

**UAB** 12th ANNUAL

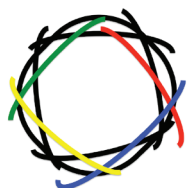
# HEALTH DISPARITIES RESEARCH SYMPOSIUM



## THE ROLE OF SOCIAL DETERMINANTS IN POPULATION HEALTH

May 3, 2017  
Birmingham, Alabama





MID-SOUTH TRANSDISCIPLINARY  
COLLABORATIVE CENTER FOR  
HEALTH DISPARITIES RESEARCH



**LVA** MINORITY HEALTH & HEALTH DISPARITIES RESEARCH CENTER



# UAB MINORITY HEALTH AND HEALTH DISPARITIES RESEARCH CENTER



Dear Symposium Guests,

With great pleasure we welcome you to the 12th Annual UAB Health Disparities Research Symposium.

The symposium highlights research related to health disparities by academic investigators, students, and community partners in basic science, clinical research, social and behavioral science, community-based, and health outcomes research.

Organized by the UAB Minority Health and Health Disparities Research Center (MHRC), a University-Wide Interdisciplinary Research Center and a designated Center of Excellence by the National Institutes of Health, this scientific meeting has expanded in ways that reflect the growth and proliferation of the Center. The symposium began in 2005 as a Minority Health Research Day with presentations by UAB faculty. Over the years, its themes covered a range of health disparities topics, such as obesity, diabetes, cancer, genomics, and health policy. The forum eventually expanded to reflect the entire science of health disparities “from discovery to delivery,” and became distinctly integrative in its approach, highlighting the convergence of biological, clinical, social, and behavioral disciplines in health disparities research.

As the symposium’s scientific concept matured, the event began to draw experts from around the nation and the globe, and became a crucial forum for engaged and informed participants around the country to discuss the most recent research. In its 12th anniversary edition, the 2017 symposium is co-sponsored by two national transdisciplinary collaborative centers (TCCs) for health disparities research: the Gulf States Health Policy Center, whose work is to improve health rankings of the Gulf States region and the Mid-South TCC, whose focus is investigating the social determinants of health disparities in obesity and related chronic diseases in six mid-south states.

We extend a warm welcome to our keynote speakers, Dr. Catarina Kiefe, Chair and Professor of the Department of Quantitative Health Sciences at the University of Massachusetts Medical School, and Dr. Jeroan Allison, Professor, Department of Quantitative Health Sciences at the University of Massachusetts Medical School. They will share valuable insights about the role of social determinants in population health.

The symposium’s success over the years would not have been possible without you, your interest in the causes and impact of health disparities, your passion for excellence and innovation, and your enthusiasm for equity in health and health care. Thank you for your time, commitment, and continued support!

We hope that you will use this scientific forum to enrich your views, share ideas and perspectives with colleagues, create networks, and generate collaborations that will bear future projects.

With best wishes for a productive and enjoyable meeting,

Mona N. Fouad, MD, MPH  
Senior Associate Dean for Diversity and Inclusion  
UAB School of Medicine  
Director and Professor, Division of Preventive Medicine  
Director, UAB Minority Health &  
Disparities Research Center  
PI, Mid-South Transdisciplinary Collaborative Center

Regina Benjamin, MD, MBA  
Founder and CEO, BayouClinic  
18th U.S. Surgeon General  
NOLA.com/Times Picayune Endowed Chair of  
Public Health Sciences at  
Xavier University of Louisiana  
PI, Gulf States Health Policy Center

## PLENARY SPEAKER

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### **Jeroan Allison, MD, MS**

Professor and Vice Chair, Department of Quantitative Health Sciences  
Associate Vice Provost for Health Disparities Research  
University of Massachusetts Medical School

Jeroan Allison, MD, MS is Professor and Vice Chair of the Department of Quantitative Health Sciences at the University of Massachusetts Medical School, where he also serves as Associate Vice Provost for Health Disparities Research. Dr. Allison's research focuses on quality measurement, implementation science, and statistical methodology, with an emphasis on eliminating racial/ethnic disparities in medical care and health outcomes.

Dr. Allison has a ten-year history of sustained funding from several extramural sources, including the NIH, the Agency for Healthcare Research and Quality, and the Robert Wood Johnson Foundation. Along with Dr. Catarina Kiefe, Dr. Allison is Co-Editor-in-Chief of *Medical Care*, sponsored by American Public Health Association. Dr. Allison has more than 200 peer-reviewed publications in print or press. He is board certified in Internal Medicine and received a Masters' degree in Epidemiology from the Harvard School of Public Health.

## PLENARY SPEAKER

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### **Catarina I. Kiefe, PhD, MD**

*Inaugural Melvin S. and Sandra L. Cutler Chair in Biomedical Research*  
Chair, Department of Quantitative Health Sciences  
Professor of Quantitative Health Sciences and Medicine  
University of Massachusetts Medical School

Catarina I. Kiefe began as a mathematician, earning her doctoral degree at the State University of New York at Stony Brook. She then earned her MD at the University of California, San Francisco. She specialized in internal medicine, completing her residency at the University of Minnesota Hospitals and Clinics. Now, as the inaugural chair of the Department of Quantitative Health Sciences at the University of Massachusetts Medical School (UMMS), she combines the rigor of mathematics with the needs of clinical medicine. She draws upon the intellectual curiosity and drive for discovery that marked her early career as an abstract researcher, using it to help her lead an applied research program with the objective of improving healthcare outcomes for individuals and populations. Before moving to UMMS in 2009, Dr. Kiefe was Chief of the Division of Preventive Medicine and founding Director of the Center for Outcomes and Effectiveness Research and Education (COERE) at UAB.

While building her new Department at UMMS, Dr. Kiefe has actively maintained her research interests in the area of cardiovascular outcomes and effectiveness research, measuring quality of care, and in conducting federally funded cluster-randomized trials to change practice patterns. She has been continuously funded as PI by NIH, PCORI, or AHRQ for more than 25 years. She has about 250 peer-reviewed publications, has served on or lead multiple national and international scientific advisory boards and is co-Editor-in-chief (with Jeroan Allison) of *Medical Care*, a premier journal in health services research.



## Wednesday, May 3, 2017

Event Time	Topic	Room Location
7:30 – 9:00 AM	<b>Registration and Breakfast Buffet</b>	<i>Lobby</i>
<b>POSTER SESSION</b>		
8:00 – 9:30 AM	<b>Poster Session:</b> Review Research Posters and Discuss with Presenters	<i>Heritage II</i>
<b>OPENING REMARKS</b>		
9:30 – 9:40 AM	<b>Mona Fouad, MD, MPH</b> Senior Associate Dean for Diversity and Inclusion, UAB School of Medicine Director and Professor, Division of Preventive Medicine Director, UAB Minority Health & Health Disparities Research Center <b>Regina Benjamin, MD, MBA</b> Founder and CEO, BayouClinic 18th U.S. Surgeon General	<i>Heritage I</i>
<b>BREAKOUT SESSION</b>		
9:45 – 11:15 AM	<b>Advancing Health Policy Research Through Academic and Community Partnerships</b> <b>Moderator: Maria Pisu, PhD</b> Associate Professor, UAB School of Medicine, Preventive Medicine	<i>Heritage I</i>
1	<b>Candace Forbes Bright, PhD</b> Associate Scientist, The University of Southern Mississippi, Department of Political Science, International Development, and International Affairs	Social Support and Perceptions of Recovery: A Social Network Study of Gulf States Disasters
2	<b>Lori B. Bateman, PhD</b> Research Associate, UAB School of Medicine, Preventive Medicine	Policy, System, and Environmental Correlates of Fruit and Vegetable Consumption in a Low Income African American Population in the Southeast
3	<b>Pamela Bowen, PhD, CRNP, FNP-BC, BBA</b> Assistant Professor, UAB School of Nursing	Does Using Policy Increase Physical Activity Discussion Among African Americans?
4	<b>Amanda E. Staiano, PhD, MPP</b> Assistant Professor, LSU Pennington Biomedical Research Center	Preschool Policies on Free Play and Screen-Time: Associations with Children's Physical Activity and Out-Of-School Screen-Time
5	<b>Andreea Voinea-Griffin, DDS, PhD, MBA, MSHA, FACHE</b> Assistant Professor, Director of Research, Department of Public Health Science, College of Dentistry, Texas A&M University	Compliance Barriers and Initial Outcomes of the First Dental Home Policy
6	<b>Jerome R. Kolbo, PhD</b> Professor, The University of Southern Mississippi, College of Health	Community Conversations About Adolescent Sexual Health in Mississippi
7	<b>Mirjam-Colette Kempf, PhD, MPH</b> Associate Professor, UAB School of Nursing Nursing, Family, Communications, and Health Systems	Barriers to HIV Testing Among Primary Care Providers and Patients in Alabama
8	<b>Roma Hanks, PhD</b> Professor, University of South Alabama, Sociology	Intergenerational Relationships, Livable Communities and Health Outcomes
9:45 – 11:15 AM	<b>Basic and Clinical Science of Disparities</b> <b>Moderator: Upender Manne, PhD, MS</b> Professor, UAB School of Medicine, Pathology	<i>Arlington</i>
1	<b>Doug Moellering, PhD</b> Assistant Professor, UAB School of Health Professions Nutrition Sciences	Life Stress Adversely Affects Oxidative Stress and Obesity
2	<b>Ian McDonough, PhD</b> Assistant Professor, UA College of Arts and Sciences, Psychology	Beta-Amyloid and Cortical Thickness Reveal Racial Disparities in Preclinical Alzheimer's Disease
3	<b>Gina M. McCaskill, PhD</b> Assistant Instructor, UAB School of Medicine, Gerontology, Geriatrics, and Palliative Care	Kilocalorie Expenditure and All-Cause Mortality in Older Men

## Wednesday, May 3, 2017

Event Time	Topic	Room Location
4	<b>Jovanny Zabaleta, PhD, MS</b> Associate Professor, LSU Health Sciences Center, School of Medicine, Pediatrics and Stanley S. Scott Cancer Center	Breast Cancer in Hispanic/Latina women: Distribution of Subtypes and Associations with Ancestry in Colombia
5	<b>Claudia Leonardi, PhD</b> Assistant Professor of Research, LSU School of Public Health, Biostatistics Stanley S. Scott Cancer Center	Neighborhood Disadvantage and Glycemic Control in Type I Diabetes: Mediators
9:45 – 11:15 AM	<b>Social Influences on Disparities</b> <b>Moderator: Carlos Estrada, MD</b> Professor and Division Director, UAB School of Medicine, General Medicine	<b>Centennial I</b>
1	<b>James M. Shikany, DrPH</b> Professor, UAB School of Medicine, Preventive Medicine	Multi-Level Perspectives on Developing Blood Pressure Interventions for Young African American Men in Faith-Based Settings: A Community-Based Participatory Approach
2	<b>Richard Scribner, MD, MPH</b> D'Angelo Professor, LSU Health Science Center, School of Public Health, Epidemiology	Social Determinants of Liver Cancer in Louisiana
3	<b>Jamey J. Lister, PhD</b> Assistant Professor, Wayne State University, School of Social Work, School of Medicine, Psychiatry and Behavioral Sciences	Psychosocial Factors and Methadone Treatment Outcomes among African-Americans: A Substance Abuse Research Program to Address Minority Health Disparities
4	<b>Sarah-Jeanne Salvy, PhD</b> Associate Professor, UAB School of Medicine, Preventive Medicine	Social Influence and Childhood Obesity: From Lab to Community
5	<b>Virginia Howard, PhD</b> Professor, UAB School of Public Health, Epidemiology	Race, Age and Other Differences in the Perceived Harm of Having a Stroke
9:45 – 11:15 AM	<b>Racial/Ethnic Disparities</b> <b>Moderator: Linda Moneyham, PhD, RN, FAAN</b> Professor and Senior Associate Dean for Academic Affairs, UAB School of Nursing	<b>University</b>
1	<b>George Howard, DrPH</b> Professor, UAB School of Public Health, Biostatistics	An Assessment of Contributors to the Excess Incidence of Hypertension in Blacks: the REasons for Geographic And Racial Differences in Stroke (REGARDS) Study
2	<b>Anna Lee, PhD</b> Associate Professor, North Carolina A&T State University	Pathways to Obesity Prevention among Black Men: Understanding the Role of Racism and Masculinity Ideology on Indicators of Obesity Risk
3	<b>Karen Albright, PhD, DO, MPH</b> Assistant Professor, UAB School of Medicine, Neurology	Racial Differences in 1-Year Recurrent Ischemic Stroke and 30-day Case Fatality: An Analysis of Medicare Beneficiaries
4	<b>Magdalena Szaflarski, PhD</b> Assistant Professor, UAB College of Arts and Humanities, Sociology	Are We Enrolling Minorities and Socioeconomically Disadvantaged in Epilepsy Cannabidiol Research?
5	<b>Sarah Dilley, MD, MPH</b> Fellow, UAB School of Medicine, Gynecologic Oncology	Racial Disparities in Cervical Cancer Incidence Among Older Women in the Southern US and Considerations for Screening Guideline Changes
9:45 – 11:15 AM	<b>Place-Based Disparities</b> <b>Moderator: Wendy Demark-Wahnefried, PhD, RD</b> Professor and Webb Endowed Chair of Nutrition Sciences Associate Director, UAB Comprehensive Cancer Center	<b>Centennial II</b>
1	<b>Robert Collins, PhD</b> Professor of Urban Studies and Public Policy Dillard University, School of Social Sciences	An Analysis of the Relationship between Segregation and Alcohol Outlet Density in Mid-South States
2	<b>Tekeda F. Ferguson, PhD, MPH, MSPH</b> Professor, LSU School of Public Health, Epidemiology	Racial Disparities in Late Stage Breast Cancer Diagnosis: Assessing Geographic Variation and Ecological Risk

## Wednesday, May 3, 2017

Event Time	Topic	Room Location
3	<b>Gabriela Oates, PhD</b> Instructor, UAB School of Medicine, Preventive Medicine	Individual and Neighborhood-Level Determinants of Adherence to Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Disease (COPD)
4	<b>Rob Weech-Maldonado, PhD, MBA</b> Professor and L.R. Jordan Endowed Chair, UAB School of Health Professions, Health Services Administration	Racial/Ethnic Disparities in Gonorrhea: The Role of STD Service Organization and Community Factors in Alabama and California
5	<b>Suzanne Judd, PhD</b> Associate Professor, Assistant Dean for Undergraduate Education UAB School of Public Health, Biostatistics	Regional Differences In Stroke Mortality and Incidence In The United States: Sodium Intake, Socioeconomic Status And Race
6	<b>Kara Riehman, PhD</b> Strategic Director, American Cancer Society, Evaluation and Research	Adaptation of an Evidence-Based Community Health Advisor Program to Increase Cancer Education and Screening: A Comparison of Implementation in Appalachia and the Deep South
11:15-11:30 AM	<b>BREAK</b>	
<b>PLENARY SESSION I</b>		
11:30 AM – 12:15 PM	<b><i>Social Determinants of Health: From Understanding to Action?</i></b> <b>Catarina Kiefe, PhD, MD</b> Inaugural Melvin S. and Sandra L. Cutler Chair in Biomedical Research Chair and Professor, Department of Quantitative Health Sciences and Medicine University of Massachusetts Medical School	<b><i>Heritage I</i></b>
<b>LUNCH</b>		
12:15 PM	<b>LUNCH BUFFET OPEN</b> <b>UAB MHRC Training Scholars &amp; Alumni Photo Call</b>	<b><i>Lobby</i></b>
<b>PLENARY SESSION II</b>		
12:45 – 1:30 PM	<b><i>Fixing the Social Determinants of Health: Emerging Lessons from Education, Practice and Policy</i></b> <b>Jeroan Allison, MD, MS</b> Vice Chair and Professor, Department of Quantitative Health Sciences Associate Vice Provost for Health Disparities Research University of Massachusetts Medical School	<b><i>Heritage I</i></b>
<b>MENTORING AWARDS</b>		
1:30 – 2:00 PM	<b>UAB MHRC Excellence in Mentoring Awards</b>	<b><i>Heritage I</i></b>
<b>Panel Discussion</b>		
2:00 – 3:00 PM	<b><i>Health Care Reform and Disparities: A Policy Perspective</i></b> <b>David J. Becker, PhD</b> Associate Professor, Department of Health Care Organization and Policy, UAB School of Public Health <b>Bisakha "Pia" Sen, PhD</b> Professor, Department of Health Care Organization and Policy, UAB School of Public Health	<b><i>Heritage I</i></b>
<b>Symposium Conclusion</b>		



# THE ROLE OF SOCIAL DETERMINANTS IN POPULATION HEALTH



## Abstracts

12th Annual UAB Health Disparities Research Symposium

May 3, 2017

Birmingham, Alabama



# ABSTRACTS

12th Annual UAB Health Disparities Research Symposium  
May 3, 2017

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**Adedoyin, Christson A., PhD****Poster 1**

UAB School of Public Health, Social Work

**Traumatized African Refugees in the USA: A Systematic Review of Religious Coping Strategies**

**PURPOSE:** This study examined extant scholarship focused on the use of religious coping resources by traumatized African refugees resettled in the United States of America (USA). Most African refugees are from war-torn, natural-disaster-affected, ethnic, religious, and political conflicts ridden countries. Moreover, resettling in the USA equally precipitates traumatic experiences for African refugees. It is therefore not uncommon that African refugees are usually symptomatic of traumatic experiences such as posttraumatic stress disorder (PTSD), anxiety, and depression.

**METHOD:** A systematic review of 20 years of published articles were examined using seven electronic databases such as PubMed, CINAHL, PsychInfo, Medline, Social Work Abstracts, SocINDEX and ASSIA. Search terms included a combination of keywords such as PTSD, and mental health and African refugees, and religion or spirituality were used to identify evidence-based religious coping strategies often utilized by traumatized African refugees.

**RESULT:** The study found that religious activities bifurcated into private religious practices (PRAs) and organized religious practices (ORAs) were significant markers of improved health and emotional outcomes among traumatized African immigrants resettling in the USA. It was instructive to also find that associated social determinants of health such as membership of diaspora association, state the refugees resettled at in the USA, and refugee friendly policies in the receiving states were instrumental in overcoming traumatic experiences among African refugees resettling in the USA.

**DISCUSSION:** In addition personalized religious undertakings empowered African refugees to effectively address traumatic reminiscences, and acculturation stressors in the USA. Implications for behavioral/health professional practice, education, and policy as it relates to African refugees are delineated.

**Ainsworth, Matthew C., MPH****Poster 2**

UAB School of Public Health, Department of Health Behavior

**A Randomized Trial of HIPP Interventions for African American Women in the Deep South**

*Ainsworth, Cole, MPH; Joseph, Rodney, PhD; Kvale, Elizabeth, MD; Williams, Victoria, MPH, MEd; Herman, Casey, MS; Desmond, Renee, PhD; Meneses, Karen, PhD, RN; Marcus, Bess, PhD; Demark-Wahnefried, Wendy, PhD, RD; Pekmezi, Dori, PhD*

**PURPOSE:** To assess the feasibility of Home-based, Individually-tailored Physical activity Print (HIPP) interventions for African American women in the Deep South.

**METHODS:** A pilot randomized controlled trial of the HIPP intervention (N=43) vs. wellness contact control (N=41) was conducted. Recruitment, retention, and adherence were examined, along with physical activity (7-Day PARs, accelerometers) and related psychosocial variables at baseline and 6 months.

**RESULTS:** The sample included 84 overweight/obese African American women aged 50-69 in Birmingham, AL. Retention was high at 6 months (90%). Most participants reported being satisfied with the HIPP program and finding it helpful (91.67%). There were no significant between group differences in physical activity ( $p=0.22$ ); however, HIPP participants reported larger increases ( $M=+73.9$  minutes/week,  $SD=90.9$ ) in moderate intensity or greater physical activity from baseline to 6 months than the control group ( $+41.5$ ,  $SD=64.4$ ). The HIPP group reported significantly greater improvements in physical activity goal-setting ( $p=.02$ ) and enjoyment ( $p=.04$ ) from baseline to 6 months than the control group. There were no other significant group differences [6MWT, physical activity planning, behavioral processes of change, stage of change]; however, trends in the data for cognitive processes of change, self-efficacy, outcome expectations, and family support for physical activity indicated small improvements for the HIPP arm ( $P>.05$ ) and declines for the control arm. Significant decreases in decisional balance ( $p=0.01$ ) and friend support for physical activity ( $p=0.03$ ) from baseline to six months were observed in the control arm and not the intervention arm.

