

**UAB** 14th ANNUAL

**HEALTH DISPARITIES RESEARCH SYMPOSIUM**

**ADDRESSING HEALTH DISPARITIES  
THROUGH POLICY, SYSTEMS,  
AND ENVIRONMENTAL CHANGES**



POLICY  
SYSTEMS  
ENVIRONMENT

**THURSDAY, APRIL 18, 2019**

Birmingham, AL

**MHRC** | UAB 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 14th Annual UAB Health Disparities Research Symposium.

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

Organized by the UAB Minority Health & 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.

We extend a warm welcome to our speakers who will share valuable insights about addressing health disparities through policy, systems, and environmental changes. **Karen Glanz, PhD, MPH**, an endowed professor at the University of Pennsylvania, is a globally influential public health scholar whose work spans psychology, epidemiology, nutrition, and other disciplines. **Jonathan Engel, PhD, MBA**, a professor in the School of Public Affairs, Baruch College, CUNY, focuses his research on the historical evolution of U.S. health and social welfare policy.

This year, the symposium is sponsored by the Gulf States Health Policy Center, whose aim is to improve the health rankings of the Gulf States region and the UAB Obesity Health Disparities Research Center, working to reduce obesity and related health disparities in the state.

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, UAB Obesity Health Disparities Research 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

---



## **Karen Glanz, PhD, MPH**

**Karen Glanz, PhD, MPH**, is the George A. Weiss University Professor in the Perelman School of Medicine and the School of Nursing, Director of the UPenn Prevention Research Center at the University of Pennsylvania. She is also Associate Director for Community Engaged Research and Program Leader for Cancer Control, at the Abramson Cancer Center of the University of Pennsylvania.

A globally influential public health scholar whose work spans psychology, epidemiology, nutrition, and other disciplines, her research in community and healthcare settings focuses on obesity, nutrition, and the built environment; reducing health disparities; and health communication technologies.

Her research, funded for over \$40 million over the past 25 years, focuses on cancer prevention and control, theories of health behavior, obesity and the built environment, implementation science, social and health policy, and new health communication technologies. Dr. Glanz's research and publications about understanding, measuring, and improving healthy food environments, beginning in the late 1980's have been widely recognized and replicated.

Dr. Glanz is a member of the NHLBI Advisory Council and served on the U.S. Task Force on Community Preventive Services for ten years. She was elected to membership in the National Academy of Medicine of the National Academy of Sciences in 2013. She was designated a Highly Cited Author by ISI Highly Cited.com, in the top 0.5 percent of authors in her field and designated as one of The World's Most Influential Minds 2015 by Thomson Reuters.

# PLENARY SPEAKER

---



## Jonathan Engel, Ph.D.

Jonathan Engel writes about the historical evolution of U.S. health and social welfare policy. His books are *Doctors and Reformers: Discussion and Debate on Health Policy, 1925-1950* (University of South Carolina Press, 2002); *Poor People's Medicine: Medicaid and U.S. Charity Care Since 1965*, (Duke University Press, 2006); *The Epidemic: A History of AIDS*, (Smithsonian Books, 2006); *American Therapy: The Rise of Psychotherapy in the United States*, (Gotham Books of Penguin/Putnam, 2008); *Unaffordable: American Healthcare From Johnson to Trump* (University of Wisconsin Press, 2018); and *Fat Nation: Obesity in America Since 1945* (Rowman and Littlefield, 2018). He

is currently writing a history of Cold War science tentatively entitled, *Transforming American Science*.

Dr. Engel is Professor of Public Affairs at the Marxe School of Public and International Affairs at Baruch College (CUNY). He has also taught at Seton Hall University, the Mailman School of Public Health at Columbia University, and the School of Public Health at the University of Massachusetts. Previously, he was staff historian to the President's Advisory Committee on Human Radiation Experiments, and was the lead author on multiple HIV needs assessments for the city of Newark, New Jersey. He has conducted strategic design projects for the Department of Behavioral Health of Kings County Medical Center (Brooklyn), the United Neighborhood Houses of New York, and Edwin Gould Services for Children and Families (New York).

Dr. Engel received his B.A. from Harvard in history and science in 1986, his MBA from the Yale School of Management in accounting and finance in 1991, and his Ph.D. in the history of medicine and science from Yale in 1994. He has four grown children, and is married to Rozlyn, an economist.



# Thursday, April 18, 2019

Event Time	Topic	Room Location
9:00 – 10:30 AM	<b>Registration and Continental Breakfast</b>	<i>Lobby</i>
<b>POSTER SESSION</b>		
9:30 – 11:00 AM	<b>Poster Session:</b> Review Research Posters and Discuss with Presenters	<i>Hamilton II</i>
<b>OPENING REMARKS</b>		
11:15 – 11:30 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	<i>Hamilton I</i>
<b>PLENARY SESSION</b>		
11:30 – 12:30 PM	<b>Jonathan Engel, PhD, MBA</b> Professor, Marxe School of Public and International Affairs, CUNY Author of <i>Fat Nation: A History of Obesity in America</i>  "America's Obesity Epidemic: Multiple Causes, Disparate Impacts"	<i>Hamilton I</i>
<b>LUNCH</b>		
12:30 PM	<b>LUNCH BUFFET OPENS</b>	<i>Lobby</i>
<b>KEYNOTE SPEAKER</b>		
1:00 – 2:00 PM	<b>Karen Glanz, PhD, MPH</b> George A. Weiss University Professor Professor of Nursing and Professor of Epidemiology Perelman School of Medicine, University of Pennsylvania Senior Scholar, Center for Clinical Epidemiology and Biostatistics  "Changes in food and activity environments: Do they improve health behavior and reduce risk?"	<i>Hamilton I</i>
<b>MENTORING AWARDS</b>		
2:00 – 2:15 PM	<b>UAB Minority Health &amp; Health Disparities Excellence in Mentoring Awards</b>	<i>Hamilton I</i>
2:15 – 2:30 PM	<b>MHRC Education and Training Program Alumni Photo</b>	<i>Lobby</i>
<b>BREAKOUT SESSIONS</b>		
2:30 – 4:00 PM	<b>Policy and Systems Influences on Health</b> <b>Moderator: Sejong Bae, PhD</b> Professor, UAB School of Medicine, Preventive Medicine	<i>Hamilton I</i>
1	<b>Pamela Bowen, PhD, CRNP</b> Assistant Professor, UAB School of Nursing	A System-Level Policy to Increase Physical Activity Discussions Among African American Patients in a Safety Net Clinic
2	<b>Roma Hanks, PhD</b> Professor & Chair, USA Department of Sociology, Anthropology & Social Work	Voices Carry! Employing CBPR with Seniors to Raise Policymakers' Awareness of Priorities for Healthy Aging and Livable Communities
3	<b>Lori Bateman, PhD</b> Scientist I, UAB School of Medicine, Division of Preventive Medicine	Barriers and Facilitators to Advancement of Underrepresented Minorities and Women in Academic Medicine: Qualitative Findings from a Southeastern Academic Medical Center

# Thursday, April 18, 2019

Event Time	Topic	Room Location
4	<b>Seung Eun Jung, PhD</b> Assistant Professor, University of Alabama, Human Nutrition & Hospitality Management <b>Ragan Dougherty</b> Graduate Student, University of Alabama, Human Nutrition & Hospitality Management	The Moderating Effect of Habit Strength On Behavior: An Investigation of Fruit and Vegetable Intake Among Low-Income Older Adults
2:30 – 4:00 PM	<b>Disparities Measurement and Methods</b> <b>Moderator: Olivia Affuso, PhD</b> Associate Professor, UAB School of Public Health, Epidemiology	<i>Hamilton II</i>
1	<b>Joseph Wolfe, MS, PhD</b> Assistant Professor, UAB Department of Sociology	Wealth and Obesity Among Midlife Adults
2	<b>Elizabeth Baker, PhD</b> Associate Professor, UAB Department of Sociology	Assessing Stress in Pregnancy and Postpartum: What Is In the Measures?
3	<b>Abigail Gamble, PhD, MS</b> Assistant Professor, UMMC John D. Brewer School of Population Health	Qualitative Interviews with WIC Providers to Probe Recruitment, Retention, and Engagement Strategies for Exercise interventions with Rural Antenatal Adolescents
4	<b>Yufeng Li, PhD</b> Professor, UAB School of Medicine, Division of Preventive Medicine	Exploring Quantitative Methods in Health Disparity Measurement
2:30 – 4:00 PM	<b>Clinical and Social Factors</b> <b>Moderator: Tiffany Carson, PhD, MPH</b> Assistant Professor, UAB School of Medicine, Preventive Medicine	<i>Skipwith I</i>
1	<b>Suzanne Judd, PhD</b> Professor, UAB School of Public Health, Biostatistics	Clinical and Social Factors Associated With Excess Hypertension Risk in Black Compared With White US Adults
2	<b>Zechen Chong, PhD</b> Assistant Professor, UAB School of Medicine, Genetics	The Mutational Landscape of Cancer Patients With Overweight and Obesity
3	<b>Ainny Shamim, MD</b> Assistant Researcher, Morehouse School of Medicine School of Public Health	The Emotional/Psychological Well-Being of Long-Term Female Breast Cancer Survivors by Treatment Type and Length of Time Since Treatment: An Analysis of Health Information National Trends Survey (HINTS) Data
2:30 – 4:00 PM	<b>Social and Environmental Determinants of Health</b> <b>Moderator: Maria Pisu, PhD</b> Associate Professor, UAB School of Medicine, Preventive Medicine	<i>University</i>
1	<b>Adolfo Molina, MD</b> Assistant Professor, UAB School of Medicine, Pediatrics	Residential Instability and Neighborhood Deprivation As Risk Factors For Pediatric Asthma Outcomes
2	<b>Gabriela Oates, PhD</b> Assistant Professor, UAB School of Medicine, Pediatrics	Association Between Socioeconomic Position and Health-Related Quality of Life in Chronic Obstructive Pulmonary Disease
3	<b>Ian McDonough, PhD</b> Assistant Professor, University of Alabama College of Arts & Sciences, Psychology	Biological Mechanisms Underlying Social Determinants of Risk for Dementia: An fMRI Analysis of Middle Aged and Older Adults
4	<b>Candace Bright, PhD</b> Assistant Professor, East Tennessee State University, Sociology & Anthropology	Perceptions of Vulnerability and Resilience Across Disaster Types: A Closer Look at Four Gulf Region Communities





# ADDRESSING HEALTH DISPARITIES THROUGH POLICY, SYSTEMS, AND ENVIRONMENTAL CHANGES



## ABSTRACTS

14th Annual UAB Health Disparities Research Symposium

Thursday, April 18, 2019

Birmingham, Alabama



# ABSTRACTS

14th Annual UAB Health Disparities Research Symposium  
April 18, 2019

## TABLE OF CONTENTS

Ainsworth, Matthew C., MPH ( <i>Poster 1</i> ) .....	3
Akhter, Samina, MPH, MS ( <i>Poster 2</i> ) .....	3
Baker, Elizabeth H., PhD ( <i>Hamilton II</i> ) .....	4
Barba, Cheyanne, BA ( <i>Poster 3</i> ) .....	4
Barnes, Katherine, BS ( <i>Poster 4</i> ) .....	5
Barron, Keri A., PhD ( <i>Poster 5</i> ) .....	5
Bateman, Lori B., PhD ( <i>Hamilton I</i> ) .....	6
Borgatti, Alena C., BA ( <i>Poster 6</i> ) .....	6
Bowen, Pamela G., PhD ( <i>Hamilton I</i> ) .....	7
Bright, Candace F., PhD ( <i>University</i> ) .....	7
Broker, Thomas R., PhD ( <i>Poster 7</i> ) .....	8
Cai, Anping, MD ( <i>Poster 8</i> ) .....	8
Callahan, Makenzie, MS ( <i>Poster 9</i> ) .....	9
Cedillo Juarez, Yenni E., MS ( <i>Poster 10</i> ) .....	9
Chong, Zechen, PhD ( <i>Skipwith I</i> ) .....	10
Davis, Brittney, PharmD ( <i>Poster 11</i> ) .....	10
Dey, Suranjana, BS ( <i>Poster 12</i> ) .....	11
Footman, Alison, MPH ( <i>Poster 13</i> ) .....	11
Gamble, Abigail, MS, PhD ( <i>Hamilton II</i> ) .....	12
Grant, Raynesha L., BS, MS ( <i>Poster 14</i> ) .....	12
Gray, Cicily A., MPH ( <i>Poster 15</i> ) .....	13
Hanks, Roma, PhD ( <i>Hamilton I</i> ) .....	13
Hendricks, Bailey, BS ( <i>Poster 16</i> ) .....	14
Herman, Casey, MS ( <i>Poster 17</i> ) .....	14
James, Hanleigh ( <i>Poster 18</i> ) .....	15
Jerome, Maggie, MS ( <i>Poster 19</i> ) .....	15
Judd, Suzanne, PhD ( <i>Skipwith I</i> ) .....	16
Jung, Seung Eun, PhD ( <i>Hamilton I</i> ) .....	16
Letang, Sarah, MS ( <i>Poster 20</i> ) .....	17
Li, Yufeng, PhD ( <i>Hamilton II</i> ) .....	17
Lock, Lindsay, MS ( <i>Poster 21</i> ) .....	18
Malla, Gargya, MD, MPH ( <i>Poster 22</i> ) .....	18
McDonough, Ian M., PhD ( <i>University</i> ) .....	19
McNeill, Stephanie A., MD ( <i>Poster 23</i> ) .....	19
Molina, Adolfo L., MD ( <i>University</i> ) .....	20
Morgan, Bria K., BA ( <i>Poster 24</i> ) .....	20
Nourani, Anis R., MD ( <i>Poster 25</i> ) .....	21
Oates, Gabriela, PhD ( <i>University</i> ) .....	21
Packer Williams, Martrice A., MS ( <i>Poster 26</i> ) .....	22

Park, HyounKyoung G., PhD ( <i>Poster 27</i> ) .....	22
Reed, Rhiannon D., MPH ( <i>Poster 28</i> ) .....	23
Richards, Jaimie L., BS ( <i>Poster 29</i> ) .....	23
Rodgers, Shameka, BS, MS ( <i>Poster 30</i> ) .....	24
Rutland, Sarah B., MA ( <i>Poster 31</i> ) .....	24
Sakhuja, Swati, MPH ( <i>Poster 32</i> ) .....	25
Shamim, Ainny, MD ( <i>Skipwith I</i> ) .....	25
Tarasovich, Mercedes, BA ( <i>Poster 33</i> ) .....	26
Thomas, Soweto, BA ( <i>Poster 34</i> ) .....	26
Uddin, Jalal, MS ( <i>Poster 35</i> ) .....	27
Watts, Amber, MAEd ( <i>Poster 36</i> ) .....	28
Waugaman, Kaitlyn, MPH ( <i>Poster 37</i> ) .....	28
Wen, Huacing, MS ( <i>Poster 38</i> ) .....	29
Williams, Michelle S., BS, MPH, MSPH, PhD ( <i>Poster 39</i> ) .....	29
Wise, Jenni, RN, MSN ( <i>Poster 40</i> ) .....	30
Wolfe, Joseph, MS, PhD ( <i>Hamilton II</i> ) .....	30
Yang, Leila ( <i>Poster 41</i> ) .....	31

**Ainsworth, Matthew C., MPH****Poster 1**

UAB School of Public Health, Health Behavior

**Physical Activity Maintenance Following Home-Based, Individually-Tailored Print Interventions For African American Women**

*Ainsworth, M Cole, MPH; Desmond, Renee, DVM PhD; Pisu, Maria, PhD; Williams, Victoria, MPH MEd; Wang, Kaiying, MPH; Holly, Taylor, MPH; Marcus, Bess H, PhD; Demark-Wahnefried, Wendy, PhD RD; Pekmezi, Dori, PhD*

**INTRODUCTION:** African American women report low participation in physical activity and are disproportionately burdened by related conditions (obesity, breast and colon cancer). Physical activity interventions have shown promising results among African American women, but most studies in this area have focused on short-term increases.

**METHODS:** The current study examined 12-month physical activity and psychosocial outcomes from a pilot randomized controlled trial (N=84) of a Home-based Individually-tailored Physical activity Print (HIPP) intervention for African American women in the Deep South.

