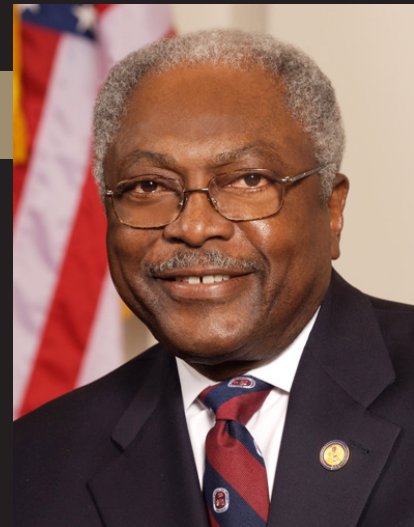


BUILDING A  
HEALTHY,  
EQUITABLE  
FUTURE FOR  
COMMUNITIES  
THROUGH RESEARCH AND  
PRACTICE



*Part of the James E. Clyburn  
Health Disparities Lecture Series  
April 9, 2010*

**POSTER SESSION &  
ABSTRACTS**



Institute for Partnerships to  
Eliminate Health Disparities

*B*ears the  
ARNOLD  
SCHOOL  
at the Heart of our Health



*Building a Healthy, Equitable Future for  
Communities Through Research and Practice*

**Part of the James E. Clyburn Health Disparities Lecture Series  
April 9, 2010**

**POSTER SESSION &  
ABSTRACTS**

*The poster session and corresponding abstract booklet showcase health disparities research and practice being conducted by University of South Carolina faculty members, research staff, and students as well as community, clinical, and/or agency partners.*

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**Title:** Differences in Specialty Care Use among Patients with Chronic Diseases

**Authors:** Jessica D. Bellinger, Rahnuma M. Hassan, Patrick A. Rivers, Qiang Cheng, Edith Williams and Sandra H. Glover

**Previously Presented At/Published In (if applicable):** Academy Health Conference, June 2010

**Abstract:**

**Research Objective:** The purpose of this study was to determine rural/urban variation in specialty care utilization by perceived health and chronic disease status.

**Study Design:** The Commonwealth Fund's 2006 Health Care Quality Survey is a nationally-representative telephone survey of adults living in the United States measuring health care utilization and quality of care. Data include self-reported health status, patient preference and behaviors, and other measures. To reduce loss of information and account for missing data, respondents with missing values from relevant items were not included in our final sample (n=2475), whites (43%), African Americans (32%), and Others (25%). Logistic regression and chi-square analysis were used in the analysis of the primary outcome, self-report of specialty care. SAS 9.2 was used to perform all analyses appropriately weighted for survey estimates.

**Principal Findings:** More African Americans reported poor health (23%) than whites (20%). African Americans reported more chronic diseases (hypertension, diabetes, heart disease) than other respondents ( $p<.0001$ ). African Americans were less likely to report specialty care than whites when controlling for age, income, and health insurance status (AOR=0.81; 95% CI 0.67, 0.99). Respondents lacking health insurance were less likely to report specialty care use (AOR=0.42; 0.28, 0.61).

**Conclusions:** Overall, perceived need (as measured by self-report of health), race/ethnicity, access, and age were predictors of both specialty care use and chronic disease status. Low income respondents were more likely to report specialty care use, which suggests that public health insurance programs increase appropriate access to care. African Americans reported higher rates of chronic disease, and were less likely to report specialty care use indicating an opportunity to target interventions for the elimination of health disparities.

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This research is supported by Grants# 5P20MD001770-04, funded by the National Center on Minority Health and Health Disparities (NCMHD) at the National Institutes of Health (NIH).

The content and views expressed in this publication are solely that of the authors and does not necessarily reflect the official views of the NIH.

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**Title:** Differential expression of Human Zinc Transporters 1 (*hZIP1*) in nonmalignant prostate tissue: Racial Differences

**Authors:** Keaira Berry\*, Leslie A. Johnson, Kendall Williams, Andrea' Kajdacsy-Balla, and Omar Bagasra

**Previously Presented At/Published In (if applicable):** 6<sup>th</sup> Annual Clark-Atlanta Symposium on Prostate Cancer, March 2010

**Abstract:**

The role of zinc, its underlying active function in the development and progression of prostate malignancy and its potential application in the prevention and treatment of PC are contemporary critical issues for the medical/scientific community and the public-at-large. Prostate Cancer (PC) is the most prevalent type of cancer observed in American men. Virtually all human diseases are the result of the interaction of genetic susceptibility factors and modifiable environmental factors. According to the CDC, 189, 075 men were diagnosed with PC in 2004 in the U.S. By the end of 2009, there was an estimated 192,280 new cases according to the National Cancer Institute. Despite an apparent decrease in the number of fatalities due to PC over the years, PC is still silently eradicating the population of men within America showing a 1% increase yearly. On average, African American men (AAs) are twice as likely to develop PC as compared to European Americans men (EAs) of similar age. We theorize that zinc and its transportation; specifically *hZIP1* is down-regulated in the prostate gland of AAs, resulting in development of PC at an earlier age as compared to that of EAs. Through a series of experiments, we are able to quantify and calibrate the accumulation and expression of a particular *hZIP1* expression using *in situ* PCR/Hybridization, Realtime PCR, and differential zinc staining. Our analyses with differential zinc staining showed a marked relative depletion of zinc in the glandular areas of AAs as compared to age-matched EAs. These observations were carried out in conjunction with *in situ* RT-PCR/hybridization for *hZIP1* expression levels, which inversely correlates with zinc accumulation data. There is a significant down-regulation of *hZIP1* in the glandular areas of AAs *versus* EAs. Our findings have important implication in prevention of PC and may have wider applications in other diseases.