**CONCLUSION:** The HIPP intervention has great potential as a low cost, high reach method for reducing physical activity-related health disparities. The lack of improvement in some domains may indicate that additional resources and supports will be required to help this target population reach national physical activity guidelines.



## Albright, Karen, PhD, DO, MPH

University

UAB School of Medicine, Neurology

### Racial Differences in 1-Year Recurrent Ischemic Stroke and 30-day Case Fatality: An Analysis of Medicare Beneficiaries

*Albright, Karen, DO MPH; Huang, Lei, PhD; Blackburn, Justin, PhD; Howard, George, DrPH; Mullen, Michael, MD; Bittner, Vera, MD MSPH; Muntner, Paul, PhD; Virginia Howard PhD*

**PURPOSE:** To determine if black-white differences exist in recurrent ischemic stroke and 30-day case fatality following a recurrent stroke in older US adults.

**METHODS:** We conducted a retrospective cohort study using a 5% random sample of Medicare beneficiaries with fee-for-service insurance coverage who were hospitalized for ischemic stroke between 1999 and 2013. The exposure of interest was race. The outcomes were recurrent ischemic stroke within 365 days and all-cause mortality within 30 days of hospital admission for recurrent ischemic stroke. The cumulative incidence and incidence rate for 1-year recurrent ischemic stroke rate were determined for whites and blacks, separately. Hazard ratios (HR) for recurrent stroke comparing blacks and whites were calculated using the extension of the Cox regression to analyze competing risks.

**RESULTS:** Of 128,789 Medicare beneficiaries having an ischemic stroke (mean age 80 years [SD 8 years], 11.1% black, 60.4% male), 7.8% (95% CI 7.6-7.9%) of whites and 11.0% (95% CI 10.5-11.5%) of blacks had a recurrent ischemic stroke within 365 days of index stroke hospital discharge. After multivariable adjustment, the hazard ratio for recurrent stroke among blacks compared with whites was 1.36 (95% CI 1.29-1.44). Among patients with recurrent stroke, 21% (95% CI 21-22%) of whites and 16% (95% CI 15-18%) of blacks died within 30 days. Blacks had a lower multivariable-adjusted relative risk (RR) for 30-day case fatality following recurrent stroke compared with whites (RR 0.82, 95% CI 0.73-0.93).

**CONCLUSIONS:** The risk of stroke recurrence among older Americans hospitalized for ischemic stroke is higher for blacks than whites, while 30-day case fatality following recurrent stroke is lower for blacks than whites.

## Allen, Shauntice, PhD

Poster 3

UAB School of Public Health

### The Association of Blood Pressure Control with Belief of Self-Efficacy in Preventing Stroke

*Howard, Virginia, PhD; Kleindorfer, Dawn O, MD; Allen, Shauntice, PhD; Aycock, Dawn M, PhD; Anderson, Aaron M, MD; Howard, George, DrPH*

**BACKGROUND:** Hypertension (HTN), including uncontrolled HTN, is one of the greatest contributors to stroke risk. A Risk Behavior Diagnosis Scale (RBD) was used to assess individual perceptions of stroke including efficacy for managing HTN associated with stroke risk.

**METHODS:** Data came from the 10-year risk factor telephone interview and in-home assessment of REGARDS participants. REGARDS is a national, population-based, longitudinal study of black and white adults > 45 years, enrolled 2003-2007. Participants were asked about agreement with four constructs of RBD: response efficacy (controlling my blood pressure (BP) is effective in preventing stroke), self-efficacy (having skills to control my BP to prevent stroke), severity (belief that stroke is extremely harmful), and susceptibility (it is likely I will have a stroke.) Analysis was restricted to 8,269 individuals with self-reported physician-diagnosis of HTN. BP control was defined as SBP < 140 mmHg or DBP < 90 mmHg. Logistic regression was used to examine the association of hypertension control with agreement with each construct, adjusting for demographics, socioeconomic factors, and history of previous stroke.

**RESULTS:** Of those who reported HTN, 6,799 (82%) had controlled HTN. Overall, there was high agreement that BP control prevents stroke (95%), that the person has skills to control BP (92%), and that stroke is harmful (97%). There was lower agreement (17%) that the person is likely to have a stroke. In the multivariable model, control of BP was strongly associated with agreement with "having the skills to control BP to prevent stroke" (OR = 1.37; 95% CI: 1.13 - 1.66). There were no associations ( $p > 0.05$ ) between hypertension control and agreement with any other constructs.

**CONCLUSIONS:** Among persons with self-reported HTN, those who agreed they had the skills to control their blood pressure to prevent stroke were more likely to have their hypertension controlled. Although self-efficacy is difficult to influence, strategies such as goal setting or demonstration/re-demonstration to improve skills and confidence related to BP management may improve BP control.

**Atnafou, Rebkha, MPH****Poster 4****Johns Hopkins School of Public Health****Barriers and Promoters of Communication About Family Cancer History Among African-Americans in Baltimore**

**PURPOSE:** African-Americans remain more likely to die from cancer than any other racial or ethnic group in the U.S. Family cancer history (FCH) plays a key role in shaping individual prevention and early detection behaviors however, many individuals may lack knowledge of FCH. For some African-Americans, a lack of communication about FCH is pronounced and barriers to this communication have not been well studied.

**METHODS:** We conducted four community focus groups (40 participants) and seven key informant interviews (9 participants) to investigate knowledge and barriers/promoters of FCH.

**RESULTS:** Thematic analysis of transcripts identified 11 distinct themes across 4 topic areas: definitions of FCH, past FCH communication, and barriers/promoters of FCH. The majority of participants had gathered or shared little or no FCH information with family members. Three psychosocial domains (fear/denial, pride/dignity, and fatalistic attitudes about cancer) were commonly reported barriers to sharing family cancer history. Additionally, distrust/skepticism about medical care was a barrier to sharing FCH with healthcare providers. Diagnosis/death of a loved one and need for caregiving/social support promoted FCH communication and encouraged cancer prevention behaviors such as screening.

**DISCUSSION/CONCLUSIONS:** Although most participants had experienced cancer in their families, reported communication about FCH was low and psychosocial barriers were common. Understanding these communication domains is crucial to addressing disparities in cancer. Community-based interventions and communication tools are needed.

**Bail, Jennifer, BSN****Poster 5****UAB School of Nursing, Office of Research and Scholarship****Evaluating Self-Reported Cognitive Changes among Breast Cancer Survivors Participating in a Cognitive Training Intervention in the Deep South***Bail, Jennifer, BSN; Vo, Jacqueline B., BSN, RN; Benz, Rachel, MSN, RN; Meneses, Karen, PhD, RN, FAAN*

**BACKGROUND/PURPOSE:** Up to 90% of breast cancer survivors (BCS) report cognitive changes (CC). Self-reported CC are associated with poor overall quality of life, self-esteem, confidence, social relationships, and work ability in BCS. In the *Speed of Processing in Middle Aged and Older Breast Cancer Survivors (SOAR)* study, the feasibility of a web-based cognitive training intervention is being examined among BCS in Alabama. The purpose of this presentation is to report changes in self-reported CC at baseline and immediately post-intervention among SOAR participants.

**METHODS:** Using a controlled trial design, 60 BCS (African-American=31; Caucasian=29) were randomly assigned to either a web-based cognitive training intervention group (n=30) or a no contact control group (n=30). Intervention consisted of 2 hours of cognitive training per week for a total of 10 hours within 6-8 weeks. Self-reported questionnaires and neuropsychological test battery were completed at baseline and immediately post-intervention. Self-reported CC were measured using the Cognitive Failures Questionnaire (CFQ). Descriptive statistics and t-tests were conducted and analyzed. Due to being a feasibility study, the generated p-values are for reporting purposes only and do not infer statistical inferences. Effect sizes of the difference in means, a key element in building future studies, were calculated using Cohen's d. Data analyses were conducted with SPSS

**RESULTS:** At baseline CC were comparable ( $p=0.9$ ;  $d=0.01$ ) in both the intervention ( $M=55.60$ ;  $SD=12.64$ ) and the control group ( $M=55.43$ ;  $SD=15.3$ ). At immediately post-intervention a non-statistically significant change in self-reported CC was seen in both the intervention ( $M=-6.31$ ;  $SD=11.44$ ) and the control group ( $M=-2.96$ ;  $SD=10.55$ ), with a larger change seen in the intervention group ( $3.35$ ,  $p=0.26$ ,  $d=0.3$ ). In the intervention group, changes in self-reported CC between African-American ( $M=-6.20$ ;  $SD=12.83$ ) and Caucasian ( $M=-6.43$ ;  $SD=10.23$ ) BCS were consistent ( $p=0.9$ ;  $d=0.02$ ).

**DISCUSSION/CONCLUSIONS:** Both the intervention group and control group received benefit, but no significant difference. African-American and Caucasian intervention participants benefited equally. Previous literature on cognitive training among BCS has been primarily informed by Caucasian participants. This study provides new knowledge about cognitive training among African-American BCS.

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## Bateman, Lori B., PhD

## Heritage I

UAB School of Medicine, Preventive Medicine

### Policy, System, and Environmental Correlates of Fruit and Vegetable Consumption in a Low Income African American Population in the Southeast

*Bateman, Lori Brand, PhD, RD; Smith, Theolishia, MPH; O'Neal, LaToya J., PhD; Li, Yu-Feng, PhD; Wallace, Theresa, PhD; Dai, Chen, PhD; and Fouad, Mona N., MD, MPH*

**PURPOSE:** Significant racial/ethnic health disparities exist in the U.S., and current research is examining the impact of policy, systems, and environmental (PSE) strategies designed to improve health outcomes among priority populations, such as low-income African Americans. The current study seeks to identify PSE correlates of fruit and vegetable consumption among a sample of low-income African Americans in three southeastern U.S. cities.

**METHODS:** A total of 256 participants were surveyed during the pre-intervention stage of a multi-state research study. An intervention was designed that includes 50 Community Health Advisors (CHAs). The CHAs were trained to recruit participants from the target communities to encourage them to increase physical activity by walking and to increase fruit and vegetable consumption, and 367 participants were recruited. The intervention, which also includes activities at churches, recreation centers and community organizations, is consistent with the socio-ecological model and Community-Based Participatory Research (CBPR) framework which address health disparities in low income communities. A post-intervention survey will be administered to mutually exclusive participants in the communities under study to see if changes were made at the community level.

**DISCUSSION/CONCLUSIONS:** Bivariate and chi-square analyses of the pre-intervention survey data reveal that whether participants met the daily recommendation for fruit and vegetables was related to meso-level factors such as health-related policies at churches and child care centers and macro-level factors such as whether participants observed media campaigns related to nutrition. Those who met recommendations were more likely to report receiving food assistance and were more likely to have personally participated or had a family member who participated in a health policy meeting. These findings suggest that policy-based interventions have the potential to improve health outcomes among low-income African Americans, who are at high risk of developing chronic diseases.

## Bell, Tyler R., MA

## Poster 6

UAB College of Arts and Sciences, Psychology

### Social Dysfunction Explains the Relation between Pain and Depressive Symptoms in Older Adults with HIV

*Bell, Tyler, MA; Pope, Caitlin Northcutt, MA; Stavrinou, Despina, PhD; Vance, David E., PhD, MGS, MS; Fazeli, Pariya, PhD*

**PURPOSE:** In next decade, the population of older persons with HIV is expected to increase by 67% (CDC, 2008), making healthy aging in HIV a priority. One obstacle to well-being may be high levels of depressive symptoms, with over 30% of older adults with HIV reporting clinical levels of depression (Groves et al., 2010). Elevations in depression may be partially driven by high rates of pain in persons with HIV, reported in over 55% of individuals (Aouizerat et al., 2010). Such pain significantly interferes with daily living (i.e., pain interference, Miaskowski et al., 2011) and may contribute to depression development.

**OBJECTIVE:** The goal of the current study was to investigate if pain interference predicted depressive symptoms in older adults with HIV and if social dysfunction (limitations in social activities) or physical dysfunction (lifting/carrying objects, moving, walking, bending, eating) mediated this relationship.

**METHOD:** For this study 68 older adults (86.8% African-American, 58.8% male, Mage=50.86, SD=4.47) from a local HIV clinic were administered instruments measuring depression (BDI-II, Beck et al., 1996), pain interference (health questionnaire), bodily pain, social dysfunction, and physical dysfunction (MOS-HIV, Wu et al. 1997). Mediation models with bootstrapping were used to determine the total and indirect effects of pain interference on depression, while controlling for correlates of BDI-II scores including CD4 count and BMI.

**RESULTS:** Overall, 76.5% of participants reported at least very mild bodily pain in the past 4 weeks, and 50% reported that pain interfered with daily function. The total effect model showed higher levels of pain interference was associated with greater levels of depression ( $b=3.22$ , 95%CI: .45 to 5.98,  $r^2=.22$ ). The indirect model revealed social dysfunction (indirect=2.59, 95%BCI: .79 to 4.91) but not physical function ( $b=.53$ , 95%BCI: -.05 to 1.90) significantly mediated the association between pain interference and depressive symptoms. Overall, the final model accounted for 46.9% of the variance in depressive symptoms.

**CONCLUSION:** Findings suggest that pain interference contributes to depression in older adults with HIV and is explained by disruption in social rather than physical function. Thus, removing barriers to social functioning may be a critical goal for healthy aging with HIV.

**Blejwas, Emily, MS****Poster 7****Gulf States Health Policy Center****Building Community Based Research through Community Coalitions***Blejwas, Emily (GS-HPC); Lineberry, Isiah (GS-HPC); Patterson, Danny (GS-HPC)*

**PURPOSE:** The positive effects of community coalitions, including working collectively, networking, sharing information and resources, and streamlining efforts, are well documented. In addition to these benefits, community coalitions can build and improve health policy research. This paper identifies the factors that have taken the Gulf States Health Policy Center's Coalition beyond "business as usual" to functioning as a community coalition that successfully developed community-based research which can be used to affect health policy and improve health outcomes.

**METHODS:** The Gulf States Health Policy Coalition, comprised of 92 organizations, meets on a monthly basis in four locations: Bayou La Batre, AL; Birmingham, AL; Hattiesburg, MS; Gulfport, MS. The coalition is comprised of organizations from a range of sectors, including governmental, non-profit, faith-based, and academic. This effort examines the work of the Coalition branch based in Bayou La Batre, AL, to determine which factors contributed to its sustainability, as well as its ability to successfully develop community-academic partnerships and research.

**RESULTS:** At the center of the Coalition's success is its inclusion of researchers, policy experts, and practitioners. These three roles have proven essential to the Coalition's creation of a feedback loop that increases practitioners' understanding of policy in order to build effective programming as well as increases researchers/policy experts' understanding of community challenges in order to craft effective research and policy. Further, the presence of these three roles shifts the focus of the coalition from competition over limited resources and funding (which often stunts community coalitions) to collectively identifying upstream solutions. Additional factors for success include members' diversity in a range of aspects, grassroots selection of policy focus areas, continual identification of gaps in knowledge, and a familial leadership style.

**DISCUSSION/CONCLUSION:** This effort adds to a growing body of literature on community-academic partnerships by identifying specific components that make these partnerships function and contribute to research and policy advancement.

**Bowen, Pamela G., PhD, CRNP, FNP-BC, BBA****Heritage I****UAB School of Nursing****Does Using Policy Increase Physical Activity Discussions among African Americans?***Bowen, Pamela, PhD*

The American College of Sports Medicine's "Exercise is Medicine" Initiative expects healthcare providers (HCPs) to actively promote regular physical activity in order to prevent many chronic health conditions. Disproportionately, African Americans are inactive and physical inactivity results in approximately \$131 billion of healthcare costs. The utilization of healthcare visits is a promising method to increase opportunities for HCPs to discuss physical activity as part of a patient's overall healthcare and health promotion regimen.

The **purpose** of this study is to determine what policies are in place to support HCP discussions of physical activity and whether a policy level intervention can increase the frequency of those discussions.

**METHODS:** A pre-post design has been initiated at Cooper Green Mercy Health Services clinic in three phases: 1) Policy and Baseline Assessment, 2) Intervention Development and Implementation, and 3) Intervention Evaluation. Results to date: Phase 1 assessment yielded no policies to encourage clinicians to discuss physical activity with their patients. Only 5 of 39 patients interviewed stated that physical activity was discussed. Phase 2: A physical activity discussion policy has been developed. The Exercises is Medicine Initiative was introduced to the HCPs as a method to promote physical activity with their patients. Brochures have been developed to decrease any perceived increases in HCP workload. The brochure lists parks in Jefferson County with contact information, tells benefits of physical activity, and gives examples of patient activities to help meet the standard of 150 minutes a week of physical activity. Strength training tips are also included. The HCPs and administrators' provided positive feedback and responses to the brochure. The electronic medical record at the clinic is in the process of being updated to assist HCPs with documentation of their physical activity discussions. Implementation of the policy will begin April 2017.

**CONCLUSION:** This study will help fill the gap in understanding whether HCPs initiate and promote physical activity discussions with their patients during clinic encounters. This strategy will allow physical activity discussions to remain in the forefront for HCPs and potentially increase patients' awareness to be regularly active, thereby, reducing the poor health consequences of physical inactivity.



## Bright, Candace F., PhD

## Heritage I

The University of Southern Mississippi, International Development and International Affairs

### Social Support and Perceptions of Recovery: A Social Network Study of Gulf States Disasters

*Bright, Candace Forbes, PhD; Hanks, Roma, PhD; Sayre, Edward, PhD; Butler, David, PhD; Bagley, Braden, MA; Mayo, Shelley*

**PURPOSE:** The purpose of this research is to assess the impact of social support on perceptions of personal recovery following a disaster. Specifically, we focus on the 2010/2011 Tuscaloosa Tornado, BP Deepwater Horizon Oil Spill, and the flooding of the Mississippi River in the Delta community.

**METHODS:** To collect data on social support and perceptions of recovery, we first collected survey data in 2014 using a random phone sample (n=712). In 2015, we collected additional survey data from this sample and in 2016, we interviewed a sub-set of this sample (n=84). This has produced both qualitative and quantitative data on the role of social support in perceptions of long-term recovery from the disasters.

**RESULTS:** The results, both qualitative and quantitative, indicate that social support has a strong influence on one's perceptions of personal recovery from the disaster. Specifically, in the quantitative data we find a relationship between the number of individuals in one's immediate social network and the perception of personal recovery, as well as between the strength of their relationship with individuals in their social network and perception of personal recovery. These findings are supported by the qualitative data, which shows the experiences of those who felt like they did not have a strong social support system following the disaster. In particular, individuals who felt they had to rely on organizations outside of their network express more stress and challenge in their recovery or lack thereof.

**DISCUSSION:** The data reveal the need to have strong social support systems prior to a disaster, as these mechanisms will be relied on in the post-disaster recovery phase. In the absence of this support system or when a weak support system is present, individuals become dependent on organizations outside their network, but also have lower levels of perceived recovery following a disaster.

**CONCLUSION:** Based on our findings, we draw conclusions and develop policy implications for strengthening social networks at the individual and community level for improving resilience to and recovery from disasters. Specifically, we discuss populations that may be more vulnerable based on social structures, such as those with intergenerational households, racial minorities, and low economic classes.

## Campbell, Anthony D., PhD, MSW

## Poster 8

UAB School of Medicine, Division of Geriatrics, Gerontology, and Palliative Care

### Health from the Faith Leader Perspective: Implications for Research and Outreach in Faith Communities

*Campbell, Anthony D., MSW, PhD*

**PURPOSE:** The aim of this qualitative, community-based study was to fill a notable gap in the understanding of how faith leaders define health and perceive their role in health-related matters in their congregations and communities. Faith leaders are clearly influential figures who fulfill a variety of roles outside of their unique pastoral responsibilities. One potential role is serving as a source of health-related information. The role of the faith leader in health may be particularly important in the Deep South where health disparities by race are highly prevalent and the influence of faith leaders in the lives of individuals, especially African Americans, is relatively high.