**RESULTS:** Retention was 77.4% at month 12. HIPP participants increased self-reported moderate-to-vigorous physical activity (MVPA) from 35.1 minutes/week (standard deviation [SD]=47.8) at baseline to 124 minutes/week (SD=95.5) at 12 months, compared to the wellness contact control participants who reported increases from 48.2 minutes/week (SD= 51.3) to 102.5 minutes/week (SD=94.5) over 12 months (between group  $p>0.05$ ). Results indicate that modest improvements in MVPA and related psychosocial variables occurred during the active intervention phase (months 0-6) and were sustained during the tapered maintenance period (months 6-12).

**CONCLUSIONS:** Low cost, high reach, home-based strategies have great potential for supporting sustained participation in physical activity and achieving long-term health benefits among African American women in the Deep South. Future research in this area should incorporate lower literacy intervention approaches (telephone counseling, DVDs, etc.). Such strategies will enhance the inclusivity of the HIPP intervention, as well as its effectiveness and relevance for less-educated individuals.

**ACKNOWLEDGMENTS:** This research was supported by the American Cancer Society (MRS-13-156-01-CPPB), the National Center for Advancing Translational Sciences (UL1TR001417), and National Heart, Lung, And Blood Institute of the National Institutes of Health (T32HL105349). We would like to thank our collaborators for their contributions to the study. We also thank our research participants for their time.

**Akhter, Samina, MPH, MS****Poster 2**

Tuskegee College of Veterinary Medicine, Public Health

**The Relationship between Environmental Pollution and the Risk of Development of Breast Cancer in the Black Belt Counties of Alabama**

*Samina Akhter; Lloyd Webb; Hafiz Anwar Ahmad; David Nganwa; John Heath; Crystal M. James; and Ehsan Abdalla*

**BACKGROUND:** There is racial disparity in the incidence and mortality rates of breast cancer between Blacks and Whites women living in the Black Belt Counties (BBC) of Alabama. Our study examined the relationship between environmental pollution and the risk of development of breast cancer in selected BBC (Baldwin, Barbour, Bullock, Choctaw, Dallas, Greene, Hale, Macon, Perry, Pickens, Sumter, and Wilcox). Our objective is to determine whether certain known single or combinations of environmental carcinogenic toxicants released in these BBC are correlated to the observed disparity.

**METHODS:** We used the Environmental Protection Agency's Toxics Release Inventory (TRI) Program Explorer dataset of 2018. Nine chemicals and eight metals were selected from the TRI dataset for the BBC from 2011 to 2015. Breast cancer incidence data was extracted from the Surveillance Epidemiology, and End Result (SEER) and rates were calculated using SEER\* Stat software. A Linear Regression Model was developed using SAS 9.4 Software to analyze the relationship between race and the selected chemicals and metals respectively.

**RESULTS:** The results of this study showed that a coefficient of determination ( $R^2$ ) of 34 % variation for Blacks in the BBC can be explained by the selected environmental carcinogenic toxicants released into the environment with 66% of variance remaining unexplained. A 74%  $R^2$  variation for Whites in the BBC can be explained by the same toxicants with 26% of variance remaining unexplained.

**CONCLUSION:** The lack of data from some of the BBC (Bullock, Macon, and Perry counties) made it difficult to correctly establish the relationship between environmental carcinogenic toxicants and the risk of development of breast cancer among Blacks in the BBC. This lack of data highlights the need for advocacy to create better monitoring and assessment systems to provide evidence-based information on this type of research.

**KEYWORDS:** Breast cancer; BBC; disparities; Blacks; Whites; carcinogenic environmental toxicants; SAS software; SEER\*Stat

## Baker, Elizabeth H., PhD

Hamilton II

UAB College Arts & Sciences, Sociology

### Assessing Stress in Pregnancy and Postpartum: What Is in the Measures?

*Irena Stepanikova; Elizabeth Baker; Gabriela R. Oates; Julie Bienertova-Vasku; Jana Klanova*

**BACKGROUND:** Measuring of early-life stress is complicated by methodological challenges. This paper compares three survey instruments for stress assessment in pregnant/postpartum women and investigates the effects and timing of early-life stress for emotional/behavioral difficulties (EBD) in later childhood/adolescence.

**METHODS:** Data were obtained from the European Longitudinal Cohort Study of Pregnancy and Childhood (ELSPAC-CZ), which includes 96% (N=7,589) of all eligible births in two Czech metropolitan areas. We used data collected at 20 weeks of pregnancy (T1), after delivery (T2), at 6 months postpartum (T3), and at child's age of 7 years (T4), 11 years (T5), 15 years (T6), and 18 years (T7). Life stress was assessed with (1) the Edinburgh Postnatal Depression Scale (EPDS), (2) a stressful life events (SLE) count based on 42-item inventory, and (3) the SLE measure weighted by perceived stressfulness (PS). Each stress measure was administered at T1, T2, and T3. Child's EBD were assessed with the Strengths and Difficulties Questionnaire at T4, T5, T6, and T7.

**RESULTS:** Each stress measure independently predicted long-term EBD. The best data fit was obtained in a model combining EPDS and SLE. Effect sizes for SLEs decreased between early pregnancy and postpartum, while EPDS effects increased.

**CONCLUSION:** SLE-based methods capture an aspect of perinatal stress not adequately assessed by EPDS. Combination of psychological distress measures and SLE-based measures of perinatal stress is optimal in predicting EBD of the child. Stress measures based on SLE may be useful during early pregnancy, while self-reports of depressive symptoms may perform better in postpartum.

## Barba, Cheyanne, BA

Poster 3

UAB College of Arts & Sciences, Psychology

### Childhood Infectious Disease and Adult Health in a Population Based Sample in Puerto Rico

*Barba, Cheyanne, Department of Psychology; Dávila-Roman, Ana-Luisa; Andel, Ross; Crowe, Michael*

**OBJECTIVE:** Puerto Ricans have high rates of cardiovascular disease, higher incidence rates of Alzheimer's disease, and are more susceptible to infectious diseases compared to other ethnic groups. We investigated whether infectious diseases in childhood are associated with cognitive impairment and cardiovascular risk in late adulthood in a sample of older Hispanic adults.

**PARTICIPANTS AND METHODS:** Participants included 3,883 community-dwelling older adults aged 60+ years from the Puerto Rican Elderly: Health Conditions (PREHCO) Study without cognitive impairment at baseline. A summary scale comprised of 11 infectious diseases (typhus fever, hepatitis, tuberculosis, rheumatic fever, polio, malaria, dengue, measles, chickenpox, mumps, and smallpox) was created and coded into "low" (0-1 infections), "moderate" (2-3), or "high" (4+) groups. Cognitive functioning was measured by the minimal mental Cabán at baseline and follow-up. Covariate-adjusted logistic and linear regression models were used to examine the influence of health levels on cognitive functioning.

**RESULTS:** High levels of childhood illness was not associated with cognitive impairment at baseline but moderate levels of illness were significant ( $p < .001$ ). Greater number of infectious diseases were associated with a greater risk of cardiovascular disease ( $p < .001$ ).

**CONCLUSION:** Contrary to our prediction, greater number of childhood infectious diseases were not associated with cognitive impairment in late adulthood. However, individuals with more infectious diseases were at an increased risk for cardiovascular problems. It is possible that a complex, lifelong process beginning with contraction of multiple infectious diseases at a young age increases susceptibility to vascular issues that in turn influence cognitive functioning in old age.



**Barnes, Katherine, BS****Poster 4**

UAB School of Medicine

**Cross-sectional evaluation of transition readiness in the interdisciplinary spina bifida clinic**

*Barnes, Katherine, BS; Kuhn, Elizabeth, MD; Haji, Faizal, MD, PhD; Zimmerman, Kathrin, BA; Hopson, Betsy, MSHA; Blount, Jeffrey, MD; Rocque, Brandon, MD, MS*

**INTRODUCTION:** Adolescents with spina bifida (SB) are subject to disparities of care due to their underlying medical condition. With their multiple healthcare needs, preparing adolescents with SB for transition to adult healthcare is a critical process that requires ongoing evaluation and individualization. The Transition Readiness Assessment Questionnaire for SB (TRAQ-SB) is a validated, patient-centered questionnaire, with a SB-specific domain, that evaluates patients' readiness for transition to adult care.

**METHODS:** The TRAQ-SB was administered to all patients >13 years old at their annual SB Clinic visit starting in June 2016 (n=155). Survey results for the first 24 months of administration were reviewed. Higher TRAQ-SB scores suggest greater transition preparedness (maximum score: 160).

**RESULTS:** The TRAQ-SB was completed 136 times (87.7% completion) by 121 patients. The mean patient age was 20.3 years (IQR 16.0-21.7). 64 patients (52.9%) were female. Most patients had myelomeningocele and shunted hydrocephalus. The mean total score was 109 (SD: 29.0, range: 31-160). Mean subscores were: Managing Medications: 13.6 (4.7, 4-20); Appointment Keeping: 19.5 (8.4, 7-35); Tracking Health Issues; 10.9 (4.7, 4-20); Talking with Providers: 9.1 (1.36, 2-10); Managing Daily Activities: 11.3 (3.1, 3-15); SB Activities: 44.4 (12.9, 0-60).

The Total TRAQ-SB Score was significantly higher in females (113.8 vs. 103.1,  $p=0.03$ ), as were the Managing Medications, Tracking Health Issues, and Managing Daily Activities subscores. The Managing Daily Activities subscore varied significantly by anatomic lesion level and was significantly higher in patients with a diagnosis other than myelomeningocele. The SB Activities subscore was significantly higher in patients with myelomeningocele (45.9 vs 35.7,  $p=0.0009$ ) and hydrocephalus (47.0 vs 34.4,  $p<0.0001$ ). Neither the total TRAQ-SB score, nor any of the subscores, significantly correlated with age. Among 29 patients with repeat TRAQ-SB scores, the mean change was +7.7 points. The greatest gains were in Appointment Making (+2.9) and SB Activities (+2.8) (not statistically significant).

**CONCLUSIONS:** The TRAQ-SB has the potential to focus transition education and facilitate transition to adult care.

**Barron, Keri A., PhD****Poster 5**

UA Capstone College of Nursing

**Quality Healthcare and Readmissions -Utilizing Evidence-Based Guidelines in the Treatment of Heart Failure Patients**

*Barron, Keri, PhD, RN*

**INTRODUCTION:** Heart failure can be defined as the loss of the heart's ability to supply the body with an adequate oxygen supply. As a result, the individual's quality of life is affected. The costs associated with the care of a heart failure patient can put a tremendous burden on a health care institution. For this reason, the Center for Medicare and Medicaid services instituted policies that would restrict payments to healthcare institutions with readmissions of heart failure patients. The purpose of this study was to explore the relationship adhering to evidence-based pharmacological guidelines had on heart failure readmissions in a select Mississippi hospital.

**METHODS:** This was an exploratory study that utilized a retrospective design. There was a scarce amount of literature comparing practice patterns of Mississippi hospitals with national evidence-based guidelines for treating heart failure. This study offered insight into the relationship between adhering to evidence-based pharmacological guidelines and heart failure readmissions in a select Mississippi hospital. The study took place in a hospital in the southeastern section of the United States. Retrospective data was collected on readmitted heart failure patients seen between January 2011 and June 2014. The researcher limited the study to the first 30 days of the patient's index hospitalization and readmissions included in that period. Patient inclusion criteria for this study included: 18 years of age and older with a diagnosis of heart failure as identified by the International Classification of Disease (ICD - 9) Codes for heart failure. A researcher generated data abstraction tool was used to collect data on demographic variables and clinical variables. A total of 31 charts comprised the sample. Descriptive statistics, a t-test and independent samples t-test were used to analyze collected data.

**RESULTS:** The overall findings of this study indicated that a relationship was not seen between readmissions and the utilization of evidence-based pharmacological guidelines.

**CONCLUSIONS/DISCUSSION:** The study did contribute rudimentary data for future research that might inform practices for reducing readmissions, and the study further revealed the importance of qualitative research and the importance of incorporating comorbid conditions in heart failure research. Keywords: heart failure, readmissions, Mississippi

## Bateman, Lori B., PhD

## Hamilton I

UAB School of Medicine, Preventive Medicine

### Barriers and Facilitators to Advancement of Underrepresented Minorities and Women in Academic Medicine: Qualitative Findings from a Southeastern Academic Medical Center

Lori Brand Bateman, PhD, Laura Heider, MBA, Mona N. Fouad, MD, MPH

**PURPOSE:** Increasing racial/ethnic minorities who are underrepresented in academic medicine (URiM) has the potential to decrease health care disparities in several ways including: increasing physicians' cultural competence; increasing minority populations' access to health care; decreasing bias, prejudice and stereotyping in health care, and increasing health disparities research. The purpose of this study is to examine the perceptions of the working environments, and barriers and facilitators to success by URiM medical school faculty, and how these differ from their majority counterparts.

**METHODS:** Faculty of all ranks and specialties were recruited from one southeastern medical school to participate in a semi-structured one-on-one interview between July and September, 2017. The interview guide was based on the Institutional Context for Diversity (Hurtado), previous studies reported in the literature, and analysis of comments from a recent Diversity Engagement Survey conducted at the institution. Interviews were audio recorded, transcribed, and analyzed by 3 members of the research team using thematic analysis. Participants were organized into 4 groups for analysis— URiM women, majority women, URiM men, majority men.

**RESULTS:** Sixty-four faculty consented to participate in the study (56.2% women, 34.4% URiM). Emerging themes related to advancement for URiM and women faculty differed by demographic group, with majority men as a group holding a distinctly differing perspective than the other three demographic groups. The most notable differences were between majority men and URiM women. Majority men were more likely to suggest that the advancement of women and URiM faculty was acceptable or getting better, that the lack of URiM faculty in leadership was due to mainly to pipeline issues, and that women choose not to be in leadership.

**DISCUSSION/CONCLUSION:** We found that intersectionality of race/ethnicity and gender informed perspectives in distinct ways. This study suggests that more work must be done to communicate the reality of structural barriers, the existence of bias, and the importance of shifting attitudes toward non-majority faculty and women. This work may be necessary in order to narrow the gap in perception and experience between different demographic groups before efforts aimed at increasing cultural competency and decreasing health disparities can achieve maximum efficacy.

## Borgatti, Alena C., BA

## Poster 6

UAB School of Medicine, Psychology

### On The Same Weight-Length: How Social Connections in Weight Loss Groups Differ By Race and Income

Borgatti, Alena, B.A.; Busky, Meghan, B.S.; Dutton, Gareth, PhD

Behavioral obesity interventions delivered in groups are efficacious and cost-effective, although Black and lower-income participants tend to lose less weight in these programs. Little is known about the social relationships formed in these groups, whether such relationships differ based on race or income, or if these social ties impact weight loss. The current study utilized social network analysis to evaluate the effect of race, income, and social ties on weight loss and attendance in a group-based intervention delivered to a racially diverse sample (N=65, 61% Black). Participants nominated up to 7 other participants that they interact with, like most, seek advice from, and seek emotional support from. We predicted that fewer nominations by peers and reciprocated relationships across these networks would impact attendance and weight loss (measured in pounds), and that having lower income and being Black would negatively impact social ties. An independent samples t-test revealed that White participants (M=15.15 pounds, SD=8.36) lost more weight than Black participants (M=10.45 pounds, SD=8.36,  $t(62) = -2.177, p=0.033$ ). Controlling for baseline weight, being White correlated with more reciprocated emotional support ties ( $r=0.249, p=0.047$ ). Adjusting for motivations to initiate treatment, higher income marginally correlated with weight loss ( $r=0.229, p=0.068$ ) and attendance ( $r=0.236, p=0.059$ ), and correlated with interaction frequency nominations ( $r=0.259, p=0.039$ ) and reciprocal advice ties ( $r=0.266, p=0.034$ ). Attendance marginally correlated with interaction frequency ( $r=0.217, p=0.083$ ) and emotional support ( $r=0.239, p=0.055$ ) nominations, and weight loss correlated with interaction frequency nominations ( $r=0.284, p=0.022$ ) and reciprocal "most-liked" ties ( $r=0.256, p=0.040$ ). Despite sampling from a predominantly Black cohort, White, more affluent participants had more peer nominations and reciprocated social relationships within their group. While not all social networks evaluated significantly correlated with weight loss, all associations trended in the hypothesized directions, indicating that these sub-groups may experience reduced social connectedness in weight loss interventions compared to their peers. This may reflect potential stigmatization of participants by peers or external barriers impacting social connectedness, treatment, and attendance. Future studies should consider how participants' within-group social connections may affect their treatment goals, and how to further integrate underserved participants into these social networks to improve their weight loss success.