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**Title:** Oral Health in Rural South Carolina: The Importance of the Relationship Between School Nurses and the Dental Community

**Authors:** Amy Brock Martin, DrPH; Jeff Hatala, MBA, MMC; Kyle Shah; Janice C. Probst, PhD.

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

**Background:** Oral health is a significant unmet need among children, especially those who are rural or poor. Our research examined access to dental care issues and the degree to which school-aged children have access to care from the perspective of school nurses.

**Methods:** We examined challenges experienced by South Carolina school nurses when coordinating dental care for children who lack regular sources of dental care. We conducted an electronic survey of school nurses practicing in South Carolina public schools in October 2008 with three reminders in efforts to obtain a high response rate.

**Results:** About 88% (n=784) school nurses responded to the survey. Approximately a third (30.66%) of the responding nurses represented rural schools. More than a third of dentists who accept referrals from school nurses saw children with no ability to pay for care. School nurses reported parents not following-up or missing appointments (85%) as the biggest barrier to accessing dental care. In rural communities, lack of parent involvement ( $p < .05$ ) was identified by nurses as a barrier, as was being unable to reach parents, and finding a dentist to care for children with special health care needs.

**Conclusion:** The challenges that school nurses reported they faced are not driven by the dental community, but by the parents of the children needing oral health services. One key to providing successful oral health care to these students lies in parental involvement and support for their children. Nurses, schools and the dental community need to leverage the positive partnership to develop ways that further encourage parents to support their children.

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**Title:** MOMS Project: Getting to Outcomes with Substance-Abusing Pregnant Women

**Authors:** Jennifer Castellow\*, Isha Metzger, Jonathan Scaccia, and Sara Schmidt

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

The abuse of alcohol or other substances during pregnancy has dangerous implications in terms of the health of the affected child as well as the stability of the substance-abusing mother. Fetuses exposed to drugs and alcohol are more likely to experience developmental deficiencies, Fetal Alcohol Syndrome, mental retardation, low birth weight, and other abnormalities after birth and are ultimately at risk of death in utero (Coleman & Miller, 2007). A local drug and alcohol treatment facility (LRADAC) reached out to a consultant team at the University of South Carolina to aid in the development, implementation, and evaluation of a new program, dubbed MOMS (Maternal Outreach Management Services), designed to provide specific services to substance abusing pregnant women. The consultant team used the framework of Getting to Outcomes™ (Chinman, Imm, & Wandersman, 2004) in order to design a manual that would facilitate the clinicians at LRADAC in developing patient-centered, obtainable goals and monitoring individual and program-level progress using measurable outcomes. The development of the program and manual was a collaborative process, involving key leaders and working clinicians at LRADAC. This process of program development, implementation, and evaluation is ongoing and continues to evolve with each progressive step forward.

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**Title:** Acupuncture and Stress in Persons Living with HIV/AIDS in Rural South Carolina: A Qualitative Perspective

**Authors:** Minnjuan Flournoy\*, MPH, Jason R. Jagers, G. William Lyerly, MS, Sandra Glover, MBA, PhD, Gregory Hand, PhD

**Previously Presented At/Published In (if applicable):** 2009 Annual Meeting of the APHA

**Abstract:**

The USC/Claflin Center for Excellence in Partnerships, Outreach, Research on Health Disparities and Training focuses on HIV/AIDS, particularly among people living in Orangeburg County, South Carolina. The rates of incidence and mortality from HIV infection are disproportionately higher in Orangeburg and several other rural regions across South Carolina. As evidenced in scientific literature, HIV/AIDS is becoming more of a chronic disorder rather than a terminal illness. Medical care and subsequent medications are oftentimes expensive, thus making accessibility more challenging for persons who are uninsured or underinsured. This led to the exploration of alternative treatments for some symptoms associated with HIV/AIDS. Research indicates that when a person is diagnosed with HIV, their stress level increases while oral immune function decreases over time.

Sixty-three HIV+ persons were enrolled in the Acupuncture and Oral Immune Function project. This research utilized a single-blinded, randomized crossover design. Persons were asked open ended questions about their experiences with acupuncture and their opinions on its effectiveness at baseline, midpoint and at the conclusion of the treatment. Responses were coded and analyzed using NVivo 2.0. Themes that emerged were barriers to this type of treatment (systemic and intrinsic), perceived reduction of stress because of acupuncture from placebo-receiving participants, and an overall reduction of stress, pain relief, and muscle relaxation from participants receiving acupuncture. This research indicates that if systemic barriers to access are reduced or eliminated, acupuncture can be a viable method of reducing stress and alleviating other symptoms experienced in HIV-positive persons.

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**Title:** Promoting Physical Activity in Sumter County's Underserved Communities Through A Walking Intervention

**Authors:** Steven Hooker, PhD, Lili Stoisor-Olsson, MSW/MPH, CHES, Ericka L. Burroughs, MA, MPH, Linda M. Pekuri, MPH, LD, RD, and Catherine Blumberg, MSSW

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

The University of South Carolina Prevention Research Center (USC PRC) partners with its community committee, the Sumter County Active Lifestyles coalition (SCAL), to achieve the vision of *Physically Active People in Active Community Environments*. Sumter County has significant disparities in some communities in terms of capacity to encourage physical activity (PA). SCAL's coalition partners include several underserved communities. Five of these communities, Rembert, Dalzell, Cherryvale, Salterstown, and a neighborhood surrounding Broad Street, are located primarily in rural areas of Sumter County.