**METHODS:** In-depth qualitative interviews were conducted with 32 faith leaders, including 20 African American and 12 white clergy members, from a variety of denominations in Jefferson County, Alabama between January 2015 and February 2016. Data were coded and analyzed using modified grounded theory practices to identify common concepts and themes among participants.

**FINDINGS:** Findings reveal that faith leaders generally define health in holistic terms and emphasize the interaction between physical, mental, and spiritual domains. Participants explain that their evolving definitions of health are influenced by individual characteristics in addition to the unique social contexts they occupy and are only developed through social interaction and comparison. Perspectives on health are tied to the faith leader's identity and are the product of multiple layers of social context. Participants commonly expressed an awareness that the health of their congregants is strongly determined by factors beyond the individual level, including socio-demographic characteristics at the community and neighborhood levels.

**DISCUSSION/CONCLUSIONS:** Identified themes align well with the symbolic interactionist perspective and socioecological models. The holistic perspective commonly held by faith leaders presents a contrast to the prevailing medical model of health in Western society. Researchers studying health in congregations should better understand and incorporate faith leaders' perspectives on health. Directing increased attention to the spiritual basis of health may be a more effective strategy when attempting to research and reach out to faith communities that subscribe to the holistic definition of health.



**Collins, Robert, PhD****Centennial II****Dillard University, School of Social Sciences****An Analysis of the Relationship between Segregation and Alcohol Outlet Density in Mid South States***Collins, Robert, PhD; Leonardi, Claudia, PhD, Biostatistics Fellow; Scribner, Scott, MA; Simonsen, Neal, PhD*

Despite the fact that disparities in rates of mortality for poor and minority populations have been documented and studied for decades, there is little consensus on the origins of these disparities. The conventional view implicates individual level factors for the higher rates of disease and death including access to and quality of health care, a behavioral profile that promotes risk, and/or a genetic predisposition to disease.

Over the last several decades, researchers have initiated a number of efforts to identify conditions in residential environments to which poor and minority populations are exposed as a contributing factor in explaining health disparities. These efforts have highlighted a number of environmental factors that may account for health disparities, not the least of which is the role of black segregation.

The goal of this project is to use a relatively new multilevel approach to test a conceptual model that links black segregation to exposure to neighborhood social and contextual risk in places characterized by high levels of segregation at the city level. We believe studying the potential effects of segregation at the city level is critical because this is the level where policies that shape the conditions at the neighborhood level are most likely to originate.

**Research Hypothesis #1** - There will be significant clustering of social (i.e., concentrated disadvantage) and built (e.g., unhealthy food outlet density) environment risk factors at the neighborhood level (i.e., in census tracts) across Mid South TCC cities (i.e., US Census Places). **Research Hypothesis #2** -The clustering of social and built environment risk factors at the neighborhood level will be explained by increasing levels of measures of black segregation at the city level, such that Mid South TCC cities that are the most segregated have the highest levels of inequality in exposure to social and built environment risk factors.

**Data:** Segregation Exposure Data - Data on segregation was obtained from the Mid South TCC Social Determinants of Health (SDH) Core database. US Place (city) level measures of both isolation and dissimilarity was drawn from the 2010 US Census data.

**Neighborhood Risk Data** - Census tract data was used as a proxy for neighborhood. Census tract level measures of risk factors in the built environment were obtained from the Mid South TCC SDH Core database including: alcohol outlet density, unhealthy outlet density, and supermarket density. In addition, measures of social environmental risk factors were obtained from the Mid South TCC SDH Core database including: concentrated disadvantage index and crime index.

**Neighborhood Demographic Data** - Data from the 2010 US Census for various demographic measures at the census tract level was accessed, including, but not limited to the following: median age, percent male, percent households in poverty, level of education, and percent Hispanic.

**Exclusions** - US Places with fewer than five census tracts within the place were excluded. In addition, US Places with fewer than ten percent black residents were excluded.

**Statistical Analysis Plan and METHODS:** Multilevel analysis of census tracts nested with US Places across Mid South TCC states were conducted. Tests of significance for the degree of between city clustering (i.e., Intra-class Correlation Coefficients (ICCs)) of the various social and built environment risk factors represent a test of Research Hypothesis #1. Tests of significance for the estimated effect for either of two measures of black segregation (i.e., dissimilarity or isolation) in explaining between city clustering represent a test of Research Hypothesis #2.

**Result: Hypothesis #1: There is a 4% Intra-class Correlation Coefficient** between clustering of social (i.e., concentrated disadvantage) and built (e.g., unhealthy food outlet density) environment risk factors at the neighborhood level (i.e., in census tracts) across Mid South TCC cities (i.e., US Census Places). **Hypothesis #2: There is a 3% Increase** by Census Tract for Off-Sale Outlet (Liquor Store) attributed to Isolation. By applying the segregation measure of Dissimilarity, **when Racial Dissimilarity increases from 2% up to 8%, it accounts for an average increase of one On-Sale Outlet (Bar) per 10,000 people.**

There does appear to be correlation between Segregation and Higher Alcohol Outlet Density. More detailed analysis is needed to reach Significance due to alcohol outlet data sets being in non-uniform formats in some jurisdictions. However, it suggests that Mid-South places that are more segregated have higher densities of alcohol outlets.

## Curtis, Amy, MS

Poster 9

Auburn School of Nursing

### Breast Cancer Screening Behaviors in Women and the Potential Relationships Among Fatalism and the Health Belief Model

*Curtis, Amy, PhD, RN*

**BACKGROUND:** Breast Cancer is the most common cancer in women, with the exception of cancers of the skin, and is responsible for thousands of deaths each year. The American Cancer Society indicates that breast cancer death rates and incidence increase with age. In the United States, there will be 234,190 new cases of breast cancer and 40,290 women will die from this disease in 2015 alone. Among the women who were diagnosed with breast cancer, Caucasian women have a higher incidence than African American women beginning at age 45. However, African American women have a higher incidence rate before 45, and are more likely to die from this type of cancer at any age. It has been said that one in four women in the United States ages 50-74 have not had a mammogram within the past two years.

**PURPOSE:** To explore the relationships between components of the Health Belief Model (HBM), level of breast cancer knowledge and fatalism on breast cancer screening behaviors in working women at a southeastern United States university. The researcher will pay particular attention to those relationships discovered among women of all ethnicities. The sample for this study consisted of 667 females employed at this particular university.

**METHODS:** Several statistical tests were performed; some of these include MANOVA, Chi-square Independence test, and a logistic regression. Logistic regression was utilized for several aspects of this study. It was particularly helpful when looking at the "benefits, barriers, and pessimism" components of the questionnaire as well as the screening behaviors, and some of the knowledge questions. Linear regression is typically utilized in the effort to predict or forecast relationships between variables, thus it was a major point of reference in many of the research questions.

**RESULTS/CONCLUSION:** The findings of this study revealed that certain components of the HBM and the Fatalism scale have a predictive effect of an individual's screening behaviors. Also, a need for further investigation and education among women of varying ethnicities was revealed. The researcher plans on replicating this study in a community based setting to determine other potential relationships among the HBM, Fatalism and level of breast cancer knowledge and the role it plays in breast cancer screening behaviors.

## Danos, Denise, PhD

Poster 10

LSU School of Medicine, Stanley S. Scott Cancer Center

### Neighborhood Disadvantage and Racial Disparities in Colorectal Cancer Incidence: A Population-based Study in Louisiana

*Danos, Denise, PhD; Ferguson, Tekeda, PhD; Simonsen, Neal, PhD; Leonardi, Claudia, PhD; Yu, Qingzhao, PhD; Wu, Xiao-Cheng, MD, MPH; Scribner, Richard, MD, MPH*

**PURPOSE:** Colorectal cancer (CRC) continues to demonstrate widening incidence and survival disparities between whites and blacks in the United States. We designed a population-based study to investigate the potential role of neighborhood concentrated disadvantage in the incidence of colorectal cancer in Louisiana and the degree this appears to contribute to the observed racial disparity in CRC incidence.

**METHODS:** Colorectal cancer incidence in Louisiana was calculated using Surveillance Epidemiology End Results Program's Louisiana Tumor Registry 2008-2012 data and 2010 US Census population counts. Average annual incidence rates were computed as the number of cases for age, sex and race specific cells within census tracts divided by person-years of exposure for each cell. Concentrated disadvantage index (CDI) for each census tract was calculated using the PhenX Toolkit criteria. Multilevel log-binomial models of individuals nested within census tracts were used to quantify the degree of association shown by neighborhood CDI with cancer incidence and its potential contribution to racial differences.

**RESULTS:** The study sample included 11,089,745 person years with 10,198 incident cases of CRC. There was a notable difference in the distribution of CDI for the study population by race, with blacks disproportionately represented in more disadvantaged areas. Adjusting for age and sex, the risk of CRC was 28% greater for blacks compared to whites [Risk Ratio (RR)= 1.28; 95% CI (1.22, 1.33)]. Concentrated disadvantage was significantly associated with increased CRC risk for both races; after adjusting for CDI, racial disparities in CRC were no longer observed among residents in the most disadvantaged areas, but persisted in more advantaged areas.

**DISCUSSION/CONCLUSIONS:** The significant association between area disadvantage and CRC incidence supports the overall notion that CRC disproportionately affects residents in environments characterized by concentrated disadvantage. However, our results suggest an additional dimension to racial disparities in CRC outside of neighborhood disadvantage that warrants more investigation.

**Dilley, Sarah, MD, MPH**

UAB School of Medicine, Gynecologic Oncology

**Racial Disparities in Cervical Cancer Incidence Among Older Women in the Southern US and Considerations for Screening Guideline Changes***Dilley, Sarah, MD, MPH; Yoo, Wonsuk, PhD; Huh, Warner, MD; Partridge, Edward, MD; Bae, Sejong, PhD*

**PURPOSE:** Black women have higher incidence rates, are more likely to be diagnosed at a higher stage, and are twice as likely to die from cervical cancer than white women. Identifying at-risk groups and trends in incidence is a crucial step in improving prevention strategies. Our study explores racial, geographic and age-related disparities in cervical cancer incidence and mortality.

**METHODS:** Surveillance, Epidemiology, and End Results (SEER) 18 Program data were used to calculate incidence and mortality rates of cervical cancer from 2000-2012 for four groups: US14-Non-Hispanic White (NHW), US14-Non-Hispanic Black (NHB), South-NHW, and South-NHB, where the South included registries from Georgia and Louisiana. Alabama tumor registry data from 2009-2013 were used to calculate similar outcomes for NHB and NHW women.

**RESULTS:** Our data demonstrate a decrease in overall cervical cancer incidence rates from 9.6/100,000 in 2000 to 7.4/100,000 in 2012. However, the incidence and mortality rates were higher for NHB compared to NHW in the US (12.3 and 7.9 in 2000, 8.8 and 6.6 in 2012) and in the South (13.4 and 9.2 in 2000, 9.6 and 7.6 in 2012). Regional disparity in incidence rates was shown: Age-adjusted incidence rates increased with age for NHB but decreased for NHW after age 50, while age-adjusted mortality rates increased with age for all four groups. Age-specific analysis revealed cervical cancer incidence rates for South-NHB compared to US14-NHW were higher as age increases (1.59x: age 50-64, 2.09x: age 65-74, 3.88x: age 75 and older). A similar trend was observed among Alabamians, with 4.07x higher incidence in NHB age 70-74.

**DISCUSSION/CONCLUSIONS:** Our results are consistent with previous data showing overall decreasing cervical cancer incidence over time with persistently higher incidence and mortality rates in NHB. These racial disparities in incidence rates were most pronounced for older women in the South. Available data have not shown a difference in compliance with cervical cancer screening that would contribute to these differences, and current cervical cancer screening guidelines recommend cessation of Pap and HPV testing after age 65. These guidelines may need to be reevaluated for consideration of continued screening for black women after age 65.

**Dowla, Shima****Poster 11**

UAB School of Public Health, Health Behavior

**Racial Differences in Pediatric Non-Alcoholic Fatty Liver Disease***Dowla, Shima; Aslibekyan, Stella, PhD; Ashraf, Ambika, MD*

**PURPOSE:** With the growth of the childhood obesity epidemic, non-alcoholic fatty liver disease (NAFLD) has emerged as the primary cause of pediatric chronic liver disease. The purpose of this study is to characterize the demographic, anthropometric, and metabolic profile of children with NAFLD and evaluate differences in characteristics based on race.

**METHODS:** This retrospective chart review was conducted in a sample of 206 children identified with NAFLD. Patients were included if they met the following criteria: 1) confirmed NAFLD through an ultrasound or liver biopsy or 2) clinical diagnosis of NAFLD in an obese child (BMI = 95th percentile) along with an elevated alanine aminotransferase (ALT) value 1.5 times the upper range of normal, in the absence of other systemic diseases. Descriptive statistics were computed to characterize the sample population. One-way ANOVA and Tukey's honest significant test were used to assess differences in anthropometric and metabolic characteristics based on race.

**RESULTS:** Subjects were primarily male (n, % = 136, 66), Caucasian (n, % = 133, 66), Hispanic (n, % = 42, 21), and Black (n = 25, 12%). Mean age, weight (lbs.), height (in), BMI (kg/m<sup>2</sup>), systolic and diastolic blood pressure (mmHg), and ALT (U/L) of subjects at diagnosis were 12.3 + 3.5 years, 192 + 77 lbs., 61.7 + 6.6 in, 34.6 + 9.7 kg/m<sup>2</sup>, 124 + 15.4 mmHg, 69.6 + 10.6 mmHg, and 91.8 + 67.2 U/L respectively. The following metabolic abnormalities were seen in this sample of children: 14% with pre-diabetes (n= 78), 10% with diabetes (n= 78), 67% with elevated triglycerides (n=99), 25% with elevated LDL (n=99), and 37% with elevated Non-HDL (n=99). Racial differences existed based on weight (p = 0.03), systolic blood pressure (p = .01), diastolic blood pressure (p = .02), and hemoglobin A1c (p = 0.04). In particular, Hispanics with NAFLD had significantly lower mean weight (p= .02) and diastolic blood pressure (p = .02) than Blacks, and lower mean systolic blood pressure than Whites (p = .01). Whites had significantly lower mean hemoglobin a1c than Blacks (p = 0.04).

**DISCUSSION/CONCLUSIONS:** Anthropometric and metabolic profile of children with NAFLD differ based on race.

## Ferguson, Tekeda F., PhD, MPH, MSPH

Centennial II

LSU School of Public Health, Epidemiology

### Racial Disparities in Late Stage Breast Cancer Diagnosis: Assessing Geographic Variation and Ecological Risk

*Ferguson, Tekeda, PhD, MPH; Danos, Denise, PhD; Simonsen, Neal, PhD; Leonardi, Claudia, PhD; Yu, Qingzhao, PhD; Wu, Xiao-Cheng, MD, MPH; Scribner, Richard, MD, MPH*

**PURPOSE:** Racial disparities in breast cancer mortality reflect disparities in both stage at diagnosis and stage-specific survival. We designed a population-based study to evaluate the geographic variation in late stage diagnosis of invasive female breast cancer and to quantify racial disparities between black and white women after adjusting for effects of neighborhood characteristics.

**METHODS:** Data from the population-based Louisiana Tumor Registry, a participant of NCI's SEER program, were used in the analyses of primary breast cancer cases in Louisiana diagnosed 2008-2012. Late stage breast cancer included regional and distant stages, as defined by the SEER summary staging system. Neighborhood concentrated disadvantage index (CDI) for each census tract was calculated from US American Community Survey 2012 5-year estimates, in accordance with PhenX Toolkit protocol. Hierarchical logistic regression models were used to quantify census tract level variation in late stage diagnosis among cases and estimate racial disparities after accounting for neighborhood CDI and rural population.

**RESULTS:** Our analyses included 11,235 women diagnosed with their first primary breast cancer during 2008-2012. Hormone receptor negative subtypes displayed a significantly higher proportion of late stage diagnoses [44% versus 38%, p-value<0.0001]. Late stage diagnosis was more common among younger, never-married and uninsured individuals, as well. Controlling for hormone receptor status, age, and marital and insurance status at time of diagnosis, the odds ratio (OR) of advanced stage diagnosis for black women compared to white women was 1.31 (1.20,1.43). Census tract-level variation in stage was marginal for the study sample. Nonetheless, neighborhood concentrated disadvantage and percentage of population outside of metropolitan areas were positively associated with advanced stage diagnosis and the racial disparity was reduced after adjusting for these factors [OR: 1.25 (1.12, 1.38)].

**DISCUSSION/CONCLUSION:** Greater neighborhood CDI increased the likelihood of late-stage breast cancer diagnoses in Louisiana and adjusting for CDI reduced the observed racial disparity. However, our results indicate that other factors contributing to the excess risk of late stage cancer in black women should continue to be investigated in order to guide efforts to improve overall survival.

## Foster, Bethany M., MPH

Poster 12

Wayne State, School of Medicine, Emergency Medicine

### Metrics for Effective Linkage to Care Services within an Emergency Department HIV Screening Program

*Foster, Bethany, MPH; Brody, Aaron, MD, MPH; Levy, Phillip, MD, MPH*

**PURPOSE:** Many EDs are implementing public health programs promoting early detection and linkage to care to address the issues that patients have when navigating the healthcare system. With over 100,000 emergency department (ED) visits at a Detroit hospital, public health programs provide an opportunity to reach an underserved population that rely on EDs for primary care/chronic disease management.

**METHODS:** In the Detroit Receiving Hospital (DRH) ED, a rapid HIV testing program has been integrated into the ED workflow. Patients are tested at the bedside for HIV using the rapid test. Results are disclosed before the patient is discharged from the ED and linkage to care services are provided as necessary. Patients are linked to HIV Specialty Clinics within 30 days and community-based organizations that provide case management to address social needs.

**RESULTS:** In FY 2016, 13,125 patients were offered the rapid HIV test and 8,168 (62.8%) patients consented. 19 (0.2%) new HIV infections were identified (additionally, 7 false-positives). Of those, 17 accepted linkage to care services. 94.1% of the newly diagnosed were successfully linked to their appointment. 19 previously positive individuals previously diagnosed were self-reported as not being in care and 14 (73.7%) re-engaged in care. 44 sexual assault survivors were started on post-exposure prophylaxis (PEP) to prevent the possibility of seroconverting and 1 patient started pre-exposure prophylaxis (PrEP) after their partner was diagnosed with HIV. One acute HIV infection was identified and the patient was linked to care within a day. 30 (83.3%) HIV positive patients accepted early intervention services (EIS) to help address social needs, such as housing, transportation, medical insurance, and mental health services.

**DISCUSSION/CONCLUSIONS:** In an urban ED, public health programs can effectively assist with linking not only newly diagnosed patients but also previously diagnosed to the specialty clinics that will help manage their health condition. HIV screening efforts in EDs also can reach other disadvantaged patients such as sexual assault survivors and sexual/injection drug partners of HIV positive individuals. The overall program plan can be modified for other chronic conditions, such as hepatitis C, diabetes and hypertension, and implemented in ED settings.



