Arnold School of Public Health **Department of Health Services Policy and Management, The Office of Diversity, Equity and Inclusion,** and **Center of Civil Rights History and Research** University of South Carolina

### **10th Annual James E. Clyburn Health Disparities Lecture**

# **Poster Session** & Abstracts

### "Bridging Health Equity Across Communities"





Part of the 10th Annual James E. Clyburn Health Disparities Lecture

University of South Carolina Alumni Center 900 Senate Street Columbia, SC



UNIVERSITY OF SOUTH CAROLINA Arnold School of Public Health

# **Poster Session** & Abstracts

# "Bridging Health Equity Across Communities"



Part of the 10th Annual James E. Clyburn Health Disparities Lecture

USC Alumni Center Columbia, SC

This year's Poster Session and Abstracts booklet will showcase health disparities research and practice being conducted by faculty, postdoctoral research fellows, staff, and students at the University of South Carolina, as well as members from other academic institutions, local community-based agencies, and the SC Department of Health and Environmental Control. The 10th Annual James E. Clyburn Health Disparities Lecture Poster Session is an opportunity for individuals to share their health disparities research and practice with others and address this year's theme: *"Bridging Health Equity Across Communities".* 

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# **Poster Session Abstracts**

### **Poster Session Abstracts Presented**

P01 Title: The Children Dietary Inflammatory Index (CDII) and Body Mass Index (BMI): Disparities Among African American Children

**Authors:** Christian R. Alvarado, MPH, Statewide Cancer Prevention and Control Program, Department of Epidemiology & Biostatistics, Arnold School of Public Health, University of South Carolina; Samira Khan, MSW, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina; Michael Wirth, PhD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, Senior Research Scientist, Connecting Health Innovations, LLC; Nitin Shivappa, PhD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, Senior Research Scientist, Connecting Health Innovations, LLC; James R Hebert, ScD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, President and Scientific Director, Connecting Health Innovations, LLC

#### P02 Title: How Can We Help Diverse Smokers To Quit? An Experimental Study To Determine The Most Effective Content For Cigarette Package Inserts

Authors: Dien Anshari, Farahnaz Islam, Victoria Lambert, James F. Thrasher

P03 Title: The African-American (AA) Community Suffers from Various Chronic-disease Related Health Disparities, Including Asthma. Adequate Sleep Among Adults is a Protective Health Factor that is Vital for All Individuals. This study used the 2012 and 2014 Behavioral Risk Factor Surveillance System (BRFSS) survey to determine the association between sleep time and asthma among non-Hispanic AAs in South Carolina (SC)

**Authors:** Malcolm S. Bevel, MSPH, PhD (c), Graduate Assistant, Division of Surveillance, Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control; Chelsea Lynes, MSPH, Project Coordinator, Division of Surveillance, Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control; Harley T. Davis, MSPH, PhD, Director, Division of Surveillance, Program Manager, S.C. Environmental Public Health Tracking (EPHT), Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control

P04 Title: Children's Obesogenic Behaviors During Summer Versus School: A Within-Person Comparison

Authors: Keith Brazendale, Michael W. Beets, Russell R. Pate, Gabrielle M. Turner-McGrievy, and Andrew T. Kaczynski

#### P05 Title: Diabetes Education and Disparities among Four Public Health Regions in South Carolina: A 2011-2015 BRFSS Analysis

**Authors:** Andrew Broadway; Chelsea Lynes, MSPH; Betsy Barton, MSPH; Tangee Thomas, PhD; Rhonda Hill, PhD, MCHES; Harley T. Davis, MSPH, PhD

### P06 Title: Charlson Commobidity Index and Reported Mental Unhealthy Days of Veterans: A Racial Variation Analysis Using Zero-Inflated Negative Binomial Model

Authors: Eric Chinaeke, (MSc, M.Pharm) and Bankole A. Olatosi, (PhD, MS, MPH, FACHE)

### P07 Title: Housing First residents as educators on the mental and physical health crisis within the chronically homeless population

Authors: Jennie Ann Cole, MSW, PhD Candidate; Justin Markel (Community Member); VeronicaMathis (Community Member); Sharon Davis (Community Member)

#### P08 Title: PROJECT Diabetes

Authors: PI: Ida J Spruill, PHD BSN MSN (deceased), Co-PI - Charlene Pope, PhD, MPH, RN, FAAN, Program Manager: Briana Davis, MPH, HCC, April Stubbs, MS, Katie Kirchoff, MSHI

#### P09 Title: Engaging Latinas in Community Assessment Mapping in Rio Grande Valley Colonias for a Randomized Physical Activity Intervention

Authors: DeAnne K. Hilfinger Messias, Ph.D., RN, FAAN, Deborah Parra-Medina, Ph.D., Lulis del Castillo-Gonzalez, MSW, Ph.D., Patricia A. Sharpe, Ph.D.

#### P10 Title: Disparities in Access to Lung Cancer Screening in the U.S.

Authors: Jan M. Eberth, PhD; Linda J. Hazlett, PhD; Parisa Bozorgi, MS; Cassie Odahowski, MSPH; Erica Sercy, MSPH; Swann A. Adams, PhD

#### P11 Title: Trends in socio-economic and racial disparity in birth outcomes in South Carolina: Evidence from PRAMS data

Authors: Mohammad Rifat Haider, Khairul Alam Siddiqi, Ibrahim Demir, M. Mahmud Khan

#### P12 Title: A Synergistic Regional Network's Infrastructure to Reduce Cancer Related Health Disparities

**Authors:** Neha Jaggi, MPH; Julia F. Houston, MSW; James R. Hébert, MSPH, ScD; Mark Dignan, PhD, MPH; Mark Cromo, BS; Mark Evers, MD; Janice Bowie, Phd; Adrian Dobs, MD; Ashleigh DeFries Gallagher, M.A., Dr.PH(c); and Roger Anderson, PhD.

### P13 Title: Interpersonal communication about cigarette health warning labels and subsequent quit attempts: Assessing differences among Latinos and non-Hispanic Whites

Authors: Victoria Lambert, James F. Thrasher

#### P14 Title: Partner-related stress during pregnancy in South Carolina

Authors: Chelsea Lynes, MSPH; Kristin Simpson, MSW, MPA; Daniela Nitcheva, PhD; Harley T. Davis, MSPH, PhD

### P15 Title: Utilizing Community Engagement Events to Improve Participant Engagement and Networking

Authors: Ekundayo Nylander-Thompson, Lashonda Williams, Heather Brandt, Andrea Gibson, Bonita Clemons, James Hebert

#### P16 Title: Veterans Preferences for Treatment of Advanced Prostate Cancer (aPCa) and a Shared Decision Making (SDM) tool

Authors: Zaina P Qureshi, PhD, MS, MPH, Ronnie Horner, PhD, Ronit Elk, PhD, Charles Bennett, MD, PhD, MPP

### P17 Title: An Ecological Analysis of State-Level Policy and County-Level Health Center Density and Teen Birth Rates in the United States

Authors: Kerry Spillane, Jan M. Eberth

### P18 Title: Unmet Need for Prescription Drugs among Children aged 1-17 years in the US

Authors: Shyamkumar Sriram MD, MBA, MPH, Khairul Alam Siddiqui MPS, Zaina Querishi PhD

### P19 Title: Persisting Racial Disparities in Colonoscopy Screening of Persons with a Family History of Colorectal Cancer: What are the Barriers?

Authors: Meng-Han Tsai, PhD; Sudha Xirasagar, PhD, MBBS; Piet C. de Groen, MD

### P20 Title: African American End-Stage Renal Disease and Medication Adherence: What are the Effects of Everyday Racism?

Author: Tamara Estes Savage, USC College of Social Work Doctoral Program

## P01 The Children Dietary Inflammatory Index (CDII) and Body Mass Index (BMI): Disparities Among African American Children

**Authors:** Christian R. Alvarado, MPH, Statewide Cancer Prevention and Control Program, Department of Epidemiology & Biostatistics, Arnold School of Public Health, University of South Carolina; Samira Khan, MSW, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina; Michael Wirth, PhD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, Senior Research Scientist, Connecting Health Innovations, LLC; Nitin Shivappa, PhD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, Senior Research Scientist, Connecting Health Innovations, LLC; James R Hebert, ScD, Statewide Cancer Prevention and Control Program, Arnold School of Public Health, University of South Carolina, President and Scientific Director, Connecting Health Innovations, LLC

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Introduction: Chronic inflammation is a risk factor for many health conditions, including obesity. Previous research has shown that a high body mass index (BMI, kg/m2) is indicative of obesity. The Dietary Inflammatory Index (DII) is a literaturederived index developed to measure the inflammatory potential of diet. A Children's Dietary Inflammatory Index (CDII) was developed to understand the association between diet and inflammation-related health outcomes in children.

Methods: Food parameters that comprise the CDII include several nutrients. To develop a reliable scoring algorithm, aggregate data on children ages 6-14 were obtained from 16 different countries. This forms the basis for a world standard database to which all individuals' intakes can be standardized. Using this global database, CDII scores were calculated using dietary data from the children (n=8099) who participated in the U.S. National Health and Nutrition Examination Survey (NHANES) from 2005 to 2010. Data were analyzed using linear regression models with CDII as the independent variable and BMI as the outcome and we stratified by race (European American, African American, Hispanic, & Other).

Results: A significant association was observed between the CDII and BMI (p-value 0.008) for all children, for each unit increase in CDII (i.e., corresponding to a 12.5% increase in inflammatory potential of the diet as observed in NHANES) BMI increased by 0.1014 (standard error = 0.04, 95%CI [0.0278, 0.1751]). After stratifying by race, only African American children were observed having a significant association between the CDII and BMI (p-value 0.01), for each unit increase in CDII, BMI increased by 0.2154 (standard error = 0.0834, 95%CI [0.049, 0.381]).

Conclusion: Results indicate that the CDII is associated with BMI among African American children aged 6-14 years. Further validation and analyses using NHANES, as well as other datasets, are required to deepen understanding of BMI and the CDII association in children.

### P02 How Can We Help Diverse Smokers To Quit? An Experimental Study To Determine The Most Effective Content For Cigarette Package Inserts

Authors: Dien Anshari, Farahnaz Islam, Victoria Lambert, James F. Thrasher

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Background: Cigarette pack inserts (i.e., small leaflet inside the pack) can communicate cessation information to smokers; however, which insert content would be most effective across key smoker subgroups remains unexplored.

Method: Adult smokers (18-50 years) were recruited using a consumer panel in the US (n=665). The discrete choice experiment involved a 2x2x2x2x4 within-subjects design: image provision (vs no image), textual strategy (testimonial vs informational), cessation resources (vs none), call to action (vs none), and message topics (well-being, financial benefit, cravings, social support). Each participant evaluated nine choice sets, with four inserts in each set, selecting one in response to the following questions: (1) "Which insert would most/least motivate you to quit smoking?" and (2) "If you decided to quit, which insert would be most/least helpful for you?" Linear regression was used to analyze inserts selection as a function of insert characteristics while controlling for age, sex, race, education, nicotine dependence, quit intention, self-efficacy to quit, and quit attempt. Interaction between insert characteristics and key smoker characteristics (i.e., educational level, quit intention, self-efficacy) were assessed.

Results: Inserts were perceived as most motivating and helpful to quit when they had an image, provided cessation information, and talked about about response efficacy (i.e., well-being and financial benefit of quitting). Interaction analyses suggest that inserts with cessation information and financial benefit messages were perceived as more motivating and helpful among smokers with low self-efficacy (compare to those with high self-efficacy), among smokers with no quit intention (compare to those had quit intention), and among those with lower education (compare to those with university degree or higher).

Conclusion: Inserts with imagery and cessation resources may help smokers quit, and may be more effective for smokers with no quit intention, low self-efficacy, and low educational attainment.