Characterized by higher-than-average rates of poverty and large proportions of African American (AA) residents, these communities exhibit an elevated risk of sedentary lifestyle and undesirable chronic health conditions. The USC PRC and SCAL intend to implement a multi-level walking intervention to address these disparities. The walking intervention is being developed specifically for the five underserved communities mentioned earlier. The USC PRC plans to determine the effectiveness of the intervention on walking behavior and health-related outcomes in adults living in these communities.

The walking intervention will augment an 11-year academic-community partnership between USC and SCAL and increase opportunity for the partners to work toward the goal of eliminating health disparities in Sumter County.

This poster will highlight this new walking intervention initiative intended to increase physical activity in these underserved Sumter County communities.

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**Title:** Role of Zinc Transporters and the Role of Zinc in Breast Epithelia of Various Racial Groups

**Authors:** Clara L. Jones\*, Jessica Abercombie, Leslie A. Johnson, Kendall M. Williams, Joseph P. Pestaner, and Omar Bagasra

**Previously Presented At/Published In (if applicable):** N/A

**Abstract (limit to 300 words):**

Breast Cancer (BC) is the leading cancer among European and African American women (AAW). AAW are almost twice more likely to die from this disease than European American women (EAW). BC is also one of the leading causes of death among Hispanic women despite having lower rates of incidence compared to non-Hispanic white women and AAW. BC incidence in women has increased from 1/20 in 1960 to 8/20 in 2007. Approximately 90% of BC occurs sporadically, without any apparent predisposing genetic alterations. The remaining BC cases are inheritable, and may be caused by mutations of tumor suppressor genes, such as the breast cancer associated 1 (BRCA1) and BRCA2, p53, or by other possible means of altered expression. Zinc is essential for cell proliferation and differentiation, especially for the regulation of DNA synthesis, mitosis, gene regulation, immune response, wound healing and as structural components in the formation of over 300 zinc finger domains, which regulate many transcription factors and numerous cellular functions. It is hypothesized that since Africa is a mineral-rich continent and zinc levels in the diet are 30-60 times higher than in North America; Africans may have genetically down-regulated their zinc transporters; henceforth, they would have abnormally higher levels of intracellular zinc, that may result in serious neurodegenerative and biochemical disorders. Therefore, AAW living in North America and some other islands may have lower intracellular zinc levels when compared to EAW. We have analyzed the intracellular zinc levels and zinc transporters in the breast tissues of various racial groups and have discovered that AAW downregulate their zinc transporters and have less zinc in the breast glands and this may be related to high tumor grade and mortality in AAW.

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**Title:** Identifying and Understanding Factors That Influence Physical Activity Behavior among South Carolina Latinas

**Authors:** Alexis Koskan\*, MA, DeAnne K. Hilfinger Messias, PhD, Patricia Sharp, MPH, PhD, Deborah Parra-Medina, PhD, Daisy Y. Morales-Campo, PhD

**Abstract:**

The ENLACE project is a community-based, participatory research project in the South Carolina Midlands that focuses on Latinas exposed to varying degrees of social, economic, cultural, and linguistic marginalization. One study aim of this research was to identify and understand factors (e.g., perceptions, enablers, barriers) that influence moderate intensity physical activity behavior among Latinas, in order to design a community-based physical activity intervention. We conducted a total of 4 focus groups in Spanish with adult Latinas (n=36) and in-depth interviews with formal and informal community leaders (Spanish n=10; English n=3; Total n=13). Interviews and focus groups were audio-taped and transcribed, and transcripts were reviewed, analyzed, and interpreted. We used constant comparative approaches to analyze the qualitative data within and across sites. We analyzed transcripts individually, identified salient themes, developed a common coding scheme and subsequently recoded all transcripts using Atlas.ti. Demographic data from focus group participants were analyzed using SPSS. Participants identified social, cultural, environmental, and economic factors as impacting participation in moderate intensity physical activity. Common constraints to regular leisure-time exercise identified included the dominance of work and family responsibilities, social isolation, lack of social support and personal motivation, time constraints, and access barriers (e.g. cost, transportation, lack of childcare), linguistic isolation, perceived discrimination, fear and distrust, immigration status, and the lack of culturally appropriate exercise programs in Spanish. Findings will be used to design and test a feasible and appealing community-based intervention. To address community preferences and barriers and enhance adherence, the intervention will need to include low-cost options for group exercise activities, offered around women's home and work schedules, in safe and accessible locations, and incorporate elements of social support and personal empowerment components.

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**Title:** Associations of Built Food Environment with BMI and Waist Circumference among Youth with Diabetes

**Authors:** Archana P. Lamichhane\*, Dwayne Porter, Matteo Bottai, Elizabeth Mayer-Davis, Robin Puett, Angela D. Liese

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

**Purpose:** The food environment has been increasingly thought to influence risk of obesity. Furthermore, environments supporting healthy (e.g. supermarkets) and unhealthy (e.g. fast-food outlets) dietary choices have been mostly examined in isolation. We examined the separate and joint associations of supermarkets (SUP) and fast-food (FF) outlets availability with body mass index z-score (BMI z-score) and waist circumference (WC).