**Glover, LáShauntá M., MS****Poster 13****University of Mississippi, School of Medicine, Jackson Heart Study****Life Course Socioeconomic Status As A Risk Factor For Hypertension In African American Adults: The Jackson Heart Study***Glover, LáShauntá M., MS; Wyatt, Sharon B., PhD, CANP, FAAN; Diez-Roux, Ana, MD, MPH; Booth, John N., III, MA, MS; Sims, Mario, PhD***PURPOSE:** Examine the associations of childhood and adult socioeconomic status (SES) with hypertension in African Americans (AAs).**METHODS:** We evaluated two childhood SES (mother's and father's education) and four adult SES (education, income, occupation, wealth) factors measured at baseline (2000-2004) among 5306 JHS participants, a cohort comprised exclusively of AAs. Associations of SES measures with prevalent and incident hypertension were determined using multivariable Poisson regression to estimate prevalence ratios (PR, 95% confidence interval - CI) that were adjusted for age, sex, and health behaviors (smoking, alcohol, physical activity, diet).**RESULTS:** Prevalent hypertension was inversely associated with childhood and adult SES measures, except education. Specifically, compared to their low SES status counterparts, participants whose mother had a college degree or more, and adults in management/professional occupations had a lower prevalence of hypertension at baseline (PR, 0.86 95% CI 0.82, 0.91 and PR, 0.94 95% CI 0.91, 0.96, respectively), after multivariable adjustment. Between 2004 and 2013, there were 858 new cases of hypertension. Compared to participants with low occupational status, adults in management/professional occupations were less likely to develop hypertension (adjusted PR, 0.94 95% CI 0.88, 0.99).**CONCLUSIONS:** Prevalent and incident hypertension were associated with low childhood and adult SES factors. Efforts to prevent hypertension among AAs may need to intervene on low SES factors that result in AAs having higher probability of developing hypertension.**Griffiths, Lauren, MPH****Poster 14****LSU School of Public Health****Higher Frequency of Sugar-Sweetened Beverage Consumption is Associated With Obesity Among African-American and Caucasian Adolescents in Southeast Louisiana***Griffiths, Lauren, MPH; Tseng, Tung-Sung, DrPH; Kepper, Maura, PhD; Skizim, Meg, MPH; Cornwell, Kristin, BS; Maronge, Jacob, MS; Uddo, Rober, MPH; Sothern, Melinda, PhD***PURPOSE:** Sugar-sweetened beverages (SSB) promote childhood obesity, and African-American children consume more SSB and experience higher rates of obesity than Caucasian counterparts. This study examined frequency of SSB consumption, weight status and insulin resistance (HOMA-IR) in a group of African-American and Caucasian adolescents.**METHODS:** Nutrition behavioral data was obtained from participants enrolled in two studies (NIMHD 5U54MDO08176-02; NIH 1P20MD004817-01) in Southeast Louisiana that examined social and behavioral determinants of obesity and related metabolic disorders. A total of 125 African-American (57.6%) and Caucasian (42.4%) adolescent (mean age=15.2 years; SD=1.77) males (30.4%) and females (69.6%) self-reported frequency of SSB consumption in the previous week on the Eating Habits Questionnaire. African-American participants had higher BMIz than Caucasian participants (mean=2.0 vs. 0.7;  $p<0.0001$ ). Chi-square tests were used to determine differences in SSB by race. Pearson correlations were used to examine associations among SSB intake, BMIz, and HOMA-IR. Linear regression models accounting for race, sex and age were used to examine relationships between SSB and: 1) BMIz, and 2) HOMA-IR. Models were stratified by race to determine differences between African-American versus Caucasian adolescents.**RESULTS:** African-American participants reported higher frequency of consumption of fruit-flavored sodas (3.5 times in past week vs. 0.4,  $p=0.001$ ), fruit drinks (i.e. Kool-Aid, Hawaiian Punch, Hi-C, Tropicana Twisters) (6.5 vs. 1.6;  $p=0.00021$ ), fruit and vegetable juices (4.6 vs. 2.5;  $p=0.05$ ), and total SSB (19.2 vs. 7.4;  $p<0.0001$ ) compared to Caucasian participants. Frequency of consumption did not significantly differ by race for regular soda and water. Frequency of SSB consumption was positively associated with BMIz ( $p=0.001$ ), but significance was lost after adjusting for race, sex, and age ( $p=0.36$ ). In the subset of participants with available HOMA-IR data ( $n=85$ ), frequency of SSB consumption was positively associated with HOMA-IR ( $p<0.01$ ), but significance became marginal ( $p=0.07$ ) after adjusting for race, sex, and age.**DISCUSSION/CONCLUSIONS:** African-American adolescents in Southeast Louisiana reported higher frequency of SSB consumption, and this behavior was related to higher levels of obesity. Strategies targeting SSB consumption, specifically in African-American adolescents, may be an important step to reducing high rates of obesity and related metabolic disorders observed in this population.



## Hamby, Bryant, MA

Poster 15

UAB School of Public Health, Sociology

### Individual and Neighborhood Determinants of Bikeshare Use in Urban Communities

*Hamby, Bryant W., MA; Oates, Gabriela R., PhD; Hart, H. Olivia, BSc; Fouad, Mona N., MD, MPH*

**INTRODUCTION:** The social determinants of use of bike share programs are still poorly understood. While many studies focus on the individual determinants of things such as bicycle use, and other studies have looked at neighborhood factors related to repeated use of a bike share stations, we aim to examine the structural and neighborhood level effects of individuals repeated use of a bike share program.

**METHODS:** Data were obtained from a bike share company on clients who rent their bikes around the Birmingham, AL area from October 2015 to October 2016 and were combined with census tract variables from the 2010 Census. Individual-level variables included total number of times an individual used a bike, sex, age, average speed traveled, total distance traveled, total minutes ridden, membership type, and type of bike ridden (traditional bicycle or electricity assisted pedelec). Neighborhood-level data aggregated to Census tracts were obtained from 2010 U.S. Census after geocoding the billing addresses of clients. A socioeconomic index, constructed from 15 candidate variables, included 8 factors with loading >0.5: households with disabled individuals, households without vehicles, cost burden (>30% income toward housing), poverty, public assistance or food stamps, unemployment, minority population, college education and disability. Further, a marker of whether or not a permanent bike share station was present in their census tract was added. Using this scale, linear regression models were estimated to predict number of times an individual used the bike share service.

**RESULTS:** Predictors of increased bike share use were: being younger, being a faster rider, riding a longer distance, increased percentages of all trips that were taken on a pedelec, and, contrary to expectations, a lower socioeconomic status index

**CONCLUSION:** Some accounts of bike share programs have been critical of whether or not they reduce disparities in access to healthier options such as bicycles over automobiles. However, the present results show that the people who are using the bike share services the most actually reside in neighborhoods which have higher levels socioeconomic distress.

## Hanks, Roma, PhD

Heritage I

University of South Alabama, Sociology

### Intergenerational Relationships, Livable Communities and Health Outcomes

*Hanks, Roma Stovall, PhD; Estes, Barbara*

**PURPOSE:** Healthy community designs ensure livable communities in which youth and families can thrive and seniors can choose to continue working, retire with purpose, and connect with social networks to meet changing social and health care needs. This project has been innovative in bringing together: (1) Community-based participatory research (CBPR) methods, (2) evidence-based policy building models, (3) critical considerations of generation-friendly policy, and (4) planning strategies for livable communities. The goal of this project has been to explore how a fusion of these strategies can produce evidence that can be used in modeling innovative approaches in communities across the Gulf region. The project is led by the Center for Generational Studies (CGS), a Community-University partnership between the University of South Alabama and Via Health, Fitness, and Enrichment Center.

**Research Questions RQ #1** How does the community understand and support: (a) the concepts of intergenerational policy and (b) the concept of livable communities? **RQ #2** How do local policy makers understand and support: (c) the concepts of intergenerational policy and (d) the concept of livable communities? **RQ #3** How can the effectiveness of the intergenerational perspective and multi-generational livable communities be demonstrated for local policy makers?

**METHODS:** During Phases I & II of this pilot project the CGS Team has collected data in focus group and town meeting formats, using Community-Based Participatory Research (CBPR) methods to capture community needs and priorities and community-generated strategies to bring a life span/intergenerational focus to policies.

**Discussion Analysis** of these results will inform a design initiative in Phase III of the project, with the goal of demonstrating to community leaders that livable communities are possible, when built on principles of intergenerational support networks, plans for changing care needs across the lifespan, and focus on health and safety for all generations sharing a built environment.

**Howard, George, DrPH**

UAB School of Public Health, Biostatistics

**An Assessment of Contributors to the Excess Incidence of Hypertension in Blacks: the REasons for Geographic And Racial Differences in Stroke (REGARDS) Study**

Howard, George, DrPH; Cushman, Mary, MD, MSc; Moy Claudia, PhD; Oparil, Suzanne MD; Muntner, Paul, PhD; Lackland, Daniel, DrPH; Manly, Jennifer, PhD; Flaherty, Matthew, MD; Judd, Suzanne, PhD; Wadley, Virginia, PhD; Howard, Virginia, PhD

**PURPOSE:** The high prevalence of hypertension in blacks is a major contributor to racial disparities in cardiovascular risk and life-expectancy; however, the causes for the racial disparity in the incidence of hypertension are not well understood. Our goal is to identify contributors to the excess incidence of hypertension in blacks.

**METHODS:** Analysis included 3,583 black and 8,689 white participants from the REasons for Geographic And Racial Differences in Stroke (REGARDS) Study without hypertension at baseline who attended a follow-up visit approximately 10 years later (2013-2016). Incident hypertension defined as SBP = 140mmHg or DBP = 90 mmHg, or use of antihypertensive medications at the follow-up visit. Logistic regression was used to estimate the excess risk of incident hypertension after adjustment for baseline SBP, age and sex; and to estimate the mediation of this effect by measure of diet, lifestyle and patient characteristics.

**RESULTS:** Over 10 years of follow-up, 49% of black and 35% of white participants developed hypertension. Blacks had higher mean Southern Diet scores than whites (men:  $0.79 \pm 0.04$  vs.  $-0.20 \pm 0.02$ ; women:  $0.28 \pm 0.03$  vs.  $-0.50 \pm 0.02$ ), and the diet score was strongly associated with incident hypertension (OR(men) = 1.17; 95% CI: 1.07-1.30; OR(women) = 1.18; 95% CI: 1.06-1.30). The diet score was the most powerful mediator of the black-white difference in incident hypertension, accounting for 52% (95% CI: 19%-84%) of the black excess risk for incident hypertension in men and 26% (95%CI: 10%-42%) in women. In men, low education and high dietary Na+/K+ ratio also mediated the risk of incident hypertension; while in women higher BMI, low mobility, low DASH diet score, low income, low neighborhood quality, high dietary Na+/K+ ratio, low physical activity, and low education were implicated.

**DISCUSSION/CONCLUSIONS:** This report provides insights into the contributors to the higher incidence of hypertension in blacks. High consumption of the Southern Diet was the most powerful contributor to the increased incidence of hypertension in black men and women.

**Howard, Virginia, PhD**

Centennial I

UAB School of Public Health, Epidemiology

**Race, Age and Other Differences in the Perceived Harm of Having a Stroke**

Howard, Virginia, PhD; Allen, Shauntice, PhD; Kleindorfer, Dawn O, MD; Aycock, Dawn M, PhD; Anderson, Aaron M; Howard, George, DrPH

**BACKGROUND:** Consequences of stroke can be devastating and long-term, impacting physical and mental functioning, quality of life, and other activities of daily living. Based on fear appeal research, perceived harm from having a stroke can be used to motivate people to engage in self-protective behaviors.

**METHODS:** REGARDS is a national, population-based, longitudinal study of 30,239 blacks and whites > 45 years of age. Designed to identify factors associated with the higher stroke mortality among blacks and residents of the stroke belt region of the US, the study used a centralized telephone interview and an in-home evaluation for baseline risk assessment with telephone follow-up every six months. Ten years after enrollment, participants underwent a 2nd risk factor assessment. As part of a Risk Behavior Diagnosis Scale, participants were asked their level of agreement with the statement "I believe that stroke is extremely harmful." Data from the 10-year assessment were available on 15,312 participants. Logistic regression was used to examine the association of agreement with the statement by demographics, region, socioeconomic (SES) factors, previous stroke and hypertension.

**RESULTS:** Almost 500 (3%; 446/15,312) participants did not agree with the statement that stroke is extremely harmful. After adjustment for age group, sex, region, household income, education, previous stroke, and hypertension, the odds of blacks agreeing that stroke was harmful was only one-third that of whites. Also in the multivariable model, older participants, those with previous stroke, and those with lower household income or education were also significantly less likely to agree stroke was harmful. There was no significant association by sex, region, or hypertension.

**CONCLUSIONS:** Despite public health campaigns and active participation in a long term observational study of stroke risk factors, the harmful repercussions from stroke are not perceived similarly for blacks and whites, across SES and age groups, and even in persons who have experienced a stroke compared to those who have not. Fear-based messaging intended to motivate stroke prevention behaviors may not be as effective in these subgroups. Other prevention strategies such as culturally inclusive community education about the harm/consequences of stroke could be appropriate.

## Judd, Suzanne, PhD

## Centennial II

UAB School of Public Health, Biostatistics

### Regional Differences in Stroke Mortality and Incidence in The United States: Sodium Intake, Socioeconomic State and Race

*Suzanne E Judd; Philippa Clarke; Cecilia Samieri; George Howard; Sindhu Lakkur; Virginia Howard; Dan Lackland; Elsayed Soliman; Natalie Colabianchi*

**BACKGROUND AND AIMS:** Many hypotheses have been suggested as to why regional differences in stroke mortality exist. We hypothesized that regional differences in stroke incidence may be explained by the joint effect of home location (geographic residence) and dietary sodium intake.

**METHOD:** Data were from the REasons for Geographic and Racial Differences in Stroke (REGARDS) national cohort study of U.S. blacks and whites. The primary outcome was incident stroke. Geographic residence and sodium intake were modeled together as the exposure to examine the joint effects of these variables. Stroke-free participants with dietary data and geographic residence were included (n=19,316). A Block Food Frequency Questionnaire was used to assess sodium intake. County level stroke mortality (CLSM) from national statistics was modeled in quartiles and neighborhood SES was modeled using US Census tract level data. We adjusted for traditional stroke risk factors, income, education, race, age and sex in final Cox proportional hazards models.

**RESULTS:** Counties with higher CLSM had lower levels of neighborhood SES, and this association was stronger in white ( $\rho = -0.40$ ,  $p < 0.001$ ) than black participants ( $\rho = -0.27$ ,  $p < 0.001$ ). Sodium intake differed by geography. When examining the joint effect of sodium intake and geography on incident stroke, an interaction ( $p < 0.05$ ) was present.

**CONCLUSION:** Underlying factors behind racial and regional differences in stroke are difficult to examine due to the inter-related nature of variables like sodium intake and SES. Further, since these associations differ by race, considering the impact of sodium intake and neighborhood may require a different public health approach for different race/ethnic groups.

## Jung, Seung Eun, PhD

## Poster 16

University of Alabama, Human Nutrition

### Nutritional Status of Rural Older Adults is Linked to Physical and Emotional Health

*Jung, Seung Eun, PhD, RD; Bishop, Alex, PhD; Kim, Minjung, PhD; Hermann, Janice, PhD, RD; Kim, Giyeon, PhD; Lawrence, Jeannine, PhD, RD*

**BACKGROUND:** Although nutritional status is influenced by multi-dimensional aspects encompassing physical and emotional well-being, there is limited research on this complex relationship.

**OBJECTIVE:** The purpose of this study was to examine the interplay between indicators of physical health (perceived health status and self-care capacity) and emotional well-being (depressive affect and loneliness) on rural older adults' nutritional status.

**DESIGN:** The cross-sectional study was conducted from June 1, 2007 to June 1, 2008. Participants/setting: A total of 171 community-dwelling older adults, 65 years and older, who resided within non-metro rural communities participated in this study. Main outcome measures: Participants completed validated instruments measuring self-care capacity, perceived health status, loneliness, depressive affect, and nutritional status. Statistical analyses performed: Structural equation modeling (SEM) was employed to investigate the complex interplay of physical and emotional health status with nutritional status among rural older adults, Chi-square statistic, CFI, RMSEA and SRMR were used to assess model fit. **RESULTS:** Chi-square statistic and the other model fit indices showed the hypothesized SEM model provided a good fit to the data ( $\chi^2(2) = 2.15$ ,  $p = 0.34$ ; CFI = 1.00; RMSEA = 0.02; SRMR = 0.03). Self-care capacity was significantly related with depressive affect ( $\beta = -0.11$ ,  $p = 0.03$ ) whereas self-care capacity was not significantly related with loneliness. Perceived health status had a significant negative relationship with both loneliness ( $\beta = -0.16$ ,  $p = 0.03$ ) and depressive affect ( $\beta = -0.22$ ,  $p = 0.03$ ). Although loneliness showed no significant direct relationship with nutritional status, it showed a significant direct relationship with depressive affect ( $\beta = 0.46$ ,  $p < 0.01$ ). Finally, the results demonstrated that depressive affect had a significant negative relationship with nutritional status ( $\beta = -0.30$ ,  $p < 0.01$ ). The results indicated physical health and emotional indicators have significant multi-dimensional associations with nutritional status among rural older adults.

**CONCLUSIONS:** The present study provides insights into the importance of addressing both physical and emotional well-being together to reduce potential effects of poor emotional well-being on nutritional status, particularly among rural older adults with impaired physical health and self-care capacity.

**Junkins, Anna, MSPH****Poster 17**

UAB School of Public Health, Epidemiology

**An Integrated Child Health Nutritional and Agricultural Program: Changes In Behavior and Nutrition In a Rural Community of Guatemala***Junkins, Anna, MSPH; Padilla, Luz, MD, MSPH; Jennings, Emily; Baker, Nicole; Callahan, Kaylajoi; Cruz, Lilian; Mazariegos, Manolo, MD; Jolly, Pauline, PhD, MPH*

**PURPOSE:** Early nutritional intervention, especially during the first two years of life, is necessary in order to prevent irreversible consequences of chronic malnutrition. In Guatemala, about 50% of children under the age of five suffer from malnutrition and stunted growth. An integrated nutrition and agricultural intervention was introduced into two communities in rural Guatemala in order to improve education, food hygiene, and health outcomes among children two years of age and younger. Participants included in the study lived in one of two communities, Santo Tomás Union and Chocolá, in the South West Region of Guatemala. Families included in the study had an infant under the age of two or a pregnant woman in her last trimester or who was currently breastfeeding. Both communities received agricultural and nutrition education, and resources to create and sustain a vegetable garden. In addition, the Chocolá community received livestock for consumption, breeding, and trading.

**METHODS:** Anthropometric values including weight and height, and hemoglobin values of the children were collected by research personnel at baseline and follow up. For every child at each time point, weight-for-age, height-for-age, and weight-for-height z-scores were calculated using standardized z-score calculators. Paired-sample t-tests were conducted to compare z-scores from baseline to follow up. Results:

**Results** suggest a significant decrease in malnutrition, stunted growth, and wasting from baseline to follow-up among children who received the intervention that included the livestock. Furthermore, clinical data measuring hemoglobin levels to assess anemia status show significant improvement among the children who received the livestock intervention. Children from the community which did not receive the livestock intervention also showed a positive trend in nutritional status, but it was not statistically significant.

**CONCLUSIONS:** These results suggest that children in both communities significantly improved dietary intake of vitamins and folate which are necessary in the production of red blood cells. This study shows that interventions which provide higher access to food may positively affect diet, and thus decrease child malnutrition, stunted growth, and wasting.

**Kempf, Mirjam-Colette, PhD, MPH****Heritage I**

UAB School of Nursing

**Barriers to HIV Testing among Primary Care Providers and Patients in Alabama***Kempf, Mirjam-Colette, MPH, PhD; Ott, C., PhD; Azuero, A., PhD; Wise, J.; Gardner, A; Davies, S. PhD; Lanzi, R., G. PhD, MPH*

**BACKGROUND:** Evidence regarding the uptake and implementation of the CDC's routine HIV testing guidelines, as revised in 2006, is still limited, making it difficult to evaluate the impact of the guidelines on detection of new HIV infections and on patient loads in HIV clinics locally and throughout the US. To address fundamental gaps in knowledge regarding HIV testing practices and perceptions, the objective of this project was to assess patients' HIV testing attitudes and behaviors, and to evaluate perceptions of providers regarding HIV testing guidelines at clinics affiliated with a large Federally Qualified Health Center (FQHC) in Alabama.

**METHODS:** An iPad administered survey was furnished to patients and family members visiting participating FQHC clinics. Survey responses were tabulated and analyzed using logistic regression. Barriers to HIV testing among providers were assessed via in-person interviews.

**RESULTS:** In total 250 patients across three clinic sites completed surveys and ten providers participated in qualitative interviews. 70% of patients reported having been tested for HIV previously, with only 39% reporting having been offered an HIV test by a provider within the last 8yrs. While minority populations were more likely to have been tested previously ( $p=0.006$ ), minority populations were more likely to be concerned that HIV testing could reflect negatively on them as a person ( $p=0.008$ ). Perceived costs, locating HIV care, not feeling at risk for HIV and fear of negative judgment were identified as strong barriers to HIV testing by patients. However, providers reported fear of test results as being the most important barrier for patients.