Keywords: Tobacco control, health communication, smoking cessation

P03 The African-American (AA) Community Suffers from Various Chronicdisease Related Health Disparities, Including Asthma. Adequate Sleep Among Adults is a Protective Health Factor that is Vital for All Individuals. This study used the 2012 and 2014 Behavioral Risk Factor Surveillance System (BRFSS) survey to determine the association between sleep time and asthma among non-Hispanic AAs in South Carolina (SC)

**Authors:** Malcolm S. Bevel, MSPH, PhD (c), Graduate Assistant, Division of Surveillance, Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control; Chelsea Lynes, MSPH, Project Coordinator, Division of Surveillance, Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control; Harley T. Davis, MSPH, PhD, Director, Division of Surveillance, Program Manager, S.C. Environmental Public Health Tracking (EPHT), Office of Public Health Statistics and Information Services (PHSIS), SC Department of Health and Environmental Control

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Data were obtained and combined from SC BRFSS for 2012 and 2014 (restricted to AA; n = 5,851). Sleep time categories were inadequate (<6 hours) or adequate sleep (7 to 8 hours per night) in an average 24-hour period; sleep time over eight hours was excluded. The outcome of interest was current asthma status. We examined potential confounders, including: age, physical activity, smoking status, and health insurance. Survey logistic regression models (via SAS 9.2) were run to obtain unadjusted (ORs) and adjusted odds ratios (AORs) and 95% confidence intervals (CIs). We also ran four additional adjusted models that included SC health department-designated regions (Lowcountry, Midlands, Pee Dee, and Upstate) to observe any regional variability in our analysis.

Seventy-seven percent of AAs in SC reported receiving inadequate sleep in 2012 and 2014; the prevalence of current asthma was 16.3%. Significantly more inadequate sleepers were ever smokers and 18-64 years old, compared to adequate sleepers. After adjusting for covariates, inadequate sleep was significantly associated with lower odds of asthma (OR = 0.09; 95% CI = 0.06 - 0.15). We also observed the same association across all four regions of SC.

Our results on the relationship between sleep time and current asthma differed from previous studies. Asthmatics in our population may have access to health care and medical supplies to assist with breathing while sleeping. Interventions aimed at minorities in regards to chronic disease afflictions should address sleep quality, as well as reinforcing standard care recommendations.

## P04 Children's Obesogenic Behaviors During Summer Versus School: A Within-Person Comparison

Authors: Keith Brazendale, Michael W. Beets, Russell R. Pate, Gabrielle M. Turner-McGrievy, and Andrew T. Kaczynski

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Background: Evidence consistently shows U.S. children gain 3-5 times more weight during summer vacation (~2.5 months) compared to the 9 month school year. Notably, this trend is more pronounced in children of ethnic/racial minority. Few studies have used a within-person design to examine children's obesogenic behaviors during summer and how these compare to school. The purpose of this study is to examine within-child differences in 4 obesogenic behaviors (physical activity (PA), sedentary/screen-time, diet, and sleep) during school versus summer.

Methods: Using a repeated-measures within-subjects design, children (n=55 mean age=8.2 years; 57% female; 37% overweight/obese; 100% African American) wore accelerometers on the non-dominant wrist for 24hr/d over 9 consecutive days during school and summer of 2016 to capture PA, sedentary time, and sleep. Parents completed a daily diary to report bed/wake times, diet (food/beverage questionnaire), and screen-time of their child each day. Mixed effect models, conducted 2016, compared summer and school behaviors. All models included age, sex, and weight-status as covariates.

Results: Children spent more time sedentary (69 vs. 67% of wake weartime), less time in light PA (25 vs. 23% of wake weartime), had higher screen-time (242 vs. 123 min/day), slept longer (428 vs. 413 mins/night), and consumed more sugar-based foods (6 days vs. 2.5 days/week) and fruit (7 days vs. 4.7 days/week) during summer compared to school (p<0.05).

Conclusion: Initial evidence suggests children are displaying multiple unfavorable obesogenic behaviors during summer compared to school that may contribute to the accelerated weight gain during summer. Longitudinal evidence with larger, more diverse samples of children is necessary to identify specific behavioral targets for interventions during summer.

### P05 Diabetes Education and Disparities among Four Public Health Regions in South Carolina: A 2011-2015 BRFSS Analysis

Authors: Andrew Broadway; Chelsea Lynes, MSPH; Betsy Barton, MSPH; Tangee Thomas, PhD; Rhonda Hill, PhD, MCHES; Harley T. Davis, MSPH, PhD

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Diabetes education is associated with lower risk of diabetes complications; yet, nearly half of the adult population with diabetes in South Carolina (SC) reports never having taken a diabetes self-management education (DSME) class. The purpose of this study was to evaluate regional disparities in diabetes education among SC adults.

Data from the SC Behavioral Risk Factor Surveillance System (BRFSS) were obtained from 2011-2015 and restricted to only those with self-reported diabetes (n=9,490). DSME use was assessed using the response to the question, "Have you ever taken a course or class in how to manage your diabetes yourself?" The prevalence of diabetes education was compared by the SC Department of Health and Environmental Control (DHEC) public health regions (Upstate, Midlands, Pee Dee, and Lowcountry). Contingency tables were obtained utilizing SAS 9.4 to assess weighted prevalence estimates and their 95% confidence intervals (CI).

For the SC adult population with diabetes, approximately 53.7% (95% CI: 52.2-55.2) reported ever having taken a DSME class. The Pee Dee region (48.8%; 95% CI: 46.1-51.5) had a significantly lower prevalence of DSME use than either the Midlands (55.7%; 95% CI: 52.7-58.8) or the Lowcountry (58.3%; 95% CI: 55.5-61.2). The Upstate did not have significantly different prevalence than any other region.

There are many barriers to education access that may be contributing to the observed regional disparity. Counties in the Pee Dee region generally have low median incomes, higher population concentration in rural areas and lack options for DSME in 8 of 12 counties, despite having the highest diabetes prevalence of the four regions. These factors may contribute to the low DSME utilization. Future community needs assessments in South Carolina, and the Pee Dee region in particular, may want to consider disparities in DSME access.

### P06 Charlson Commobidity Index and Reported Mental Unhealthy Days of Veterans: A Racial Variation Analysis Using Zero-Inflated Negative Binomial Model

Authors: Eric Chinaeke, (MSc, M.Pharm) and Bankole A. Olatosi, (PhD, MS, MPH, FACHE)

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BACKGROUND: Approximately 20% of Veterans suffer from major depression or post-traumatic stress disorder. While studies have assessed the impact of comorbidities on mental health, the racial variation of these effects amongst veterans is not well known. This study analyzed the racial variation in the effects of weighted chronic conditions on reported mental unhealthy days among veterans.

METHODS: We analyzed weighted pooled 2011-2015 Behavioral Risk Factor Surveillance System (BRFSS) data containing 5,080,920 Veterans. We assigned disease severity weights (0-2) to selected conditions -Diabetes, Stroke, MI, Kidney disease, COPD, Arthritis, Angina and Asthma to obtain Charlson Comorbidty Index (CCIs) ranks 0 to 2. The estimates of the effects of CCI on reported mental unhealthy days were obtained using Zero-Inflated Negative Binomial Regression (ZINB).

RESULTS: Approximately 2,835,076 veterans were living with at least one of the selected chronic conditions. The comorbidity index distribution showed CCI =0 (44 %), CCI =1 (33%) and CCI=2 (23%). Compared to veterans with the lowest severity index CCI (0), the odds of reporting mental unhealthy days were higher among CCI=2 [(OR:1.07 (CI: 0.04, 0.09)] and CCI=1 [(OR:1.06 (CI:0.04,0.08)]. Compared to White veterans, the odds of reporting mental unhealthy days were higher among American Indians [OR:1.13 (CI:0.07, 0.18)], Blacks [OR:1.06 (CI:0.03-0.09)] and Others [OR:1.22(CI:0.16-0.26)]. The predicted average number of mental unhealthy days where CCI=1 was highest among American Indians (4.84), Others (4.83), Blacks (4.40), Asians (3.62), compared to Whites (3.63).

CONCLUSION: The number of mental unhealthy days reported by severity of chronic conditions was consistently higher among minority populations compared to White veterans. The persistence of racial disparities in poor mental health outcomes may reflect a systemic problem affecting minority populations.

# P07 Housing First residents as educators on the mental and physical health crisis within the chronically homeless population

Authors: Jennie Ann Cole, MSW, PhD Candidate; Justin Markel (Community Member); Veronica Mathis (Community Member); Sharon Davis (Community Member)

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A small body of research has explored how the aging formerly homeless population can inform health policy on how to secure housing for the chronically homeless. There is very limited research evidence that investigates how the intersection of mental and physical health exacerbates an individual's tenure on the streets. While research has explored changing demographics and needs of the chronically homeless population, there is little evidence that provides solutions from the perspectives of those that have experienced chronic homelessness. Drawing on their own experiences, participants offer suggestions regarding the best ways to understand the recovery process as clients' transition into housing.

In-depth, semi-structured interviews were conducted with adults who were classified as chronically homeless. The sample is predominantly Black/African American. Interviews were transcribed verbatim, guided by the principles of grounded theory and an inductive approach to qualitative analysis. IRB approval was granted for this study.

Data analysis reveals the importance of Housing First residents in educating front line workers on client's health needs as they transition into housing as part of the aging population. In addition, data suggests that challenging traditional modalities in Housing First program design may keep people housed by utilizing art as activism.

Findings highlight the importance of establishing a curriculum that assists aging individuals transitioning from homelessness to housing to support housing retention. This curriculum provides tools and training to formerly homeless adults to share their stories and explain the need for supportive housing internationally.

### P08 **PROJECT Diabetes**

Authors: PI: Ida J Spruill, PHD BSN MSN (deceased), Co-PI - Charlene Pope, PhD, MPH, RN, FAAN, Program Manager: Briana Davis, MPH, HCC, April Stubbs, MS, Katie Kirchoff, MSHI

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### Background

Approximately 1 in 6 African-Americans in South Carolina has diabetes, which is one of the highest rates in the nation. Diabetes is a complicated disease to monitor and manage and can lead to many complications, including blindness, kidney failure, amputations, and cardiovascular disease.

Health literacy is the ability to read or understand basic health information to make appropriate health decisions that can also impact diabetes self-management. Health literacy rates among African-Americans in South Carolina are low.

PROJECT DIABETES, formerly entitled Ethno-Cultural Barriers to Health Literacy and Disease Management in African Americans, examined how multiple systems (economic, social and health), family, and culture affect diabetes knowledge and health literacy.

### **Research Methods**

A descriptive, mixed method approach was used to explore the effects of beliefs and culture on health literacy and the management of diabetes in African Americans in four regions in South Carolina. Principles from the Social Ecological Model and the PEN-3 Cultural Model provided a framework to develop focus group questions and surveys with assistance from African-Americans with diabetes, or a family member with the disease. Focus groups, recruited through churches, barber/beauty shops, word of mouth, sororities/fraternities, HBCUs, newspapers, radio and television, developed appropriate questions for the surveys. Two hundred (200) surveys were administered by phone, in person and by mail in 8 counties across the State.

### Results

Focus groups and surveys helped to identify selected learning needs and preferences. Cultural and religious beliefs also revealed attitudes about health and diabetes management.

### Conclusion

Effective methods are needed to inform and educate those at risk for and those living with diabetes. The results of this study may be used to select appropriate media channels and develop relevant messages to reach African-Americans with important guidelines to improve diabetes management and health outcomes.

### P09 Engaging Latinas in Community Assessment Mapping in Rio Grande Valley Colonias for a Randomized Physical Activity Intervention

Authors: DeAnne K. Hilfinger Messias, Ph.D., RN, FAAN, Deborah Parra-Medina, Ph.D., Lulis del Castillo-Gonzalez, MSW, Ph.D., Patricia A. Sharpe, Ph.D.