**Methods:** Information on residential location, BMI z-score and WC for 845 youth with diabetes residing in South Carolina was obtained from the SEARCH for Diabetes in Youth study. Using geocoded SUP and FF outlet data from InfoUSA, we constructed SUP and FF availability measures around the participant's residence and examined their associations with BMI z-score and WC.

**Results/Findings:** Increased availability of SUP was significantly associated with lower BMI z-score adjusting for individual demographic and socio-economic characteristics, and population density. Each additional SUP, SUP/sq. mile (crude density) and SUP/sq. mile (kernel density) was significantly associated with decrease in BMI z-score of  $-0.05$  (95% CI =  $-0.10, -0.01$ ),  $-0.23$  (95% CI =  $-0.39, -0.06$ ) and  $-0.19$  (95% CI =  $-0.31, -0.07$ ), respectively. The associations of SUP availability measures and WC were in similar direction as BMI z-score (count: estimate =  $-0.21$ , 95% CI =  $-0.71, 0.28$ ; crude density: estimate =  $-1.05$ , 95% CI =  $-2.63, 0.54$ ; kernel density: estimate =  $-2.47$ , 95% CI =  $-3.75, -1.19$ ). The count and crude density associations with WC however did not reach the statistical significance. FF availability was not associated with either BMI z-score or WC. Further adjustment for FF availability in the SUP model did not attenuate the association between SUP availability and BMI z-score (count: estimate =  $-0.05$ , 95% CI =  $-0.10, -0.004$ ; crude density: estimate =  $-0.22$ , 95% CI =  $-0.39, -0.04$ ; kernel density: estimate =  $-0.17$ , 95% CI =  $-0.30, -0.04$ ).

**Conclusions:** The built food environment supporting healthy diet such as SUP around the residence may significantly influence BMI and WC in youth population. However the influence of FF, commonly considered as a source of energy-dense unhealthy food, on BMI and WC remains inconclusive. Future studies should explore both home and school FF environment that can equally influence the eating behavior and hence the health outcome.



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**Title:** Changing our Future, Changing our Community: The Females Against Cancer Education and Awareness Workshop Series

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**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

The USC-Claflin Center for Excellence focuses on HPV/cervical cancer and HIV/AIDS, particularly among people living in Orangeburg County, South Carolina. South Carolina ranks 14<sup>th</sup> in the nation in cervical cancer mortality. The rates of incidence and mortality from cervical cancer and HIV infection are disproportionately higher in Orangeburg and several other rural regions across South Carolina. In an effort to address these disparities from a prevention perspective, the Center of Excellence and the Orangeburg Consolidated School District Five partnered to create the Females Against Cancer (FAC) education and awareness workshop series. The 7-part series consisted of mother/daughter information sessions for middle and high school girls of the school district. FAC served approximately 50 ladies, where participants attended 4-hour sessions every other Saturday from January – April 2010. The interactive sessions highlighted topics such as HPV and its associated cancers, STIs including HIV, unhealthy relationships, and decision-making skills.

Pre- and post evaluations were administered to assess knowledge of session-specific information. Open-ended responses were coded and analyzed using NVivo 2.0, while closed-ended questions were summarized using Microsoft Excel. Some of the themes that emerged were mothers and daughters discussed communication issues, lack of in-depth knowledge regarding HPV, its related cancers, and other in-depth knowledge about other STIs.

These findings indicate that FAC was helping to equip these ladies with much needed women's health information. Some of the participants recommended FAC to their peers and wanted to share what they learned with the males in their lives. They also indicated that FAC was beneficial and they learned new and interesting information at each session; daughters felt more empowered to not engage in unhealthy relationships; and had a desire to either abstain from sexual relationships or if they do engage, they will do so responsibly and not before discussing with their mothers.

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**Title:** Unmet Need For Publicly Funded Family Planning In Region IV

**Authors:** Kathryn J. Luchok, PhD

**Previously Presented At/Published In (if applicable):** *Originally presented as an oral presentation at the 29<sup>th</sup> Region IV Data and Utilization Network meeting, Chapel Hill, NC, September 28-29, 2009; poster presented at the 3<sup>rd</sup> annual Women's Health Research Forum, University of South Carolina School of Medicine, October, 2009.*

**Abstract (limit to 300 words):**

Unmet need for family planning results in higher rates of unintended pregnancies, shorter birth spacing intervals, higher abortion rates, and a greater number of pregnancies. There are marked racial disparities in unmet need, with highest rates of unintended pregnancies among African-American women. Unmet need may be caused by lack of services, fewer contraceptive options offered, high out-of-pocket costs of methods, low understanding of options and proper use, and low use of effective long-acting methods. By examining trend data in the southeast compared to national data, program decision-makers can monitor unmet need and take steps to improve service delivery that will reduce unintended pregnancies and lead ultimately to better health outcomes for women and the children they eventually may bear.

This was a secondary data review of national (Guttmacher Institute, FPAR—Title X, PRAMS) and state level 10-year (1997-2007) trend data from 8 states in Region IV (AL, FL, GA, KY, MS, NC, SC) as collected and reported by the Region IV Data and Utilization Network.

National data reveals a high unintended pregnancy rate (49%) and generally low contraceptive levels; contraceptive failures are high due to imperfect use (43% of unintended pregnancies vs. 5% for perfect use). Regionally, only 38% of the estimated unmet need is met. Racial disparities in contraceptive use, unintended pregnancy, and terminations persist.