**Bowen, Pamela G., PhD**

Hamilton I

UAB School of Nursing

**A System-level Policy to Increase Physical Activity Discussions Among African American Patients in a Safety Net Clinic***Bowen, Pamela G., PhD, FNP-BC; Opoku-Agyeman, William, PhD; Pisu, Maria, PhD; & Martin, Michelle Y., PhD*

**INTRODUCTION:** Only 25% of all Americans engage in regular physical activity (PA) and these percentages decrease for individuals living in the Gulf States, especially among African Americans (AA). Because physical inactivity is a significant problem that contributes to many chronic diseases among AAs, initiatives to address physical inactivity in this region are urgently needed. The utilization of healthcare visits is a promising method to increase opportunities for healthcare providers (HCPs) to discuss PA as part of a patient's overall health promotion regimen. Thus, interventions delivered in the healthcare system may offer an answer. The purpose of this study was to determine whether the presence of system-level policies would support HCP PA discussions and whether a policy-level intervention would increase the frequency of those discussions.

**METHOD:** A pre-post design was conducted at Cooper Green Mercy Health Services clinic in three phases: 1) Identified whether policies were present to support HCP PA discussions with patients and performed baseline assessments with patients to assess whether PA discussions occurred. 2) PA policy development and implementation to promote PA discussions between HCP and patients during clinic encounters. 3) Policy intervention evaluation to assess changes in PA discussions at clinic.

**RESULTS:** Phase 1: assessment yielded no policies to encourage HCP to discuss PA. Only five of 39 patients interviewed stated that PA was discussed. Phase 2: a PA discussion policy was developed and implemented over 12 weeks, which incorporated the "Exercises is Medicine Initiative" as a strategy to assist HCPs with discussing PA with their patients. The clinic's electronic medical record was updated to assist HCPs with documentation of their PA discussions. Phase 3: post-intervention evaluations were conducted with 40-patients with an average age of 52 and 10-HCPs were interviewed (4-nurse practitioners, 6-doctors) with an age range of 46-72. Overall, results showed a 53% increase in PA discussions after PA policy implementation.

**DISCUSSION/CONCLUSIONS:** Policy implementation that promotes PA had a significant association with increased number of detailed PA discussions at clinical encounters between patients and HCPs. Findings should alert clinicians to use innovative ways to counsel patients about PA to potentially improve health outcomes.

**ACKNOWLEDGEMENTS:** The Department of Health and Human Services, National Institutes of Health, National Institute on Minority Health and Health Disparities funded this study. Grant Number: 3U54MD008602-03S1 FAIN: U54MD008602 The Gulf States Collaborative Center for Health Policy Research (U54MD008602)

**Bright, Candace F., PhD**

University

East Tennessee State University, Sociology &amp; Anthropology

**Perceptions of Vulnerability and Resilience Across Disaster Types: A Closer Look at Four Gulf Region Communities***Bright, Candace F., PhD; Wraight, Sarah, BS; Hanks, Roma Stovall, PhD; Sayre, Edward, PhD; Bagley, Braden, MA; Fischbach, Emily, BS*

**PURPOSE:** Disaster impact has a significant impact on health, including in some cases, loss of life. With rising sea levels, risky off-shore drilling procedures, industrial and commercial enterprises near the coast, and more frequently devastating tornadic events, coastal communities and surrounding areas are becoming increasingly vulnerable to both natural and technological disasters, the lines of which continue to blur. Understanding disaster vulnerability often involves an examination of several dimensions within the vulnerability concept- especially as it pertains to community resilience. The purpose of this research is to advance current understandings of the role of community capital-social, economic, physical, human, and natural-in disaster resilience.

**METHODS:** To better understand the role of community capital in disaster resilience, focus groups were conducted in four Gulf States communities impacted by disparate disasters: (1) Bayou La Batre, Alabama, impacted by the 2010 Deepwater Horizon Oil Spill, (2) Tuscaloosa, Alabama, impacted by the April 21, 2011 Tuscaloosa tornado, (1) Clarksdale, Mississippi, impacted by the 2011 flooding of the Mississippi River, and (4) Hattiesburg, Mississippi, impacted by tornados in both 2013 and in 2017.

**RESULTS:** Through deductively analyzing the focus group transcripts using an existing conceptual model of capital-based resilience, we found that capital (1) is perceived to impact all aspects of community livability, not just disaster resilience; (2) varies substantially across the four communities studied; and (3) is perceived to played a major role in differences in levels of vulnerability and resilience across the communities.

**DISCUSSION/CONCLUSIONS:** Based on our results, we discuss the numerous indicators of resilience discussed in the focus groups (e.g., trust and social networks, income and savings, economic opportunity, housing and transportation, and other community assets) and what they mean for the role of capital in community structure and sustainability, both related to disasters and other issues of quality of life, such as mental and physical health.

## Broker, Thomas R., PhD

Poster 7

UAB Joint Departments, Biochemistry and Molecular Genetics

### Topical Therapeutic Drugs Are Essential To Reducing The Extreme Global Disparities In Human Papillomavirus Diseases and Deaths

Broker, Thomas R., PhD; Banerjee, N. Sanjib, PhD; Chow, Louise T., PhD

Papillomavirus diseases are responsible for 0.8% of all human deaths. Anti-HPV vaccines are safe and effective at blocking new infections by nine currently targeted viral genotypes. However, anticipation that prophylactic vaccines would substantially reduce the staggering burden of HPV diseases has been unfulfilled. Although the first FDA-approved HPV vaccines have been heavily marketed since 2006, less than 1.5% of the world's population is vaccinated, primarily in high income countries. Behind the disappointing uptake are bottlenecks in manufacturing and delivery, high cost, lack of public health infrastructure, anti-vaccine efforts, and competing economic and medical issues. Moreover, despite some Gates Foundation- and GAVI-funded initiatives in the low and middle income countries where 85-90% of life-threatening HPV diseases occur, population growth is outpacing vaccination by 10:1. 80% of people eventually acquire and can pass along the sexually transmitted HPVs, with a 2% lifetime risk that lesions will undergo neoplastic progression. Globally, 15,000,000 HPV cancer cases are projected to emerge over the next 20 years. Nevertheless, over-zealous support for HPV vaccination has crippled efforts at alternative approaches to HPV management. Possible surgical interventions are generally out-of-reach in much of the world. Immunotherapies have proven elusive, likely due to the immune-escape functions of the HPV oncoproteins E6, E7 and E5. As a two-part public health strategy, elimination of active lesions and long-term suppression of persistent infections requires early and regular universal screening for both non-oncogenic and oncogenic HPV infections using sensitive and specific molecular tests. Positive diagnoses should be followed immediately with self-administered topical treatments using effective, safe, well-tolerated and universally affordable small molecule antivirals. Our conceptual approach is to repurpose existing drugs that have cleared phase I trials for completely different indications. Our laboratory created the only 3-dimensional epithelial tissue culture model capable of supporting a robust productive infection cycle of high-risk HPV-18. With this informative system, we characterized and validated a number anti-HPV agents of very different pharmaco-chemical classes, and several have already moved into clinical trials in multiple countries. This is the most promising path forward to diminish the dreadful disparities in HPV diseases that disproportionately impact economically challenged communities and countries.

## Cai, Anping, MD

Poster 8

UAB School of Medicine, Neurology

### Risk of Major Adverse Cardiovascular Events and Bleeds After Coronary Artery Stenting Among African Americans and European Americans

Cai, Anping, MD; Chrisly Dillon MD; Charles Rivers PhD; Mark Beasley PhD; Brigitta C. Brott MD; William B. Hillegass MD; Ganesh V. Halade PhD; Sumanth D. Prabhu MD; Nita A. Limdi Pharm. D, PhD, MSPH

**INTRODUCTION:** The objective of current study was to evaluate differences in major adverse cardiovascular events (MACEs) and major bleeds after coronary artery stenting among African Americans (AAs) and European Americans (EAs).

**METHODS:** Our study includes patients receiving coronary artery stenting at UAB Hospital. Patient demographics, socioeconomic status (SES), medical history, peri-percutaneous coronary intervention (PCI) characteristics, and medications used at discharge were collected. Participants were followed up to one year for MACEs (all-cause mortality, non-fatal myocardial infarction, stroke/TIA, stent thrombosis), and major bleeds (intracranial hemorrhage or substantial hemodynamic compromise requiring treatment). All outcomes were adjudicated by a blinded investigator. Between-group differences were evaluated. The incidence rate ratio of MACEs and major bleeds were compared between AAs and EAs. Cox proportion hazard analysis was used to evaluate the relative risk of MACEs and major bleed. MACEs and major bleeds free rate was estimated using Kaplan-Meier estimates.

**RESULTS:** Compared to EAs, AAs (n=203; 22.1 % of the cohort) were younger, more likely to be smoker, female, have a higher body mass index and lower SES (lower annual household income, education, health insurance). AA had a higher prevalence of diabetes and chronic kidney disease (CKD)  $\geq$  stage 3b and more likely to undergo urgent PCI. During the 757 years of follow-up accrued, 171 MACEs (rate 22.6/100 person-years) and 87 major bleeds (11.5/100 person-years) were encountered. The rates of MACEs (34.7 % vs 19.2 %) and major bleeds (17.0 % vs 10.0 %) were higher in AAs versus EAs, and the incident rate ratio of MACEs was 1.80 (95 % CI: 1.31-2.47, p = 0.001) and major bleeds was 1.71 (95 % CI: 1.08-2.67, p = 0.02), respectively. After adjusting for comorbidities, medications treatment and SES, AAs are more likely to have MACEs (HR=1.59; 95% CI 1.02-2.47; p = 0.043) and major bleeds (HR=2.04; 95% CI 1.20-3.48; p = 0.008).

**CONCLUSIONS:** Compared to EAs, AAs had higher rate of MACEs and major bleeds after PCI. Future research should aim to elucidate SES, genomic, lipidomic and inflammatory underpinnings for these disparities and develop interventions to reduce disparities and improve outcomes.

**ACKNOWLEDGEMENTS:** This work was supported in part by grants from UAB's Health Service Foundations' General Endowment Fund and Hugh Kaul Personalized Medicine Institute and National Heart Lung and Blood Institute (RO1HL092173; K24HL133373) and the National Institutes of Health (NIH) Clinical and Translational Science Award (CTSA) program (UL1TR000165).



**Callahan, Makenzie, MS****Poster 9**

UAB School of Health Professions, Nutrition Sciences

**Influence of Metabolic Syndrome and Food Insecurity in African American Women: A Preliminary Analysis***Callahan, Makenzie, MS, RDN; Martin, Samantha, PhD; Chandler-Laney, Paula, PhD;*

**BACKGROUND:** Food insecurity impacts about 15 million U.S. households, and households in the Southeast, those led by African American women, and those in urban areas, are disproportionately burdened. The published literature supports an association between food insecurity and metabolic syndrome criteria such as hyperlipidemia and hypertension. These criteria can increase the risk for cardiovascular disease, and African Americans have the highest CVD incidence. The purpose of this study is to examine whether food insecurity is associated with metabolic syndrome in a cohort of only African American women. We hypothesized that women reporting any degree of food insecurity will have a greater odds of having metabolic syndrome compared to those with no report of food insecurity.

**METHODS:** Data from the ongoing Health After Pregnancy (HAPi) Study, a cross-sectional study examining the intergenerational transmission of obesity in mother-child dyads, was used for this secondary analysis. Women were eligible for inclusion if they delivered a healthy infant at or near term, 4-10 years prior to enrolling in this study, and were aged 20-36 years at delivery. Food Insecurity was assessed with the USDA Food Security Screener, and women were stratified as food secure versus insecure. Markers of the metabolic syndrome were obtained from measurements (waist circumference, blood pressure) and a fasting blood draw (glucose, triglycerides, and HDL-cholesterol). Metabolic syndrome was defined as meeting three or more risk factors as described by the National Heart Lung and Blood Institute. A logistic regression was used to examine the association of food insecurity with metabolic syndrome after adjusting for education, age, and income.

**RESULTS:** In the final model, women who reported food insecurity were 6.4 times more likely to fit the criteria for MetS compared to women who self-reported no food insecurity (OR 6.398, P =0.04).

**CONCLUSIONS:** If confirmed in a larger cohort, these results suggest that African American women reporting any level of food insecurity are at a greater risk for MetS. Future research should examine whether other factors such as stress or diet quality mediate the association between food insecurity and metabolic syndrome.

**Cedillo Juarez, Yenni E., MS****Poster 10**

UAB School of Health Professions

**Physiological consequences of racial discrimination on stress markers, LDL oxidation, and obesity among a multiethnic sample of females***Cedillo Yenni E; Lomax Rachel O; Fernandez Jose R; Moellering Douglas R*

**PURPOSE:** Factors underlying physiological reactions from perceived discrimination and its relation to adverse health outcomes are not completely understood. The main purpose of this study was to investigate the relationship of lifetime experiences of discrimination with biomarkers of stress, oxidative stress, obesity, and race among adult women.

**METHODS:** Data on 62 females self-identify as African American (AA; n=31) or European American (EA; n=31) aged 21-45 years were included. Lifetime discrimination was evaluated based on a scale developed by Shariff-Marco. Stress was assessed based on hair (HC) and saliva cortisol (SC), hsC-reactive protein (hsCRP), cardiovascular markers (blood pressure, pulse, glucose, insulin, and LDL-cholesterol), and LDL-cholesterol oxidation expressed in lag time. Obesity was measured based on BMI, waist circumference, and body percent fat. Multiple linear regression analyses were performed to evaluate the influence of lifetime experiences of discrimination on stress and cardiovascular biomarkers, and to evaluate the interaction of stress biomarkers on oxidation of LDL-cholesterol expressed in lag time while controlling for BMI and race.

**RESULTS:** Significant differences were observed for BMI, waist circumference, percent body fat, and lifetime experiences of discrimination ( $p < 0.0001$ ) by race. Significant differences in lifetime experiences of discrimination were observed by race [ $F(1,52)=13.29$ ,  $p < 0.0006$ ;  $R^2=0.203$ ] and were higher in AA females. Regarding biomarkers of stress by race, significant differences were seen in systolic blood pressure, pulse, LDL-cholesterol, and hair cortisol among AA and EA women ( $p < 0.05$ ). Results for the multiple regression models assessing the contribution of lifetime experiences of discrimination indicate that diastolic blood pressure, HC, and hsCRP were statistically significant [ $F(3,37)=8.70$ ,  $p < 0.0002$ ;  $R^2=0.4344$ ] [ $F(3,48)=5.36$ ,  $p < 0.0029$ ;  $R^2=0.2508$ ] [ $F(3,30)=17.35$ ,  $p < 0.0001$ ;  $R^2=0.6344$ ]. Higher levels of DBP, hair cortisol, and hsCRP were statistically significantly associated with lifetime experiences of discrimination when adjusted for BMI ( $p < 0.05$ ). Finally, oxidation of LDL-cholesterol expressed in lag time was significantly associated with saliva cortisol ( $p=0.0420$ ) when adjusted by lifetime experiences of discrimination ( $p=0.0366$ ) and BMI ( $p=0.6252$ ).

**DISCUSSION/CONCLUSION:** AA females showed higher scores of lifetime experiences of discrimination compared to EA females. Levels of lifetime experiences of discrimination were associated with some stress biomarkers. Saliva cortisol was associated with oxidation of LDL-cholesterol in lag time.

**KEYWORDS:** discrimination, stress markers, LDL-oxidation, obesity

**ACKNOWLEDGEMENTS AND GRANT SUPPORT:** Mid-South Transdisciplinary Collaborative Center for Health Disparities Research - NIMHHD U54 MD008176; UAB Center for Clinical and Translational Science - NCATS UL1TR000165; UAB Diabetes Research Center - NIDDK DRC: P30 DK079626; UAB BioAnalytical Redox Biology (BARB) Core & Kelley Smith-Johnston.

## Chong, Zechen, PhD

Skipwith I

UAB School of Medicine, Genetics

### The mutational landscape of cancer patients with overweight and obesity

Xu, Peng, Ph.D.; Chong, Zechen, Ph.D.

**INTRODUCTION:** Obesity is a major health concern in the US, especially in the South where over one-third of adults had obesity and the minority racial groups had the highest prevalence. Increasing epidemiological evidence showed the association between excess body weight and the risks of at least 13 cancers. However, these large-scale studies mainly focused on statistical association, the underlying molecular basis remains to be elucidated.