University of South Carolina, College of Nursing and Social Work

Strategies aimed at increasing Latinas' participation in physical activity (PA) must address social, cultural, economic, and environmental factors. As part of a promotoradelivered physical activity intervention trial, we conducted two rounds of Community Asset Mapping (CAM) sessions in eight Texas communities on the US/Mexico border. In the first CAM sessions, participants (n=89) identified and mapped physical-activity related social and environmental resources in their local colonias. During the second CAMS, participants (n=68) conducted walking tours of their neighborhoods, measured walking trails and identified specific environmental assets and barriers to physical activity. Participants (ages 20 to 64 years) were mostly Mexican born (76%), and 63% spoke only Spanish while 29% spoke both English and Spanish at home and 8% spoke only English at home.

Data sources included the audio tapes of the 16 CAMS, field notes, and community asset maps participants produced. Our analyses of these data highlighted several issues underlying Latinas' ability to engage in PA within their colonias: fear, safety, social isolation, marginalization, and poverty. Women's prominent concerns revolved around fears for their own and family's safety, physical and mental health, environmental conditions, socio-economic inequities and lack of resources. The data from these CAM sessions provide a unique view of the concerns of Latinas living in impoverished areas of the southern border. They describe the day-to-day dilemmas and challenges, but also demonstrate individual and collective resilience while giving voice to their desires to improve their lives and communities. Efforts to increase levels of regular physical activity among such hard-to-reach, vulnerable populations must go beyond providing access to facilities and resources. These findings indicate the need for collective action to address broader social and environmental issues on the border.

### P10 Disparities in Access to Lung Cancer Screening in the U.S.

Authors: Jan M. Eberth, PhD; Linda J. Hazlett, PhD; Parisa Bozorgi, MS; Cassie Odahowski, MSPH; Erica Sercy, MSPH; Swann A. Adams, PhD

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Objectives: Lung cancer is the leading cause of cancer-related death among both men and women in the United States. Results from the National Lung Screening Trial showed a 20% reduction in lung cancer mortality among patients screened annually using low-dose computed tomography (LDCT). The purpose of this study is to describe disparities in geographic access to LDCT screening for lung cancer across the U.S. using data on screening center locations and estimates of the population at risk from the U.S. Census American Community Survey.

Methods: Locations of LDCT screening centers from the Lung Cancer Alliance Database of Screening Centers of Excellence and the American College of Radiology Directory of Designated Lung Cancer Screening Centers were geocoded and mapped. Density rates were calculated for each state, and lung cancer incidence and mortality were overlaid on the map.

Results: Preliminary results indicate that the density of screening centers per capita varied considerably across states, ranging from 0.58 (Utah) to 7.95 (Delaware) centers per 100,000 persons. Density scores were generally highest in the Northeast and South Atlantic states and lowest in the Midwest.

Conclusions: With the US Preventive Services Task Force now recommending LDCT screening for all persons aged 55-80 years at high risk for lung cancer and both private and public insurers being required to cover the cost of screening for all high-risk patients, access to screening has become increasingly important. This study found substantial variation in screening center availability, with many Midwesterners having few options for screening.

### P11 Trends in socio-economic and racial disparity in birth outcomes in South Carolina: Evidence from PRAMS data

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### Background:

In 2013, 13.8% babies born in South Carolina were premature, while 9.9% of had Low Birth Weight (LBW). Like other health indicators, poor birth outcomes, e.g., premature birth and LBW, are inequitably distributed among different socio-economic strata of the population. This study intends to find out the trends in inequity in PB and LBW in South Carolina from 2004 to 2013.

### Methods:

South Carolina Pregnancy Risk Assessment and Monitoring System (PRAMS), 2004 and 2013 data were analyzed. Income and race related inequity were measured by using the concentration index. Since the dependent variables are binary and bounded in nature, we used Erreygers' correction for calculating CI. Analyses were performed using STATA 14.2.

### **Results:**

Across two surveys most of the mothers were White, aged 21-29 years, had some college and associate degree, and had Women, Infants, and Children (WIC) supplement during pregnancy. Over the ten years period South Carolina has experienced decrease in inequity in premature birth (CI: 0.091 in 2004 and 0.052 in 2013). However, inequity in LBW has increased (CI: 0.074 in 2004 and 0.147 in 2013). Along the racial line, Whites (9.3% in 2004 and 7.4% in 2013) and other races (12.3% in 2004 and 8.8 in 2013) showed progress in decreasing premature birth, while African Americans performed poorly and showed almost no progress in case of LBW (14.6% in 2004 and 13.7% in 2013).

### Conclusions:

Study results demonstrate that South Carolina faces increasing health inequity in terms of LBW and still have marked inequity in premature births. It is imperative to reach out to the African American women who are deprived of basic amenities during pregnancy to ensure healthy newborns.

### P12 A Synergistic Regional Network's Infrastructure to Reduce Cancer Related Health Disparities

**Authors:** Neha Jaggi, MPH; Julia F. Houston, MSW; James R. Hébert, MSPH, ScD; Mark Dignan, PhD, MPH; Mark Cromo, BS; Mark Evers, MD; Janice Bowie, Phd; Adrian Dobs, MD; Ashleigh DeFries Gallagher, M.A., Dr.PH(c); and Roger Anderson, PhD.

University of South Carolina, Cancer Prevention and Control Program

Cancer Health Disparities is defined by the National Cancer Institute (NCI) as "adverse differences in cancer incidence, prevalence, morbidity, mortality, survivorship, and burden of cancer or related health conditions that exist among specific population groups in the United States." NCI's Center to Reduce Center Health Disparities (CRCHD) created region-based "hubs" under the Geographic Management of Cancer Health Disparities Program (GMaP) to advance the science of cancer health disparities in the regions, contribute to the next generation of cancer health disparities researchers, and achieve measureable reductions in cancer health disparities in the United States.

GMaP Region 1 North (R1N) hub is based at the University of Kentucky Markey Cancer Center, with Johns Hopkins University Sidney Kimmel Comprehensive Cancer Center, University of South Carolina, and University of Virginia Cancer Center as lead institutions. The overall goal of GMaP R1N is to enhance the capacity of regional cancer centers, associated academic partners, community partners, and early stage investigators to contribute to the reduction of cancer health disparities in the region covering Kentucky, West Virginia, Virginia, Delaware, Maryland, New Hampshire, Vermont, Maine, and Washington DC.

GMaP Region 1 North utilizes an infrastructure of regional investigators and partners that serve on the Advisory Committee, Education and Outreach Subcommittee, Diversity Training Subcommittee, and/or Evaluation Subcommittee to: create opportunities for scientific exchange, cooperation, and collaboration among cancer and cancer health disparities rese archers;; attract underrepresented students, trainees/scholars, and investigators to the biomedical cancer enterprise; promote career development/mentoring opportunities; and increase cancer information dissemination and best practice sharing among its members.

Using this infrastructure, Region 1 North expects to result in enhanced collaboration between regional cancer centers and other academic partners, including regional minority serving institutions; increased number of competitive collaborative grant applications and successful K- and R- award applications to NCI by regional members.

### P13 Interpersonal communication about cigarette health warning labels and subsequent quit attempts: Assessing differences among Latinos and non-Hispanic Whites

Authors: Victoria Lambert, James F. Thrasher

University of South Carolina, Arnold School of Public Health, Department of Health Promotion, Education, & Behavior

Background: One way that prominent health warning labels (HWLs) encourage cessation is by promoting interpersonal communication about smoking risks and cessation. This study examined whether non-Hispanic Whites and Latinos differed in talking about HWLs and its relationship with subsequent smoking cessation behavior.

Methods: Data were analyzed from a longitudinal cohort of adult smokers recruited from an online consumer panel. From January 2013 to September 2014, approximately 1,300 smokers were surveyed every four months (n= 4,628), with replenishment used to maintain sample size at each wave. An analytic sample was created for smokers who were followed-up at least once. Measures included frequency of HWL talk, psychological responses to HWLs, quit attempts, heaviness of smoking, and socio-demographic variables. Non-Hispanic Whites and Latinos were included in the sample, with Latinos sub-divided into English-preference and Spanish-preference according to the language they selected for responding to the survey. Generalized estimating equation (GEE) models were estimated to assess correlates of talking about HWLs and predictors of having attempted to quit by the subsequent wave. Interactions between ethnicity and HWL talk were also assessed.

Results: 85% of Spanish-preference Latinos, 59% of English-preference Latinos, and 35% of non-Hispanic Whites reported talking about HWLs. Both English-preference and Spanish-preference Latinos were more likely to talk about HWLs than Whites (AIRR=1.27; 95% CI= 1.19-1.35 and AIRR=1.73; 95% CI= 1.62-1.86). Talking about HWLs independently predicted quit attempts at follow-up (AIRR=1.27; 95% CI=1.12-1.43), and English-preference as well as Spanish-preference Latinos were more likely to attempt to quit than Whites (AIRR=1.12; 95% CI= 1.02-1.23 and AIRR=1.18; 95% CI= 1.03-1.36). No significant interactions were found.

Conclusions: These results show Latinos talk more frequently about HWLs than non-Hispanic Whites and that HWL talk is consistently associated with smoking cessation across ethnic groups. Future anti-smoking campaigns could consider using messages that encourage interpersonal communication to increase cessation.

### P14 Partner-related stress during pregnancy in South Carolina

Authors: Chelsea Lynes, MSPH; Kristin Simpson, MSW, MPA; Daniela Nitcheva, PhD; Harley T. Davis, MSPH, PhD

University of South Carolina, Arnold School of Public Health, Office of Public Health Statistics and Information Services, South Carolina Department of Health and Environmental Control

Maternal stress experienced in the year prior to a baby's birth has been associated with preterm birth, low birth weight, lack of breastfeeding initiation, and postpartum depression. Partner-related stress during pregnancy disproportionately affects certain sub-populations of women, such as low income or black women. To examine this in SC, we utilized information on prenatal partner-related life stressors collected as part of the Pregnancy Risk Assessment Monitoring System (PRAMS) for 2012-2013 (n=1,569). For this analysis, each "yes" response was scored as one point toward the cumulative partner-related score, with a range of 0-9. Demographics of interest were: marital status; maternal race; maternal age group; and maternal education. Survey analysis procedures were utilized to obtain means and 95% confidence intervals (CI). The overall mean partner-related score was 0.94 (95%CI: 0.88-1.01). Unmarried women (1.21; 95%CI: 1.02-1.39) had a significantly higher mean score than married women (0.59; 95%CI: 0.48-0.69). Black women (1.16; 95%CI: 0.91-1.40) had a significantly higher mean score than white women (0.78; 95%CI: 0.66-0.90). Those with less than a high school education (1.03; 95%CI: 0.70-1.35) had a significantly higher mean score than those with a college education (0.48; 95%CI: 0.34-0.63). Generally, our findings agree with the literature that unmarried, low income, minority women experience more partner-related stress during pregnancy compared to other women, with the largest difference in means for unmarried and married women. Understanding the prenatal stress experienced by particular sub-populations can inform interventions by obstetricians and gynecologists, in order to reduce its adverse effects in the total population.

### P15 Utilizing Community Engagement Events to Improve Participant Engagement and Networking

Authors: Ekundayo Nylander-Thompson, Lashonda Williams, Heather Brandt, Andrea Gibson, Bonita Clemons, James Hebert

University of South Carolina, Arnold School of Public Health, Department of Health Promotion, Education and Behavior

### Abstract

Background: Faith-Based African American Communities Empowered for Change (FACE) is a community based organization collaborating with African American churches in the Midlands region of South Carolina to address health disparities in their communities as part of the Healthy Eating and Active Living in the Spirit (HEALS) intervention. The Community Engagement event invited participants from different churches in the program to foster engagement, provide participants with helpful health information and encourage networking within the community.

Methods: Current and active churches were invited to participate in the Community Engagement Celebration. Participants and HEALS program lay health educators (LHEs) engaged in a two-hour session that involved a motivational speaker, food and physical activity demonstrations, and access to community resources. Participants completed a post evaluation to assess their intention to make health behavior changes to improve their health, networking opportunities, and the helpfulness of the information they received from presenters.