Nationally and regionally there is considerable unmet need for family planning services. Regionally states appear to be slipping in ability to meet these needs. Examining trends across time and across the region indicates where needs are being met more or less consistently, indicating where programs need to improve.

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**Title:** Obesity Among African Americans in South Carolina

**Authors:** Jametta S. Magwood\*

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

The World Health Organization has declared obesity a national epidemic that is only increasing in severity. Health complications associated with the disease are also becoming more prevalent according to Partners for Active Living. According to their findings, obesity-attributable medical expenditures in South Carolina topped one billion dollars in 2003. The Centers for Disease Control and Prevention has suggested that this is due to the physical inactivity that begins during adolescence, especially in the African American community.

Diets are another essential part of being healthy individuals. Regimens that are high in fat, cholesterol, and calories can cause a person's weight to increase and overall health to deteriorate. This diet format is common in the African American community. As a result high blood pressure, increased cholesterol, an increased stroke rate and obesity are prevalent in the African American community. Research suggests African Americans living in neighborhoods with at least one supermarket are more likely to meet dietary guidelines for fruit and vegetable consumption and fat intake than African Americans living in neighborhoods without supermarkets. This reinforces national findings showing a large proportion of low-income African-American communities are cluttered with fast food chain restaurants and their value menus. These communities are dependent on the fast food restaurants. Inexpensive meal options and convenience, can equate to obese families. South Carolina Department of Health and Environmental Control states that overweight adolescents have a 70 % chance of becoming overweight or obese adults. This is a cycle that will continue to repeat itself if drastic measures are not taken in prevention. If said actions are not executed soon, the demographics in the African American population indicate that issues of overweight and obesity will only increase.

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**Title:** Role of Spirituality in the use of CAM Therapies Among Adults with Chronic Diseases in the United States

**Authors:** Crystal Piper, MPH, MHA, PhD, Saundra Glover, MBA, PhD, Kamala Swayampakala, MSPH, Larrell Wilkinson, MSPH, Chinelo Amarachukwu Ogbuanu MD, MPH, and Dayna Anne Campbell, MPH

**Previously Presented At/Published In (if applicable):** 2009 American Public Health Association Annual Meeting & Exposition

**Abstract:**

Background

There is a considerably large amount of individuals with chronic diseases that utilize CAM therapies. A vast amount of studies have illustrated that empathy, prayer or a prayer-like state of compassion, have a positive impact on individuals with chronic diseases.

Purpose

The purpose of this study is to examine the characteristics, patterns, and predictors of CAM therapies among individuals with chronic diseases in the United States. This study will determine the role of spirituality among CAM therapy users with chronic diseases.

Methods

This study used the 2002 National Health Interview Survey. SAS callable SUDAAN software was utilized to account for the multistage sampling of the NHIS. Chi-square tests were used to compare demographics between adults with chronic diseases that utilize CAM therapies. Multivariate logistic regression analysis was conducted to determine the demographic and other predictors of CAM therapies. A propensity score-weighted analysis was conducted to explore the role of spirituality among CAM users comparing to non-CAM users with chronic diseases. Spirituality was defined as: if the respondent prayed for their health or had someone pray for them. A final model at an alpha level of 0.05.

Results

Most adults with chronic diseases utilized CAM therapies because they felt the combination with conventional treatment would help. Spirituality was found to be a predictor for CAM therapy use among adults with chronic diseases (OR=2.08 p<.0001).

Discussion

Findings from this study indicate the use of CAM therapies, and physicians should inquire about the use among their patients, embrace these methods, and consider CAM as management of the disease.

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**Title:** Racial Disparities in Mortality among Middle Aged Adults: Can Health Insurance Be the Solution?

**Authors:** Jan Probst, PhD, Katrina Walsemann, PhD, Jessica D. Bellinger, PhD, MPH, James Hardin, PhD

**Previously Presented At/Published In (if applicable):** Academy Health Conference, 2010

**Abstract:**

Objectives: Disparities in life expectancy between white and non-white populations in the US are marked. While infant mortality contributes to this difference, the majority of excess deaths occur in middle age. Our research investigates whether health insurance ameliorates racial disparities in mortality among adults aged 45 - 64.

Study Design: Data were drawn from the 2004 National Health Interview Survey (NHIS) Linked Mortality File, which links respondent information from the nationally representative NHIS to death records through 2002.

Population: Our analyses examined 217,748 respondents between the ages of 45 and 64 during interview years 1986, 1989-2000. We excluded 1987-1988 because no insurance information was collected. We applied Cox proportional hazard models to estimate mortality hazard ratios (HR) by race/ethnicity (black, white, Hispanic, other) and insurance status (privately insured, publicly insured, uninsured) at time of interview. Multivariable analyses adjusted for respondent demographic, resource and health status characteristics. All analyses were stratified by sex and weighted to account for the sample design.

Results: Overall, 77.1% of respondents reported private insurance, 11.1% public insurance, and 11.8%, uninsured. Minorities were more likely to be uninsured (18.2% black, 27.2% Hispanic, and 17.5% other adults, versus 9.5% of white respondents). In analyses holding age and interview year constant, black adults had an elevated risk of death (Female: HR 1.62, CI 1.52-1.72. Male: HR 1.57, CI 1.48-1.66) compared to white adults. Adjustment for insurance alone reduced the hazard ratio for blacks, but did not fully eliminate disparities (Female: HR 1.31, CI 1.23- 1.40. Male: HR 1.32, CI 1.25-1.41), which remained after further adjustment for socio-economic status, region, rurality, and health status (Female: HR 1.11, CI 1.04-1.19; Male HR 1.08 CI 1.02-1.16). Of note, uninsured individuals were at higher risk of death in all analyses.