**CONCLUSIONS:** HIV testing uptake and experiences differ by race. Providers' perceptions towards barriers to HIV testing differ in comparison to their patients. Barriers as perceived by patients need to be communicated with providers to allow for successful implementation of routine testing guidelines.

## Kolbo, Jerome R., PhD

## Heritage I

University of Southern Mississippi College of Health

Community Conversations About Adolescent Sexual Health in Mississippi

*Kolbo, Jerome, PhD, MSW*

**PURPOSE:** Mississippi's rates of adolescent sexual activity, teen pregnancy, teen births, sexually transmitted diseases, and HIV/AIDS are among the highest in the nation. A Community-University Research Team (CURT), consisting of faculty from The University of Southern Mississippi and staff from the Southeast Mississippi Rural Health Initiative collaborated with community members to examine whether the application of Community Based Participatory Research (CBPR) in investigating how policies and practices affect adolescent sexual health outcomes could change perceptions of both community resilience and ability to improve adolescent sexual health.

**METHODS:** Under the direction of a Community Advisory Team (CAT), researchers engaged community members from nine population groups in a series of community conversations regarding the needs and problems, policies and practices, and roles and contributions that impact adolescent sexual health in Forrest County, Mississippi. Responses collected during community conversations were compiled by community and university coordinators, and analyzed and interpreted by members of the CAT and CURT.

**RESULTS:** Qualitative analysis of the conversations yielded five overarching themes related directly to: education, health, environment, communication, and parental involvement. Within these themes community members identified needs and problems such as the importance of information being readily available to the public, a greater emphasis on mental and emotional health, the power of social influence on decisions about sexual health, the lack of accurate and consistent communication about formal policies, and the need for parents to engage their children in conversations about sexual health. It was extremely difficult for community members to identify formal policies that affect adolescent sexual health, but they made clear references to the importance and impact of informal practices. Additionally, community members communicated a strong desire to improve adolescent sexual health, offering specific recommendations and action plans to do so.

**DISCUSSION:** Results suggest that the use of CBPR was effective in allowing participants to share their knowledge and experiences as they learned from perspectives of other community members. Lessons learned from the study may influence future adolescent sexual health policy as well as provide a model for using CBPR in other communities to build community resilience and address health policy concerns.

## Lee, Anna, PhD

## University

North Carolina A&T

Pathways to Obesity Prevention Among Black Men: Understanding the Role of Racism and Masculinity Ideology on Indicators of Obesity Risk

*Lee, Anna, PhD; Corneille, Maya, PhD*

**PURPOSE:** Racial inequities in health continue to persist in various illnesses; including diabetes and cardiovascular disease. One major controllable and preventable risk factor is obesity, therefore there is a need to better understand the pathways to obesity prevention. Research has shown that biological, psychological and social factors are related to obesity risk. For Black men, psychosocial factors such as masculinity ideology and the frequency of experiences with racism may be significantly associated with obesity risk. The purpose of this study was to examine the extent to which these psychosocial factors are related to obesity risk.

**METHODS:** Participants were 125 Black men aged 20-39 years old (M=23.0, SD=3.43). They completed surveys to measure masculinity ideology and experiences with racism. Measures of racial identity and use of Africultural coping were also collected as covariates. In addition, body mass index, waist-to-hip ratio and systolic and diastolic blood pressure readings were collected.

**RESULTS:** Results showed low negative correlations between experiences with racism and masculinity ideology. There were significant interaction effects between masculinity ideology and experiences with racism for body mass index scores, waist-to-hip ratio and blood pressure.

**CONCLUSION:** Findings from the study indicated that among young adult Black men, experiences with racism and masculinity ideology can interact to impact obesity risk and thereby prevention.



**Leonardi, Claudia, PhD**

Arlington

LSU School of Public Health

**Neighborhood Disadvantage and Glycemic Control in Type I Diabetes: Mediators**

*Leonardi, Claudia, PhD; Kepper M; Yu Q; Coulon SJ; Velasco-Gonzalez C; Park CL; Gomez R; Vargas A; Stender S; Zabaleta J; Clesi P; Chalew SA,; Hempe JM; Scribner R*

**PURPOSE:** The overall objective of the proposed analysis is to identify potential neighborhood environment mediators that explain the observed differences in glycemic control measured as Hemoglobin A1c (HbA1c) among white and black type 1 diabetes patients. In particular, examine whether obesity (BMIz) and/or C-reactive protein (CRP) mediate the relationship between neighborhood disadvantage and poor glycemic control (HbA1c) among white and black type 1 diabetes patients.

**METHODS:** A total of 86 patients (53 white, 33 black) between the ages of 5 and 21 years were recruited to be part of the study between March and October 2014. Blood was collected for analysis of HbA1c and C-reactive protein (CRP) at each clinic visit at Children's Hospital, New Orleans. Neighborhood disadvantage was assessed using Concentrated Disadvantage Indices (CDIs) generated by factor analysis. CDI is based on patient home addresses and reflects a linear combination of six United States census tract characteristics, including 1) percent receiving welfare, 2) percent in poverty, 3) percent unemployed, 4) percent female headed households, 5) percent African-American, and 6) percent less than 18 years old. Various mediation analyses were implemented using both linear models and models based on the counterfactual framework. Linear models consisted of multiple regressions implemented using the regression procedure in SAS and non-linear methods will be implemented using the *mma* package in the statistics software R.

**RESULTS:** HbA1c was higher in blacks than whites (10.4% vs. 8.9%,  $p < 0.0001$ ). Furthermore CDI, which was higher in blacks, was positively linearly associated with HbA1c and with the logarithmic transformed CRP. The relationship between CDI and HbA1c was partially mediated by CRP but not by BMIz in linear models. Non-linear models are still under investigation.

**CONCLUSIONS:** Neighborhood disadvantage was linearly associated with HbA1c in black pediatric type 1 diabetes patients. A measure of inflammation partially mediated the relationship.

**Lindquist, Ruth, PhD**

Poster 18

University of Minnesota, School of Nursing

**Peer Support to Reduce Risks of Cardiovascular Disease and Stroke among African American (AA) Men according to Life's Simple 7 in Faith-Based Settings**

*Lindquist, Ruth, PhD, RN; Lee, Sohye, PhD candidate; Hadidi, Niloufar N., PhD, RN; Konety, Suma, MD; Catrava, Rodica, DNP, RN; Schorr, Erica, PhD, RN; McAfee, Rev Jerry; Kelley, Robin, DrPH; Nixon, Terry, MAS; Mayo, Phyllis, PhD; West, Rev L. B., DRS; Treat-Jacobson, Diane, PhD, RN; Lindgren, Bruce, MS*

**PURPOSE:** This pilot was designed to determine whether a multifaceted program focused on AHA's Life's Simple 7 (weight loss, better diet, get active, no smoking; and reduced cholesterol, blood sugar, and blood pressure) presented in context of peer support groups, was feasible, safe, acceptable, and effective in producing meaningful risk reduction among AA men.

**METHODS:** A convenience sample of 24 men (43-80 yrs), with  $>1$  CVD risk factor, and affiliated with two churches (Washington, DC [*W-DC*]; Minneapolis, MN [*M-MN*]) participated in a non-randomized (peer group vs. control) quasi-experimental study. Men ( $N=17$ ) met in two peer groups ( $W-DC=8; M-MN=9$ ) 14 times over six months. Peer-facilitated groups discussed Life's Simple 7 videos; information and materials related to diet and activity were provided. Controls ( $N=7; W-DC=4; M-MN=3$ ) received assessments, and Simple 7-related information/materials. Feasibility was assessed by conduct/completion of peer group sessions and measures; safety by ongoing monitoring for self-reports of lifestyle-change-related symptoms/medical events; acceptability by post interviews, attendance, and attrition. Potential efficacy was assessed by examining within and between-group changes in measures (10-yr CHD risk, Life's Simple 7 score, diet, physical activity, blood pressure, cholesterol, blood sugar, smoking, and weight) using non-parametric statistics (baseline-6-months) and reported as median(range). Site data were analyzed separately.

**RESULTS:** Twenty-four men (100%) completed the study with no study-related adverse symptoms/medical events. *W-DC peer group:* Participant program evaluations were highly positive; attendance was 13(9/14). There were significant beneficial changes ( $p < .05$ ) in measures: Weight loss was -2.8 lbs. (-0.4/-14); improvement in diet was +2.5(0/+6); cholesterol reduction was -25mg/dl (-59/+12); systolic blood pressure decreased -9.5mmHg (-33/+5); Simple 7 score increase was +3(+1/+4); decrease in 10-yr CVD risk scores was -3.0(-4/+1), translating to marginally significant ( $0.05 < p\text{-value} < 0.1$ ) median 48% decrease in individual risk. Qualitative improvement was greater than controls in 8/9 measures. *M-MN peer group:* Attendance was 8(0/14). Significant beneficial changes ( $p < .05$ ) comprised weight loss of -4.6(-18.2/+8.6) and improvements in diet of +3.0(0/+7). Simple 7 score increase, +2(-2/+3), was marginally significant ( $0.05 < p\text{-value} < 0.1$ ). Qualitative improvement was greater than controls in 6/9 measures.

**DISCUSSION/CONCLUSIONS:** The peer program of behavior change was judged feasible, safe, acceptable and having strong potential efficacy for highly motivated AA men in faith-based settings.

## Lister, Jamey J., PhD

## Centennial I

Wayne State School of Social Work, Psychiatry and Behavioral Neurosciences

### Psychosocial Factors and Methadone Treatment Outcomes among African-Americans: A Substance Abuse Research Program to Address Minority Health Disparities

Lister, Jamey J., PhD; Greenwald, Mark, PhD; Ledgerwood, David, PhD

**PURPOSE:** African-Americans have demonstrated heightened risk for poor methadone-maintenance-treatment [MMT] outcomes. Limited research has explored factors (psychosocial disadvantage) that explain risk and few investigations have been conducted among African-American samples. Herein we describe a translational research program to address African-American health disparities. To this end, we conducted a sequential set of investigations (Studies 1-3) examining psychosocial predictors to short- (continued drug use early in treatment) and long-term (treatment retention) outcomes among African-American MMT patients.

**METHODS:** We utilized intake data (2002-2009) and treatment outcomes (proportion of opioid+ and cocaine+ urine drug screens [UDS], treatment retention) from African-American patients ( $N=212$ ; male=65.1%) at an urban, university-affiliated MMT clinic for Studies 1 and 2. In Study 1, we examined psychosocial and clinical predictors of short- and long-term outcomes. In Study 2, we examined gender differences in interpersonal risk factors, and the influence of interpersonal predictors to short-term outcomes among gender-stratified subsamples. We used these findings (Studies 1 and 2) coupled with the literature to design a comprehensive prospective study examining psychosocial risk/protective factors (across individual, relational, and community/societal levels) to treatment outcomes among newly admitted African-American MMT patients in Study 3 ( $N=28$ ; male=67.9%, ongoing since Sept 2016).

**RESULTS:** In Study 1, psychosocial factors (family/peer substance abuse, economic and housing problems) predicted a higher proportion of opioid+ and cocaine+ UDS and shorter retention in bivariate analyses. Clinical factors (living farther from the clinic, injection use, cocaine abuse/dependence) best predicted a higher proportion of opioid+ and cocaine+ UDS and shorter retention in multivariate analyses. In Study 2, African-American women were more likely to report interpersonal risk factors, and among the African-American female subsample, interpersonal abuse and family/peer substance abuse predicted a higher proportion of cocaine+ UDS. Study 3 data will be sufficiently powered (anticipated sample of 40-45 African-American MMT patients) for presentation at the 2017 symposium.

**DISCUSSION/CONCLUSIONS:** These findings offer a substantive contribution to health disparities among African-American MMT patients. Across gender, greater psychosocial disadvantage increased risk for poorer outcomes. Interpersonal risk factors were particularly important for women. Continued research regarding psychosocial risk/protective factors is warranted to increase translational impacts on African-American health disparities.

## Little, Kiara, MPH

## Poster 19

Alabama A&M College of Agricultural, Life, and Natural Sciences, Plant Science

### Addressing Health Disparities in Breast Cancer Among Minority Women in Central Georgia

Little, Kiara, Alabama A&M University; Samples, Oreta, Fort Valley State University

Inequalities in the quality of health benefits because of differences in their socioeconomic status, racial background, ethnic background, and educational level often affect how frequently a disease affects a group, how many people will get sick, and how often the disease causes death. Populations typically affected by these disparities include; racial minorities, ethnic minorities, rural area residents, women, children, elderly people, and the disabled.

**PURPOSE:** The purpose of this research was to address the disparities of minority women afflicted with breast cancer in the central Georgia area.

**METHODS:** Statistics were collected from surveys taken by the Susan G. Komen of Central Georgia (GA) organization which illustrated rates of women who received mammography screenings at various clinics and health centers in Baldwin, Bibb, Crawford, Houston, Jones, Monroe, Peach, and Twiggs counties of GA over one year period.

**RESULTS:** Trends suggested that 67% of Caucasian and 66% of African American women were more likely to receive their mammography screenings when compared to Hispanic, Asian, and other ethnic groups. Crawford County with 130 reported cases had the most prevalent breast cancer incidence between 2006 and 2010.

**CONCLUSION:** Disparities were due to many reasons such as lack of health insurance, low income, lack of access to health facilities, transportation, lack of health care provider, deficiency in knowledge of screening methods and lack of awareness of risks. Additionally, women between the ages of 51 and 65 were almost 50% more likely to receive a mammogram when compared to other age groups. Women under the age of 40 and above 65 were less likely to receive a mammogram in all ethnic groups mainly because these groups of women were outside the recommended age for mammograms.

**Lord, Justin, MBA****Poster 20****UAB School of Health Professions****The Relationships Among Socio-Demographics, Perceived Health, and Happiness***Weech-Maldonado, Robert, PhD; Miller, Michael J., DrPH; Lord, Justin, MBA*

**PURPOSE:** This article explores the relationships among socio-demographics, perceived health, and happiness in a patient population of 221 adults recruited from 39 primary care practices in Alabama. We also explored whether the relationship between socio-demographics and happiness is mediated by perceived health.

**METHODS:** The dependent variable, happiness, was dichotomized as happy versus unhappy. Independent variables included race (Black or White), age (< 65 vs. 65 and older), gender (male vs. female), perceived income (sufficient vs. insufficient to meet basic needs), health literacy (adequate vs. inadequate), and self-rated health (excellent/very good/good vs. poor/fair). Generalized linear latent and mixed models (GLAMM) with logit link were used to analyze the data.

**RESULTS:** Blacks were more likely to be unhappy (54%) and perceive having insufficient income (62%) and poor/fair health (46%) compared to Whites (46%, 28% and 26%, respectively). Multivariate results show that adequate health literacy (OR = 2.9; 95% CI = 1.25-6.51) and better perceived health (OR = 6.7; 95% CI = 3.13-14.29) are associated with a greater likelihood of happiness. In addition, individuals with sufficient income (OR = 2.3; 95% CI = 1.21-4.48) are more likely to have better perceived health, and as a result more likely to be happy. Other individual factors, such as gender, age, and race were not significantly associated with being happy or having higher perceived health.

**DISCUSSION/CONCLUSIONS:** 1. Individuals who had better perceived health were more likely to be happy. Individuals with poor health may become “disengaged” from social and physical activities, which could negatively affect their sense of well-being. 2. Adequate health literacy remained a relatively strong correlate of happiness even after controlling for perceived health. Health literacy skills can empower individuals to act, and as a result, improve their self-efficacy and general sense of well-being. 3. Individuals who perceive having sufficient income may have less financial stressors, which may increase an individual’s perception of health, and ultimately happiness. Policies aimed at increasing health literacy, promoting health, and reducing income disparities may be associated with greater happiness. Given the disparities in income and health between Black and Whites, these policies may be particularly relevant in addressing racial disparities in happiness.

**McCaskill, Gina M., PhD****Arlington****UAB School of Medicine, Gerontology, Geriatrics, and Palliative Care****Kilocalorie Expenditure and All-Cause Mortality in Older Men***McCaskill, Gina M., PhD, MSW, MPA; Clay, Olivio, PhD; Li, Peng, PhD; Kennedy, Richard E., PhD, MD; Burgio, Kathryn L., PhD; and Brown, Cynthia J., MD, MSPH*

**PURPOSE:** Although evidence indicates that there is a survival benefit associated with physical activity, most older adults remain physically inactive. We sought to determine if leisure-time physical activity, measured by kilocalorie expenditure, resulted in a survival benefit in a sample of Black and White men in the University of Alabama at Birmingham (UAB) Study of Aging (SOA).

**METHOD:** The UAB SOA was a longitudinal investigation that examined racial differences in mobility in a sample of community-dwelling adults ( $N = 1,000$ ) 65 years and older. Trained interviewers conducted baseline interviews in the homes of participants. Follow-up telephone calls were conducted every 6 months over 8.5 years. The current analyses were conducted using data from Black and White men ( $n = 501$ ). Kilocalorie expenditure was the independent variable and was calculated based on a modified version of the Minnesota Leisure Time Activity Questionnaire (MLTPAQ). Vital status was determined from the National Death Index. Multivariable Cox proportional hazard models were used to evaluate the predictors of overall survival. Veteran status and race were entered in the model as independent variables. Standard demographic variables were entered in the model as control variables. Health factors were also added as control variables and included comorbidity, cognition, and depression.

**RESULTS:** Kilocalorie expenditure ( $p = 0.015$ ), as were black race ( $p = 0.022$ ), young age ( $p < 0.001$ ), absence of depression ( $p = 0.001$ ), and cognitive impairment ( $p < 0.001$ ) were all significant predictors of survival. Although veterans had significantly higher kilocalorie expenditures, they did not experience significantly higher survival when contrasted to non-veterans, after controlling for kilocalorie expenditures ( $p = 0.155$ ). Blacks had higher survival benefits despite their lower level of kilocalorie expenditure.

**DISCUSSION/CONCLUSIONS:** High kilocalorie expenditure was associated with a survival benefit in older men in the UAB SOA. Being a veteran did not offer additional survival benefits. Further study is necessary to understand the influence of kilocalorie expenditure and all-cause mortality, which could lead to reductions in premature mortality in older men.

## McDonough, Ian M., PhD

Arlington

University of Alabama College of Arts and Sciences, Psychology

### Beta-Amyloid and Cortical Thickness Reveal Racial Disparities in Preclinical Alzheimer's Disease

McDonough, Ian, PhD

**PURPOSE:** African Americans are two to four times more likely to develop dementia as Whites. This increased risk in African Americans represents a critical health disparity that affects nearly 43 million Americans. Due to the prolonged exposure to stressful environments, African Americans may be less able to resist neural insults and toxic proteins such as beta-amyloid-a plaque that might signify the beginning stages of Alzheimer's disease (AD). The present study tested the hypothesis that older African Americans with elevated beta-amyloid would show greater neurodegeneration (smaller hippocampal volumes and decreased cortical thickness) than older Whites with elevated beta-amyloid.

**METHODS:** Data from the Harvard Aging Brain Study were used to form groups of older African American and White adults, matched on age, sex, education, and verbal IQ. Beta-amyloid was measured using PiB-PET imaging and brain structure was measured using Freesurfer-derived estimates of volume and cortical thickness. African Americans and Whites were separated into groups of high and low beta-amyloid and entered into a Barycentric Discriminant Analysis along with a matrix of hippocampus volumes and cortical thickness from AD signature regions.

**RESULTS:** One factor was significant and explained 86.55% of the variance ( $p = .0006$ ). This factor revealed that amyloid-positive African Americans had decreased cortical thickness in 15 of the 18 AD signature regions compared with amyloid-positive Whites. Furthermore, this factor was negatively correlated with age ( $r = -.30$ , CI  $[-0.48, -0.09]$ ) and positively correlated with education ( $r(84) = .24$ , CI  $[0.03, 0.43]$ ,  $p = .026$ ) and MMSE score ( $r(84) = .30$ , CI  $[.09, 0.48]$ ,  $p = .005$ ).

**CONCLUSIONS:** These findings suggest that African Americans are more vulnerable to pathology related to AD, which may then accelerate the rate of a diagnosis of AD. African Americans may be less able to resist neural insults and toxic proteins such as beta-amyloid-a plaque that might signify the beginning stages of AD.