Results: Fifty-four evaluation surveys were turned in. The evaluation surveys were comprised from participants (n= 28), LHEs (n=17), and others (n=2), representing 16 churches. 92% of participants intended to make changes to improve their health after the event. 91% of participants indicated that they were very satisfied with the currency and helpfulness of the information presented at the event and 83% of participants indicated that they were very satisfied much and collaboration.

Conclusion: Collaborating with HEALS community partners for community engagement events provides intervention participants with satisfactory opportunities to network and collaborate with each other and community partners. Community engagement events provide participants with information that they find helpful and that participants can use to make behavioral changes to improve their health.

### P16 Veterans Preferences for Treatment of Advanced Prostate Cancer (aPCa) and a Shared Decision Making (SDM) tool

Authors: Zaina P Qureshi, PhD, MS, MPH, Ronnie Horner, PhD, Ronit Elk, PhD, Charles Bennett, MD, PhD, MPP

University of South Carolina, Arnold School of Public Health, Department of Health Services Policy and Management

Instructions: Abstracts should be 300 words or less and describe health disparities research or practice, particularly in the areas of the science of health disparities, social justice and special populations.

Background: Prostate cancer (PCa) is the 2nd leading cause of cancer death in men and afflicts African Americans (AA) and especially veterans at higher rates and aggressive forms. Therapeutic options for advanced prostate cancer (aPCa) are increasing in number and complexity. Shared decision-making (SDM) is the preferred approach to selecting a therapy but is hindered by a lack of information on whether men with aPCa desire SDM, and the treatment characteristics (e.g., side effects) that most concern them. PCa treatment preferences may differ by race/ethnicity as there are known racial differences for other types of care.

Objective: To determine Caucasian and AA Veterans preferences for treatment for aPCa and their likelihood of uptake of a SDM tool.

Methods: We used a qualitative research study design, involving one-on-one interviews with Caucasian and AA Veterans with aPCa. Patients were recruited during a routine clinic visit. An interview question guide – based on the literature and expert opinion – was used to guide the interviews.

Results: (In progress) To date, 6 patients (2 Caucasians and 4 African Americans) all > 60 years of age and suffering from aPCa were interviewed. All the patients preferred Abiraterone despite the requirement for steroids versus Enzalutamide that poses the risk of dizziness and eating disorder. Those who received their therapy related information from the internet found the process to be time-consuming and the information confusing. All patients indicated strong interest in a SDM tool that would allow their preferences to be taken into consideration in the treatment decision-making process.

Conclusion: Caucasian and AA veterans were similar in their preference for a therapy that had minimal or no side-effects. All also desired a SDM process with their provider and wanted a tool that could inform them about their choices and present their preferences to the provider.

### P17 An Ecological Analysis of State-Level Policy and County-Level Health Center Density and Teen Birth Rates in the United States

Authors: Kerry Spillane, Jan M. Eberth

University of South Carolina, Arnold School of Public Health, Department of Epidemiology & Biostatistics

Background: Compared to other developed countries, the U.S. has a substantially higher teen birth rate. Social, economic, and health burdens of teen births are further complicated by persistent geographic disparities. Examining the relationship between state policy and teen birth rates can provide essential knowledge to better influence and inform state policy makers and policy practice.

Objective: To assess whether U.S. state-level policies regarding contraceptive and abortion access for teenagers are correlated with state-level teen birth rates. Secondly, assess whether county population density rates of health centers (Federally Qualified Health Centers and Planned Parenthood centers) are correlated with different county-level teen birth rates.

Methods: Level of state policies regarding access to reproductive health services for teens was categorized using a rating scale from "very lenient" to "very rigorous". Pearson's correlation between level of state policies and state teen birth rates were computed. Pearson's correlation between county population density rates of health centers and county-level teen birth rates were computed and mapped for five states, representing each level of the state policy rating scale using bivariate mapping in ArcGIS Pro Version 1.

Results: Preliminary correlation results showed a significant, positive relationship between level of state policy and state-level teen birth rate indicating that as policy rating increases in rigorousness so does teen birth rate. Preliminary findings also showed no correlation between county population density rates of health centers and county-level teen birth rates.

Conclusion: This ecological analysis showed a positive association between rigorous state-level policies and teen birth rate. Improving and supporting legislative efforts to increase minors' access to reproductive health services can address the issues of teenage pregnancy on a much larger scale. Consideration of social and cultural determinants, as well as individual demographics, is needed in future research.

Keywords: Teen Pregnancy; State Policy; Geographical Information Systems

# P18 Unmet Need for Prescription Drugs among Children aged 1-17 years in the US

Authors: Shyamkumar Sriram MD, MBA, MPH, Khairul Alam Siddiqui MPS, Zaina Querishi PhD

University of South Carolina, Arnold School of Public Health, Department of Health Services Policy and Management

### Introduction

Children represent a vulnerable population for whom adequate access to prescription drugs is vital to promote health and to prevent onset of disease that may reduce health status and quality of life throughout the child's life. Identifying factors leading to the unmet need for prescription drugs should help in reducing barriers to prescription drugs.

### Methods

2014 National Health Interview Survey data were used. National weights were used to estimate relevant parameters. Variables like ability of Children's families to pay medical bills, ethnicity, children who currently receive special education and early intervention and services, appointment with the physician, health status, difficulties in visiting a physician, delays in medical care and health insurance coverage were used to explain probability of having unmet need for prescription drugs. Logistic regression model was used for analysis.

### Results

Children from families unable to pay medical bills are 1.97 times (OR 1.97:Cl 1.32-2.93) more likely to have unmet needs for prescription drugs. Hispanic children were 1.51 times (OR 1.51:Cl 1.05-2.19) more likely to have unmet needs. Children who currently receive special education had 1.71 times (OR 1.71:Cl 1.11-2.63) higher likelihood of having unmet needs. Children having access barriers such as barriers to visit a physician for the past 12 months, barriers due to physician office closures, medical care delays had 1.86 times (OR 1.86:Cl 1.07-3.25), 1.96 times (OR 1.96:Cl 1.02-3.77), 3.47 times (OR 3.47:Cl 2.21-5.44) higher unmet need for prescription drugs respectively. Children having worse health status have 1.51 times (OR 1.51:Cl 1.03-2.22) increased likelihood and children who were not covered by any type of health insurance were 2.46 times (OR 2.465:Cl 1.56-3.87) higher unmet need for prescription drugs.

### Conclusions

Financial, access and ethnicity barriers are the leading causes for higher unmet need for prescription drugs in US. Policy changes addressing these barriers should reduce unmet needs among children.

### P19 Persisting Racial Disparities in Colonoscopy Screening of Persons with a Family History of Colorectal Cancer: What are the Barriers

Authors: Meng-Han Tsai, PhD; Sudha Xirasagar, PhD, MBBS; Piet C. de Groen, MD

University of South Carolina, Arnold School of Public Health, Department of Health Services Policy and Management

Colorectal cancer (CRC) screening guidelines recommend that individuals with a family history of CRC should undergo colonoscopy screening every five years beginning at age 40 years. Colonoscopy is preferred over other screening methods for this group, due to potentially more aggressive disease that may elude early detection. Colonoscopy screening rates are lower among African Americans, despite 23% and 47% higher CRC incidence and mortality, respectively, than Whites. African Americans first-degree relatives (FDR) of a CRC patient are at the intersection of two elevated risk populations, race and FDR status. This study examined screening patterns among FDRs by race using the National Health Interview Survey data to identify potential policy interventions to reduce CRC disparities.

Despite higher colonoscopy rates in 2015 than 2010 among FDRs (72.3% and 62.2% among Whites and African Americans, respectively), sustained and substantial screening disparities were observed among the 40-49 age group in 2010 and 2015, with 35.3% lower colonoscopy rates among African Americans than Whites in 2015 compared to 31.7% in 2010, statistically not significant). Adjusted analysis of the pooled 2005, 2010 and 2015 data (4,135 respondents aged over 40 years, 3,220 Whites, 466 African Americans), showed that, the age group of 40-49 years had one-third the colonoscopy likelihood of the age group of 50-plus. African Americans without college education were 40-60% less likely than Whites of any educational level to have a colonoscopy (Adjusted Odds Ratios (AOR) 0.6 and 0.4, respectively, relative to Whites with and without college education, both p<0.01). There was a widening of the racial disparity among the younger age group since 2005, concurrent with the much increased screening rate in 2015 relative to 2005 (AOR for 2015, 10.9). Targeted patient navigation may increase screening rates among less educated and younger Americans with a CRC family history.

### P20 African American End-Stage Renal Disease and Medication Adherence: What are the Effects of Everyday Racism?

Author: Tamara Estes Savage, USC College of Social Work Doctoral Program

University of South Carolina, Department of Social Work, USC College of Social Work Doctoral Program

Background & Purpose: Poor medication adherence leads to increased hospitalizations, morbidity, and mortality in end-stage renal disease (ESRD) patients. African American ESRD patients have poorer rates of medication adherence when compared to Whites. Studies have not investigated the impact of broader social issues such as everyday racism on this racial disparity. This is the first study to explore how everyday racism within the healthcare system contributes to this disparity in medication adherence. A mixed methods study was conducted to investigate the relationship between everyday racism and medication adherence within the African American ESRD community.

Methods: Primary data were collected from 46 African American ESRD patients. All participants completed a questionnaire comprised of demographic information, a medication adherence survey, and an everyday racism in the healthcare setting survey. Additionally, 27 of the total sample (N=46) participated in in-depth interviews which lasting approximately one hour. Participants were recruited from attendees at two patient-centered meetings in Greensboro, NC and Nashville, TN. Pearson's Correlation was used to analyze quantitative data and Constructivist Grounded Theory was used to identify themes that emerged from interview transcripts.

Findings: A statistically significant negative relationship was found between medication adherence and everyday racism in the healthcare system (r = -.477, p < .01). As everyday racism increased, medication adherence decreased. Furthermore, interviews revealed that everyday racism perpetuated within the healthcare system negatively affected participants' medication adherence. Three themes were identified: 1) Concern that medical providers were not knowledgeable about the medications they were prescribing 2) Concern that the medication was not safe 3) Information about medication and lab results withheld or given to participants without further consultation.

Conclusions & Implications: These findings provide the basis for development of future research that could lead to antiracist praxis, strategies, and targeted interventions that could address the medication adherence racial health disparity.

### **Poster Session Abstracts Submitted**

Colorectal Cancer Educational Intervention in African American Men Authors: Dr. Betty Abraham-Settles and Dr. Joyce Pompey

An Evaluation of Changing Healthcare Place Among African-American Population Authors: Serdar Aydin, Ph.D(c), MBA, Shyamkumar Sriram

### The Effect of Sexual Orientation on Heart Condition/Disease: Is Sexual Orientation Related to Heart Disorders?

Author: Serdar Aydin, Ph.D(c), MBA

Racial Differences in Access to a Specialist: Current healthcare landscape Authors: Serdar Aydin, Ph.D(c), MBA, Khairul Alam Siddiqi, MPH, Zaina Qureshi PhD, MPH, MS, DMM, Abeer Alharbi

Working with Federally Qualified Health Centers to Increase Colorectal Cancer Screening Authors: Cynthia Calef, MAML, Hiluv S. Johnson, BA, Jay Whitmore, MSW, Lauren Workman, PhD, and Heather M. Brandt, PhD, CHES, University of South Carolina.

Identifying facilitators and barriers for shared-decision making in prostate cancer Authors: Cynthia Calef, MAML, Zaina P Qureshi, PhD, MS, MPH, Ronnie Horner, PhD, Ronit Elk, PhD, Daniela Friedman, PhD, Jan Ostermann, PhD, Saundra Glover, PhD, Charles Bennett, MD, PhD, MPP

**Demographic Disparities in Extent of Suicidal Events after Exposure to Fluoroquinolones Authors:** Eric Chinaeke, (MSc, M.Pharm) Shyamkumar Sriram, M.B.B.S., M.D., M.B.A., M.P.H., Amir Mehrabi, MHSA, BS, Rakchanok Noochpoung, MHA, DDS, Cynthia Calef, MAML, Zaina Qureshi, PhD, MPH, MS and Charles Bennett, PhD.