**METHODS:** By exploring the genomic somatic mutations, gene expression and clinical information of 2,721 samples in 14 cancer types with BMI information from TCGA, we performed a pan-cancer analysis and comprehensively characterized the mutational landscape of the cancer patients with overweight and obesity.

**RESULTS:** Endometrial cancer (TCGA UCEC project) has a significantly excessive number of obese patients compared to other groups, which is consistent with previous epidemiological studies. We also found that in esophageal (ESCA project), kidney (KIRP project), and uterine (UCEC project) cancers, the median somatic mutation frequency in overweight and obese patients are higher compared with normal weight patients, implying that the genetic burden is higher in obese/overweight patients and this burden has elevated the somatic mutations of the cancer genomes. Among the significantly mutated genes in different cancers, 8 genes (CASP8, DAZAP1, ERBB2, HLA-B, B2M, FAT1, KDM6A, and KIAA) tend to occur in overweight and obese patients but not in normal weight patients. Whole transcriptome analysis showed that esophageal, uterine, and skin (SKCM project) cancers contain more differentially expressed genes in overweight and obese patients than normal weight patients and the top 50 differentially expressed genes in esophageal cancers can group overweight/obese and normal weight donors separately, implying these genes may be important biomarkers between the two cancer groups.

**DISCUSSION:** These results indicate that mutation and gene expression landscapes between obesity/overweight and normal weight cancer patients are different in many cancer types. Following this, we will conduct additional analytic work including pathway enrichment, structural variations, and germline mutations analysis and the results will be integrated into the current landscape. Finally, we will combine the clinical data to identify potential genetic markers that can be used to predict diagnostic outcomes.

**KEY WORDS:** cancer, obesity, genomics

**ACKNOWLEDGEMENTS:** This project was supported by an OHDCRC year 2 pilot grant. We thank the mentors of this project Drs. Eddy Yang and Ryan Irvin for their help and support.

## Davis, Brittney, PharmD

Poster 11

UAB School of Medicine, Neurology

### Prevalence of High Actionability Pharmacogenetic Variants Among African Americans and European Americans in Alabama

Davis, Brittney, PharmD; Williams, Kelly, PhD; Absher, Devin, PhD; Limdi, Nita, PharmD, PhD, MSPH

**PURPOSE:** Genes account for 20-95% of variability in drug response. To facilitate genotype-guided drug therapy, the Clinical Pharmacogenetics Implementation Consortium (CPIC) develops evidence-based guidelines, classifying actionable gene-drug pairs as CPIC level A or B. We leveraged the Alabama Genome Health Initiative (AGHI) to determine the prevalence of actionable pharmacogenetic (PGx) variants among African Americans (AA) and European Americans (EA).

**METHODS:** AGHI aims to use genomic analysis to determine predictors of health and disease in Alabama residents. Genotyping was conducted for 3,136 participants using the Illumina Global Screening Array (GSA). Data on 51 of 78 PGx variants across 19 genes was analyzed. Racial differences in frequencies were assessed using the Chi-square test.

**RESULTS:** Our 3,717 patient cohort, comprised of predominately women (73%) and EAs (76%), enrolled participants from 64 (of 67) Alabama counties. AA and other races contributed 15% and 9% respectively. Among 3,136 participants genotyped, 99.8% harbored at least one actionable PGx variant influencing 68 medications (including opioids, antidepressants, and anticoagulants). Variants in genes influencing immunosuppressants (*CYP3A5/TPMT*), antiepileptics (*HLA-A*), antivirals (*IFNL3*), and antihyperlipidemics (*SLCO1B1*) were more common in AAs, while variants in genes influencing anticoagulants (*CYP2C9/VKORC1/CYP4F2*), drug transport (*ABCB1*), and sodium channels (*SCN1A*) were more common in EAs. PGx variants influencing anesthetic response (*RYR1*) were only observed in EAs.

**CONCLUSION:** Genetic variation can profoundly influence medication response. The common prevalence and high evidence of actionability in tailoring medication regimens supports preemptive PGx testing, especially in patients with multiple comorbidities. Actionability in other minority race groups (e.g. Hispanics) is needed.

**ACKNOWLEDGEMENTS:** This work was supported in part by the National Institute of Health (Award numbers: RO1HL092173, K24HL133373, and T32HG008961), the UAB-HudsonAlpha Center for Genomic Medicine, and the UAB Hugh Kaul Precision Medicine Institute.



**Dey, Suranjana, BS****Poster 12**

UAB School of Medicine

**Socioeconomic risk factors for methicillin resistant staphylococcus aureus (MRSA) infection in pediatric patients with cystic fibrosis (CF)***Dey, Suranjana, BS; Zhu, Aowen; Harris, William T., Gutierrez, Hector H., Oates, Gabriela R.*

**BACKGROUND:** In the United States, MRSA infection rates in CF have increased from 1% to 49% between 1997 and 2009. This study explored the association of MRSA with individual-level socioeconomic status (SES), area-level deprivation, and rurality among pediatric CF patients. We hypothesized that socioeconomic deprivation increases the risk of MRSA acquisition.

**METHODS:** Patient residential addresses were geocoded and linked to area deprivation index (ADI), a composite socioeconomic measure on the level of Census tracts, proxies for neighborhoods. Constructed from 17 variables in the domains of income, education, employment, and housing quality, ADI ranks neighborhoods on a 1-10 scale. Similarly, geocoded addresses were linked to the rural-urban commuting area (RUCA) index, a measure of rurality that ranks Census tracts on a 1-10 scale. SES measures included income and parental education. The association of MRSA prevalence with ADI, RUCA, and SES was evaluated using logistic regression adjusted for demographic covariates (age, ethnicity), known risk factors (*P. aeruginosa*, number of clinic visits), and clustering of patients into Census tracts.

**RESULTS:** The study population included pediatric patients aged = 6 years (N=183) treated at the UAB/Children's of Alabama CF Center. Mean age was 14 years, 54% were male, and 92% were non-Hispanic White. MRSA was present in 51% of patients. Higher ADI was strongly correlated with higher rurality and lower paternal education ( $p < 0.001$  for both). In a multivariate analysis, ADI increased the risk of MRSA nearly 3-fold (OR 2.75,  $P = 0.030$ ). Similarly, in a multivariate analysis of individual SES, low paternal education (no college) increased the risk of MRSA more than 3-fold (OR 3.31,  $P = 0.006$ ). When area- and individual-level factors were included in the same model, father's education remained significant (OR 3.07,  $P = 0.015$ ) while ADI did not. Minority ethnicity was a risk factor in all models (OR 7.40,  $P = 0.023$  in the full model).

**CONCLUSION:** Low paternal education and minority ethnicity are risk factors for MRSA in our pediatric CF Center. The role of area-level deprivation is explained by individual-level SES. In the absence of individual SES data in clinical settings, area-level measures can be used as a proxy. MRSA prevention strategies should consider socio-environmental factors.

**Footman, Alison, MPH****Poster 13**

UAB School of Public Health, Health Education

**Cultural Norms and Perceived Barriers among Low-Income African American Men: Limiting Factors to Performing Civic Behaviors***Footman, Alison, MPH; Gray, Cicily, MPA; Packer-Williams, Martrice, MAEd; Wilkinson, Larell, PhD; Hannon, Lonnie, PhD; Davies, Susan, PHD*

**PURPOSE:** National economic and education indicators, such as income, employment, and high school graduation rates report that Blacks typically lag behind other racial/ ethnic groups. These disparities are often a result of years of systemic racism observed through phenomena such as red lining, limited access to healthcare, quality education, and employment opportunities, which can have an adverse effect on overall health and well-being. This study uses the Integrative Model of Behavior prediction to examine the behavioral and normative beliefs, environmental factors, and self-efficacy among young African American men performance of pro-social behaviors such as high school graduation and employment. These findings highlight the importance of encouraging prosocial beliefs and norms towards prosocial behaviors among AA males in order to create program that will foster civic engagement to pressure education and seek job training to improve quality of life.

**METHODS:** Semi-structured interviews were conducted with African American males (n=41) and members in their larger social networks (N=11) in an urban city in the southeast. Thematic analysis was used to analyze transcripts.

**RESULTS:** We found that participants viewed education and employment as important to improve quality of life. However, many participants held antagonistic views regarding the school environment and employment opportunities, especially regarding "immediate success" and disenfranchisement among African American men. Members of the community, family, and friends were found to be imperative for establishing a standard of peer and community norms regarding education and employment.

**CONCLUSIONS:** These results serve as practical guidance on how community organizers, interventionist, and faith-based coalitions can leverage constructs to design culturally relevant programs for young AA men living in urban and underserved communities. Understanding both the positive and negative experiences relating to education and employment among African American males can help in determining perceived control to achieve financial success and improve quality of life.

**KEYWORDS:** Education, Employment, Social determinants of health

## Gamble, Abigail, MS, PhD

Hamilton II

UMMC John D. Brewer School of Population Health, Preventive Medicine

### Qualitative interviews with WIC providers to probe recruitment, retention, and engagement strategies for exercise interventions with rural antenatal adolescents

Gamble, Abigail, PhD, MS

**TITLE:** Qualitative interviews with WIC providers to probe recruitment, retention, and engagement strategies for exercise interventions with rural antenatal adolescents.

**PURPOSE:** Public health stakeholder engagement is integral to developing effective public health interventions. The perspectives of mothers in the Supplemental Nutritional Program for Women, Infants and Children (WIC) have often been sought when designing WIC-based interventions; however, the perspectives of WIC providers are underrepresented. The purpose of this investigation was to explore the experiences of WIC providers' whom counsel adolescent clients and to identify strategies for recruitment, retention, and engagement of adolescents in an antenatal exercise intervention.

**METHODS:** Qualitative interviews were conducted with WIC providers (N=9) serving mostly Black clients across 14 of the 18 Delta Counties. The Delta is a geographically and culturally distinct rural region in northwest Mississippi where the population is predominantly Black, of low-socioeconomic status, and bears a disproportionate burden of poor health outcomes compared to the rest of the state. The Interview Protocol Refinement Framework was used to develop the interview guide. A qualitative descriptive approach guided the analysis.

**RESULTS:** Four themes emerged: *early recruitment and retention through WIC are possible; family involvement and compensation may bolster participation; transportation and misperceptions about exercise may be barriers to engagement; and a mobile intervention approach to deliver positive messaging may be effective when intervening with adolescents.*

**DISCUSSION:** Four testable hypotheses (*Hyp*) for future study were developed. *Hyp1:* Recruiting adolescents in early pregnancy to participate in a WIC-based exercise intervention study is feasible. *Hyp2:* Supplementing adolescent-focused intervention strategies with an interpersonal parental component supports engagement and retention. *Hyp3:* Compensating adolescent-parent-dyads with items related to the shared goal of caring for an infant enhances recruitment and retention. *Hyp4:* A mobile health intervention disseminating brief, positive messages fosters engagement and retention. Investigators are currently conducting interviews with adolescent WIC clients and their parents to corroborate these hypotheses and to garner further insight.

**CONCLUSION:** Engaging the perspectives of WIC providers was a critical first step in understanding the context for an antenatal exercise intervention that will be delivered through WIC. Public health entities serving vulnerable populations at high risk for adverse health outcomes may represent ideal settings for the recruitment, retention, and engagement of populations that are underrepresented in health research.

**KEY WORDS:** adolescent pregnancy; antenatal exercise; recruitment; retention; engagement

## Grant, Raynesha L., BS, MS

Poster 14

UAB Department of Medicine, Surgery-Transplantation

### Morphometry Differs by Race among Prior Living Kidney Donors

Grant, Raynesha, M.S.; D. Reed, Rhiannon, MPH; Locke, Jayme, MD MPH FACS FAST

**INTRODUCTION:** Living kidney donation continues to be a key source of organs, and the selection process is very specific, including an extensive screening that assesses comorbidity. However, the criteria differs when accounting for race. In the presence of comorbidity at the time of their donor evaluation, African Americans (AA) are screened more aggressively due to a higher risk of end stage renal disease (ESRD) in comparison to their white counterparts. We sought to assess the relationship between race and morphometric measures using preoperative CT imaging in living kidney donors at time of donation.

**METHODS:** Cohort consists of 64 donors from WHOLE (Wellness and Health Outcomes of Live Kidney Donors)-Donor Study. Donor race and morphometric measures were assessed. Morphometric measures included liver total mean, abdominal and subcutaneous fat, psoas and paraspinous muscle measurements, and presence of abdominal aortic calcifications and were compared by race using t-tests or Wilcoxon rank sum tests as appropriate.

**RESULTS:** The results show that Caucasians had greater abdominal fat volume (mean of 1263.192 (SD: 379.222) vs. AA (1101.938 (SD: 353.697),  $p=0.22$ ), visceral fat volume with a median and interquartile range (IQR) of 304.3637(223.92 -409.089) and AA with 184.0182(142.69 -340.72,  $p=0.13$ ), and psoas fat volume mean at 1.453 (SD: 0.857) and AA at 0.818 (SD: 0.598,  $p=0.03$ ). Caucasians were more likely to have abdominal aortic calcifications than African Americans at a frequency of 42% to 0 ( $p=0.01$ ). African Americans had greater psoas total volume with a median and IQR of 34.33 (27.8 -46.87) and Caucasians at 28.308 (24.216 -37.481,  $p=0.10$ ).

**CONCLUSIONS:** These finding show that African Americans are considered to have "healthier" morphometry when compared to Caucasians, which may be attributed to the intense screening process they undergo at evaluation.

**Gray, Cicily A., MPH****Poster 15**

UAB School of Public Health

**Prevalence and Predictors of Co-occurring hypertension and depression in community-dwelling older adults.***Gray, Cicily, A., MPA; Sims, Omar, T., PhD; Hyejung Oh, PhD*

**BACKGROUND:** Although hypertension and depression are common among older adults and synergistic, there has been limited research on co-occurring hypertension and depression among older adults. The objectives of this study were to estimate the prevalence of co-occurring hypertension and depression among community-dwelling older adults and to examine predictors of co-occurring hypertension among older adults.

**METHODS:** This study conducted a secondary analysis of epidemiologic data collected by an Alabama Medicaid Agency-funded project known as Charting the Course. The project was a long-term care needs assessment of community-dwelling older adults (n=1,204) living in the state of Alabama. Measures of central tendency and frequency distributions were used to characterize the sample. Binomial logistic regression was used to examine predictors of co-occurring depression and hypertension.

**RESULTS:** African American race (OR=1.789, CI: 1.305 - 2.453) and diabetes (OR=1.544, CI: 1.096-2.175) were positively associated with co-occurring depression and hypertension. Income  $\leq$ \$20,000 (OR=0.579, CI: 0.426 - 0.788),  $\geq$ 3 meals on average per day (OR=0.562, CI: 0.420-0.752), and higher self-ratings of general health (OR=0.741, CI: 0.640-0.857) and physical activity (OR=0.832, CI: 0.702-0.986) were negatively associated with co-occurrence.

**CONCLUSIONS:** More than a third of community-dwelling older adult Alabamians had co-occurring depression and hypertension. These findings suggest clinicians should screen for depression among older adults as part of the standard of care. Public health professionals and researchers are encouraged to consider intervention strategies to increase awareness of co-occurrence. Furthermore, promotion strategies are needed to increase awareness of depression and reduce mental health stigma in the community.

**Hanks, Roma, PhD****Hamilton I**

University of South Alabama, Sociology, Anthropology &amp; Social Work

**Voices Carry! Employing CBPR with Seniors to Raise Policymakers' Awareness of Priorities for Healthy Aging and Livable Communities***Estes, Barbara; Hanks, Roma Stovall, PhD*

**PURPOSE:** We report on a pilot project supported by the Gulf States Health Policy Center. This project employed Community-based Participatory Research (CBPR) methods to: (1) Identify needs and priorities of a diverse population of senior citizens and (2) Bring those priorities to policymakers to influence change. CBPR strategies include trust-building, knowledge-building, priority setting, and translation into policy.

**METHODS:** This project reached over 300 individuals. Interviews and focus groups were conducted in five town hall meetings, eight focus groups conducted at a senior center and in senior housing communities, two regional conferences, and two public planning forums. Participants were diverse in race and gender; all were on low or fixed incomes, representing populations whose voices are not always represented in local policy.