## Moellering, Doug, PhD

Arlington

UAB School of Health Professions, Nutritional Sciences

### Life Stress Adversely Affects Oxidative Stress and Obesity

Moellering, Douglas R.; Saini, Vikram; Smith-Johnston, Kelley; Kumar, Sumit; Blackstock, Britney F.; Cockerham, William; Cherrington, Andrea L.

**OBJECTIVE:** Obesity and chronic metabolic disease (e.g., Type 2 Diabetes Mellitus (T2DM) & cardiovascular disease) are two distinct yet related products of the interactive effects of life stress, behavior, and diet quality at a macro- and micro-nutritional level. Chronic life stress such as economic stress, depression, discrimination, and/or a lack of social support are suggested to elevate cortisol, pro-inflammatory factors, and oxidative stress. The mechanism we posit includes that stressed individuals with elevated cortisol levels, have increased cravings and intake of processed carbohydrates (CHO). We hypothesize that psychosocial 'life' stress can affect dietary choices (increased CHO) and these stressors mediate a feed forward loop between stress hormones and oxidative stress leading to obesity and contributing to health disparities in African American women (AA).

**METHOD:** AA and Caucasian American (CA) women, 21-45 years, with a body mass index (BMI) between 19-45 kg/m<sup>2</sup>, exercising < 2 hours/week were recruited through the UAB reporter, flyers, word of mouth, and social media. We examined social support, perceived stress, self-esteem, stressful life events, spirituality, depression, discrimination, and aggression using valid diagnostic questionnaires in relation to body composition, cortisol, insulin sensitivity, inflammation, diet, and markers of oxidative stress in a cohort of 30 AA and 30 CA women.

**RESULTS:** There were no significant differences between AA or CA women in age (AA=29.5±8.0, CA=28.9±7.2), level of education, or reported income. Both groups of women have significant positive correlations between perceived stress and oxidative stress. Perceived stress and serum cortisol levels were significantly associated in CA women. Salivary and serum cortisol levels significantly correlate to oxidative stress in AA. AA women report significantly higher levels of perceived stress compared to CA women (21.9±5.6 vs. 15.6±7.1), significantly higher oxidative stress, and had significantly higher BMI, waist circumference, and % body fat compared to CA women (33.7±7.0 vs 27.5±7.0 kg/m<sup>2</sup>; 96.8±16.3 vs 86.4±17.7cm; and 42.3±7.4 vs 38.2±8.5 respectively). Lack of social support significantly correlated to increased levels of perceived stress in AA women.

**CONCLUSION:** Increased levels of perceived stress, cortisol, and oxidative stress are associated with higher BMI, waist circumference, and % body fat in this cohort.



**Mondesir, Favel L., MSPH****Poster 21**

UAB School of Public Health, Epidemiology

**Association of Social Isolation with Medication Adherence Among Participants With Coronary Heart Disease Risk Factors***Mondesir, Favel L., MSPH; Carson, April P., PhD; Durant, Raegan W., MD, MPH; Lewis, Marquita W., PhD, MPH, MS; Safford, Monika M., MD; Levitan, Emily B., ScD*

**PURPOSE:** Limited social networks are markers of social isolation. Prior research suggests that functional (e.g., practical support) social network components are more strongly associated with treatment adherence than structural (e.g., social network size, frequency of social contacts) components. It is unclear, however, whether social isolation worsens medication adherence, specifically among those with coronary heart disease (CHD) risk factors.

**METHODS:** We included 17,113 black and white adults aged  $\geq 45$  years from the REasons for Geographic and Racial Differences in Stroke (REGARDS) study who had diabetes, hypertension, dyslipidemia, or prevalent CHD and used medications for these. Social isolation was assessed by self-reported functional (i.e., someone to care for you while sick or disabled vs no-one available) and structural (i.e., presence vs absence of adults in household, partnered vs not partnered, number of close friends and relatives, and frequency of contacts with close friends and relatives) social network components. High medication adherence was defined as self-reported "no" responses to all 4 questions on the Morisky Scale. Multi-variable logistic regression models adjusted for demographics, CHD risk factors and number of medications, were used to estimate the association between social isolation and medication adherence.

**RESULTS:** Mean age was 66.2 years, 53.8% women, 44.6% black and prevalence of high medication adherence was 68.9%. Compared to participants who reported no-one to care for them while sick or disabled, participants who reported having someone, had higher prevalence of medication adherence [OR=1.15 (95% CI: 1.04, 1.26)]. Participants who reported having  $\geq 5$  close friends had higher prevalence of medication adherence compared to participants with 0-4 close friends [OR=1.08 (95% CI: 1.01, 1.15)]. In comparison with participants who reported seeing 0-5 close friends and relatives at least monthly, those who reported seeing  $\geq 6$  close friends and relatives had higher prevalence of medication adherence [OR=1.11 (95% CI: 1.04, 1.18)]. No significant associations were observed between medication adherence and other structural components.

**DISCUSSION/CONCLUSIONS:** Interventions aimed at providing social support for people with CHD risk factors may need to consider preferentially focusing on enhancing functional aspects of individuals' social networks, thereby reducing social isolation. This may improve medication adherence and ultimately cardiovascular health.

**Moore, Justin X., MPH****Poster 22**

UAB School of Public Health, Epidemiology

**Community Characteristics and Regional Variations in Sepsis***Moore, Justin Xavier, MPH; Donnelly, John P., MSPH; Griffin, Russell, Ph.D; Safford, Monika M, M.D.; Howard, George, Dr.PH.; Baddley, John, M.D.; Wang, Henry E, M.D., M.S*

**PURPOSE:** Sepsis is responsible for more than 200,000 annual deaths in the United States. Little is known about the regional patterns of sepsis mortality and the community characteristics that mediate this relationship. We aimed to determine the influence of community characteristics upon regional variations in sepsis incidence and case fatality.

**METHODS:** We performed a prospective analysis on data from the Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort. Using United States sepsis mortality data, we used two strategies for defining geographic regions: 1) Sepsis "Belt" vs. Non-Belt, and 2) Sepsis "Cluster" vs. Non-Cluster. We determined sepsis incidence and case fatality among REGARDS participants in each geographic region, adjusting for participant characteristics. We examined the mediating effect of community characteristics upon regional variations in sepsis incidence and case fatality.

**RESULTS:** Among 29,680 participants, 16,493 (55.6%) resided in the Sepsis Belt, and 2,958 (10.0%) resided in a Sepsis Cluster. Sepsis incidence was higher for Sepsis Belt than Non-Belt participants (adjusted HR 1.18; 95% CI, 1.07 - 1.31), and higher for Sepsis Cluster than Non-Cluster participants (adjusted HR 1.29; 95% CI, 1.11 - 1.51). Sepsis case fatality was similar between Sepsis Belt and Non-Belt participants, as well as between Cluster and Non-Cluster participants. Community poverty mediated the regional differences in sepsis incidence.

**DISCUSSION/CONCLUSIONS:** Regional variations in sepsis incidence may be explained by community poverty. Other community characteristics do not explain regional variations in sepsis incidence or case fatality.



## UAB School of Health Professions, Nutrition Sciences

## Psychological and Social Correlates of Diet Quality in Older Adults Living With HIV

Muhammad, Josh, MEng; Fernandez, Jose, PhD; Clay, Olivia, PhD; Saag, Michael, MD; Overton, E. Turner, MD; Willig, Amanda, PhD, RD

**PURPOSE:** People living with HIV (PLWH) face multifaceted social and psychological burdens which may affect their overall nutrition. Our purpose is to determine whether self-reported measures of depression, perceived stress, perceived social support and food insecurity are correlated with diet quality in PLWH 50+ years of age.

**METHODS:** Sixty men and women aged 50 years or older and diagnosed with HIV were recruited for this cross-sectional study. Participants were African-American or White with a well-controlled HIV viral load (<400 copies/mL). Participants were excluded if they used proton pump inhibitor or antibiotic medications within 30 days of their first study visit. Dietary intake was measured using the NHANES 12-month Food Frequency Questionnaire (FFQ) and three Automated Self-Administered (ASA) 24-hr diet recalls. Diet Quality was assessed using three independent indices: The Mediterranean Diet Score (MDS); alternative Healthy Eating Index (aHEI); and the Recommended Food Score (RFS). Food insecurity was assessed with the Food Security Questionnaire (FSQ) Participants completed the following psychosocial scales: (1) Depression - Patient Health Questionnaire-8 (PHQ8); (2) Perceived Stress - Perceived Stress Scale (PSS-10); (3) Social Support - Multidimensional Scale of Perceived Social Support (MSPSS). Linear regression models were used to investigate relationships among variables controlling for gender, income, education and race.

**RESULTS:** Participants were on average aged  $56 \pm 4.6$  years, 80% African-American, and 31.7% women. Mean BMI was  $28.4 \pm 7.2$ , with 55% reporting food insecurity. Most participants reported post-secondary education (53.33%) and 76.67% reported annual incomes of less than \$20,000. Only 3.33% of participants were currently married. Significant associations with diet quality were observed between the food security scale and the aHEI ( $-.09$ ,  $p=.02$ ) and MDS ( $-.20$ ,  $p<0.01$ ) diet indices. In the aHEI subscales, the scale assessing depression was associated with consumption of Total Fruit ( $.75$ ,  $p=.03$ ), the scale for social support was associated with Total Dairy ( $-1.61$ ,  $p=.02$ ) and Fatty Acid ( $.91$ ,  $p=.02$ ) intake, while the measure of food security was associated with aHEI subscales Total Fruit ( $-.89$ ,  $p=0.01$ ) and Whole Fruit ( $-.81$ ,  $p<.01$ ).

**CONCLUSIONS:** There is preliminary evidence that self-reported measures of depression, perceived stress, perceived social support and food insecurity each impact different aspects of diet quality.

**Oates, Gabriela, PhD****Centennial II****UAB School of Medicine, Preventive Medicine****Individual and Neighborhood-Level Determinants of Adherence to Pulmonary Rehabilitation in Chronic Obstructive Pulmonary Disease (COPD)**

*Oates, Gabriela, PhD; Hamby, Bryant, MA; Bae, Sejong, PhD; Knight, Sara, PhD; Bhatt, Surya, MD; Hitchcock, Jason, MBA, BSN; Schumann, Christopher, MA; Dransfield, Mark, MD*

**PURPOSE:** Adherence to pulmonary rehabilitation (PR) is low. Previous studies have focused on clinical predictors of PR completion, with little attention to socio-environmental factors. We aimed to identify social determinants of PR adherence in COPD patients.

**METHODS:** We performed a retrospective cross-sectional analysis of a clinical database of patients (N=455) who attended an outpatient PR program at the UAB Hospital from 1996 to 2013. Individual-level measures included age, sex, race, BMI, smoking status, pack years, baseline 6-minute walk distance (6MWD: <150, 150-249, ≥250), comorbidities, depression, and prescribed PR sessions. Adherence, calculated as a ratio of attended-to-prescribed sessions, was coded as low (<35%), moderate (35-85%), and high (>85%). We geocoded patients' residential addresses and enhanced the database with area-level measures aggregated to Census tracts, proxies for neighborhoods. Data were obtained from the 2000 and 2010 U.S. Census. Next, we used exploratory factor analysis to construct a neighborhood socioeconomic disadvantage index from 15 candidate variables. The index included 6 factors with loading >0.5: poverty, public assistance or food stamps, households without vehicles, cost burden (>30% income toward housing), unemployment, and minority population. Multivariate regression models were adjusted for clustering on Census tracts (N=211).

**RESULTS:** 26% of patients had low adherence, 23% were moderately adherent, and 51% highly adherent. Relative to high adherence, low adherence was associated with current smoking, more comorbidities, lower functional status, and higher number of prescribed PR sessions, while moderate adherence was associated with higher number of prescribed PR sessions and increased socioeconomic disadvantage. In the best fitted joint model of individual and neighborhood characteristics, current smoking more than tripled the relative risk of low adherence ( $p<0.01$ ), while each increase in 6MWD category decreased it by 72% ( $p<0.01$ ) and 82% ( $p<0.001$ ), respectively. Each decile increase in the socioeconomic disadvantage index increased the risk of moderate vs high adherence by 12% ( $p<0.01$ ).

**CONCLUSIONS:** While low adherence is associated with current smoking and worse functional capacity, moderate adherence is associated with socioeconomic disadvantage. Interventions to improve adherence should consider various pathways to suboptimal adherence. Future research should test approaches to mitigate the negative impact of economic hardship on adherence.

**Okunbor, Jennifer****Poster 24****UAB School of Public Health****The Impact of Disease-Specific Internalized Stigma on Depressive Symptoms, Pain Catastrophizing, Pain Interference, and Alcohol Use in People Living With HIV and Chronic Pain (PLWH-CP)**

*Jennifer I. Okunbor; Michael A. Owens, BS, BA; Rachael L. Rainey; Dyan M. White, BS; Kaneisha A. Mushatt; Lindsey R. Yessick, BS; Jessica S. Merlin, MD; Janet M. Turan, PhD, MPH; & Burel R. Goodin, PhD*

**PURPOSE:** It is not uncommon for people with HIV and/or chronic pain to experience negative social reactions in response to these medical conditions. The experience, perception, or anticipation of negative social reactions by people living with HIV and chronic pain (PLWH-CP) may become internalized and affect the self in a stigmatizing manner. Internalized stigma is characterized by stereotype endorsements and negative self-thoughts that unfavorably impact health outcomes. This study aims to determine whether internalized HIV and chronic pain stigma is related to depressive symptoms, excessive catastrophic thoughts about pain, pain interference, and hazardous alcohol use.

**METHODS:** PLWH-CP were recruited from the 1917 Clinic, which provides medical and social services to adults with HIV. A total of 46 participants completed reliable questionnaires assessing depressive symptoms, pain catastrophizing, pain interference, and alcohol use in addition to HIV and chronic pain-related stigma.

**RESULTS:** In hierarchical multiple regression models adjusted for demographic (sex, race) and clinical variables (CD4+, viral load, pain intensity), internalized HIV and chronic pain stigma together accounted for significant portions of variance in depressive symptoms ( $R^2 = 35.8\%$ ,  $p < .001$ ), pain catastrophizing ( $R^2 = 17.7\%$ ,  $p = .008$ ), pain interference ( $R^2 = 15.3\%$ ,  $p = .005$ ), and hazardous alcohol use ( $R^2 = 15.0\%$ ,  $p = .031$ ). Interestingly, unique effects revealed that chronic pain stigma was a more significant predictor of depressive symptoms ( $t = 3.36$ ,  $p = .002$ ), pain catastrophizing ( $t = 2.91$ ,  $p = .006$ ), pain interference ( $t = 2.37$ ,  $p = .023$ ), and hazardous alcohol use ( $t = 2.73$ ,  $p = .010$ ) relative to HIV stigma.

**DISCUSSION/CONCLUSIONS:** These findings support previous literature that internalized stigma negatively affects psychosocial health outcomes in a novel population of PLWH-CP. Understanding how internalized stigma affects health outcomes can help improve the clinical experience and the treatments available for chronic pain and HIV.

## Pope, Caitlin N., MA

Poster 25

UAB College of Arts & Sciences, Psychology

### On The Road To Better Healthcare Access: Assessing Transportation Barriers in Older Adults With HIV

Pope, Caitlin Northcutt, MA; Fazeli, Pariya L., PhD; Vance, David E., PhD, MSG, MS; Stavrinou, Despina, PhD

**PURPOSE:** Previous research has shown significant associations between reliable and adequate transportation and better health outcomes for individuals living with chronic disease, such as human immunodeficiency syndrome (HIV). Currently, over 1 million people in the United States are living with the disease, with the highest prevalence in African Americans, individuals living in the South, and in economically disadvantaged urban areas. Consequently, by the year 2020, it is estimated that 70% of the individuals living with HIV will be 50 years or older, raising several transportation-related questions in relation to adequate transportation and healthcare needs. The current study sought to better understand the overall impact of aging on transportation needs and behaviors as well as possible transportation barriers for individuals living with HIV in the Birmingham-metropolitan area.

**METHODS:** Data collection is currently underway (expected final  $n=200$  adults HIV positive individuals, 42 completed for presentation). The sample consisted of 52.4% ( $n=22$ ) men, 85.7% ( $n=36$ ) African American, and age ranged from 40 to 73 years ( $M_{age}=53.12$ ,  $SD=7.21$ ). Participants completed a demographic questionnaire and a 16-question transportation survey assessing transportation usage, opinions towards public transportation, and the importance of adequate transportation in healthcare management.

**RESULTS:** Preliminary findings suggest that just under half of the sample (40.5%,  $n=17$ ) reported no access to a vehicle, but that only 21.4% ( $n=9$ ) reported using public transportation on a daily to weekly basis. Furthermore 40.5% ( $n=17$ ) reported previously cancelling or missing an appointment due lack of transportation. The majority of the sample (95.2%,  $n=40$ ) reported adequate transportation as very important for their healthcare needs and 83.3% ( $n=35$ ) agreed that adequate transportation improved their quality of life.

**DISCUSSION:** While adequate transportation is rated important by individuals with health disparities across chronic conditions, it continues to be an ongoing burden for adequate healthcare access. Public transportation options are available in larger urban areas, but public opinion varies and options are limited for rural areas. Further research is warranted to assess the feasibility of designing public transportation options and increasing usage for groups such as socially disadvantaged individuals living and aging with chronic disease.

## Riehman, Kara, PhD

Centennial II

American Cancer Society, Evaluation and Research

### Adaptation of an Evidence-Based Community Health Advisor Program to Increase Cancer Education and Screening: A Comparison of Implementation in Appalachia and the Deep South

Riehman, Kara PhD; Bostick, Pam

**PURPOSE:** Cancer disparities continue to exist in the United States. Community health advisors (CHAs) can play a critical role in addressing cancer disparities by increasing outreach and access to care for underserved populations. In 2011 the American Cancer Society (ACS) implemented the Community Health Advisor (CHA) Collaborative, a pilot project adapted from an evidence-based CHA program created by the Deep South Network for Cancer Control (DSN), to reduce cancer disparities in predominantly African-American, underserved communities. Two key components of the model include developing Community Network Partnerships (CNPs) to serve as advisory groups, and recruitment and training of volunteer CHAs to conducted outreach, education, and screening navigation. In adapting the model, one question was whether the program could successfully be implemented in Appalachia, where the rural geography and culture are very different from the DSN communities, but where cancer incidence and mortality rates are much higher than in other regions of the United States. The CHA Collaborative was implemented in 28 communities in the south, including African-American, Appalachian, and American Indian communities.

**METHODS:** A mixed methods process evaluation of the program was conducted from 2013-2014 and included qualitative data collected during community site visits, a survey of local Community Network Partnerships, and community-level quantitative data on volunteer CHA and CNP recruitment, number of individuals educated, and number of individuals screened through the program.

**RESULTS:** Findings from the evaluation indicate differences in program implementation in Appalachia compared to African-American communities. The CNP survey found significantly higher scores among CNP members from African-American communities on expectations of the CNP, communication, and perceived benefit, influence and community impact compared to CNP members from Appalachian communities. Volunteer recruitment and number of individuals educated and screened also varied. Data from the site visits also indicate regional differences, and provide context and explanation for the survey and quantitative findings.

**DISCUSSION:** The program was successfully implemented and continued in several, but not all, Appalachian communities. Different strategies for engaging community members and navigating women to screening are discussed.

**Rung, Ariane, MPH, PhD****Poster 26**

LSU School of Public Health, Epidemiology

**Mobile Mindfulness to Mitigate Disease (3MD) Pilot***Rung, Ariane, PhD, MPH; Peters, Edward S., ScD, DMD*

**PURPOSE:** The purpose of this study is test the feasibility of recruitment and participation of women into a trial of a mindfulness training using a novel smartphone app called Headspace™. We will examine the relationships between the practice of mindfulness, social determinants of health, and psychological well-being and risk factors for obesity. We will assess the feasibility of using an email- and web-based approach to recruit participants, as well as pilot-test two forms of participant compensation.