Electronic Cigarette Awareness and Use amongst South Korean Smokers: Implications for Socioeconomic Health Disparities

Authors: Yoojin Cho, James F. Thrasher

The Effect of Balancing Work and School on Weight Gain in Undergraduate: the perspective of Female Students at University of South Carolina Authors: Gloria Esoimeme: Jarrod Bullard

Differences in wearout trends of novel pictorial warning labels across smoker subgroups: Results from smokers in Australia and Canada

**Authors:** Farahnaz Islam (University of South Carolina), James F. Thrasher (University of South Carolina), Kamala Swayampakala (University of South Carolina), Hua Yong (Cancer Council Victoria), Ron Borland (Cancer Council Victoria), James W. Hardin (University of South Carolina), Lin Li (Cancer Council Victoria), David Hammond (University of Waterloo)

The Association of Supplemental Nutrition Assistance Program on Educational Outcomes Authors: Michele Josey, MS; Anwar T. Merchant, ScD, MPH, DMD

Mental Health of African American College Students attending Predominantly White Institutions Author: Kaleea Lewis, MSPH, Doctoral Candidate

Creating a Resource Guide to Ensure the Right to Women's Reproductive Health Authors: Kathryn Luchok, PhD Dept of Anthropology and Women's and Gender Studies, USC Columbia; Melissa Davis, Women's Rights and Empowerment Network, Columbia SC

Food shopping patterns of residents living in food desert communities in South Carolina Authors: Xiaonan Ma, Angela D. Liese, Bethany A. Bell, Jihong Liu, Kellee White, Patricia A. Sharpe

### Using Tailored Narratives to Increase Cross-Racial Empathy and Reduce Implicit Racial Bias: A Preliminary Study Toward Eliminating Racial Health Disparities

Authors: Jennifer Mandelbaum, MPH, Rachel E. Davis, PhD, Andrea K. Henderson-Platt, PhD, Sonya J. Jones, PhD, Monique L. Lyle, PhD, Alexander C. McLain, PhD, Mindi Spencer, PhD

### The History of Tobacco Advertisements Targeting African American Youth

Authors: Eric J. Junious, MSW, Gennetta G. Mitchell, D.C., and Osasere Egheomhan

### Calcium to Magnesium Intake Ratio and Prostate Cancer Aggressiveness in the North Carolina – Louisiana Prostate Cancer Project

Authors: Omonefe Omofuma, Lenore Arab, L. Joseph Su, Jeannette T. Bensen, Elizabeth T.H. Fontham, James L. Mohler, Susan E. Steck. Department of Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA, University of Arkansas, Little Rock, AR, Department of Epidemiology, Gillings School of Global Public Health, Lineberger Comprehensive Cancer Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, School of Public Health, Louisiana State University Health Sciences Center, New Orleans, LA, Roswell Park Cancer Institute, Buffalo, NY

### Demographic Variation of Hepatitis C Virus (HCV) Prevalence in the US: Results from the National Health and Nutrition Examination Survey 2009 – 2014 Authors: Chamberline E. Ozigbu, Bankole Olatosi

### Income-related Disparity in Medical Care Use by American Children: Evidence from the National Survey of Children's Health, 2011-12

Authors: Khairul Alam Siddiqi (MPS), Serdar Aydin (MBA), Shyamkumar Sriram (MPH), Mohammad Rifat Haider (MBBS, MHE, MPS), Zaina Qureshi (PhD, MPH, MS, DMM)

### In Our Community Dementia Speaks: Through the Lens of Family Caregivers

Authors: Macie P. Smith, Ed.D, Bonnie Bonomo, BS, Briana Thompson, BS

### Addition of Chronic Sleep Restriction to Caloric Restriction: Substrate Utilization and Physical Activity Changed Differently

Authors: Joshua R. Sparks, Kimberly P. Bowyer, and Xuewen Wang

### Protecting Our Kids from Harmful Effects of Media: Exploring Advocacy and Policy Strategies to Reduce Exposure to Tobacco Products in Video Games

Authors: Srivastav, MPH, Sam Christmus, and James F. Thrasher, PhD

### Differences in The Availability And Quality Of Physical Activity Resources in Sumter And York Counties

Authors: D. Matthew Walker; Kerry McIver, PhD; Russell Pate, PhD

#### Alzheimer's and Women's Holistic Health

Author: Rebecca Weissman, USC doctoral candidate in Curriculum and Instruction and Women's and Gender Studies Graduate Certificate Student

### **OPASCities:** Building capacity for food systems change for childhood obesity prevention in SC communities.

Authors: Sonya J. Jones, Mary J. Wilson, Katie Wellborn, Ashley Page, Carrie L. Draper, Holly Pope, Jason Craig, Ranina Outing

#### SC Cancer Alliance: Health Equity in Colorectal Cancer

Author: Gerad Wilson, PhD, South Carolina Cancer Alliance, Chairman

### **Colorectal Cancer Educational Intervention in African American Men**

Authors: Dr. Betty Abraham-Settles and Dr. Joyce Pompey

### University of South Carolina Aiken, College of Nursing

Colorectal cancer mortality rate for African American men (AAM) is 29.8 per 100,000 compared to 19.5 per 100,000 for Caucasian men. This project was completed to determine if African American men experienced an increase in awareness in health belief and colorectal cancer knowledge after participating in an educational session developed by a faith community nurse. A convenience sample consisting of 17 AAM was recruited to participate in a parish based education project. The men attended 15 minute education sessions covering information about colorectal screening. Each small group session also received written materials for future reference. A pre/post design was used to test the effectiveness of the intervention by comparing knowledge and Health Belief scores. A small increase in knowledge scores for awareness of colorectal cancer (CRC) symptoms and the colonoscopy procedure was noted. Scores for Health Belief improved from pre intervention (M =3.25, SD = 0.96) to post intervention (M = 3.87, SD = 0.33). Knowledge gained from this initial program will be used to develop future health education interventions for this faith community.

### An Evaluation of Changing Healthcare Place Among African-American Population

Authors: Serdar Aydin, Ph.D(c), MBA, Shyamkumar Sriram

University of South Carolina, Arnold School of Public Health, Department of Health Services and Policy Management

### Background

A focus on changing places in healthcare can provide some important contributions to evaluate health and health inequalities as well as quality of care.

### Objective

The purpose of this analysis was to determine the relationships of changing healthcare place with African-American population. is study aims to explore the effects of race on changing healthcare places association between sexual orientation and heart condition/ disease among African-American Population.

### Methods

The 2015 National Health Interview Survey (NHIS) asked adults regarding their experiences whether healthcare place has been changed during the past 12 months, "Change healthcare place, past 12 m" (n =31,359). We used both logistic regression model to compare the relationship of each racial group with changing healthcare place, and chi-square tests were also used to explore the association between covariates.

### Results

Only 7.7% of African-American changed healthcare place compared to 8.8% white, and 8.7% others. There is no statistically significant relationship between changing healthcare place with African-American population (OR= 0.98; 95% CI 0.87-1.11) compared to others. The result also showed that changing healthcare place is not associated with any races ( $\chi 2 = 5.347$ , p = .069).

### **Discussion & Conclusion**

In this study, we identified that even changing healthcare place is an important indicator for many topics, it does not have any relationship with racial disparities. Further research is needed to determine the factors that may be associated with changing healthcare place among racial differences.

### The Effect of Sexual Orientation on Heart Condition/Disease: Is Sexual Orientation Related to Heart Disorders?

Author: Serdar Aydin, Ph.D(c), MBA

University of South Carolina, Arnold School of Public Health, Department of Health Services and Policy Management

### Background

Sexual minority health is increasingly getting more attention. Sexual orientation, gay, lesbian, bisexual (GLB) has been a debated risk factor for many health disorders including mental health, suicide, physical health status, and HIV. To date, most sexual orientation studies have reported its relationship with the prevalence of psychiatric disorders, tobacco use, health care access, violence victimization, and chronic disease risk. However, there are still many gaps in research of sexual orientation that need to be answered.

### Objective

This study is one of the first to examine the association between sexual orientation and heart condition/disease.

### Methods

Sexual orientation was determined by the following question: "Which of the following best describes you?" Heart condition disease was analyzed comparing GLB individuals and other. Data from the National Health Interview Survey (NHIS) were examined (n= 19,592). Pearson Chi-Square tests were used to examine the association between sexual orientation and heart condition/disease.

### Results

The sexual orientation of male consisted 1.9% gay and 0.5% bisexual while female had 1.4% lesbian and 1.0% bisexual. Gay and bisexual male, and lesbian and bisexual female who had a heart condition/disease were 8.5% and 9.1%, respectively, compared to straight male and female 8.3% and 8.7%, respectively. However, there is no statistical significance between sexual orientation and heart condition/disease ( $\chi 2 = 0.225$ , p = .894).

### **Discussion & Conclusion**

This study fulfilled a gap about the effect of sexual orientation on heart condition/disease that has not been known. Future research is needed to ascertain factors that may be associated with sexual orientation.

### Racial Differences in Access to a Specialist: Current healthcare landscape

Authors: Serdar Aydin, Ph.D(c), MBA, Khairul Alam Siddiqi, MPH, Zaina Qureshi PhD, MPH, MS, DMM, Abeer Alharbi

University of South Carolina, Arnold School of Public Health, Department of Health Services and Policy Management

### Background

Access to timely and appropriate healthcare services from a specialist is crucial. There are a number of diseases for which early treatment through a specialist is vital to reduce morbidity and pain. Access to medical care for African Americans (AA) in the United States has improved significantly. However, previous studies have reported that AAs use fewer health care services offered by a specialist? than whites despite having worse health status. This study's purpose is to begin filling in some of these gaps in knowledge.

### Objective

To determine whether there is a correlation between racial differences and access to a specialist.

### Methods

2015 National Health Interview Survey, a large-scale household interview survey of a statistically representative sample of the U.S. population, was used in this study (n= 36,345). Pearson's correlation between races and accessing specialist were computed to explore the relationship between variables. Logistic regression was conducted to study the association of race with access to specialist adjusting for other covariates.

### Results

While 4.4% white, and 4.6% others couldn't see a specialist, black/African American had 5.5% of the total not to see a specialist. White were more likely able to see a specialist (95.6%) compared to black and others. Racial differences are significantly associated with access to healthcare from a specialist ( $\chi^2 = 12.023$ , p = .002). Black/African American population was significant compared to others (OR= 0.83; 95% CI 0.69-0.99).

### **Discussion & Conclusion**

Consistent with prior literature we found that race is associated with access to a specialist and that AAs were less likely to have seen a specialist. Future research is needed to identify barriers to accessing a specialist.

# Working with Federally Qualified Health Centers to Increase Colorectal Cancer Screening

Authors: Cynthia Calef, MAML, Hiluv S. Johnson, BA, Jay Whitmore, MSW, Lauren Workman, PhD, and Heather M. Brandt, PhD, CHES, University of South Carolina.

University of South Carolina, Center for Colon Cancer Research

Objective: Our program aims to increase colorectal cancer (CRC) screening among clients in federally-qualified health centers (FQHCs), which are frontline providers of high quality clinical care among medically underserved individuals.

Methods: In partnership with eight FQHC systems in South Carolina, American Cancer Society, and South Carolina Primary Health Care Association, the Colorectal Cancer Screening Program in South Carolina (CCSPSC) engages in activities to increase CRC screening. Partner FQHCs implement at least two priority, evidence-based strategies (provider assessment and feedback, provider reminders, client/patient reminders), supportive strategies (professional education and small media), and additional activities (standard procedures and 80% by 2018 pledge) to increase CRC screening.

Results: The CCSPSC team has partnered with eight FQHCs' and enrolled 14 sites. Ten sites have completed CRCS baseline data collection, including assessments of organizational capacity and readiness. The CCSPSC team has also conducted CRC professional education in 10 sites, implementation trainings in 9 sites, and 7 sites have started implementing evidence based strategies to increase CRC screening. Preliminary results have shown increase in CRC screenings.