**RESULTS:** Participants voiced priorities for livable communities, aging in place, and successful aging. The community of seniors identified transportation, centralized information, community networks, and housing options as the highest priorities. Barriers to achieving successful aging and livable communities were: poor dissemination of information, accessibility of services (including transportation, location of housing options, and neighborhood crime), and a political structure that impedes change.

**DISCUSSION/CONCLUSION:** The results of the project were disseminated to the community at two annual conferences on Generational Resiliency. Meetings with policymakers resulted in priorities being included in the 5-Year City Consolidated Housing and Community Development Plan (Goal SL-1 and Goal SL-2). Project reports have been presented at two UAB Health Disparities Symposia and at the 2018 annual meeting of the Gerontological Society of America, Interest Group on Intergenerational Learning, Research and Community Engagement. Seniors also launched a discussion of the need for a city government level advocate for senior affairs. Collaborations for future projects related to this pilot have been launched with the USA College of Engineering, Community Action of South Alabama, and the MIT Age Lab.

## Hendricks, Bailey, BS

Poster 16

UAB School of Nursing

### Reporting on Think Well: A Community Based Approach to Address Cognitive Changes in Alabama Breast Cancer Survivors

*Hendricks, B., BSN, RN; Vo, J.B., PhD, RN; Lewis, K.A., BS; Gisiger-Camata, S., MPH, RN; and Meneses, K., PhD, RN, FAAN*

**PURPOSE:** More than 250,000 women are diagnosed with breast cancer annually in the United States, including nearly 4,000 in Alabama. Their cancer treatment can lead to cognitive changes (also known as ‘chemobrain’), which affect 75% of breast cancer survivors (BCS) during treatment and 35% after treatment. Despite this, there are few cognitive change-focused, cancer education programs. Think Well is a sustained, nurse-led, intervention developed with community partners to deliver cognitive-focused, cancer education to BCS and co-survivors in Alabama. The purpose of this presentation is 1) to describe the community engagement process of Think Well, and 2) to report participants evaluation of Think Well.

**METHODS:** We conducted a summative evaluation of 17 Think Well seminars delivered from 2014-2017. Priority counties, those with indicators showing increased risk of becoming a vulnerable population and having barriers to care, were identified and targeted using the Susan G. Komen North Central Alabama Community Profile Report. Community leaders were engaged using a 7-step framework. Content was delivered via lecture and discussion style seminars tailored to each community and included evidence-based education components addressing cognitive changes, nutrition, physical activity, stress management, and coping strategies. Program evaluations consisted of a 25-item survey regarding demographics and program satisfaction. Data were analyzed using SPSS v24.

**RESULTS:** Five hundred and fifteen of 666 participants (77%) completed an evaluation; BCS (n=151), co-survivors (n=209) and other attendees (n=155). Notably, BCS were African American (41.1%), married (54.3%), older (mean 61.2 years), and from a rural county (47%). Greater than 95% of all attendees reported ‘good’ or ‘excellent’ on Think Well’s education components and program satisfaction. BCS reported that Think Well education was relevant (96.5%), useful for coping with cognitive changes (97.2%), and information gained was useful to communicate cognitive concerns with healthcare providers (97.9%).

**CONCLUSIONS:** Think Well was well received and provided cognitive change-focused cancer education for an underserved and diverse population. Future directions include disseminating Think Well to a multi-state or national platform, implementing Think Well education using social media engagement, and collaborating with healthcare professionals to provide cognitive change information.

**KEY WORDS:** cancer education, breast cancer, community-based, chemobrain

**ACKNOWLEDGEMENTS:** Think Well is supported by a grant from the North Central Alabama Affiliate of Susan G. Komen (CGA-2017-AL100-UNSN73-00001; PI: Meneses). Authors are also supported by funding: Susan G. Komen Graduate Traineeship in Disparities Research and the Robert Wood Johnson Foundation Future of Nursing Scholarship.

## Herman, Casey, MS

Poster 17

UAB School of Public Health, Health Behavior

### Feasibility of a Novel Teleexercise Movement-to-Music Intervention Using Real-Time Coaching for Individuals with Multiple Sclerosis

*Herman, Cassandra, MS; Young, Hui-Ju, PhD; Rimmer, James, PhD*

**OBJECTIVE:** To investigate feasibility of a telehealth exercise intervention (Movement-to-Music, M2M) for individuals with multiple sclerosis (MS). Design: Participants were randomly assigned to a home-based telehealth exercise intervention referred to as M2M as part of a larger, ongoing randomized controlled trial.

**SETTING:** Exercise sessions were delivered by M2M instructors via commercially available video conference technology. Participants: Participants ages 18 to 65 years with mild to moderate MS (N=14; Patient Determined Disease Steps [PDDS] 0-6).

**INTERVENTION:** The M2M intervention consists of movement routines choreographed to music. The intervention focuses on four key fitness components: range of motion, muscle strength, cardiorespiratory endurance, and balance.

**MAIN OUTCOME MEASURES:** Feasibility was evaluated by 1) participant attendance, and 2) ease of using technology.

**RESULTS:** Participant attendance was 84.4%, which was higher than a previous M2M trial at a local exercise facility (53.7%) ( $p < 0.01$ ). Common reasons for missed classes included participants out of town (13), exacerbations of disease symptoms (13), unrelated illness or injury (7) and difficulty contacting participant for rescheduling (15). The most common technology issues were related to connectivity/wifi (14), video conferencing application (8), hardware (tablet or charger) (7), and user error (5). Of the all remote classes offered to date, technology issues resulted in cancellation or rescheduling of 22 sessions out of a total 421 sessions (5.2%). All other technology issues were resolved using troubleshooting and the session was resumed.

**CONCLUSIONS:** These preliminary findings provide support for the use of commercially available technology to deliver exercise interventions remotely to individuals with MS. Offering home-based exercise may increase attendance and consequently intervention adherence. Though some technological difficulties were experienced, commercially available technology is a viable tool to use for exercise delivery for individuals with MS.



## James, Hanleigh

Poster 18

UAB College of Arts & Sciences, Biology

### Intergenerational, Transactional and Disparate Sex among Adolescent Girls and Young Women in Western Jamaica

Grace Jepkemboi, Ph.D.; Pauline Jolly Ph.D.; Hanleigh James; Ndeye Silla

Few studies are important for researchers in the field of Adolescent Health as understanding factors that influence adolescent girls to engage in intergenerational, transactional or disparate sex with men, ten years or older than them. The issue is problematic because as girls enter the adolescent phase, they attempt to engage in risky behaviors, including having unprotected sex. However, the girls are immature and oblivious to the risks of unprotected sex. They are immature, financially unstable and wanting to live excessively wealthy lifestyles that are beyond their means, and are vulnerable to engage in unprotected sex with older men, who are more mature, financially stable, and out to exploit their naivety. Research shows unprotected sex is the highest form of HIV transmission. Many studies have examined factors that influence young people to engage in premarital sex and their likely to use condoms. Some studies in Sub-Sahara have examined this phenomenon. However, there are limited studies on this subject in the Caribbean region, and none in Jamaica, a tourist country, and girls are likely to engage in sex with older men. The purpose of this mixed-methods study was to examine factors that influence adolescent girls in Jamaica to engage in inter-generational, transactional or disparate unprotected sex with men, ten years older or more than them. The study was conducted in Summer 2018 in Montego Bay Jamaica. 600 girls and young women, ages 15-24 participated in this study. Data was collected using survey questionnaire and focus discussion groups. Key findings show factors influenced adolescent girls and young women to engage in intergenerational sex include: a) Social and financial factors: poverty, school drop outs, unemployment, unstable family lives, raising younger siblings, peer pressure, exposure to media and social media; b) Cultural factors: Early marriages, sexualization of women, patriarchal society and gender roles. Taken together, this study is significant for health care providers, social workers and counselors to understand sexual behaviors of adolescent girls and meet their health needs. Policy makers will find these findings valuable to develop policies that meets the health needs of adolescent girls allocate resources to cater for those needs.

## Jerome, Maggie, MS

Poster 19

UAB School of Health Professions, Nutrition Sciences

### Racial Disparities in Body Composition of Preterm Infants

Jerome, Maggie, MS, RD; Chandler-Laney, Paula, PhD; Salas, Ariel, MD, MSPH

**INTRODUCTION:** At term-equivalent age, preterm infants have higher percent body fat (%BF) than infants born at term. This difference in %BF is often the result of exposure to enriched postnatal diets prescribed to promote rapid weight gain among preterm infants. Because rapid weight gain during infancy and obesity are more prevalent among blacks than among whites, racial disparities in the development of adiposity expressed as %BF need to be explored. The purpose of this study was to compare %BF in two major racial groups using normative data as reference.

**METHODS:** We analyzed data from a prospective study that assessed body composition in preterm infants using air displacement plethysmography (PeaPod®). After stratifying data according to race, we analyzed differences between mean %BF values of preterm infants at the time of hospital discharge and compared these differences to existing references of %BF in preterm infants. A linear regression analysis was performed to account for differences in baseline characteristics.

**RESULTS:** We assessed body composition in 84 preterm infants, of which 47 were black and 37 were white. Mean birthweight was 1471 g and median gestational age was 30 weeks. In preterm infants assessed at the time of hospital discharge, mean %BF was  $14.6 \pm 3.6$  ( $14.5 \pm 2.9$  in white infants and  $14.6 \pm 4.1$  in black infants;  $p=0.90$ ). The measured %BF at the time of hospital discharge was higher than the expected %BF at equivalent postmenstrual age (mean difference:  $4.7 \pm 3.5$ ;  $p < 0.05$ ). After adjustment for BW, GA, sex, and length of hospital stay, this difference between measured and expected %BF was not significantly higher among black infants compared to white infants ( $5.1$  vs.  $4.2$ ;  $p=0.28$ ).

**CONCLUSIONS:** Black race is not associated with higher %BF at the time of hospital discharge in preterm infants. If racial disparities in body composition exist among former preterm infants, those differences may occur after hospital discharge. Both black and white preterm infants exposed to enriched postnatal diets develop higher than expected %BF by the time of hospital discharge.

## Judd, Suzanne, PhD

Skipwith I

UAB School of Public Health, Biostatistics

### Clinical and Social Factors Associated With Excess Hypertension Risk in Black Compared With White US Adults

*Suzanne E Judd PhD; George Howard, DrPH; Mary Cushman, MD, MSc; Claudia S. Moy, PhD; Suzanne Oparil, MD; Paul Muntner, PhD; Daniel T. Lackland, DrPH; Jennifer J. Manly, PhD; Matthew L. Flaherty, MD; Virginia G. Wadley, PhD; D. Leann Long, PhD; Virginia J. Howard, PhD*

**IMPORTANCE:** The high prevalence of hypertension US blacks is a major contributor to racial disparities in life-expectancy. However, the causes for the racial disparity in the incidence of hypertension are unknown.

**OBJECTIVE:** To evaluate potential factors associated with higher risk of incident hypertension in blacks.

**DESIGN, SETTING AND PARTICIPANTS:** Prospective cohort study of 6,897 black and white participants (drawn from a longitudinal cohort study of 30,239 participants) not having hypertension at baseline (2003-2007) and attending a follow-up 9.2 years later (2013-2016). Exposure: 12 clinical and social factors potentially associated with incident hypertension.

**MAIN OUTCOME MEASURE:** Incident hypertension (systolic blood pressure  $\geq$ 140mmHg, diastolic blood pressure  $\geq$ 90 mmHg, or use of antihypertensive medications) at the follow-up visit.

**RESULTS:** Incident hypertension, assessed over 9.2 (standard deviation 0.8) years in 6,897 participants (mean (SD) age 62 (8) years; 26% black and 55% women), occurred in 46% of black and 33% of white participants. Black men had a mean Southern Diet score that was 20.5 standard errors (SED) higher than white men than for black men, and 22.4 SED higher in black than white women, and this diet score was significantly associated with incident hypertension (per standard deviation of diet score: ORmen = 1.16; 95% CI: 1.06-1.27; ORwomen = 1.17; 95% CI: 1.08-1.28). This dietary pattern was the largest mediator of the difference between black and white participants in the incidence of hypertension, accounting for 51.6% (95% CI: 18.8%-84.4%) of the excess risk in black men and 29.2% (95%CI: 13.4%-44.9%) in black women. In men, higher dietary Na+/K+ ratio and education = \$35K mediated 12.3% and 12.0% of the excess risk of incident hypertension in blacks. In women 18.3% of the excess risk in blacks was mediated by higher BMI, 15.2% by a larger waist, 11.2% by less adherence to the DASH diet, 9.3% income = \$35K, 6.8% by higher dietary Na+/K+ ratio, and 4.1% education = high school.

**CONCLUSIONS AND RELEVANCE:** In a mediation analysis comparing incident hypertension in black vs white US adults, key factors statistically mediating the racial difference for both men and women included Southern diet score, dietary sodium/potassium and education. Waist circumference and BMI were also key factors in women.

## Jung, Seung Eun, PhD

Hamilton I

UA Human Nutrition

### The moderating effect of habit strength on behavior: an investigation of fruit and vegetable intake among low-income older adults

*Jung, Seung Eun, PhD, RD; Shin, Yeon Ho, PhD; Kim, Seoyoun, PhD; Dougherty, Regan, BS, RD*

**BACKGROUND:** Despite the overwhelming evidence linking adequate fruit and vegetable (F&V) intake with decreased risk of many nutrition related chronic diseases, low-income older adults are not consuming recommended amounts of F&V.

**OBJECTIVE:** To examine the effect of habit and theory of planned behavior (TPB) variables in predicting low-income older adults' F&V consumption.

**METHODS:** A total of 372 low-income older adults participated in this cross-sectional study. Study participants completed a validated survey instrument measuring TPB variables (attitude, subjective norm, perceived behavioral control, and intention). In addition, the Block Dietary Fruit-Vegetable Screener and self-reported habit index were completed to measure F&V consumption. Structural equation models were performed using Mplus 7 statistical software.

**RESULTS:** Perceived behavioral control was the largest factor affecting intention to consume F&V, followed by attitude and subjective norm. In addition, there was a significant interaction between habit strength and intention, such that intention was associated with F&V consumption only among individuals with average or higher habit strength.

**CONCLUSIONS:** Findings from this study suggest that health promotion programs aimed at increasing F&V intake among low-income older adults should focus on establishing F&V intake as a habit so that an individuals' intentions to consume F&V can be transformed into actual F&V intake. Also, emphasizing how to overcome potential barriers would improve low-income older adults' actual F&V intake by increasing their sense of control over consuming F&V.



**Letang, Sarah, MS**

Poster 20

University of Alabama

**Do Stress and Socioeconomic Status Mediate Racial Disparities in Cognition in Young Adults?***Letang, Sarah, MS; McDonough, Ian, Ph.D.; Parmelee, Patricia, Ph.D.; Stinson, Elizabeth*

**PURPOSE:** Allostatic load, or the wear and tear of stress, has been found to negatively impact one's health. The weathering hypothesis suggests that racial and ethnic minorities experience more stress that results in greater allostatic load and greater health disparities. Limited research has investigated the impact these issues have on cognition in young adults. Using cross-sectional data, we tested the extent that stress and socioeconomic status (SES) mediated ethn racial differences in cognition in a tri-ethnic sample of young adults.

**METHODS:** Using data from the Human Connectome Project, we analyzed 970 young adult participants. Participants self-reported their ethn racial identity, perceived stress, and completed several cognitive tasks. For each task, three mediation analyses were conducted to understand the intertwined relationships among ethn racial category, stress, SES, and cognition: a parallel mediation model that assumed independent impacts of stress and SES on cognition, a sequential mediation model that assumed stress works through SES, and a moderated mediation model that tested whether SES interacted with stress.

**RESULTS:** We only found significant mediation effects for Blacks. For episodic memory and working memory (list sort), the sequential model best explained the data such that SES alone and a path from SES to perceived stress partially mediated the race-cognition disparity. For executive function (card sorting) and working memory (2-back), the strength of the SES mediating effect depended on the level of perceived stress one experienced; the more stress one experiences, the more likely SES was to mediate the race-cognition disparity.

**CONCLUSIONS:** These results suggest that both SES and perceived stress can partially explain ethn racial differences in cognition across all of the cognitive tasks tested. However, SES appears to be a stronger mediator in Blacks. We also found that SES did not mediate the race-executive function disparity for Blacks with lower stress. Perhaps stress-reducing techniques buffer against the negative impact that low SES has on cognition. Alternatively, other factors might explain the cognition disparities in people with low stress. Together, these results support the weathering hypothesis, but also suggest that other social determinants of health need to be investigated to fully account for disparities in cognition.