Conclusions: Health insurance ameliorates some, but not all, of the black-white disparity in mortality. Expansion of insurance coverage across the US population through health care reform may not be sufficient to eliminate race-based disparities in risk of death. Additional research is needed into contextual factors, which may influence health and survival.



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**Title:** Vitamin D Status Among African-American and European-American Women Diagnosed with Breast Cancer in South Carolina

**Authors:** Rebecca Rosling\*, James R. Hebert, E. Angela Murphy, J. Mark Davis, Susan E. Steck

**Previously Presented At/Published In (if applicable):** 2009 Carolina Women's Health Research Forum

**Abstract:**

**Background and Significance:** Except for lung cancer, breast cancer claims the lives of more women than any other cancer. Vitamin D is of interest in breast cancer prevention and prognosis because it has been shown to inhibit cell proliferation and induce apoptosis and differentiation in both normal and malignant breast cells. Levels of vitamin D in humans are mainly due to sun exposure and vary based on skin tone, age, body mass index [BMI=weight(kg)/height(m)<sup>2</sup>] and other factors. This study examines racial differences in vitamin D status and whether vitamin D levels vary by clinical parameters among women diagnosed with breast cancer in South Carolina

**Methods:** A total of 107 women between 33 and 84 years of age and diagnosed with breast cancer in the previous five years were enrolled in the study [n=60 African American (AA), n=47 European American(EA)]. Each participant donated a blood sample, and serum 25(OH)D was measured by enzyme immunoassay. Age, BMI, clinical characteristics, and treatment were abstracted from medical records.

**Results:** The mean ( $\pm$ SD) concentration of serum 25(OH) D in EA women was  $29.8 \pm 12.1$  ng/ml while the mean concentration in AA women was  $19.3 \pm 10.0$  ng/ml. Vitamin D deficiency (defined as  $<20$ ng/ml) was much more common among AAs (60%) compared with EAs (15%). Vitamin D concentrations decreased with increasing stage of disease.

**Conclusions:** This study corroborates other studies showing racial differences in vitamin D status and provides further support for a protective role of vitamin D in breast cancer. The prevalence of vitamin D deficiency and insufficiency was high, suggesting the need for monitoring of vitamin D levels among breast cancer patients.

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**Title:** Effects of Breastfeeding Education on Initiation among Caucasian and African American Mothers in South Carolina

**Authors:** Nelis Soto-Ramírez\*, Kesinee Hanjangsit, Alycia Albergottie, Wilfried Karmaus

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

The objective of this study was to explore the influence of breastfeeding education on the initiation of breastfeeding among South Carolina mothers. Breastfeeding provides optimal nutrition for infant plus health benefits for both mother and infant. However, only 66% of mothers initiate breastfeeding in the United States. It is known, in the US, older maternal age, Caucasian (CAU) ethnicity, higher education level, and marriage are associated with the decision to breastfeed. Particularly, African Americans (AA) have the lowest initiation rates. Low initiation rates of breastfeeding are not only unnecessary and avoidable, but result in an unfair and unjust future risk for mothers and their offspring, thus fulfilling the definition of health disparities. Recent studies suggest that bridging health disparities gaps in breastfeeding will improve health conditions. This study will shed light on the association of breastfeeding education, maternal race and initiation rates of breastfeeding.

South Carolina Pregnancy Risk Assessment Monitoring System (SC PRAMS) survey is taken by SC mothers who recently delivered a healthy newborn. Information collected from 2004 through 2007 SC PRAMS surveys included 5, 034 mothers, 44.4% AA and 55.6% CAU. Data was analyzed using survey logistic regression and risk ratios (RR) were estimated to determine the association between breastfeeding education and initiation. Confounders include maternal race/ethnicity, income, and maternal education. Overall 3,462 (68.7%) of mothers initiated breastfeeding, 61% AA and 75% CAU mothers. Initiation increased 3 times overall in SC mothers who received additional breastfeeding education, 4 times in AA and 2 times in CAU mothers after controlling for confounders compared to mothers who did not.

Our results provide evidence that breastfeeding education increases breastfeeding initiation, particular among AAs. It reflects a need for prenatal education to incorporate breastfeeding education in order to help bridge the racial gap by improving the health of SC infants and mothers.

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**Title:** Engaging Communities Through Town Hall Forums

**Authors:** Tiffany T. Stewart, LMSW; Karen Clinton, BA; John Ureda, PhD; Sarah Griffin, PhD

**Previously Presented At/Published In (if applicable):** Preliminary Findings Presented at James E. Clyburn Health Disparities Lecture Series, April 21, 2009

**Abstract:**

During the Summer 2007, the USC Claflin Center of Excellence (COE) in Cancer and HIV Research (known as EXPORT) conducted focus groups and key informant interviews throughout towns and communities in Orangeburg County. The information gained through the thirty one interviews and eleven focus groups has been essential in guiding the COE Community Partnership and Outreach Core in addressing HIV/AIDS, Human Papillomavirus (HPV) and Cervical Cancer. Many participants identified social determinants that interconnects the increased prevalence of HIV/AIDS and described a need for HPV prevention and awareness. The results were evaluated and disseminated to town residents including key informants, focus group participants and community leaders through Town Hall Forums. Each forum empowered participants to take action and address health disparities in targeted communities. The COE also promoted partnerships that continue to support and strengthen community efforts to eliminate health disparities. As a result of these meetings, ongoing events, activities, and partnerships were created and sustainable projects have emerged.