**METHODS:** Participants will be approximately 600 women recruited from the Women and Their Children's Health (WaTCH) Study, a prospective cohort study in southeast Louisiana designed to investigate the health effects of women and their children exposed to the Deepwater Horizon Oil Spill. Pre- and post-intervention online surveys will be collected. The intervention is delivered through a smart phone- and web-based mindfulness training program, the Headspace™ App. The Baseline Survey includes questions on trait mindfulness, depression, obesity, healthy eating, physical activity, stress, sleep quality, employment, work-family conflict, marital conflict, and tobacco and alcohol use. Respondents will be given access to the Headspace™ App meditation program for a year, and will be considered to have completed the intervention if 30 sessions are completed within 45 days. A Follow-Up Survey will measure changes in baseline constructs.

**RESULTS:** (Progress to date) All survey materials have been designed and IRB-approved, and recruitment materials (including a newsletter and website updates) have been sent to potential participants.

**DISCUSSION/CONCLUSIONS:** We expect to find that 1) regular use of the smartphone app will be associated with increased mindfulness scores; 2) exposure to a poor quality neighborhood environment will moderate the relationship between the practice of mindfulness and psychological well-being/risk factors for obesity; and 3) the practice of mindfulness will moderate the relationship between a poor quality neighborhood environment and psychological well-being/risk factors for obesity.

**Saheb, Amir, PhD****Poster 27**

Albany State College of Sciences and Health Professions, Natural and Forensic Sciences

**DNA Specific Sensor for Prostate Cancer Biomarkers***Saheb, Amir; Meronard, Kenton; Josowicz, Mira*

**PURPOSE:** African American men have the highest prostate cancer diagnosis and mortality rates. A major factor contributing to this is the lack of early detection methods. Current detection methods have been associated with high frequent false positives and low specificity to the disease. We have developed a label-free electrochemical detection device that unambiguously detects DNA hybridization events. In this study demonstrate the usefulness of our novel 16-microelectrode array in the detection of hypermethylation of the prostate cancer biomarker, GSTP1.

**METHOD:** A conductive bi-layer comprised of polypyrrole and 2,5-dithienyl-(N-3-phosphorylpropyl) pyrrole (PPy-pTPT) was polymerized on the Pt electrode surfaces of the 16-channel microelectrode array chip. Mg<sup>2+</sup> was then used to immobilize 15-mer probe DNA oligos (specific to GSTP1 sequence) to the bi-layer surface. Cyclic voltammetry was used to record voltammograms in Tris-HCl buffer (pH=7.2) for data analysis. The microarray chip was sequentially incubated in non-methylated and methylated target DNA samples pre-treated with bisulfite conversion. The change in CV area as compared to the probe CV was calculated for each target exposure.

**RESULTS:** The results showed a significant reduction in CV area after the methylated Target DNA exposure as compared to the non-methylated target expose. The average % difference was 24% with a SD= 11.2.

**DISCUSSION/ CONCLUSION:** We find good sensitivity to binding events and high specificity for the GTSP1 methylated target DNA. The significance of this array lies in its ability to perform a highly specific and sensitive assay several times simultaneously. Moreover, this method provides increased statistical support of the results further improving its precision. This study demonstrates the potential application of the array to provide rapid, accurate diagnosis and risk assessment of patients with prostate cancer. We hope to use such technology to provide efficient prostate cancer screening methods at a low cost.

## Sakhuja, Swati, MPH

Poster 28

UAB School of Public Health, Epidemiology

### In-Hospital Mortality and Post-Surgical Complications Among Cancer Patients with Metabolic Syndrome

*Sakhuja, Swati, MPH; Akinyemiju, Tomi, PhD; Vin-Raviv, Neomi, PhD*

**PURPOSE:** Metabolic Syndrome (MetS) is an important etiologic and prognostic factor for cancer, but few studies have assessed hospitalization outcomes among patients with both conditions. We examined the in-hospital mortality, post-surgical complications and hospital length of stay, among hospitalized cancer patients with a clinical diagnosis of MetS.

**METHODS:** Data from the Healthcare Cost and Utilization project Nationwide Inpatient Sample (HCUP-NIS) was used to identify ICD-9 codes on adults aged 40 years and over admitted to a US hospital between 2007 and 2011 with primary diagnosis of either breast, colorectal or prostate cancer. Descriptive statistics was conducted to assess the proportion of cancer patients with MetS. Multivariable regression analysis was done in order to examine in-hospital mortality, post-surgical complications and discharge disposition among cancer patients with MetS, and compared with non-MetS patients.

**RESULTS:** Hospitalized breast (OR: 0.31, 95% CI: 0.20-0.46), colorectal (OR: 0.41, 95% CI: 0.35-0.49) and prostate (OR: 0.28, 95% CI: 0.16-0.49) cancer patients with MetS had significantly reduced odds of in-hospital mortality. The odds of post-surgical complications among breast (OR: 1.20, 95% CI: 1.03-1.39) and prostate (OR: 1.22, 95% CI: 1.09-1.37) cancer patients with MetS were higher, but lower by 7% among colorectal cancer patients with MetS. Additionally, breast (OR: 1.21, 95% CI: 1.11-1.32) and colorectal (OR: 1.06, 95% CI: 1.01-1.11) cancer patients with MetS had significantly higher odds for discharge to a skilled nursing facility compared with those without MetS.

**CONCLUSIONS:** Clinical diagnosis of MetS significantly increases the odds of post-surgical complications and discharge to a skilled nursing facility among breast and prostate cancer patients. The observed reduced odds of in-hospital mortality is likely due to increased likelihood of discharge to skilled nursing facilities.

## Salvy, Sarah-Jeanne, PhD

Centennial I

UAB School of Medicine, Preventive Medicine

### Social Influence and Childhood Obesity: From Lab To Community

*Salvy, Sarah-Jeanne, PhD*

**PURPOSE:** This talk summarizes 10 years of empirical findings related to the role of social influence on eating behaviors, choices of activities and weight.

**METHODS:** Observational, experimental, field and clinical studies drawing on social influence theories and social network models.

**RESULTS:** This work clearly shows that the presence of others can promote physical activity and healthier food selection and regulation. Conversely, social exclusion and aloneness decrease engagement in physical activity and may increase energy intake. Our recent work illustrates how social processes can be translated into a family-centered scalable and sustainable intervention model to improve the reach, adoption, implementation, and maintenance of health outcomes in children and their families.

**DISCUSSION/CONCLUSIONS:** These findings add to the increasing literature suggesting that being socially connected is not only influential for psychological and emotional well-being, but is also a key determinant of physical health.



**Scribner, Richard, MD, MPH****Centennial I****LSU Health Sciences Center, School of Public Health, Epidemiology****Social Determinants of Liver Cancer in Louisiana***Scribner, Richard, MD, MPH; Danos, Denise, PhD; Ferguson, Tekeda, PhD; Simonsen, Neal, PhD; Leonardi, Claudia, PhD; Yu, Qingzhao, PhD; Wu, Xiao-Cheng, MD, MPH*

**PURPOSE:** The US has experienced a decline in overall cancer incidence, particularly for the most common cancers. However, the incidence of liver cancer in the US has significantly increased since 1975 and the state of Louisiana now has the highest rate. Chronic infection with Hepatitis B or C viruses is a leading risk factor for liver cancer, but other risks that are more prevalent in the US population, including alcohol abuse, metabolic disease and obesity, contribute to the overall rate. We aim to identify potential social determinants of the increased liver cancer incidence over the past several decades.

**METHODS:** Data from the population-based Louisiana Tumor Registry, a participant of NCI's SEER program, were used in the analysis of primary liver cancer diagnosed in 2008-2012. Average annual incidence rates were calculated for age, race and sex groups within census tracts as the number of individuals diagnosed with liver cancer over the corresponding 2010 US Census population, given as person-years of exposure. Neighborhood concentrated disadvantage index (CDI) for each census tract was calculated in accordance with the PhenX Toolkit protocol. Multilevel log-binomial models were used to evaluate neighborhood variation and quantify the degree of association of CDI with liver cancer incidence.

**RESULTS:** There were 1,538 eligible cases of liver cancer during the study period. Univariate analyses indicated significantly greater incidence of liver cancer among males ( $p < 0.0001$ ) and among African Americans when compared to whites ( $p < 0.0001$ ). Generally, incidence increased with age, with the exception of a peak observed at age 50-64 among black males. There was marginal neighborhood variation in liver cancer incidence rates ( $p = 0.06$ ). Neighborhood CDI was significantly associated with liver cancer incidence [Risk Ratio (RR)=1.18; 95% CI (1.11,1.26)].

**DISCUSSION/CONCLUSION:** There is increasing recognition that social or nutritive stress represent exposures that can lead to physiologic dysfunction and affect a variety of health outcomes. These factors are believed to be socially determined by the conditions in an individual's neighborhood environment. Our results support the concept that neighborhood concentrated disadvantage is a significant environmental risk factor for the development of liver cancer.

## Shikany, James M., DrPH

Centennial I

UAB School of Medicine, Preventive Medicine

### Multi-Level Perspectives on Developing Blood Pressure Interventions for Young African American Men in Faith-Based Settings: A Community-Based Participatory Approach

*Shikany, James, DrPH, MPH; Lindquist, Ruth, PhD, RN; Carter-Edwards, Lori, PhD, MPH; Turner, Cynthia, DNP, FNCP; Harding, Cassandra, RN, MSN, FNP, FCN; Oliver, Jessica, MAEd; Redmond, Nicole, MD, PhD, MPH; West, Larry B, DRS; Ravenell, Joseph, MD, MS*

**PURPOSE:** Few lifestyle interventions target young African-American men, who disproportionately develop high blood pressure (BP) earlier than other race- and gender-specific groups. In an ever-changing, resource-constrained health delivery climate, African-American faith-based organizations (FBOs) may provide a unique, sustainable infrastructure for implementing and disseminating community-based participatory research (CBPR) interventions among young African-American men. However, what church leadership would support, and factors and resources for successfully recruiting young African American men for faith-based BP interventions remain unclear. We describe the qualitative outcomes of a community-based participatory pilot study designed to identify multi-level perceptions and stakeholder conceived strategies for developing future BP interventions for young African American men in two, urban FBO settings.

**METHODS:** Through recruitment by community partners, academic partners conducted 21 key informant phone interviews with male and female church leaders and four focus groups of 19 participants with African American men 18-50 years. Academic and community partners collaboratively generated descriptive summaries and themes via qualitative content analysis. Assets of the churches and capacities of the churches and those of young African American men; factors influencing young African American male participation in programs and interventions; and strategies for disseminating and implementing BP management programs were assessed.

**RESULTS:** The study sample included 21 key informants and 19 young African-American men 18-50 years of age. Key informants were primarily female (71.4%), an average of 14 years in leadership, with varying roles. Focus group participants were primarily single (55.6%), college educated (88.9% in college or college degree), and employed (77.8%). The average BMI was 33.1(+12), average SBP and DBP were 131.1(+15.3) and 79.5(+11.2), one-third reported being told they have hypertension, and the majority see a provider annually (88.9%). Prevailing themes were the responsibility of pastors as advocates and role models; creation of incentive-laden programs integrating activities within the existing church infrastructure; and the role of social context through testimonials, peer mentoring, and engagement outside of the churches. Participants recommended different intervention approaches for men 18-34 compared to men 35-50 years of age.

**DISCUSSION/CONCLUSIONS:** Findings can be used to design future CBPR, FBO-led BP interventions relevant to young African American men and FBO leaders.

## Sika-Paotonu, Dianne, PhD

Poster 29

Victoria University of Wellington, Pharmacology/Pathophysiology

### Postgraduate Nursing & Midwifery Education Within A Pasifika Framework

*Sika-Paotonu, Dianne, PhD; Maude Robyn, PhD; Laban Winnie Luamanuvao, QSO*

**PURPOSE:** The purpose of this work was to explore postgraduate education needs and research options available for nursing, midwifery and allied health staff within the main and rural hospitals in Samoa.

**METHODS/DESIGN:** Medical, nursing, health staff in Samoa were consulted to explore the potential for postgraduate education and research provision and collaboration at Masters and PhD level. Nursing and midwifery staff in Savai'i and Apia were consulted regarding their needs and interest in training and workshop topics.

**RESULTS:** Current postgraduate courses and opportunities were explored with potential avenues for collaborative research identified. Nursing and midwifery staff were surveyed for their interest in workshop topics. Areas of training need that were identified included the following: (1) Midwifery, (2) Acute Care, (3) Immunology, (4) Pharmacology, (5) Paediatrics, (6) Cancer, (7) Obstetrics and Gynaecology, (8) Nursing Practice, (9) Research (10) Theatre Practice. Further interest was expressed by medical, nursing and midwifery staff concerning Cancer related Immunological research and study in Apia and within other health and education centres in both locations.

**CONCLUSION:** Strong interest was expressed in undertaking further postgraduate research and study with the opportunity to engage in distance learning encouraging to students. In addition, this work also highlighted the need for incorporation of Immunological and Cancer related components into a teaching curriculum for postgraduate nursing, midwifery and allied health students in Samoa.

**Staiano, Amanda E., PhD****Heritage I**

LSU Pennington Biomedical Research Center

**Preschool Policies on Free Play and Screen-Time: Associations with Children's Physical Activity and Out-of-School Screen-Time***Staiano, Amanda E.; Allen, Andrew T.; Martin, Corby K.*

**PURPOSE:** To examine relationships among preschool free play and screen-time policies with preschoolers' in-school physical activity and out-of-school screen-time.

**METHODS:** Fifty-nine children ( $3.3 \pm 0.4$  years of age; 47% female) enrolled in three child care centers participated. Screen-time and physical activity policies were ascertained by a director's survey. Children's screen-time and physical activity in-school were measured by direct observation using the Environment and Policy Assessment and Observation tool. Parents reported child's age, sex, and household income. Parents also reported child's out-of-school screen time by responding to the question "During the past 30 days, on average how many hours per day did your child sit and watch TV or videos outside of school?" Additional questions queried how many hours per day did the child "use a computer or play computer games," "play video games," "use a smartphone," and "use an iPad or tablet." Children's height and weight were collected using standard procedures, and body mass index (BMI) was calculated. Pearson correlations were used to examine associations among variables. Linear regression models were used to examine the associations among screen-time and physical activity (age, sex, and household income were retained as covariates when  $p < 0.05$ ).

**RESULTS:** Policies promoting more free play time were positively correlated with more observed physical activity ( $r = 0.73$ ,  $p < 0.0001$ ) but also with more screen-time ( $r = 0.60$ ,  $p < 0.0001$ ). Policies that allowed screen-time were associated with higher out-of-school television viewing ( $p = 0.03$ ), but this relationship was not significant for time spent with other devices. Children were engaged in an average of 5.6 hours/day of screen-time outside of school (parent-reported), plus 35 min/day (based on observation) or 17 minutes/day at school (based on director's report). Based on observation, children engaged in 123 minutes/day of physical activity at school. Interestingly, higher observed screen-time was related to more observed physical activity in school ( $p < 0.0001$ ) in models controlling for household income.

**DISCUSSION/CONCLUSION:** Childcare policies influence children's physical activity and screen-time both in-school and out-of-school. Identifying ways to reduce screen-time among preschoolers or to transform sedentary screen-time into physically active time warrants further research.

**Szaflarski, Magdalena, PhD****University**

UAB College Arts &amp; Humanities, Sociology

**Are We Enrolling Minorities and Socioeconomically Disadvantaged in Epilepsy Cannabidiol Research?***Szaflarski, Magdalena, PhD; Hansen, Barbara, PhD*

**PURPOSE:** Past research indicates that minority status and socioeconomic disadvantage prevent patients from enrollment in clinical trials and limit access to novel therapies. Researchers have begun systematic research examining the efficacy of cannabis derivatives for epileptic seizure control. This study aimed to assess the enrollment of minorities and patients experiencing socioeconomic constraints in an epilepsy cannabidiol (CBD) study.

**METHODS:** Baseline social data were collected from patients with refractory epilepsy enrolled in the University of Alabama at Birmingham CBD Program between 4/1/2015 and 1/12/2017 (N=127) using standardized questionnaires. Comparison was conducted in patient enrollment between Year 1 (4/2015-3/2016) and Year 2 (4/2016-12/2017) of the study. Minority status was defined as black, black-white biracial, or Hispanic versus white/other race/ethnicity. Socioeconomic constraints were assessed with family income  $< \$40,000$ /year and financial strains in terms of money situation (ranging from "Comfortable with extra" to "Cannot make ends meet") and problems with food availability and paying for epilepsy medications ("sometimes or often" vs. "never"). Bivariate analyses included cross-tabulations and Pearson correlations ( $\alpha=0.05$ ).

**RESULTS:** The majority of patients (64%) were enrolled in Year 1 of the study. About 10% of the study participants were black/biracial/Hispanic, 31% had incomes  $< \$40,000$ /year, 60% reported money strain, and 18% and 8%, respectively, reported problems with purchasing food and epilepsy medications. The minority enrollment increased (6% to 17%) between the years, with the difference approaching statistical significance ( $p=0.089$ ). The enrollment of low-income patients increased significantly (24% to 46%;  $p=0.031$ ) while the association between financial strain and study year approached statistical significance ( $r=0.159$ ;  $p=0.080$ ). There was no association between food and medication-related constraints and study year.

**DISCUSSION/CONCLUSIONS:** Few minority and low-income patients enrolled in the initial phase of the study, suggesting better/more rapid access to clinical studies and novel therapies for white and higher-income patients. However, over time the access appeared to ease with the enrollment being more inclusive, but still showing disparities. Since epilepsy rates are disproportionately higher and treatment and research participation more restricted among minorities and low-income individuals compared with whites, stronger outreach to underrepresented groups is needed to reduce the gaps in research participation and access to novel therapies.

## Urbiel, Joseph J.

Poster 30

Wayne State University School of Medicine, Psychiatry & Behavioral Neurosciences

### Injection Opioid Use Among Patients at an Urban Methadone Clinic: An Evaluation of Race/Ethnic Differences in Injection Status

Urbiel, Joseph J., Associate Degree in Liberal Arts; Rhodes, Gary, MA; Arfken, Cynthia, PhD; Lister, Jamey, PhD

**PURPOSE:** Injecting opioids is a serious public health problem that can lead to overdose, contracting HIV, and death. Prior research has documented a lower injection rate among Black opioid users compared to White users. However, the factors that influence this difference are poorly understood. The extant literature has primarily focused on risk factors for injection use among predominantly White samples, and there is a limited understanding of protective factors associated with lower injection rates among Black opioid users. We aimed to: 1) assess current race/ethnic differences in injection status among methadone-maintenance-treatment [MMT] patients, and 2) review the literature to identify factors that may explain this pattern.

**METHODS:** A chart review was conducted of MMT patients ( $N = 367$ ; female = 54.6%; Black = 70.1%; mean age = 49.83) at one urban, university-affiliated, methadone clinic. As part of intake, patients indicated their preferred route (e.g., injecting, snorting) of opioid use. We then reviewed the literature (using Web of Science) and identified 19 relevant peer-reviewed papers that investigated risk and protective factors for injecting opioids.

**RESULTS:** In our chart review, Black patients were less likely (than non-Black patients) to report injection opioid use (28.0% vs. 56.0%;  $\chi^2 = 25.84$ ,  $p < .001$ ). Injection users were younger ( $t = 5.63$ ,  $p < .001$ ), however, younger age was only associated with injection use within the Black patient subsample ( $t = 2.24$ ,  $p = .026$ ). Our literature review suggested a few risk and protective factors that might influence observed race/ethnic differences (Risk: more injection-using peers, co-occurring mental health problems; Protective: high levels of emotional support, greater concern of HIV acquisition), though these factors have not been assessed to date among our clinic population.

**DISCUSSION/CONCLUSIONS:** Our analysis found race/ethnic differences in injection status consistent with prior studies. Future research is needed to better understand the relatively low rates of injection among Black opioid users. Therefore, we are designing a cross-sectional study among Black MMT patients to examine risk and protective factors injection status differences. These data and our future study findings will be used to inform harm reduction approaches.