Conclusions: Early buy-in for the program is strong among FQHC sites and program partners, and preliminary results indicate increased CRC screening. Initial emphasis on partnership development with FQHCs and collaboration created a foundation for successful progress towards increasing CRC screening.

Disclosure: This abstract was submitted to the 1st Annual Cancer Health Disparities Symposium (Charleston, SC) on March 17, 2017

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### Identifying Facilitators And Barriers For Shared-Decision Making In Prostate Cancer

Authors: Cynthia Calef, MAML, Zaina P Qureshi, PhD, MS, MPH, Ronnie Horner, PhD, Ronit Elk, PhD, Daniela Friedman, PhD, Jan Ostermann, PhD, Saundra Glover, PhD, Charles Bennett, MD, PhD, MPP

University of South Carolina, Arnold School of Public Health, Department of Health Services Policy and Management

### Objective

To identify barriers and facilitators to shared decision-making (SDM) among patients with prostate cancer (PCa).

### Background

Although PCa is the most common non-skin cancer among American men, especially minorities, little is understood about the informational needs of patients in the decision-making process for treatment. SDM, defined as a process in which clinicians and patients work together to make decisions and select tests, treatments and care plans based on clinical evidence that balances risks and expected outcomes with patient preferences and values, is gaining increasing prominence in healthcare delivery.

### Method

Using PubMed, a systematic literature review was conducted to identify studies that measured preferences for prostate cancer treatments. Search terms included, "prostate cancer treatment", "shared decision making", "facilitators", and "barriers". Following the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) statement, we excluded duplicates, articles that did not focus on decision making in prostate cancer and those that did not clearly define facilitators or barriers to treatment.

### Results

From the 87,730 studies originally searched, 32 met the inclusion criteria: 10 studies looked at treatment facilitators, and 22 looked at barriers in treatment and shared decision making. Barriers to SDM were trust, geographical proximity for rural patients, lack of information, inadequate use of decision aids, providers not considering patient preferences, providers not engaged in the SDM process and sociological factors. Facilitators included culturally relevant interventions to address barriers to SDM, increased communication between patients and providers, provider engagement, use of tools that enable informed decision making and improved provider engagement.

### Conclusion:

The literature provides insights into factors that enhance and block SDM. This information can guide efforts to ensure patients, especially minority patients, receive the treatment most appropriate for them.

# Demographic Disparities in Extent of Suicidal Events after Exposure to Fluoroquinolones

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### Background

Fluoroquinolones (FQs) are broad spectrum antibiotics administered to > 20 million persons in 2016. The package insert for a single FQ was revised in February 2017 indicating that suicide deaths and attempted suicide events (SEs) have occurred following its administration. Association of patient characteristics with suicidal attempts or successes operationalized as SEs is unknown. Our goal was to study whether patient's demographics, comorbidities suffered and number of concomitant drugs taken were associated with Suicide events.

### Method

We used Medwatch data; a publicly available Food and Drug Administration's voluntary safety information and adverse events reports on FQs (Ciprofloxacin, Moxifloxacin and Levofloxacin). Data was described and bivariate analysis conducted. We regressed the association between patient's demographics and other variables on whether a patient completed or attempted suicide after exposure to FQs.

### Results

Overall, 114 patients (mean age 41, 34% female) experienced FQs related SEs of which 39% (44) attempted suicide and 61 % (70) completed suicide. Majority of the SEs (78%) occurred after short-term (0-14 days) exposure. Bivariate analysis showed significant association between SEs, demographics and other covariates. Multivariate analysis shows the odds of completing suicide after FQ exposure is higher among men OR: 3.8 (CI: 1.35, 10.6) compared to women. The odds of completing suicide was lower among patients aged (45-64 years) OR: 0.11(CI: 0.023, 0.55) compared with patients aged (> 64 years). Higher number of comorbidities suffered and concomitant drugs used were associated with higher odds of completing suicide [(OR: 1.6 (CI: 1.2, 2.0) and OR: 1.8 (CI: 1.2-2.8)] respectively.

### Conclusion:

Men were more likely to commit suicide compared to women. Younger patients were less likely to commit suicide compared with older patients. Patients with multiple co-morbid conditions and or on multiple concomitant drugs were more likely to commit suicide.

### Electronic Cigarette Awareness and Use amongst South Korean Smokers: Implications for Socioeconomic Health Disparities

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### Background

Electronic cigarettes (e-cigarettes) have a potential to benefit public health by helping smokers to quit. However, there is growing concern that the benefits are likely to be realized amongst more socioeconomically advantaged groups. This study investigates whether high socioeconomic status is associated with e-cigarette awareness and use in a population of adult smokers in South Korea.

### Methods

A nationally representative sample of 2,000 Korean adult smokers were surveyed in 2016. Socioeconomic status was assessed by highest educational attainment and household income. Information was also collected on awareness, ever-use, and current use of e-cigarettes. Bivariate and multivariate logistic models estimated the association between main independent variables (educational attainment, household income) and dichotomous dependent variables (awareness, ever-use, and current use of e-cigarettes). Multivariate models adjusted for age, sex, and key smoking-related characteristics (i.e., self-efficacy to quit smoking, smoking dependence, and quit intention).

### Results

A total of 94% of respondents were aware of e-cigarettes, 38% had ever used e-cigarettes, and 5% were current e-cigarette users. Compared to smokers with low education, smokers with a 'moderate' and 'high' education level were more likely to be aware of (OR=3.76 & 4.55), have ever used (OR=4.58 & 3.81), and currently use e-cigarettes (OR=4.74 & 4.56). Compared to smokers with low income, smokers with a 'high' household income level were also more likely to be aware of e-cigarettes (OR=2.55), have ever used e-cigarettes (OR=1.69), and currently use e-cigarettes (OR=2.18). When adjusted for covariates, the association mostly disappeared; however, lower age, higher smoking dependence and lower self-efficacy were independently associated with everuse of e-cigarettes, and lower age, lower self-efficacy, and having quit intentions were independently associated with current e-cigarette use.

### Conclusion

Our findings suggest that e-cigarettes may increase socioeconomic disparities in smoking. Future studies should investigate the public health impact of e-cigarettes including effects on health disparities.

## The Effect of Balancing Work and School on Weight Gain in Undergraduate: the Perspective of Female Students at University of South Carolina

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#### Background

The transition from high school to college can be an overwhelming process because new students must adjust to balancing their social and personal lives with academic demands. Current literature suggests that the college living experience facilitates modest weight gain among females due to change in eating habits, physical activities and increased alcohol consumption.

Most studies on weight gain in college have focused on the effect of the transition only among freshmen populations and on outcomes and management of weight gain. The purpose of this study was to evaluate the effect of balancing work and school as contributing factors to weight gain female students.

#### Methods

The primary research question for this qualitative pilot study was, "what do undergraduate female students attribute their weight gain to?" Our secondary research questions are:1) Do college eating habits influence weight gain, 2) Do sleep patterns influence weight gain, and 3) How does work and school schedule influence physical activity? We conducted four semi-structured, in-depth interviews with undergraduate female USC sophomore, junior, and senior students. Our sample population was a criterion-based selection of students who have spent at least one full academic year on campus.

#### Results

The study population was 75% African American, aged 19-26 years, 50% seniors, 50% sophomores and 75% employed. Themes were coded as they emerged and most students attributed their weight gain to stress from balancing work and school. Other themes that emerged from analysis was irregular eating habits, influence of co-workers, eating out, alcoholic consumption, financial constraints, and irregular sleep patterns.

#### Conclusion

The findings from this feasibility study showed that students who work undergo significantly more stress compared to students who do not, ultimately leading to weight gain. Findings can inform development of stress relief programs for undergraduate working female students preventing weight gain in the future.

### Differences in Wearout Trends Of Novel Pictorial Warning Labels Across Smoker Subgroups: Results From Smokers in Australia and Canada

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Background: In 2012, both Canada and Australia introduced new pictorial warning labels (PWLs) for cigarette packs. In Canada, PWLs increased in size from 50% to 75% on both front and back of packs and included pack inserts with complementary cessation messages. In Australia, the PWL size increased from 30% to 75% on front of packs. This study examines adult smokers' responses to new PWLs over the post-implementation period, focusing on differences in trends across key smoker subgroups.

Methods: Data were collected from online panels in Australia (Jan 2013 – Sept 2014) and Canada (Sept 2012 - Sept 2014), with 1,000 adult smokers surveyed in each country every four months. Data were pooled across countries, and generalized estimating equation models estimated PWL responses (i.e., attention to PWLs; cognitive responses to PWLs; forgoing cigarettes due to PWLs) over time (i.e., survey wave), followed by assessment of main effects and interactions between time, country, and key cessation predictors (i.e., smoking intensity, quit intentions, recent quit behavior, self-efficacy to quit).

Results: In Canada, unlike Australia, attention to PWLs decreased (p<0.05) while cognitive reactions increased over time (p<0.05). Forgoing cigarettes due to PWLs increased significantly in both countries (p<0.01). Temporal changes in cognitive responses and forgoing cigarettes were unassociated with smoking intensity, quit intentions & recent quit behavior. In both countries, smokers with higher self-efficacy showed a greater increase in forgoing cigarettes over time compared to smokers with low self-efficacy (p<0.01); unique to Australia, smokers with higher self-efficacy had a greater increase in attention (p<0.001) and cognitive responses over time (p<0.001).

Conclusions: Novel PWLs in Australia and Canada appear effective in staving off wearout over a two-year post-implementation period, with few differences between key smoker sub-groups.

# The Association of Supplemental Nutrition Assistance Program on Educational Outcomes

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#### Background

Food insecurity (FI), a measure of limited or uncertain access to food, affects 28% of children in South Carolina (SC), especially those from single parent and lower-income households, and among Blacks or Latinos. FI and food insufficiency predict poor reading and mathematics skills, and asthma, sadness and depression, behavioral problems, repeating a grade, and being suspended from school. The supplemental nutrition assistance program (SNAP) decreases household food insecurity among adults and children. It is plausible that SNAP affects educational outcomes by impacting food insecurity, however, the direct effect of SNAP on academic performance has not been extensively studied.

#### Methods

The study population of this cross-sectional analysis comes from the 2012 – 2014 SC responses to the Behavioral Risk Factor Surveillance Survey (BRFSS) and the follow-up child survey, Children's Health Assessment Survey (CHAS). The analysis employed a logbinomial regression to model the prevalence ratios of SNAP on whether a school-aged child aged 6-17 years repeated a grade, adjusting for income, household education and composition. An interaction term was included to determine if the effect of SNAP varied by income.

#### Results

SNAP participation was positively associated with a child repeating a grade [PR = 1.60, CI (1.10, 2.34)] compared with children coming from households not receiving SNAP. Household income and composition were not associated with the outcome. The association between SNAP participation and academic performance was attenuated by income level [PR=1.36: 95%I (1.35, 1.38)] for low-income versus [PR=2.27: 95%CI (1.58, 3.26)] for higher income groups (p-for interaction=0.10) compared with children in higher income homes not receiving SNAP benefits.

#### Conclusion

While children from households receiving SNAP benefits were more likely to repeat a grade, this relation was attenuated in low-income children. This descriptive study lays the foundation for future studies to investigate a causal effect of SNAP on education outcomes.

## Mental Health of African American College Students Attending Predominantly White Institutions

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African American college students who attend predominantly White institutions of higher education (PWIs) regularly encounter subtle and explicit forms of racism on campus. These daily experiences of prejudice and discriminatory behaviors, termed everyday racism, can have an adverse impact on their mental health. This study investigates the relationship between experiences of racism and the mental health of African American college students attending a PWI.

Individual, in-depths interviews were conducted with a convenience sample of twentyfive African American college students (ages 18-24) at a PWI in the southeastern United States in order to explore the relationship between their experiences of racism on campus and their mental health.