**KEYWORDS:** cognition; weathering hypothesis; perceived stress; socioeconomic status; health disparities

**Li, Yufeng, PhD**

Hamilton II

UAB School of Medicine, Preventive Medicine

**Explore Quantitative Methods in Health Disparity Measurement***Li, Yufeng, PhD; Jackson, Bradford, PhD; Fouad, Mona, MD; Partridge, Edward, MD*

**PURPOSE:** Health disparities are gaps in the quality of health and health care that mirror differences in socioeconomic status, racial and ethnic background, and education level. Indicators of health are measured in terms of rates, percentages, proportions, means, or other quantifiable measures. The measurement of disparity between two or more groups is often used absolute difference or simple relative difference, e.g. percentage change. Both measures do not count study population and thus the estimated difference is unstable, especially when less cases are observed.

**METHODS:** We studied health disparity in breast cancer incidence in 11 Alabama Deep South Network (DSN) counties using data from Alabama state tumor registry between 2000 and 2011. Several quantitative methods in health disparity measurement include absolute measures, relative measures and health index measures are explored.

**RESULTS:** In the Alabama DSN counties, breast cancer incidence increased between 2000-2010. Whites had higher breast cancer incidence than Blacks but the rate of change was slower comparing to Blacks. Absolute Disparity between Whites and Blacks ranged from -4.6 to 51.3; and the Between-Group Variance between Whites and Blacks ranged from 1.8 to 604.7 during the study period; the Rate Ratio of disparity between Whites and Blacks was higher in 2001 and 2002, and declined and stabilized between 1.0 to 1.2 during the latter years. The Index of Disparity ranged from -2.9 to 39.5, while the Mean Log Deviation was small and had less variation.

**CONCLUSION:** The Measures of Absolute Disparity had large variation, which may not be able to provide useful information for decision making. The Index of Disparity has been proposed as a measure of progress toward relative disparity goals for Healthy People 2010 which is usually consistent with other relative disparity indicators. However the instability of the Index of Disparity is most easily seen in cases where social groups differ substantially in population size. Among the numerous indicators for disparity measurement, we found that relative disparity indicators have less variation, are more stable and consistent, especially by adding population weight in estimation.

**KEY WORDS:** health disparity, health disparity index, breast cancer incidence, population weight

## Lock, Lindsay, MS

Poster 21

UAB School of Medicine, Pediatrics

### Unmet Basic Needs Are Associated with Pediatric Asthma Outcomes

*Lock, Lindsay, MS; Lock, Lindsay, MS, RD; Gaston, Laura, MS, RD; Moulin, JoAnn, MS; Richey, Caroline, LBSW; Talmage, Miranda, RN, BSN; Zhu, Aowen, MA; Tarn, Valerie, MS, RD; Magruder, G. Teresa, MD; Oates, Gabriela, PhD*

**PURPOSE:** Children with unmet basic needs experience worse health than more advantaged counterparts. There has been limited research on identifying unmet basic needs in pediatric primary and emergency care, and no studies in pediatric specialty care. We evaluated the prevalence of unmet basic needs in a pediatric pulmonary clinic and their association with asthma outcomes.

**METHODS:** Caregivers of established patients in a pediatric asthma clinic were screened for unmet basic needs with an 18-question survey administered on encrypted iPads during a routine visit. Questions asked about food insecurity, housing, transportation, health insurance, and childcare among others, and how stressful each concern was on a 1-5 Likert scale. Patients' asthma severity, asthma control score (assessed with the Asthma Control Test, ACT), lung function (ppFEV<sub>1</sub>), BMI, and demographic characteristics were obtained from medical records.

**RESULTS:** The sample included pediatric patients (N=82) and their caregivers, mean patient age 9.5 (SD 3.9) years, 77% African American, 31% in households with annual income <\$20,000. The majority of patients (65%) had severe persistent asthma, and 56% had not well-controlled asthma (ACT ≤19). Caregivers reported concerns about: not having healthy food to eat every day (77%), running out of money (43%), running out of food (27%), child's exposure to second-hand smoke (24%), child's not getting enough exercise (21%), not having transportation (17%), the condition of their housing – mold, roaches, mice, heating/cooling (15%), not having health insurance for their child (15%), finding affordable childcare (12%), and not having housing (10%). Most concerns were rated as moderately to very stressful. Nearly a third (30%) of caregivers requested and received information about resources to meet basic needs. Asthma severity and uncontrolled asthma were associated with concerns about smoke exposure (OR 4.1, p<.035 and OR 3.6, p<.039, respectively) and running out of money (OR 2.9, p<.030 and OR 3.5, p<.011, respectively). BMI was associated with concerns about exercise (β=16.5, p<.028). Food insecurity and not having healthy food showed a trend toward significance with all outcome variables (p<.006 to p<.008). The level of stress about exercise, money, and health insurance was significant for asthma severity (OR 9.1, p<.023), asthma control (OR 3.5, p<.011), and lung function (β=9.9, p<.011), respectively.

**CONCLUSION:** Caregiver-reported unmet basic needs are associated with pediatric asthma outcomes. Future research should test the feasibility and acceptability of routine screening for unmet basic needs in pediatric specialty clinics, as well as interventions to address needs through referral to community-based resources.

## Malla, Gargya, MD, MPH

Poster 22

UAB School of Public Health, Epidemiology

### Control of cardiovascular risk factors among older adults with incident diabetes: The Reasons for Geographic and Racial Differences in Stroke (REGARDS) Study

*Malla, Gargya, MBBS, MPH; Cherrington, Andrea, MD, MPH; Zhu, Sha, PhD; Cummings, Doyle M, PharmD; Clay, Olivio, PhD; Brown Todd M, MD; Lee, Loretta, PhD, CRNP, FNP-BC; Kimokoti, Ruth, MD, MA, MPH; Cushman, Mary, MD; Safford, Monika, MD; Carson, April P, PhD;*

**BACKGROUND:** Control of risk factors is important for the primary prevention of cardiovascular disease among adults with diabetes. The objective of this study was to determine whether management of clinical (hemoglobin A1c <8%; BP <130/80 mm Hg; and statin use) and lifestyle factors (not currently smoking; physical activity on 4+ days/week; and moderate or no alcohol use) varied by race and sex among older adults with incident diabetes.

**METHODS:** This study included 1,420 Black and White adults from the REGARDS Study with incident diabetes at the follow-up exam (2014-16). Incident diabetes was defined as fasting glucose ≥126 mg/dL, random glucose ≥200 mg/dL, or use of diabetes medications among those without diabetes at baseline (2003-07). Modified Poisson regression was used to obtain prevalence ratios (PR) for the control of risk factors for Black versus White adults and assess race-sex interactions.

**RESULTS:** The mean age was 71.5 years, 53.6% were female, 46.1% were Black and 85.7% reported they were aware of their diabetes. BP control was lower for Black males than White males (p=0.0036), whereas statin use was lower for Black females than White females (p=0.0241). For lifestyle factors, not smoking was lower for Black males than White males (p=0.0187), whereas moderate or no alcohol use was higher for Black females than White females (p<0.0001). (Figure) Race-sex interactions were not statistically significant. In age and sex adjusted models, Black adults were less likely to have BP controlled (PR=0.89; 95% CI=0.81, 0.99) or use statins (PR=0.88; 95% CI=0.80, 0.97) and more likely to report moderate or no alcohol use (PR=1.05; 95% CI=1.03, 1.07) than White adults. Control of other factors was similar.

**CONCLUSION:** Although control of individual risk factors was generally high among older adults with incident diabetes, racial differences in BP control and statin use were apparent. Assessment and management of cardiovascular risk factors in this high-risk population remains important for prevention.

**McDonough, Ian M., PhD**

UA College of Arts and Sciences, Psychology

**Biological Mechanisms Underlying Social Determinants of Risk for Dementia: An fMRI Analysis of Middle Aged and Older Adults***McDonough, Ian, PhD; Letang, Sarah, MA; Stinson, Elizabeth*

**PURPOSE:** Longitudinal research suggests that genetic, lifestyle, and health factors enhance one's risk for developing dementia. Some of these factors include hypertension, high cholesterol, obesity, education, and diabetes. However, it is not known how an accumulation of such factors impact brain functioning. We hypothesized that as the number of dementia risk factors increase, brain regions within the medial temporal lobes and the default mode network would exhibit altered brain activity during an episodic memory retrieval task conducted in an fMRI scanner. Confounding health factors were reduced to better interpret the fMRI BOLD signal in populations that have altered cerebrovascular systems.

**METHODS:** Adults aged 50-74 were recruited that were free of dementia and had varying levels of dementia risk. They underwent a neuropsychological battery and fMRI. A dementia risk score was calculated by summing the presence of the following: memory complaints, low education, identified as African American or Hispanic, mild head trauma, family history of dementia, hypertension, diagnosis or family history of heart disease, high total cholesterol, history of smoking tobacco, diagnosis or family history of diabetes, and obese. In the fMRI scanner, participants viewed a pair of pictures and later took an alternative-forced-choice test in which they viewed a picture cue and had to determine which of four pictures was paired with the cue.

**RESULTS:** Whole-brain analyses revealed that increased dementia risk was associated with lower brain activity in the hippocampus—a brain region activated during the memory task—and with higher activity in the lateral parietal cortex—a brain region suppressed during the memory task. These findings could not be explained by confounds due to cerebrovascular differences, in-scanner performance, or premorbid cognitive ability.

**CONCLUSIONS:** Negative social and health behaviors can alter brain function in key brain regions that show early disruption in dementia. These findings also call into question previous studies that did not calibrate the BOLD signal and found compensatory hyperactivity in these regions. Instead, cumulative risk likely represents early dysfunction underlying attention and episodic memory.

**KEYWORDS:** Alzheimer's disease; functional magnetic resonance imaging; default mode network; episodic memory; risk factors

**McNeill, Stephanie A., MD****Poster 23**

UAB Comprehensive Neurovascular and Stroke Center, Neurology

**Age-Specific Black-White Differences in 30-Day Post-Stroke Fatality in the National REGARDS Study***McNeill, Stephanie A., MD; Howard, Virginia J., PhD; Albright, Karen C., DO, PhD; Kwon, Soo Young, MD; Lichtman, Judith H., PhD; Kleindorfer, Dawn O., MD; Kissela, Brett M., MD; Rhodes, J. David, BSN, MPH; Safford, Monika M., MD; Howard, George, DrPH.*

**INTRODUCTION:** Previous studies suggested post-stroke case fatality in blacks is similar to or lower than whites. Black-white (B-W) differences in case fatality have not been examined within age strata.

**METHODS:** This study was conducted in REGARDS (REasons for Geographic and Racial Differences in Stroke), a national population-based cohort enrolled in 2003-2007, followed for stroke events through September 30, 2017 and deaths through March 31, 2018. Medical records of suspected stroke events were retrieved and adjudicated by physicians. Case fatality (defined as death within 30-days of stroke event) following ischemic stroke was examined within age strata (45-64, 65-74 and 75+) among participants aged 45+, who were stroke-free at baseline. Logistic regression was used to examine B-W differences in case-fatality after adjustment for sex, additional adjustment for the "Framingham risk factors," and additional adjustment for socio-economic status (income and education).

**RESULTS:** There were 1,104 physician-adjudicated incident ischemic stroke events among 28,253 participants over a median of 9.4 years of follow-up, with case fatality of 9.8% (63/643) in whites and 6.1% (28/461) in blacks (B-W Odds Ratio (OR) = 0.60; 95% CI: 0.39 - 0.95). Case-fatality by age strata in whites were 5.9% (10/169) in ages 45-64 (95% CI: 2.9 - 10.6), 5.5% (14/254) in ages 65-74 (95% CI: 3.1 - 9.1), and 17.7% (39/220) in ages 75+ (95% CI: 12.9 - 23.4). Case-fatality by age strata in blacks were 7.7% (13/169) in ages 45-64 (95% CI: 4.2 - 12.8), 3.6% (7/195) in ages 65-74 (95% CI: 1.5 - 7.3), and 8.2% (8/97) in ages 75+ (95% CI: 3.6 - 15.6). Case-fatality significantly increased across age strata in whites ( $p_{\text{trend}} \leq 0.0001$ ) but not blacks ( $p_{\text{trend}} = 0.85$ ). At ages 45-64, the sex-adjusted B-W OR was 1.33 (95% CI: 0.56 - 3.11) and decreased to 0.42 (95% CI: 0.19 - 0.93) for ages 75+ ( $p_{\text{trend}} = 0.013$ ). Adjustment for risk factors and SES did not mediate the trend for lower black case fatality at older ages ( $p_{\text{trend}} = 0.012$ ).

**CONCLUSIONS:** These data confirm the lower stroke case-fatality in blacks than whites across the age-span of our study and suggest the benefit among black stroke patients is greatest at older ages.

**Molina, Adolfo L., MD**

UAB School of Medicine, Pediatrics

**Residential instability and neighborhood deprivation as risk factors for pediatric asthma outcomes**

*Molina, Adolfo, MD; Molina, Yamile, PhD; Zhu, Aowen, MA; Walley, Susan, MD; Wu, Chang, MD, MSCR; Oates, Gabriela, PhD*

**INTRODUCTION:** Sociodemographic and neighborhood characteristics are associated with pediatric asthma. Little work has examined multiple neighborhood factors and their role in chronic asthma severity and readmissions. The effect of residential instability for asthma outcomes has not been studied. This analysis quantifies the associations between residential instability, neighborhood deprivation, and asthma outcomes using data from a pediatric tertiary hospital.

**METHODS:** Patient residential addresses were geocoded and linked to area-level socioeconomic data from the U.S. American Community Survey, aggregated to Census tracts. A factor-based composite measure of neighborhood deprivation was developed, based on 20 variables from the domains of education, employment, income, poverty, home and vehicle ownership, housing, family structure, and health insurance. Patient residential instability was defined as  $\geq 3$  residences in a 4-year period. Logistic regression, ordinal regression, and Cox regression survival analysis were used to estimate chronic asthma severity, hospitalization severity, time to emergency department (ED) readmission, and time to rehospitalization. Models were nested by Census tract and controlled for patient race, gender, and age as well as health insurance, household tobacco use, and number of adults in household. Time to ED readmission and rehospitalization models also controlled for chronic asthma severity and hospitalization severity.

**RESULTS:** In the sample (N=503), 21% had severe hospitalization, 11% severe persistent asthma, and 5% 30-day ED readmission; 36% lived in highly deprived neighborhoods and 34% had residential instability. Patients with 1 residence had lower odds of severe persistent asthma (OR 0.56 [95% CI 0.36-0.87],  $p=0.009$ ) and longer time to ED readmission (HR 0.76 [0.60-0.96],  $p=0.02$ ) or rehospitalization (HR 0.84 [0.73-0.97],  $p=0.02$ ) relative to those with residential instability. Patients in highly deprived areas (Tertile 3) had higher odds of severe chronic asthma than those in less-deprived areas (OR 0.55 [0.35-0.86],  $p=0.008$  for Tertile 1; OR 0.46 [0.24-0.90],  $p=0.02$  for Tertile 2).

**CONCLUSION:** Residential instability and neighborhood deprivation are risk factors for chronic asthma severity in pediatric patients. Residential instability is a risk factor for ED readmission and rehospitalization. Neighborhood data may be a clinically useful tool to identify patients at high risk of adverse asthma outcomes to address needs potentially impactful for health.

**ACKNOWLEDGEMENTS:** No grant support to report. Mentor: Gabriela Oates, PhD

**Morgan, Bria K., BA**

Poster 24

UAB College Arts & Humanities

**Assessing the Presence of Family Resilience and The Role of Parental Education in Adolescent Anxiety**

*Morgan, Bria Kathryn*

**INTRODUCTION:** Extensive literature addresses the broad associations between parental education and children's and adolescent's mental health outcomes; however, the role of parental education and family resilience, with specific regard to child and adolescent anxiety, is unclear. The purpose of this study is to obtain a greater understanding of the role of parental education in child and adolescent anxiety. Additionally, the study aims to investigate the role and potential varying effects of family resilience.

**METHODS:** Building upon previous literature, Bowen's Family Systems Theory and Walsh's Systems Theory of Family Resilience, I hypothesize that parental education will be negatively associated with child and adolescent anxiety. I also hypothesize that the relationship between parental education and child and adolescent anxiety will vary by the presence of family resilience. Using data from the 2016 National Survey of Children's Health, analyses were conducted through nested logistic regression.