## Vo, Jacqueline B., BSN

Poster 31

UAB School of Nursing

### Comparison of Self-Reported Cognitive Changes and Resource Utilization Among African American and Caucasian Breast Cancer Survivors

Vo, Jacqueline B., BSN; Darby, Susan, BSN Student; Nolan, Timiya S., PhD, ANP-BC; Bail, Jennifer, BSN, RN; Kinnerson, Lakesha, MPH, RHIA, CPHQ; Raju, Dheeraj, PhD MSIE, MS, PhD; Gisiger-Camata, Silvia, MPH, RN; Meneses, Karen, PhD, RN, FAAN

**PURPOSE:** There are 3 million breast cancer survivors (BCS) living in the U.S. Up to 75% of BCS during treatment and 35% after treatment experience cognitive changes largely in concentration, executive function, and memory. In Alabama, support for cognitive changes is ranked as one of the greatest needs among BCS. However, data are predominately derived from urban Caucasians (CAU). The purpose of this paper is to compare CAU and AA BCS's self-reported (1) cognitive function and (2) cognitive resource utilization.

**METHODS:** Think Well is an educational program focused on cognitive changes and healthy living for BCS. Fourteen seminars were delivered to BCS in rural and urban counties across Alabama over three years. Following each seminar, participants were asked to complete an evaluation consisting of sociodemographic information, experiences of cognitive changes, interference with daily life, and resource utilization. Descriptive statistics and Fisher's exact test were conducted. Cramer's V were reported to describe effect size. Data analyses were conducted with SPSS.

**RESULTS:** Of the 122 returned surveys from CAU and AA breast cancer survivors, 48% ( $n=59$ ) were CAU and 52% ( $n=63$ ) were AA. Most CAU and AA BCS were treated with chemotherapy (80% vs. 65%,  $p=.05$ ), radiation (63% vs. 44%,  $p=.03$ ), and/or surgery (71% vs 70%,  $p=.5$ ). CAU and AA BCS respectively reported moderate to extreme changes after treatment: memory (70% vs. 51%,  $p=.2$ ), ability to think (70% vs. 52%,  $p=.04$ ), speed of problem solving (73% vs. 51%,  $p=.2$ ), and ability to pay attention (63% vs. 51%,  $p=.05$ ). CAU (80%) and AA (65%) BCS reported cognitive changes interfered with activities of daily living. Effect sizes were small ( $V=.22-.29$ ). Although BCS reported cognitive changes, many CAU (34%) and AA (29%) did not utilize resources ( $p=.5$ ).

**DISCUSSIONS/CONCLUSIONS:** CAU BCS reported more cognitive changes in domains of ability to think and pay attention after treatment and reported more chemotherapy/radiation use than AA BCS. Previous literature indicate that cognitive changes may be treatment-related. Future research should examine interventions aimed at improving cognitive function among both AA and CAU BCS.



**Voinea-Griffin, Andreea, DDS, PhD, MBA, MSHA, FACHE****Heritage I**

Texas A&amp;M University College of Dentistry, Public Health Science

**Compliance Barriers and Initial Outcomes of the First Dental Home Policy***Voinea-Griffin, AE; White, S; Gutierrez, M; Wilson, K; Renuka, S; Hoffman, P; Solomon, E*

**PURPOSE:** To more effectively address early caries in the Medicaid and CHIP population, Texas implemented the First Dental Home (FDH) Program. Despite a high participation rate, very few children complete more than 4 dental visits prior to age 3. The reasons for the low level of compliance and the impact of the program are largely unknown. This study will evaluate the Texas First Dental Home policy and construct recommendations for program improvement.

**METHODS:** The study was conducted in Dallas-Ft. Worth metropolitan area via retrospective chart reviews, focus groups, and surveys. FDH providers were selected based on a computer-generated randomized list and snowball sampling. Up to 50 dental records per provider were reviewed to insure adequate provider and patient mx. Focus groups were created based on language preference and compliance status. The results were examined via qualitative content analysis and the results informed survey design. Surveys were administered to parents of Pre-K Kindergarten students and Head Start-enrolled children. Descriptive and chi-square statistics will be used to analyze the surveys.

**RESULTS:** To date, 727 of the proposed 1,000 dental charts were reviewed. The average age when the first FDH took place was 1 y 8 mo. 58.10% and 30.64% of children were classified high caries risk at the initial and last visit, respectively. The return interval for FDH participants with 4+ visits was 5.5 months. Six focus groups (30 subjects) were conducted, of which, two focus groups included participants irrespective of their compliance status. Major themes related to compliance included access to care, patient-provider communication, lack of information, previous dental experiences, and family and cultural influences. 77 of the proposed 200 surveys were conducted to date. Of those, 14 were parents of Head Start enrollees. 87% of parents reported taking their child for a dental exam-only visit before age 3.

**DISCUSSION/CONCLUSION:** Program non-compliance appears to be impacted by the late entrance into the program and larger than recommended return interval. Complex barriers seem to exist. Future group analysis by Head Start participation will evaluate the impact of a regular dental visit mandate on program participation.

**Weech-Maldonado, Rob, PhD, MBA****Centennial II**

UAB School of Health Professions, Health Services Administration

**Racial/Ethnic Disparities in Gonorrhea: The Role of STD Service Organization and Community Factors in Alabama and California***Weech-Maldonado, Robert, PhD; Evans, Ronique, MPH; Davlyatov, Ganisher, MPH*

**PURPOSE:** To examine the association between local health department (LHD) STD service organization and community factors and disparities in gonorrhea case rates for Blacks and Hispanics in Alabama and California.

**METHODS:** Data sources included: 1) LHD survey data on STD service delivery and organization; 2) Public Health Department data on Gonorrhea rates; and 3) Area Health Resource File (AHRF). Multivariate regression models estimated the relationship of disparity rate ratios in gonorrhea for Blacks and Hispanics (compared to non-Hispanic Whites) at the county level from 2010-2014 and the independent variables: LHD STD service organization, socioeconomic, sociodemographic, and primary care supply factors. LHD STD service delivery was characterized into three dimensions: 1) Differentiation (how narrowly or broadly evidence-based STD interventions have been implemented); 2) Integration (extent to which the LHD relies on partner organizations to carry out STD services); and 3) Concentration (extent to which authority/effort for STD control is focused on the LHD vs. shared across the system). Based on the level of differentiation-integration-concentration (DIC), LHD STD service organization was characterized as: low DIC, medium DIC, or high DIC.

**RESULTS:** The Black-White disparity rate ratio was larger in Alabama, with Blacks having a gonorrhea rate approximately 11 times that of Whites in 2014. On the other hand, the Hispanic-White ratio was larger in California, with Hispanics having 8% higher gonorrhea rates. Multivariate results show that counties with higher poverty and a higher proportion of Blacks had greater Black-White (BW) gonorrhea disparities. On the other hand, greater access to federally qualified health centers (FQHCs) was associated with lower Black-White disparities. California had smaller Black-White disparities in gonorrhea compared to Alabama. STD services organization was not significantly associated with Black/White disparities. On the other hand, counties with low DIC of STD services (compared to high DIC), higher unemployment, and a higher proportion of Hispanics had greater Hispanic-White gonorrhea disparities.

**DISCUSSION/CONCLUSION:** STD service organization was associated with Hispanic/White gonorrhea disparities, with low DIC counties having larger disparities than those with high DIC. Socioeconomic factors were important predictors of gonorrhea disparities, however, the relationships between these factors and disparities varied by racial/ethnic group.



## Wen, Huacong, MS

Poster 32

UAB School of Health Professions, Physical Therapy

### The Racial/Ethnic Differences In Prevalence Of Obesity After Spinal Cord Injury

Huacong Wen, MS; Yuying Chen, MD, PhD

**PURPOSE:** To investigate potential racial/ethnic differences in prevalence of obesity after spinal cord injury (SCI)

**RESEARCH DESIGN:** Multicenter cross-sectional study

**PARTICIPANTS:** 4136 participants from 20 SCI Model Systems Centers, who were enrolled in the National SCI Database between October, 2006 and March, 2016.

**METHODS:** Participants were classified into 3 groups: non-Hispanic white (n=2749), non-Hispanic black (n=984), and Hispanic (n=403). All participants were further divided into two groups based upon their body mass index (BMI, kg/m<sup>2</sup>): non-obese (BMI<30 kg/m<sup>2</sup>) and obese (BMI≥30 kg/m<sup>2</sup>). Demographic and neurological data were obtained at discharge from the initial hospital care. Chi-square test was used to compare BMI status across the three racial groups, after stratification by demographic and neurologic factors.

**RESULTS:** In terms of demographic and injury-related factors, non-Hispanic whites were older, had a higher percentage of females, higher level of education, greater likelihood to be married and employed, lower severity of injury, and longer duration of injury, than those of the non-Hispanic black and Hispanic groups. The obesity prevalence of the 4136 participants was 21.11% (n=873). The Hispanic group had the greatest obesity prevalence (26.03%, n=106), followed by the non-Hispanic black group (22.05%, n=217) and non-Hispanic white group (20.01%, n=550; P=0.01). After stratified by demographic and injury-related factors, a greater prevalence of obesity was noted among Hispanics than other non-Hispanic blacks and non-Hispanic white for those who were younger age (20-39 years), less educated (<high school), unemployed (student/trainee; other occupation status), more severely injured and have a longer duration after injury (6-15 years post injury). Compared to other racial/ethnic groups, non-Hispanic blacks had a greater prevalence of obesity among those who were female, not married (single and other marital status), better educated (>high school), employed and less severe injured.

**CONCLUSIONS:** Racial differences exist in the prevalence of obesity after SCI, which varied by demographic and injury-related factors. Racial differences should be considered while managing weight after SCI.

## Woods, Kristen M., MA

Poster 33

UAB School of Medicine, Immunology/Rheumatology

### Insomnia Severity Predicts Clinical and Experimental Measures of Pain and Physical Function in African Americans with Symptomatic Knee Osteoarthritis

Woods, Kristen M., MA; Laurence Bradley, PhD; Burel Goodin, PhD

**PURPOSE:** Mounting evidence suggests that symptomatic knee osteoarthritis (OA) increases risk of insomnia; further, African Americans demonstrate higher rates of knee OA and insomnia compared to non-Hispanic Whites. To date, there has been very little analysis of whether insomnia is associated with pain and poor physical function specifically in African Americans with knee OA. In non-OA populations, it has been shown that both pain and insomnia promote functional impairments. Therefore, the present study sought to determine whether insomnia symptoms were a significant predictor of clinical and/or experimental measures of pain and physical function in 59 African Americans (45-77 years) with symptomatic knee OA.

**METHODS:** Participants self-reported their experiences of insomnia on the Insomnia Severity Index (ISI) as well as clinical pain and general physical function on the Western Ontario & McMaster Universities Osteoarthritis Index (WOMAC). They then completed the Short Physical Performance Battery (SPPB), which yields an overall score based upon 3 experimental measures of lower-extremity function: standing balance, 4-meter walking speed, and ability to rise from a chair. Ratings of evoked pain intensity using a 0-100 numeric rating scale were also provided in response to each of the three SPPB measures and averaged together.

**RESULTS:** Using adjusted multiple regression models, results revealed that greater severity of insomnia symptoms significantly predicted poorer physical function ( $\beta = .257$ ,  $p = .036$ ) on the WOMAC but not self-reported clinical pain ( $\beta = .140$ ,  $p = .284$ ). Conversely, insomnia symptom severity significantly predicted greater levels of evoked pain intensity to the SPPB measures ( $\beta = .361$ ,  $p = .002$ ) but not SPPB physical function ( $\beta = -.812$ ,  $p = .421$ ).

**DISCUSSION/CONCLUSION:** These findings underscore the role of insomnia as an important driver of pain and poor physical function specifically in African Americans with symptomatic knee OA. Insomnia symptoms may differentially influence measures of pain and physical function depending upon clinical versus experimental measurement. Supported by a grant from NIH/NIA; R37AG033906.

**Zabaleta, Jovanny, MS, PhD**

Arlington

School of Medicine, Pediatrics and Stanley S. Scott Cancer Center

**Breast Cancer in Hispanic/Latina women: Distribution of Subtypes and Associations with Ancestry in Colombia**

Zabaleta, Jovanny, MS, PhD; Sanabria-Salas, María C., MD; Garay, Jone, PhD; Baddoo, Melody C., MS; Hernández-Suarez, Gustavo, MD; Mejía, Juan C., MD; García, Oscar, MD; Miele, Lucio, MD, PhD; Fejerman, Laura, PhD; Serrano-Gomez, Silvia, PhD

**PURPOSE:** To determine the prevalence of the breast cancer (BC) subtypes in Colombia, a highly admixed population, and its underlying associated molecular markers.

**METHODS:** We used the 2013 St. Gallen panel surrogates to classify 301 clinically annotated samples from the Colombian National Cancer Institute into either of the intrinsic BC subtypes. Five intrinsic subtypes were defined by immunohistochemistry according to the expression of ER, progesterone receptor (PgR), HER2, Ki67, Cytokeratin (CK5/6) and EGFR. Ancestry estimation was done by using 80 SNPs previously validated as ancestry informative (AIM) markers in Hispanic/Latino. We determined the levels of gene expression using RNA-seq and validated the results of the sequencing by real-time PCR. All statistical analyses were performed using R project ([www.r-project.org](http://www.r-project.org)) and SPSS. Differences in the characteristics of the patients according to intrinsic subtype were analyzed using  $X^2$  test and differences in the mean of the ancestry fractions, age at diagnosis and tumor size were analyzed using ANOVA test. p values less than 0.05 were considered statistical significant. Differentially expressed genes were identified by using DESeq2 in R-studio.

**RESULTS:** We found that Luminal B is the most frequent subtype in Colombian women with BC. We found statistically significant differences in age at diagnosis ( $p < 0.001$ ), grade ( $p < 0.0001$ ) and recurrence ( $p < 0.001$ ) according to intrinsic subtype. Histological grade 3 was found, in order, in non-basal triple negative, basal-like, HER2-enriched, luminal B and luminal A (60.7%, 57.7%, 45.8%, 28% and 8.3%, respectively). We found statistically significant differences in the ancestry fractions among the geographic regions in Colombia ( $p < 0.0001$ ). There were differences in the proportion of African ancestry between the intrinsic subtypes ( $p = 0.02$ ). We found 67 differentially expressed genes ( $p_{adj} < 0.05$ ) from which 39 were up-regulated and 28 down-regulated in the Luminal B subtype participating in mitosis, cell cycle regulation, and phosphorylation. Using stratification by European or Indigenous American Ancestry we found a strong association of the *ERBB2*, *GRB7*, *GSDMB*, *MIEN1* and *ONECUT2* genes.

**DISCUSSION:** Luminal B is the most prevalent subtype in Colombian women with BC. These tumors are characterized by a specific set of genes that seems to be modulated by ancestry

**Zinski, Anne, PhD**

Poster 34

UAB School of Medicine

**A Qualitative Investigation of HCV Healthcare Utilization in Black Males in Birmingham, AL**

Zinski, Anne, BS, PhD; Franco, Ricardo, MD; Shurbaji, Sally, MSW MPH; Stockett, Romeo, PhD; Galbraith, James, MD; Overton, E. Turner, MD; Alexander, Mark, PhD MPH; Mugavero, Michael, MD

**PURPOSE:** In the United States, African Americans and Males show elevated rates of chronic Hepatitis C virus (HCV), as well as disparities in HCV outcomes, including mortality. Despite recent HCV screening efforts, few studies glean information from African American males to address disparities in HCV care and treatment.

**METHODS:** In this qualitative investigation, we explore relevant factors that may affect HCV linkage to treatment, in a partnership with UAB and representatives from 100 Black Men of America.

**RESULTS:** We conducted interviews with 25 recently diagnosed African American males from the Birmingham metro area. In qualitative analysis, major themes were related to individual beliefs and perceived illness-level factors, particularly with respect to HCV information seeking before and after diagnosis.

**DISCUSSION/CONCLUSION:** These findings are particularly salient for developing tailored interventions development to address HCV treatment disparities in this population.



## 2017 UAB MHRC Excellence in Mentoring Awards

*The UAB MHRC Training Program relies on dedicated mentors who go above and beyond to help guide young investigators in the field of health disparities research. This year's recipients not only have provided outstanding mentoring, but have contributed substantially to the career development and retention of students and scholars. Congratulations to Dr. Clayton Yates and Dr. Henry Wang.*

### Excellence in Mentoring Award for Graduate Students



#### Clayton Yates, PhD

Tuskegee University

Nominated by Anusha Angajala and Tewodros Endalew at Tuskegee University

“ I believe that a good leader will understand the team and show a way to grow and support the individual needs of the team. Dr. Clayton Yates is the perfect example of such a good leader.

He inspires me to think deeply about Cancer Research, to focus on my project and to be an independent researcher.”

– Anusha Angajala

### Excellence in Mentoring Award: Post-Doctoral or Junior Faculty



#### Henry Wang, MD

University of Alabama at Birmingham

Nominated by Allison Jones, PhD, MS, at UAB

“ Dr. Wang has gone above and beyond all expectations to support me in my endeavors. He immediately extended an invitation to join his weekly meetings that consist of other pre- and post-doctoral mentees from across disciplines who present works in progress and problem-solve analytical issues. These students work closely with not only Dr. Wang, but with each other – a relationship he fosters in them to build a peer-mentoring group and promote productivity. The work of Dr. Wang and his mentees culminates in a network of interdisciplinary collaborators, an extraordinary number of manuscripts submitted and accepted to high-tier journals, and abstracts presented at interdisciplinary national conferences.”

– Dr. Allison Jones

## UAB MHRC Membership



The UAB MHRC is a University-Wide Interdisciplinary Research Center that provides infrastructure for innovative health disparities research, including research, training/career development, and community outreach support.

**Eligibility:** Membership is available to UAB faculty interested in health disparities research. Appointments are available in the categories of Senior Scientist and Associate Scientist, based on faculty status and academic rank.

**Application:** Submit a letter describing your experience or interest in health disparities research, and your Curriculum Vitae at: [uab.edu/mhrc](http://uab.edu/mhrc)

## Your Opportunity to Mentor



The UAB MHRC Training Program relies on dedicated mentors to guide new investigators in the field of health disparities research. The Center is recruiting UAB faculty who are willing to serve as mentors for undergraduate and graduate students, postdoctoral fellows, junior faculty, and physician scientists.

**Benefits:** The mentor–mentee relationship can lead to mutually benefitting research opportunities and may result in long-term research collaborations. The research assistance provided by mentees is a valuable resource, and the mentoring experience often meets faculty requirements for service.

**Application:** Visit the UAB MHRC Mentors' Bureau at: [uab.edu/mhrc](http://uab.edu/mhrc)



UAB HealthSmart is an innovative prevention and wellness service of the UAB Division of Preventive Medicine and the UAB MHRC. UAB HealthSmart works to improve the health of people throughout the Greater Birmingham area by offering health evaluations and preventive screenings, nutrition and fitness counseling, healthy lifestyle demonstrations, and health education.

✓Health Screenings ✓Nutrition Counseling ✓Fitness Counseling ✓Health Information ✓Health Events

We encourage you to take the first step toward a healthier tomorrow.

UAB HealthSmart  
UAB Division of Preventive Medicine  
1717 11th Avenue South  
Birmingham, AL 35294  
(205) 996-2304  
[uab.edu/healthsmart](http://uab.edu/healthsmart)

### **UAB Minority Health & Health Disparities Research Center (MHRC)**

The UAB MHRC is a University-Wide Interdisciplinary Research Center, approved by the Board of Trustees of the University of Alabama System. It is a designated Center of Excellence in Health Disparities Research by the National Institute on Minority Health and Health Disparities. The MHRC generates and disseminates research knowledge from biomedical, behavioral, and social sciences to reduce health disparities experienced by vulnerable populations.

[uab.edu/mhrc](http://uab.edu/mhrc)

### **Mid-South Transdisciplinary Collaborative Center for Health Disparities Research (Mid-South TCC)**

The Mid-South TCC is a regional academic-community research consortium that investigates the social determinants of health disparities in obesity and related chronic diseases in six Mid-South states (Alabama, Mississippi, Louisiana, Arkansas, Tennessee, and Kentucky) and implements interventions to ameliorate such disparities.

[uab.edu/midsouthtcc](http://uab.edu/midsouthtcc)

### **Gulf States Health Policy Center**

The Gulf States Health Policy Center is a comprehensive community, education, and research center focused on improving health outcomes in the Gulf States region (Alabama, Mississippi, Louisiana, Florida, and Texas). The Center's work involves coalition building, health education, and interdisciplinary, community-driven research. It is committed to helping create a more healthy and fit nation.

[gshpc.org](http://gshpc.org)

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