Qualitative analysis of participants' narratives revealed experiences with everyday racial discrimination in the form of overt racism, racial microaggressions, and inequitable treatment by faculty and staff. The combination of such repeated experiences contributed to overall feelings of anger, loneliness, social isolation, and invisibility in participants' narratives of their subjective sense of well-being. When discussing experiences of racial discrimination, participants recounted becoming numb or "immune" to discrimination and in turn trying to transform their experiences into a source of motivation to excel at and complete their college education. Participants also discussed how the campus environment contributed to a diminished sense of self-confidence, inability to focus in class, and sleeplessness.

The ways in which African American college students make sense of their experiences with racism on campus in relation to their mental health directs attention to the importance of expanding efforts to improve the racial campus climate at PWIs. Placing the perspective of African American students at the center of inquiry allows for the development of a more nuanced understanding of the enduring discrimination that African American students negotiate at PWIs. Such insight can lead to potential strategies not currently in place.

## Creating a Resource Guide to Ensure the Right to Women's Reproductive Health

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Background/significance: South Carolina (SC) is home to 4.8 million, for whom sexual/ reproductive health care is essential to overall well-being. For many, even after insurance reform, access remains limited; affordability is a significant barrier, as 18% of SC adults went without needed care. The cost barrier is coupled with a lack of providers for the 750,000 South Carolinians living in rural counties. The rate of unintended pregnancy remains high at 50% and despite recent declines, black and Latina girls are more than twice as likely as white girls to become pregnant before they leave adolescence. Women who experience domestic violence or homelessness are also less likely to obtain reproductive health care services.

Objective/purpose: We conducted interviews with women and workers in domestic violence and homeless shelters about reproductive health needs. Uniformly neither women nor workers knew where women could access services. To address this, we created the South Carolina Resource Guide.

Methods: Volunteers from a statewide health coalition worked together on the guide. One paid staffer contacted each entry in the guide to make sure all data were correct; the guide is an on-line searchable and printable PDF.

Discussion/Conclusions: The Access Guide serves as a directory to assist in identifying affordable sexual/reproductive healthcare organized by service and county. By including a range of resources, the Guide asserts the vital role sexual/reproductive health plays throughout an individual's life. It provides a foundation for collaboration/coordination among organizations across the state in pursuit of community-based systems to combat infant and maternal mortality, STIs, unintended pregnancy and domestic violence.

Dissemination activities are underway. Other states can follow these procedures to create their own guides. Reproductive health services cannot be accessible if people do not know where to find them. This guide provides that first step in listing in one place a variety of needed services.

## Food Shopping Patterns Of Residents Living In Food Desert Communities In South Carolina

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Our purpose was to identify distinct food shopping patterns or profiles in a population residing in low-income, low access communities in South Carolina (SC) and to characterize the patterns with respect to the residents' socioeconomic status (SES) attributes, nutritional knowledge, and perceptions of the food environment. 522 participants were recruited between November 2013 and May 2014 from two SC counties. Thirteen measures of shopping behaviors (i.e. travel distances between residential location and three utilized stores, shopping frequency, store type, transportation mode (store 1 only); and community food sources, such as food banks or pantries, or churchbased resources) were used in the food shopping pattern analysis. Latent class analysis was employed to explore the food shopping patterns. Also, associations between the shopping patterns and various factors were examined. 80% of participants were living in a low income and low food access census tract. Three patterns were identified, including the 'infrequent shoppers & utilizers of community food resources' (40. 3%), the 'more frequent, proximal shoppers & utilizers of community food resources' (39.2%), and the 'distal shoppers & non-users of community food resources' (20.6%). The participants of the 'infrequent shoppers & utilizers of community food resources' had lower SES status, higher proportion of food insecurity, and perceived that food access was a problem. The 'more frequent, more proximal shoppers & utilizers of community food resources' were very similar, except their food shopping access perceptions. 'Distal shoppers & nonusers of community food resources' had higher SES, but also perceived food shopping access as a problem. Type of grocery store utilized did not distinguish the patterns. Food shopping frequency and utilization of free community food resources were the key factors that defined the shopping patterns among this low-income population. Future studies should investigate the association between these shopping patterns and dietary intake and health outcomes.

### Using Tailored Narratives to Increase Cross-Racial Empathy and Reduce Implicit Racial Bias: A Preliminary Study Toward Eliminating Racial Health Disparities

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African Americans experience persistently higher morbidity and mortality rates than Whites across a wide array of health outcomes. Racial discrimination has been posited as a key explanation for these racial health disparities, with direct and indirect effects vielding adverse physical and mental health outcomes. A growing body of work suggests that implicit racial bias (i.e., unconscious racism) may help to explain the persistence of racial health disparities. This implicit racial bias results in subtle, systematic, and indirect discrimination that operates across a wide range of settings. Existing research has promising implications for reducing implicit racial bias; research is needed, however, to apply extant findings in the development and testing of applied public health interventions to promote more equitable interracial interactions, reduce implicit racial bias, and, ultimately, eliminate health disparities between African Americans and Whites. Narratives present a promising tool for enhancing cross-racial empathy and reducing implicit racial bias. Narratives are a form of communication that contain a story with time-ordered events, characters, a plot, and spatiotemporal contexts. Exposure to a story about an individual from a stigmatized group has been shown to both increase empathy for the individual and yield more positive attitudes about the stigmatized group. Using an experimental design, this study will test the efficacy of using specific narrative strategies in tailored (personalized) narratives to increase empathy for and reduce implicit racial bias toward African Americans among a sample of 360 White adults. Findings from this study will address critical knowledge gaps for creating health interventions to reduce and ultimately eliminate African American-White health disparities.

## The History of Tobacco Advertisements Targeting African American Youth

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Tobacco is the leading preventable cause of death, disease, and disability in the US. (CDC, 2016). Communities of color have been impacted by tobacco use historically creating an assortment of physiological health conditions that range from strokes, cancer and heart disease (Bauer, 2016). This effort is primarily advanced through a targeted market, which focused on menthol brands of cigarettes by price promotions, and point of sale advertising (Larson & Derisier, 2016). 3,200 youth in America smoke for the first time daily (Bauer, 2016), by 15, one third of all girls and boys are smoking around six cigarettes daily (Garrett, Gardiner, La Tanisha, & Pechacek, 2016). Many prefer menthol cigarettes more than non-menthol, African American adolescent smokers account for 88.5% of those who have that preference (Myers, 2016). Research suggest that menthol cigarettes are twice as addictive and way more harmful that non-menthol cigarettes due to harmful chemicals (Larson & Derisier, 2016). Tobacco has been promoted through campaigns that support higher education, scholarships, and cultural events exposing more advertising among African American youth (Bauer, 2016). The aim of this exploratory qualitative study would be to curb smoking among African American adolescents in Columbia, SC through identifying themes created by the community. Focus groups conducted within communities of color will examine their lived experience pertaining (1) tobacco use, (2) promotion, (3) cause, and (4) affect. This will provide dialogue to define the problem, and understand the risk physiologically; thus, creating pathways to behavioral change.

### Calcium to Magnesium Intake Ratio and Prostate Cancer Aggressiveness in the North Carolina – Louisiana Prostate Cancer Project

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Objective: Experimental studies suggest that calcium and magnesium compete for membrane binding sites. An imbalance in the level of these micronutrients has been associated with multiple chronic diseases, though few studies to date have examined the relationship with prostate cancer. The goal of this study was to examine the dietary intake ratio of calcium to magnesium and its association with prostate cancer aggressiveness in African Americans (AAs) and European Americans (EAs).

Method: Calcium and magnesium intakes were estimated using an intervieweradministered modified version of the National Cancer Institute Diet History Questionnaire in 996 AA and 1064 EA men with a recent histologically confirmed diagnosis of prostate cancer from the North Carolina – Louisiana Prostate Cancer Project (PCaP). High aggressive disease was defined as Gleason sum  $\geq$ 8, or PSA> 20ng/ml, or Gleason score  $\geq$ 7 AND clinical stage T3-T4, and the comparison group was all other prostate cancer cases. Logistic regression was used to determine the adjusted odds ratio (OR) and 95% confidence intervals (95% CI) for high aggressive prostate cancer by quartile of calcium to magnesium intake ratio.

Results: There was a positive association for prostate cancer aggressiveness across the quartiles of calcium to magnesium intake ratio, with odds of high aggressive prostate cancer in the upper quartiles; ORQ2VS.Q1:1.46. 95% CI: 1.02 - 2.07, ORQ3VS.Q1:1.42. 95% CI: 1.00 - 2.03 and ORQ4VS.Q1: 1.69, 95% CI: 1.19 - 2.40. When stratified by race, the association was observed in both AA men, ORQ4VS.Q1: 1.72, 95% CI: 1.08-2.74 and EA men ORQ4VS.Q1: 1.89, 95% CI: 1.12 - 3.19.

Conclusion: Among both African American and European American men diagnosed with prostate cancer, a higher calcium to magnesium intake ratio as reported in the year prior to diagnosis was associated with higher odds of high aggressive prostate cancer.

Support or Funding Information

The North Carolina-Louisiana Prostate Cancer Project

### Demographic Variation of Hepatitis C Virus (HCV) Prevalence in the US: Results from the National Health and Nutrition Examination Survey 2009 – 2014

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#### Background

About 75%-85% of chronic liver diseases is caused by Hepatitis C virus (HCV) which is the primary cause of hepatocellular carcinoma in the United States. However, racial disparities continue to exist in both HCV morbidity and mortality rates. Studies have associated Black with high prevalence rate of HCV seropositivity and hepatocellular carcinoma. Blacks are reported to have more than twice the rates of Whites. In this study, we describe demographic variation in HCV prevalence in the US.

#### Methods

We used weighted pooled data from the National Health and Nutrition Examination Survey (NHANES) 2009 - 2014. Analysis was limited to participants aged 18 - 64 years (N= 14,425). Out these, 163 participants tested positive to HCV RNA constituting a 1.1% prevalence rate. Analyzes were conducted using SAS survey procedures to account for the multi stage sampling framework in NHANES.

#### Result

Preliminary results show that majority of people living with HCV were males (73%), Non-Hispanic White (60%), had less than 12 grade level education (36%), married (39%) or divorced (21%) and aged between 45-54 (47%) and 55-64 (36%), with annual family income below \$35,000 compared to non-Hispanic Blacks (22%) and other races with similar characteristics.

#### Conclusion

Racial disparity continues to be an issue in United States, with a prevalence shift of HCV positive among Non-Hispanics White. An understanding of the underlying mechanisms is an essential step in implementing measures to reduce racially based inequities affecting the management of liver disease in the US.

### Income-related Disparity in Medical Care Use by American Children: Evidence from the National Survey of Children's Health, 2011-12

**Authors:** Khairul Alam Siddiqi (MPS), Serdar Aydin (MBA), Shyamkumar Sriram (MPH), Mohammad Rifat Haider (MBBS, MHE, MPS), Zaina Qureshi (PhD, MPH, MS, DMM)

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Objectives: This study assessed children's socioeconomic conditions regarding health care access and hypothesized that, children from poor family income report higher unmet medical care needs.

Methods: We analyzed retrospective cross-sectional data from the 2011-2012 National Survey of Children's Health, a nationally representative data collected via phone interviews of parents/guardians of children between the ages of 0-17. Weighted multilevel analysis was carried out to examine the relationship of background factors with unmet medical care need.

Results: A total of 95531 children were surveyed and among them 2856 children (weighted 3.4%) had not received or had delayed medical care when they needed it. Forty-four percent of the children live below 200% federal poverty level, 6.31% had no usual source of care (USC), and 5.6% were uninsured. Twenty percent children had special health care needs, 15% were from outside the metropolitan statistical area (MSA), and 3.2% had reported their health status as poor. Multivariate analysis showed that, children from poorer family were more likely to report unmet medical care needs; who were from household income below 200% of poverty level had higher odds (OR 2.25, 95% CI 1.67-3.01) of having unmet needs compared to whom from above 400% poverty level. Additionally, children who did not have USC (OR 1.73, 95% CI 1.22-2.48) and insurance coverage (OR 8.28, 95% CI 5.96-11.51) were more likely to have unmet needs. Children with special health care need (OR 1.78, 95% CI 1.45-2.20), poor health status (OR 2.28, 95% CI 1.60-3.23), and of multiracial families (OR 1.62, 95% CI 1.09-2.40) were more likely to have delayed or no care. Surprisingly, children of mothers with lower education and from non-MSA region had lower odds of having unmet medical care need.