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**Acknowledgments:** The partnership that has formed the USC-Claflin Center of Excellence in Cancer and HIV Research is a result of a federally funded grant from the National Institutes of Health's (NIH) National Center on Minority Health and Health Disparities (NCMHHD). Another contributing group for this poster has been the Community Advisory Group of the COE Community Partnerships and Outreach Core.

**Website:** [www.sc.edu/export](http://www.sc.edu/export)

**Title:** MicroRNA (miRNA) Profiling and Zinc Transporters in  $\beta$ -cells in African Americans Vs European Americans suffering from Type 2 Diabetes

**Authors:** Bianca Thomas\*, Jazzmine Clemons, Kendall Williams, Leslie A. Johnson, Joseph. P Pestaner and Omar Bagasra

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

Zinc is an essential trace element crucial for the function of more than 300 enzymes and it is important for cellular processes like cell division and apoptosis. Hence, the concentration of zinc in the human body is tightly regulated and disturbances of zinc homeostasis have been associated with several diseases including diabetes mellitus, a disease characterized by high blood glucose concentrations as a consequence of decreased secretion or action of insulin. Zinc seems to exert insulin-like effects by supporting the insulin mediated cell signals and by reducing the production of cytokines, which lead to beta-cell death during the inflammatory process in the pancreas in the course of the disease. Furthermore, zinc might play a role in the development of diabetes, since genetic polymorphisms in the gene of zinc transporter 8 (ZnT8 and in metallothionein (MT)- encoding genes could be demonstrated to be associated with type 2 diabetes mellitus (T2DM). Circulating miRNA expression profiles appears to play an important role in gene regulation and such profile can be of benefit in predicting T2DM and may provide valuable insights into the pathogenesis of diabetes which could aid therapy. This research explores the role of zinc in the diabetic state including the molecular mechanisms, the role of the zinc transporter 8, MT and miRNAs profiling for diabetes development and the resulting diagnostic and therapeutic options through a series of experiments involving differential staining, RT-PCR, and *in situ* PCR/ Hybridization miRNA profiling. We hypothesize that the *hZIPs* and *Znts* play an important role in the development of diabetes, and may be the main reason AAs disproportionately suffer from DM as compared to EAs.

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**Title:** Pap Test and HIV Testing Behaviors of South Carolina Women 18-64 Years Old

**Authors:** Lisa Wigfall, Wayne A. Duffus, Lucy Annang, Donna L. Richter, Myriam E. Torres, Edith M. Williams, Sandra Glover

**Previously Presented At/Published In (if applicable):** 2009 Carolina Women's Health Research Forum

**Abstract:**

**Background:** Pap tests are used to detect abnormal cell growth in the cervix. Early detection of precancerous cells increases the likelihood of treatment success. In fact, the Pap test is one of only a few cancer screening procedures that can actually prevent cancer by virtue of identifying and intervening upon abnormal, precancerous cells in the early stages. There has been a growing prevalence of cervical cancer among HIV-positive women. Early diagnosis is essential to improving survival outcomes of women living with HIV/AIDS. The purpose of this study was to describe Pap test behaviors among women in South Carolina and examine its relationship with HIV testing.

**Methods:** Behavioral Risk Factor Surveillance System (BRFSS) data from 2008 were analyzed. Chi-square tests and logistic regression analyses were performed to describe Pap test behaviors among our sample (n=3,404) of non-Hispanic White and non-Hispanic Black women (18-64 years old).

**Results:** The majority of participants (97%) reported ever having a Pap test. Participants who reported never having a Pap test were 50% less likely to have ever been tested for HIV.

**Conclusion:** The participants in our study met the Healthy People 2010 target of ever having a Pap test. However, less than half of participants (42%) had ever been tested for HIV. A larger proportion of women who have had a Pap test had also been tested for HIV.

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**Acknowledgments:**

The SC BRFSS was conducted by the South Carolina Department of Health and Environmental Control (SCDHEC) with funding and guidance provided by the Centers for Disease Control and Prevention (CDC), grant number 1U58DP001466.

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**Title:** Using Routine Breast, Cervical, and Colorectal Cancer Screenings as “Teachable Moments” to Increase HIV Testing Among Older Women (50-64 years old) in the Deep South

**Authors:** Lisa T. Wigfall PhD, Donna L. Richter EdD FAAHB, Myriam E. Torres PhD, Wayne A. Duffus MD PhD, Lucy Annang PhD, Lisa L. Lindley DrPH

**Previously Presented At/Published In (if applicable):** 2009 Annual Meeting of the APHA

**Abstract:**

Background: African American women of all ages have been hardest hit by HIV/AIDS. Combined with physiological changes associated with aging, minority women may be at an increased risk of acquiring HIV/AIDS later in life, especially as the prevalence of HIV/AIDS continues to increase in persons 50 years and older. Older adults are often diagnosed with HIV late because they do not get tested. Some providers have even misdiagnosed AIDS symptoms as signs of aging.

Methods: Behavioral Risk Factor Surveillance Survey data (n=8348) from 2008 were analyzed. Chi-square tests and logistic regression were used to examine HIV testing behaviors of older (50-64 years) black and white (both non-Hispanic) women from the Deep South states.