**RESULTS:** Results indicate that, independent of parental education, family resilience plays a greater role in child and adolescent anxiety.

**CONCLUSION/DISCUSSION:** Findings conclude that the presence of family resilience significantly affects child and adolescent anxiety. Such findings support Bowen and Walsh's ideals regarding the benefits of interdependence and connectedness within a family unit. Additional research is needed to assess the cultivation of resiliency ideals and the extent of its role in child and adolescent health outcomes.

**ACKNOWLEDGEMENTS:** I wish to thank Dr. Irena Stepanikova, Dr. Elizabeth Baker, and Dr. Jessica Mirman for their continued mentorship and support during this project.



**Nourani, Anis R., MD**

Poster 25

UAB School of Medicine, Pediatrics

**Caregiver's Low Health Literacy is Associated with Decreased CPAP/BiPAP Adherence in Children With Obstructive Sleep Apnea***Anis Nourani, MD; Valerie Tarn, MS, RD; Gabriela R. Oates, PhD; Robert Bradley Troxler, MD*

**PURPOSE:** Obstructive sleep apnea (OSA) occurs in 1% to 5% of children. Left untreated, it is associated with learning and behavior problems, cardiovascular complications, and impaired growth. Continuous or bi-level positive airway pressure (CPAP/BiPAP) therapy is the main treatment for children with residual OSA following tonsilloadenoidectomy or those who are not a surgical candidate. Studies suggest that adherence to CPAP/BiPAP therapy is less than 50% in children. The role of caregiver's health literacy for CPAP/BiPAP therapy adherence has not been investigated. We tested the hypothesis that caregiver's low health literacy is associated with decreased CPAP/BiPAP adherence.

**METHODS:** Pediatric patients from the CPAP clinic and their caregivers were enrolled in the study between 11/15/2016 and 10/3/2017. At the time of enrollment, patients' CPAP/BiPAP utilization data were downloaded from the home CPAP/BiPAP device. Caregivers were asked to complete the Newest Vital Sign (NVS) questionnaire, a validated 6-question screening tool for identifying individuals with low health literacy. Patient ethnicity, annual household income, and caregiver's highest educational attainment were also collected. Data were analyzed with Stata 15.

**RESULTS:** The sample included 50 patients, mean age 14.7 (SD 4.2), 42% Black, 44% female. Adherence to CPAP/BiPAP was assessed over 139 days (SD 83). Approximately 58% of patients were non-adherent (<70% CPAP/BiPAP use of at least 4 hours/night). Approximately 26% of caregivers had low health literacy (NVS score  $\leq 3$ ). In a multiple regression of CPAP adherence adjusted for patient sex, race, household income, and caregiver education, caregiver's low health literacy was associated with a 24% decrease in CPAP/BiPAP therapy adherence ( $p=.04$ ). The model explained 23% of variation in CPAP/BiPAP adherence.

**CONCLUSION:** Caregiver's low health literacy evaluated by the NVS screening tool is associated with a significant decrease in children's CPAP/BiPAP therapy adherence. NVS may be a valuable clinical resource to identify patients at risk for poor CPAP/BiPAP adherence. Further studies are needed to develop and test effective interventions for improving CPAP/BiPAP adherence in this population.

**Oates, Gabriela, PhD**

University

UAB School of Medicine, Pediatrics

**Association Between Socioeconomic Position and Health-Related Quality of Life in Chronic Obstructive Pulmonary Disease***Oates, Gabriela, PhD; Stepanikova, Irena, PhD; Baker, Elizabeth, PhD; Regan, Elizabeth, MD; Lowe, Katherine, PhD; Putcha, Nirupama, MD; DeMeo, Dawn, MD; Parekh, Trisha, OD; Dransfield, Mark, MD; the COPDGene investigators*

**RATIONALE:** Socioeconomic position (SEP) reflects an individual's access to multiple resources that support health and minimize disease risk. In the Genetic Epidemiology of COPD (COPDGene) study, annual income <\$15,000 has been linked to clinical outcomes. This longitudinal analysis investigates the association between a wider range of SEP indicators - income, education, and Internet access - on health-related quality of life (HRQL) in individuals with COPD over time.

**METHODS:** COPDGene is a prospective cohort study of current or former smokers with or without COPD. At Phase 1 (2008-2011), data were collected from 10,371 subjects, and 6,409 of them provided data at Phase 2 (2012-2017). Our analysis is limited to individuals with COPD at Phase 1 (N=1,950), defined by the presence of airflow obstruction on spirometry (FEV1/FVC < 0.70). Higher SEP was operationalized as college education, annual household income >\$35,000, and Internet access at home or work. HRQL measures included the St. George's Respiratory Questionnaire (SGRQ) and the physical and mental health scales from the Short Form Health Survey (SF-36). HRQL was measured at Phase 1 and Phase 2. Over-time change was assessed with generalized estimating equations. Time, operationalized as respondent age in years, was interacted with time-invariant SEP indicators. All models controlled for age, gender, race, health insurance, FEV<sub>1</sub>% predicted, comorbidities, smoking status, and pack-years.

**RESULTS:** The analytic sample consisted of 1,356 individuals for SGRQ and 608 for SF-36. Mean HRQL scores at Phase 1 were 38.52 ( $\pm 21.03$ ), 39.16 ( $\pm 10.29$ ), and 49.24 ( $\pm 12.80$ ) for SGRQ, SF-36 physical health, and SF-36 mental health, respectively. Income >\$35,000, college education, and Internet access were associated with better (lower) SGRQ scores ( $b=-8.04$  [95% CI -10.2, -05.88],  $p<0.001$  for income;  $b=-3.97$  [-6.06, -1.88],  $p<0.001$  for education; and  $b=-2.09$  [-4.26, -0.07],  $p=0.041$ ) for Internet), but the income-related difference was attenuated over time ( $b=2.46$  [0.59, 4.32],  $p=0.01$ ). Income >\$35,000 and college education were associated with better SF-36 physical health ( $b=2.00$  [0.29, 3.71],  $p=0.022$  for income;  $b=2.86$  [1.23, 4.49],  $p=0.001$  for education). Income >\$35,000 and Internet access were associated with better SF-36 mental health ( $b=4.27$  [2.17, 6.37],  $p<0.001$  for income;  $b=2.30$  [0.13, 4.48],  $p=0.038$  for Internet), with a reduction in the income-related difference over time ( $b=-2.38$  [-4.49, -0.26],  $p=0.028$ ).

**CONCLUSION:** Higher SEP is associated with better HRQL on SGRQ and SF-36 physical and mental health measures. Differences by income and education were clinically significant for SGRQ. Novel strategies need to assure appropriate access to resources to reduce the burden of COPD.

## Packer Williams, Martrice A., MS

Poster 26

UAB School of Health Professions, Nutrition Sciences

### Health Beliefs of Young Urban AA Males: Perceptions of Risk Related to HIV and Other STDs/STIs

*Packer-Williams, Martrice, MAEd; Wilkinson, Larrell, PhD; Gray, Cicily, MPA; Footman, Alison, MPH; Hannon, Lonnie, PhD; Davies, Susan, PhD*

**INTRODUCTION:** Related to HIV/AIDS, there is a paucity of research regarding young African-American (AA) heterosexual men. The prevalence of HIV and sexually transmitted diseases (STDs) among young heterosexual African-American men remains a problem in the AA community. Most informal/formal sexual health education starts during the teenage years and health beliefs embed into the realities of young AA males. Without appropriate formal education to inform young men's risk, resulting sexual practices become less protective. This study uses constructs of the Health Belief Model to examine beliefs associated with risky sexual behaviors and perceptions of HIV and other STDs.

**METHODS:** Semi-structured interviews were conducted with African American males (n=41) and their social networks (N=11) in an urban city in the southeast. Thematic analysis was used to analyze transcripts.

**RESULTS:** We found that participants felt that sexual education should be taught earlier during adolescence through the school system. In addition, participants felt the role of prostitution within the community resulted in widespread rates of HIV and STDs/STIs. Overall, the participants believed more public health efforts are necessary to address HIV/AIDS in the AA community.

**CONCLUSIONS/ DISCUSSION:** The findings highlight the importance of encouraging prosocial beliefs and increasing self-efficacy towards health promoting behaviors among young African American males. Finding support development of sexual health programs that will foster increased importance of HIV/STD knowledge in African-American communities, HIV testing and condom use.

## Park, HyounKyoung G., PhD

Poster 27

UAB School of Medicine

### Cervical Cancer Outcome by Type of Health Care Facilities: National Cancer Database, 2004-2015

*Park, HyounKyoung G., PhD; Wang, Zhixin, MS; Huh, Warner, MD; Bae, Sejong, Ph.D*

**PURPOSE:** To identify cervical cancer outcomes associated with demographic and clinical characteristics measured by types of facility

**METHODS:** The National Cancer Database was analyzed to explore the differences in treatment and health outcomes among health care facilities from 2004 to 2015. Chi-Square tests were used to compare the differences in demographic characteristics, cervical cancer stage at diagnosis, treatment, and cervical cancer outcomes among programs. Adjusted odds ratios were calculated to determine factors associated with cervical cancer outcomes.

**RESULTS:** Women treated at Academic/Research Programs (ARPs) were younger at diagnosis, more likely black and less educated, lived further away from treatment facilities, had less comorbidities, more Stage II, and better 5-year survival, and were more alive at 30 and 90 days after surgery compared to other programs. Women treated at Community Cancer Programs were more likely 75 and older at diagnosis, had more Stage IV and comorbidities, were more likely to receive radiation treatment, lived in rural areas and less than 10 miles from the facility, and had lower 5-year survival compared to other programs. Women treated at Comprehensive Community Cancer Programs were more likely white and educated, had more private insurance, and underwent surgery. Women treated at Integrated Network Cancer Programs were more likely to live in urban, south region, had more Stage I disease, surgery and one comorbidity, and died fewer than 30 days after surgery. The type of facility and treatment had varied effects on vital status and 5-year survival.

**DISCUSSION:** ARPs had several outcomes that were better than those of other facilities that may be associated with more women at a younger age at diagnosis and with less comorbidities in this facility. It is important to further investigate possible factors contributing to different outcomes in each facility and the effectiveness of cancer care programs.

**CONCLUSIONS:** The type of facilities appears to be associated with cervical cancer outcomes. Considering the different cervical cancer outcomes from different health care facilities, further research is needed to identify what factors influence women to choose a health care facility for their treatment and how this choice can affect different health outcomes.



**Reed, Rhiannon D., MPH****Poster 28**

UAB School of Medicine, Surgery

**Enhanced Advocacy and Health Systems Training through Patient Navigation Increases Access to Living Donor Kidney Transplantation**

*Reed, Rhiannon D., MPH; Kumar, Vineeta, MD; Berry, Beverly, MA; Hendricks, Daagye, MBA; Carter, Alexis, BS; Shelton, Brittany A., MPH; Mustian, Margaux N., MD MSPH; MacLennan, Paul A., PhD; QU, Haiyan, PhD; Hannon, Lonnie, PhD; Yates, Clayton, PhD; Hanaway, Michael J., MD; Locke, Jayme E., MD MPH*

**BACKGROUND:** To date, no living donation program has simultaneously addressed the needs of both transplant candidates and living donors by separating the advocacy role from the candidate and improving potential donor comfort with the evaluation process. We hypothesized that development of a novel program designed to promote both advocacy and systems training among transplant candidates and their potential living kidney donors would result in sustained increases in living kidney donor transplantation (LDKT). To this end, we developed and implemented a Living Donor Navigator (LDN) Program at the University of Alabama at Birmingham.

**METHODS:** We included adult patients awaiting kidney-only transplant in a retrospective cohort analysis. Using time varying Cox proportional hazards regression, we explored likelihood of living donor screening and approval by participation in the LDN program.

**RESULTS:** There were 56 LDN participants and 1,948 non-participants (standard of care). LDN was associated with a 9-fold increased likelihood of living donor screenings (adjusted hazard ratio (aHR): 9.27, 95%CI: 5.97-14.41,  $p < 0.001$ ) and a 7-fold increased likelihood of having an approved living donor (aHR: 7.74, 95%CI: 3.54-16.93,  $p < 0.001$ ) compared to standard of care. Analyses by participant race demonstrated higher likelihood of screened donors and a similar likelihood of having an approved donor among African Americans compared to Caucasians.

**CONCLUSION:** These data suggest that both advocacy and systems training are needed to increase actual LDKT rates, and that LDN programs may mitigate existing racial disparities in access to LDKT.

**ACKNOWLEDGEMENTS:** This work was supported in part by the American Society of Nephrology Foundation Pre-Doctoral Fellowship Award Program (PI: RD Reed) and the UAB AMC 21 Grant Program (PI: JE Locke).

**Richards, Jaimie L., BS****Poster 29**

UAB School of Health Professions, Biomedical Sciences

**Utilizing Facilitated Deliberation to Inform Genomic Screening Initiatives**

*Richards, Jaimie; Miskell, Edrika, MPH; Hardy, Sharonda, MAEd; Cannon, Ashley, PhD, MS, CGS; Knight, Sara, PhD*

**BACKGROUND/PURPOSE:** The Alabama Genomic Health Initiative (AGHI) is a population-based program to return results of medically-actionable genomic variants to 10,000 adult volunteers residing in all 67 counties of the state. Engaging urban, rural, and highly rural Alabama residents in genomic research has required a multi-level engagement strategy to understand stakeholder perspectives from community members, community leaders, clinicians, and healthcare system executives.

**METHODS:** We are employing a novel approach, facilitated deliberative process (FDP) meetings, to understand the wide range of expectations, needs, and priorities of Alabama communities. To date, we have hosted three meetings, one in Huntsville, Selma, and Birmingham. These meetings included education on AGHI and time to ask scientists and clinicians questions. After learning more about the initiative, participants were asked to offer recommendations for AGHI action on two topics: 1) Recruitment of underrepresented populations and 2) Value in return of genome sequencing results. Participants then voted to establish the priority of these action items.

**RESULTS:** The top suggestions for returning results focused on readability and timeliness of results, while the top suggestions for recruitment focus on establishing connections within existing health services and tailoring recruitment strategies to better connect with underserved groups.

**DISCUSSION/CONCLUSIONS:** While there were privacy concerns, most discussion in all groups was enthusiastic about the AGHI initiative, recruitment and, return of results; especially for minorities, where genomic information is lacking to inform their health care decisions. Participants seemed to value the opportunity to talk about genomic health initiatives in the setting of the facilitated deliberative process group, wanting to return for future group discussions. Overall, these FDP group meetings appear to be acceptable to diverse communities throughout Alabama, allowing community members to share their opinions for consideration and potential implementation by AGHI leaders.

## Rodgers, Shameka, BS, MS

Poster 30

UAB School of Nursing

### Associations among Sleep Quality, Adiposity, and Blood Pressure in non-Hispanic Black Children Aged 4-10 years

Rodgers, Shameka, BS, MS; Rice, Marti, PhD; Martin, Samantha, PhD; Callahan, Makenzie, MS; Bowman, Robert, MS; Anger, Cody, BS; Chandler-Laney, Paula, PhD

**PURPOSE:** The prevalence of pediatric obesity continues to increase in the United States and is higher for non-Hispanic Black (NHB; 22%) compared to non-Hispanic White (NHW; 14%) children. Sleep has been associated with obesity and hypertension in adults and children. It is not clear whether the association of sleep with hypertension is independent of obesity in children. In this analysis, we tested the hypothesis that body mass index (BMI) percentile and poor sleep quality will be independently and positively associated with blood pressure (BP) in NHB children.

**METHODS:** Data for this secondary analysis were obtained from children (4-10 years) enrolled in an ongoing study investigating metabolic health. Children's height, weight, and BP were measured using standard clinical procedures. BMI percentile and BP percentiles were calculated using national reference data. Mothers completed the Child Sleep Habits Questionnaire (CSHQ), which assesses overall sleep disturbance. Simple correlations were used to examine associations among BMI percentile, BP percentiles, and sleep disturbance. Multiple linear regression models were used to examine whether the BMI percentile and sleep disturbance were independently associated with systolic or diastolic BP percentile.