Conclusion: Family income, USC and insurance coverage play a vital role in meeting healthcare needs. Special focus should be given to those disadvantaged group of children with unmet medical needs.

## In Our Community Dementia Speaks: Through the Lens of Family Caregivers

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Columbia Urban League, Inc.

Studies support that the majority of persons living with dementia lives in the community with family members and loved ones. Therefore, comprehensive health management of persons living with dementia is vitally important to improve the lives of persons living with dementia, as well as their care partners. Emerging research reveals that community-based caregiver interventions can improve the quality of life of persons living with dementia by improving the quality of caregiver education while reducing caregiver stress.

To align with the research, the Columbia Urban League developed a structured and organized dementia education curriculum, In Our Community...Dementia Speaks, specific to the family caregiving population, with an emphasis on African Americans. Studies support that African American care partners and care recipients are at higher risk of health disparities related to Alzheimer's disease and dementia than their Caucasian counterparts. The education seminars developed are facilitated at least once per week for three consecutive weeks at varying times in faith-based organizations, community centers, senior citizen centers, and assisted living communities that are easily accessible to family members and informal caregivers within their communities. Facilitating training once per week allowed family members the opportunity to attend training while continuing to provide care for their loved one living with dementia.

Preliminary data from call-back surveys showed improvement in four key areas 1) knowledge about dementia, 2) caregivers' ability to provide optimal care, 3) renewed confidence as a caregiver, and 4) decreased caregiver stress.

## Addition of Chronic Sleep Restriction to Caloric Restriction: Substrate Utilization and Physical Activity Changed Differently

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Metabolic regulation plays an important role in maintaining overall health. Lifestyle factors, such as physical activity, dietary intake, sleep, and their interaction play a role in metabolic regulation. It is unknown whether chronic sleep restriction, a popular phenomenon, affects metabolism or physical activity during dietary weight loss. PURPOSE: To compare changes in energy expenditure (EE) and substrate utilization at rest following a caloric restriction (CR) or caloric restriction and sleep restriction (CR+SR) intervention. METHODS: Nineteen inactive, overweight or obese individuals were randomized into an 8-week CR group (n=5: age=44.9±5.2 years) or CR+SR (n=14: age=45.6±5.9 years). The CR restricted daily caloric intake to 95% of each individual's measured resting EE. Indirect calorimetry was utilized to determine resting EE and substrate utilization pre- and post-intervention. SR for the CR+SR group was up to 90 minutes reduction from their regular sleep duration for 5 days each week, and ad libitum sleep on the other 2 days. Sensewear armband was used to measure physical activity EE for 7 days. RESULTS: Body weight decreased in both the CR ( $\sim$ 4.7%, p<0.01) and CR+SR group ( $\sim$ 4.5%, p<0.01) similarly. The CR, not the CR+SR, group showed a significant increase in fat substrate utilization (53.7±7.9% to 66.3±9.5%, p<0.01) and a corresponding decrease in carbohydrate substrate utilization at rest following intervention. The CR+SR group, however, showed decreased physical activity EE (1263.3±1457.1 kcal to 641±397 kcal, p<0.01). CONCLUSION: With similar degree of weight loss, the addition of SR to CR abolished shifts in substrate utilization that occurred with CR only, and resulted in decreased physical activity EE. Effects of SR during longer-term weight loss programs should be examined to determine its role in weight loss and maintenance.

## Protecting Our Kids from Harmful Effects of Media: Exploring Advocacy and Policy Strategies to Reduce Exposure to Tobacco Products in Video Games

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University of South Carolina, Columbia, SCObjective: Children and young adults are especially vulnerable to media influences, with the U.S. Surgeon General concluding that exposure to tobacco portrayals in entertainment media promotes youth smoking. Youth rank videogames as their second favorite media activity, and studies show that tobacco use is prevalent in videogames. This study aimed to characterize the structure, financing, and regulation of the videogame industry, with a focus on opportunities to reduce child and young adult exposure to tobacco in videogames. Methods: We conducted gualitative interviews with 1) researchers and advocates who have been studying and attempting to reduce the potentially harmful effects of videogames on youth (n=7); and 2) people who have worked in the videogame industry (n=5). Interviews explored how the industry responds to attempts to regulate its behavior, including efforts to prohibit certain content and to rate videogames based on content, as well as the ways that the industry has responded to public health research. Data analyses using a grounded-theory, qualitative approach in which two researchers coded each interview using both apriori and emergent codes (percent agreement: 92%) to characterize interview content. Results: Interviews provided history of the video game industry, relationships among industry and researchers. and the role of research in informing industry practices. The interviewees also provided varying but important perspectives on the ESRB, the quality of research on children and young adult's health behaviors and video games, and the extent to which public health advocates can influence the industry. Conclusions: The study resulted in several potential advocacy strategies, ranging from the reformation of the rating system across media channels and leveraging movie studio policies that prohibit tobacco content in youth-rated films to influence their videogame subsidiaries, to automatically giving games with tobacco content a "mature" rating, as recommended by the World Health Organization.

## Differences in The Availability And Quality Of Physical Activity Resources in Sumter And York Counties

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Regular physical activity (PA) is known to have remarkable health benefits, but access to resources for PA can be a limiting factor in PA participation. The amount and quality of PA resources vary by community and along with demographic, socioeconomic, and other factors, can contribute to access-related health disparities. PURPOSE. The purpose was to compare the amount and quality of PA resources in 2 diverse counties in South Carolina. METHODS. As part of the Transitions and Activity Changes in Kids (TRACK) Study, all PA resources including parks, commercial facilities, schools and churches were assessed in Sumter and York Counties using the Physical Activity Resource Assessment (PARA). The PARA characterizes features (e.g. basketball court) amenities (e.g., benches) and incivilities (e.g., litter). We compared the total number of PA resources and the average number of features, amenities, and incivilities by county. Demographic and socioeconomic characteristics of each county were examined. RESULTS. Census data suggests socioeconomic disadvantages for Sumter compared to York County. Our study found 171 PA resources in Sumter County compared to 323 in York County. The average number of features (3.0 and 3.2, respectively, p = 0.61) and amenities (5.4 and 5.8, respectively, p=0.51) at each resource were not different between Sumter and York. The average number of incivilities at each resource, however, were significantly different (p=0.05) between Sumter County (1.3) and York County (0.92). CONCLUSIONS. Combined with the demographic and socioeconomic differences between the counties, this data suggests a disparity in the number of PA facilities and the number of incivilities at PA facilities between Sumter and York counties. Additional research on the impact of the availability and quality of PA resources on PA participation in these communities is warranted.

## Alzheimer's and Women's Holistic Health

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Women's reproductive health is often the most highlighted women's health issue, even though there are other major threats to women's health (Weber, 2012; Carpenter & Casper, 2009; Collins, 2009; Havinsky et al., 2010; Hyams, 2010). However, Alzheimer's disease is one of the greatest dangers to women's health and almost two thirds of those diagnosed with the disease are women. Around 3.2 million women 65 and older are diagnosed with Alzheimer's (alz.org, 2014) and women in their sixties are about twice as likely to develop Alzheimer's over the course of their life than they are to get breast cancer (alz.org, 2014). Additionally, almost two thirds of the caregivers for those with Alzheimer's are women (alz.org, 2014), and often times these women are unpaid. These factors make Alzheimer's a key issue for women in terms of its prevalence, and the inequity caretakers of lower socioeconomic status are dealt with when caring for a loved one with the disease or another dementia.

Additionally, there is relatively little research dedicated to improving the quality of life for those with Alzheimer's or dementia through non-pharmaceutical interventions. The existing body of research remains mostly limited to use of creative arts (Sherman, 2006;Fraser et al; Rhea et al, 2016;Blackburn et. Al, 2014; Sherman,2006;Sung and Chang, 2005). However, in addition to the creative arts there are other viable ways to improve the well being of those with Alzeheimer's and other dementias, such as lifelong learning (Pantisides, 2011;2014; Goombridge, 1982; Ruokonena and Ruismäkia 2011; Richeson and Brady ,2008; Sherman, 2006; Camp, 1995; Sung and Chang, 2005; Kim et al., 2006), this includes helping older adults maintain their highest level of cognitive functioning (Pantisdes, 2011).Therefore, research is needed to develop and refine meaningful, effective, and empowering lifelong learning pedagogical methods for seniors with dementia.

## **OPASCities: Building capacity for food systems change for childhood obesity prevention in SC communities**.

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Community organizing is a common approach to changing a variety of systems. The steps in organizing include (1) social justice issue identification, (2) building a base of people affected by the issue and willing to work for change, (3) taking action, (4) reflection, and (5) evaluation of newly emerging issues. In COPASCities, year 4 we catalyzed and ethnographically observed community organizing in 4 partner communities. Community 1- The Midlands Food Alliance surveyed farmers to identify issues, and worked to build the base of people concerned about connecting local farmers to communities through the development of a local food guide. Community 2- FoodShare Columbia identified lack of access to affordable fruits and vegetables as an issue through previous research, worked with community partners to develop a system to accept EBT and participate in the Health Bucks incentive program, and established a produce cooperative buying club in communities with low food access. Community 3- End Child Hunger SC, identified issues as lack of access to the summer feeding and school meals programs. ECHSC built a base of supporters engaging local governments to designate an End Child Hunger week, developed family champions from parents of program participants, and identified more sites and sponsors. Community 4- organizers and community leaders worked to build safe routers to school for a predominately African-American low-income area of the city where children are not offered transportation. Community organizing efforts allowed the city to focus efforts on sidewalk development and adjusting speed limits as a response. Ethnographic data from these efforts are used to develop decision case studies which can be used to train leaders to create food systems change through community organizing. We have delivered a food systems change certificate program to four community groups and have written policy and practice briefs to further build capacity.

## SC Cancer Alliance: Health Equity in Colorectal Cancer

Author: Gerald Wilson, PhD, South Carolina Cancer Alliance, Chairman

#### South Carolina Cancer Alliance

Colorectal cancer represents one of the most glaring, yet remediable disparities in medicine. Although deaths have dropped substantially for whites and to a lesser extent African American (AA) women, the mortality continues to climb for AA men for over twenty five years. This inequity is not fully attributable to lack of screening. It is due to a combination of factors including genetics and both the guality and timing of screening. AAs need to begin screenings at least five years younger to achieve similar rates of protection. Of even more concern is the growing number of patients diagnosed with colon cancer despite having undergone colonoscopy screening (referred to as "interval cancer"). We know the benefit of colonoscopy is ten times better when the quality is above the industry standard minimum. The established quality metric is the adenoma detection rate (ADR). We could prevent ninety percent of the deaths if we could increase the quality of and access to high quality colonoscopy. Here in Columbia, SC we have a program to train primary care physicians in an innovative "Tandem Colonoscopy" technique which delivers consistently high quality colonoscopy services by the patient's own doctor. Compliance among minority physician's practices where doctors are trained to perform colonoscopy have achieved the lofty goal established by the American Cancer Society (80% by 2018). We would like to emphasize the importance of quality (ADR measurement) and access to (capacity) high quality screenings. This disparity can be eliminated. We have developed tools to address compliance and capacity while achieving consistently outstanding quality here in South Carolina. Research data accumulates extolling the virtue of ADR guality monitoring in the battle against the preventable cancer. We foresee the day when South Carolina can boldly celebrate that we eliminated a disparity that claims thousands of lives of all ethnicities, but disproportionately African Americans..