Results: One fourth of participants reported having been tested for HIV, excluding testing done as part of a blood donation. Most women tested were 50-54 years old (50%), non-Hispanic white (63%) and married/partnered (59%). Older women up-to-date on cervical (84%) and colorectal cancer (62%) screenings were significantly more likely to have been tested for HIV. No associations were observed between HIV testing and mammography screening adherence.

Conclusions: Interventions aimed at reducing spread of HIV/AIDS among older adults are needed, yet few focus on the specific needs of this population. These findings suggest cervical and colorectal cancer screenings may represent opportunities to deliver HIV prevention messages to older women. More research is needed to learn how to help providers make the most of these “teachable moments” to increase the number of older adults who know their HIV status.

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**Title:** The Influence of Cultural Beliefs on Breast Cancer Risk Factor Knowledge of Women in Kumasi, Ghana

**Authors:** Michelle S. Williams\*, MPH, CHES, George Kuffuor, Edmund Ekuadzi, Prince Tuffuor Ampem, Maxwell Korang-Yeboah, Miriam El-Duah, Heather Brandt, PhD, and DeAnne Messias, MS, PhD

**Previously Presented At/Published In (if applicable):** The American Public Health Association Annual Meeting 2009

**Abstract:**

**Background and Significance:** Cervical cancer is the leading cause of cancer death among women in Ghana, West Africa. The cervical cancer mortality rate is expected to double between 2009 and 2025. There has been very little research on cervical cancer knowledge among women in Ghana. The objectives of this study were to determine 1) the knowledge of cancer risk factors, and 2) the knowledge of cancer signs and symptoms among women in Kumasi, Ghana; and 3) to identify cultural factors that influence their beliefs about cervical cancer risk factors.

**Methods:** Semi-structured interviews were conducted using a questionnaire with 53 qualitative and quantitative items. Female residents (n=220) of Kumasi, Ghana were selected to participate in the study. A purposive sampling plan was designed to ensure that women with cancer (n = 49) were included in the study. Interviews were conducted in public areas within Kumasi, the Peace and Love Hospital, and the Komfo Anokye Teaching Hospital.

**Results:** Data analysis indicated that the respondents' cancer risk factor knowledge was relatively low (mean score 2.91; range 0-5). The overall knowledge of cancer signs and symptoms was also low (mean score 2.19; range 0-6). Several cultural beliefs that had an influence on women's beliefs about the risk factors for breast cancer and cervical cancer were identified. Cultural beliefs about relationship expectations that may influence cervical cancer (i.e., 11.8% of respondents indicated that their husband would not allow them to have a cervical cancer screening performed by a male doctor).

**Conclusions:** There is a wide-spread lack of accurate knowledge of cancer risk factors, and cancer signs and symptom among women in Kumasi, Ghana. There is a need for interventions that will increase cervical cancer knowledge in this area. Effective cervical cancer education interventions must address the misconceptions about the cervical cancer risk factors that are related to cultural beliefs.

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**Acknowledgments:**

This project was supported by grant number 5T37MD001580-04 from the National Center on Minority Health and Health.

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**Title:** Use of a Community-University Partnership to Eliminate Environmental Stressors

**Authors:** Sacoby Wilson, Hebert Fraser-Rahim, Erik Svendsen, Hongmei Zhang, Edith Williams, Marjorie Aelion, LaShanta Rice

**Previously Presented At/Published In (if applicable):** N/A

**Abstract:**

In North Charleston, SC, a paucity of research has occurred to understand the cumulative impact of sources of air, water, and soil pollution including historic industrial activities, an incinerator, several Superfund sites, and heavily-trafficked highways have the overall exposure burden on economically disadvantaged communities. Limited monitoring and community-based surveillance has occurred to understand the spatial and temporal variation of the exposure of local populations to pollution released from the myriad industrial, point, and non-point sources in the region and how this cumulative exposure has affected environmental quality, community health, quality of life, and neighborhood vitality and sustainability. Our long-term goal is to use a community-university partnership between the Low-Country Alliance for Model Communities (LAMC) and the University of South Carolina (USC), the community-based participatory research (CBPR) framework, and collaborative problem solving model (CPSM) principles to address environmental injustice, public health, and revitalization issues in North Charleston, SC. To achieve the long-term goal, we will: 1) Assess the geographic distribution of pollution sources in North Charleston, SC, 2) Quantify levels of PM and heavy metals near industrial and non-point sources of pollution in economically disadvantaged neighborhoods in North Charleston, SC, and 3) Increase community capacity to reduce exposure, prevent pollution, and improve public health through community-based outreach, education, and training. This innovative project will employ the CBPR framework and CPSM principles to: 1) educate impacted residents about local pollution sources, 2) collect evidence on community exposure to PM and heavy metals emitted from local pollution sources, 3) build community confidence in scientific research, and 4) empower residents to obtain environmental justice and drive changes in local environmental health policy. The findings will have important implications for pollution prevention, risk reduction activities and strategies, and environmental health policy for economically disadvantaged and overburdened communities in the Charleston area.

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Support provided by the Institute for Partnerships to Eliminate Health Disparities and the USC Center of Excellence in Cancer and HIV Research. The USC Center of Excellence in Cancer and HIV Research is supported in part by Grant Number P20MD001770 from the National Center on Minority Health and Health Disparities (NCMHD). The content is solely the responsibility of the authors and does not necessarily represent the official views of the NCMHD or the National Institutes of Health (NIH).

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