**RESULTS:** Data from N= 52 children (mean age  $6.35 \pm 1.95$  years), were included in this analysis. In unadjusted correlations, BMI percentile was positively associated with diastolic BP ( $r=0.33$ ,  $P<0.05$ ), sleep disturbance was inversely associated with BMI percentile ( $r=-0.33$ ,  $P<0.05$ ) and diastolic BP ( $r=-0.35$ ,  $P<0.05$ ). In the linear regression model that included both BMI percentile and sleep disturbance, the associations of each with diastolic BP weakened (BMI percentile: partial  $r=0.25$ ,  $P=0.082$ ; sleep disturbance: partial  $r=-0.27$ ,  $P=0.054$ ).

**DISCUSSION/CONCLUSIONS:** Results suggest that children's weight status is positively, and sleep disturbance is inversely, associated with diastolic BP. Whether the association of sleep disturbance with diastolic BP is independent of children's weight status is not yet clear. If these associations strengthen with a larger sample size, future research should investigate whether the association of poor sleep quality with lower BMI percentile and lower diastolic BP in children is consistent across races and why the association is in the opposite direction to that hypothesized.

**KEYWORDS:** obesity, pediatric, blood pressure, sleep, non-Hispanic Black

## Rutland, Sarah B., MA

Poster 31

UAB College Arts & Humanities, Sociology

### Unmet Need for Health Care in Young Adults: What Roles do Adolescent SES and Adult SES play?

Rutland, Sarah B., MA; Baker, Elizabeth H., PhD

**PURPOSE:** The aim of this paper is to examine the association between adolescent socioeconomic status (SES) and adult SES in relation to unmet need for care (UN) in young adulthood, as well as examining potential racial/ethnic disparities. UN can be characterized as a person deciding not to seek care even when they think they need it. Younger populations are understudied for UN, even though UN can emerge as early as adolescence. Factors that may be associated with UN, such as SES and diagnosed health conditions, require further study.

**METHODS:** The hypotheses are 1) Higher adult SES will be associated with lower odds of UN in adulthood; 2) The relationship between adult SES and UN will be partially accounted for by adolescent SES, net of controls; and 3) The relationship between adult and UN will be partially accounted for by health conditions and biomarkers. I performed a cross-sectional analysis with a model build-up approach using Wave I-IV data from Add Health to demonstrate the effect of adolescent SES on the relationship between adult SES and UN. Longitudinal variables in the models included timing of college education, timing of regular smoking, and timing of heavy drinking from adolescence to young adulthood.

**RESULTS:** Preliminary findings suggest that adolescent SES does not affect the relationship between adult SES and UN. Health measures and health conditions in the final model attenuate the relationship between early college education and no college education for UN in previous models. Additionally, there are no racial/ethnic differences in UN in this study. Higher depressive symptomatology, heavy drinking later in life, and infrequent drinking later in life were all associated with higher odds of UN.

**DISCUSSION/CONCLUSION:** The addition of health measures, conditions, and biomarkers showed that the relationship between adult SES and UN is partially accounted for by these measures. Those with the most privileged SES in adulthood appear to be the most protected from UN, and those with poor health measures and diagnosed health conditions are more vulnerable to UN.

**Sakhuja, Swati, MPH**

Poster 32

UAB School of Public Health, Epidemiology

**Racial Differences In Prevalence of Colorectal Cancer Screening Among Those With and Without History Of Cardiovascular Disease.***Sakhuja, Swati, MPH; Fowler, Mackenzie E., MPH; Ojesina, Akinyemi, MD, PhD*

**INTRODUCTION:** Blacks have disproportionately increased risk for cardiovascular disease (CVD) and colorectal cancer (CRC), and decreased access to healthcare. CVD and CRC share several common risk factors. We examined the prevalence and factors associated with CRC screening among Blacks and Whites with and without history of CVD.

**METHODS:** Data from 13 states with high age-adjusted rates for CVD from 2012-2016 Behavioral Risk Factor Surveillance System was used to examine prevalence of self-reported screening for colorectal cancer among adults ages 50-75 years of age with and without history of CVD (defined as ever having stroke, myocardial infarction or coronary heart disease). Multivariable logistic regression models were used to evaluate the association between socio-demographics and access to healthcare with ever having screened for CRC by colonoscopy or sigmoidoscopy. We also examined this association pre- and post- enactment of the Affordable Care Act (ACA) given its impact on access to care.

**RESULTS:** From 2012-2016, prevalence of CRC screening among those with and without history of CVD was 71.5% and 68.72% in Blacks, and 74.90% and 72.08% in Whites, respectively. After adjustment for sociodemographic factors and access to healthcare, the odds for CRC screening among Whites with history of CVD were 19% higher (95% confidence interval: 1.13-1.26) as compared to those without history of CVD. Further, the odds ratios remained similar pre- and post-enactment of the ACA. However, among Blacks, there was no statistically significant association between history of CVD and screening for CRC overall and pre- or post-enactment of ACA, after model adjustments.

**DISCUSSION/CONCLUSIONS:** Whites with history of CVD are more likely to undergo screening for CRC which may be due to greater exposure to the healthcare system for CVD care. Whereas, there were no differences in prevalence of screening for CRC among Blacks with or without history of CVD. Further examination of factors associated with underutilization of screening services among Blacks is needed. Acknowledgements: None.

**Shamim, Ainny, MD**

Skipwith I

Morehouse School of Medicine, School of Public Health

**The Emotional/Psychological Well-Being of Long-Term Female Breast Cancer Survivors by Treatment Type and Length of Time Since Treatment: An Analysis of Health Information National Trends Survey (HINTS) Data.***Shamim Ainny, MD; Mubasher Mohamed, PhD, MA; Cooper L. Dexter, MPH; Caplan Lee, MD, PhD, MPH; Rivers M. Brian, PhD, MPH*

**BACKGROUND:** Breast cancer treatment adversely impacts various domains of health-related quality of life (HRQOL) among women in the United States. However, the association of treatment on psychological well-being remains unclear among long-term breast cancer survivors (BCS). The purpose of this analyses was to assess the association between depression & anxiety and 1) cancer treatment types and 2) length of time since treatment among BCS.

**METHODS:** Analyses were conducted using data from HINTS 5 cycle1 (2017), and HINTS 4 cycle 4 (2014). Of the 1,046 (15%) participants diagnosed with cancer, 170 (16.25%) were female, 35 or older breast cancer survivors. Depression and anxiety outcomes were self-reported and determined by applying an algorithm to Patient Health Questionnaire (PHQ-4) data. Univariate and multivariate logistic regression techniques were used to assess the outcomes of interest. SAS version 9.4. was used for the analysis.

**RESULTS:** BCS younger than 65 years old, with an income of less than \$50K, were more likely to report depression/anxiety (OR (95% CI): 1.18; (1.07, 9.96), and disabled vs. employed were more likely to be depressed (OR (95% CI): 13.87 (2.58, 74.66). Also, those who received surgery and chemotherapy or chemotherapy and radiation were more likely to be depressed vs. those who received surgery, chemotherapy and radiation (OR (95% CI): 2.85 (1.05, 7.6). Based on the PHQ-4 score, those who received treatment within one to five-year vs. 10+ years ago were more likely to have depression (OR (95% CI): 3.14 (1.08, 9.11), and anxiety (OR (95% CI): 3.23 (1.06, 9.83).

**CONCLUSIONS AND IMPLICATIONS:** The findings of this national study suggest the need for continued surveillance of long-term BCS. Clinical and non-clinical interventions addressing psychological well-being (anxiety and depression), among long-term BCS should target HRQOL particularly among the young and disabled. Longitudinal research is needed to further elucidate the late and long-term effects of treatment on long-term BCS mental health.

**Acknowledgment of Funding.** U54 Morehouse School of Medicine/Tuskegee University/UAB Comprehensive Cancer Center Partnership Grant #5U54CA118638-13R01 A Health IT Based Psychoeducational intervention for African American Prostate Cancer Grant #5R01MD007783-05Cancer Health Equity Institute Morehouse School of Medicine. Master of Public Health Morehouse School of Medicine.

## Tarasovich, Mercedes, BA

Poster 33

UAB College Arts & Humanities, Sociology

### Suicidality, Mental Health Stigma, and Online Support Systems

Tarasovich, Mercedes, BA; Baker, Elizabeth, PhD

The stigma related to suicide can often lead to individuals avoiding formal or professional mental health services and in-person support systems, for fear of discrimination and prejudice in treatment and their daily life, often resulting in worse overall health. The availability of online communities of individuals sharing similar experiences can provide a “safe haven,” offering a non-judgmental space, anonymity, and low risk of stigma to an individual’s “real life” identity. Objectives: We examine whether the association between mental health care stigma (MHCS) and self-rated health (SRH) is greater for those who have experienced suicidality. Additionally, among those experiencing suicidality, we examine whether online support groups account for the relationship between MHCS and SRH. Methods: Using data from the 2014 National Survey of Drug Use and Health (NSDUH), we use variables that account for suicidality, perceived mental health care stigma, and use of online support systems (n=41,179). All OLS regression models control for age, race/ethnicity, gender, education, and income. Findings: Suicidality is associated with worse self-rated health after controls, while online help is associated with worse SRH after controls. Some evidence suggests that among those who are suicidal, online help results in better self-rated health, however, interaction failed to reach significance in current models. Results also suggest that gender is also a factor worth exploring in future models.

## Thomas, Soweto, BA

Poster 34

Tuskegee University, Integrative Biosciences

### Targeting Pharmacologically-Induced Health Disparities with a Pumpkin Based Dietary Intervention Strategy that Reduces Blood Pressure, Alters Cardiovascular Remodeling and Components of the Renin-Angiotensin System in a Genetic Model of Hypertension

Thomas, Soweto; Dawkins, Norma L., Ph.D.; Bradford, Chastity N., PhD

**PURPOSE:** Hypertension is the principal risk factor for cardiovascular disease (CVD), the leading cause of death in the U.S. Angiotensin Converting Enzyme inhibitors (ACEi) are commonly prescribed first to lower blood pressure and decrease CVD risk, but African-Americans have increased risk of angioedema. This increased risk derived from ACEi has led a search for natural ACEi from functional foods or natural resources, one of which being pumpkin. Pumpkin seed oil reduces systolic blood pressure, serum lipid levels and increases antioxidant activity, both independently and as a supplement with pharmaceutical ACEi. Calabaza pumpkin (*Cucurbita moschata*, var. Duch, Ex. Lam) is an underutilized, promising source of  $\beta$ -carotene and other functional components. The profile of *Cucurbita moschata* has yet to be fully elucidated, and few studies compare the dietary effect of pumpkin flesh-based diets to captopril, a significant potential source of  $\beta$ -carotene and other antioxidants.

**METHODS:** This study measured changes in blood pressure and heart rate, and heart weight of 14-week old spontaneously hypertensive (SHR) and Wistar-Kyoto (WKY) rats in response to pumpkin-based diets. SHR & WKY rats were administered diets of either 4% pumpkin flesh, 4% pumpkin seed and a 2% flesh / 2% seed blend, along with a captopril-supplemented control diet (100mg/kg/day) for 8 weeks to observe differences between pharmaceutical and nutraceutical treatments. A non-invasive blood pressure tail cuff monitor was used to weekly monitor heart rate, mean arterial, systolic, and diastolic blood pressure. Upon the end of the study, whole heart and left ventricle weights were compared to tibia length, evaluating risk of cardiac hypertrophy.

**RESULTS:** Results showed a reduction in mean arterial, systolic and diastolic blood pressure in the pumpkin flesh group compared to the control diet. All pumpkin diets increased whole heart and left ventricle size by a minimum of 11% in relation to a standard diet, while captopril reduced both whole heart and left ventricle size by 10%.

**DISCUSSION:** The reduction of blood pressure observed suggests pumpkin uses an alternative pathway of blood pressure control independent of ACE inhibition. This potential new pathway elucidates the health promoting capabilities of pumpkin as an alternative blood pressure treatment reducing risk of angioedema.

## UAB College Arts &amp; Humanities, Sociology

**Adverse Childhood Experience and Chronic Health Conditions in Adulthood: Implications of Intersections of Gender, Race/Ethnicity, and Adult Socioeconomic Status***Uddin, Jalal, MS*

**BACKGROUND:** A growing body of studies highlights that many adult diseases and health disparities in late-life are rooted in childhood adversities. However, there is little research that examines how social stratification processes structure the inequality in early-life stress exposure, and the effects of stress exposure on health outcomes may vary based on the intersections of social stratification categories.

**PURPOSE:** This study examines the patterns in childhood adverse experiences (ACEs) by race/ethnicity and gender and how race/ethnicity, gender, and adult socioeconomic status combine to modify the effects of ACEs on chronic health conditions.

**METHODS:** This study uses data from four rounds of the Behavioral Risk Factor and Surveillance System (2009-2012). The key predictor variable is a count measure of ACEs. The outcome of interest is a count variable of ever-diagnosed chronic health conditions. The analysis includes multivariable Poisson regression models predicting the number of chronic health conditions as a function of ACEs. The analytic sample consists of 103,364 non-institutionalized adults.

**RESULTS:** Findings suggest that racial-ethnic minority groups and women report higher rates of ACEs compared to non-Hispanic whites and men, respectively. There is a robust association between ACEs and chronic health conditions. The measures of health behaviors and mental distress mediate the association between ACEs and chronic health conditions. The interaction models indicate that the effects of ACEs on chronic health conditions are conditioned by the complex intersections of gender, race/ethnicity, and adult socioeconomic status (SES). The link between ACEs and chronic health conditions is stronger among women and racial/ethnic minority groups such as Asian, Hawaiian, Hispanics, and blacks compared to non-Hispanic whites. Racial minority status and low SES jointly modify the effect of ACEs on chronic health conditions.

**CONCLUSION:** The findings imply that there is no singular effect of an SES variable. Instead, the complex combinations of identities along the lines of race-ethnicity, gender, and social class condition the impact of ACEs on chronic conditions. Findings have implications for the effective prevention of public problems through intervention efforts in childhood.

**KEY WORDS:** Adverse childhood experience, psychosocial stress, social stratification, chronic health conditions, intersectionality theory, the stress process model



## Watts, Amber, MAEd

Poster 36

UAB School of Education

### Factors Associated With Sedentary Lifestyle In women Participants In CALM (Counseling And Lifestyle Management) Study

Watts, Amber, MAEd; Wilkinson, Larrell, PhD; Evans, Retta, PhD; Hall, Sean, PhD; Tyson, Lawrence, PhD

**BACKGROUND:** Significant evidence has identified the importance of physical activity to the overall health and reduction in disease among humans. The Centers for Disease and Control and Prevention (CDC) has implemented physical activity recommendations as guidelines to increase physical activity (PA) among the US population. However, evidence continues to show high levels of self-reported physical inactivity and growing prevalence of related chronic diseases (i.e. type 2 diabetes, stroke, and obesity), particularly among women. Lifestyle modification employing theoretical frameworks may be more beneficial.

**PURPOSE:** This study performed a secondary analysis of data collected during the Counseling and Lifestyle Management (CALM) Study, a study to evaluate the role of intensive counseling on exercise adherence and maintenance of physiological and metabolic outcomes. The study aimed to 1) examine the association of physical inactivity/sedentary behavior with constructs of Health Belief Model (HBM), and 2) assess the association of physical inactivity/sedentary behavior with constructs of the Multidimensional Body Self-Relations Questionnaire (MBSRQ).

**METHODS:** Pearson correlation using Microsoft Excel software were used to assess the categorical physical activity data were collected from sedentary bouts and total physical activities collected from ten female participants with complete Actigraph data to examine its' association with each independent variable, (a) constructs of the MBSRQ and (b) HBM constructs collected from survey data from the CALM Study.

**RESULTS:** The findings identified a significant correlation between HBM construct Barriers and moderate PA. Other findings suggest significant associations among subscales of both HBM and MBSRQ with sedentary bouts and different levels of PA engagement.

**DISCUSSION:** Findings suggest it is important to employ theoretical frameworks to better understand performance of physical activity among women, including concepts of body image. These results fills a gap in knowledge related to women's perceived risk associated with being physically active or inactive and the perceived body image as it relates to motivations associated with being physically active or inactive. It is important for health educators to continue to examine the motivation identified by the health beliefs and body image of women as it relates to being physically active/inactive among sedentary women.

## Waugaman, Kaitlyn, MPH

Poster 37

UAB School of Medicine, Preventive Medicine

### Barriers to Fruits and Vegetable Consumption among African Americans Living in Two Census Tracts of Jefferson County, Alabama

Kaitlyn Waugaman, MPH, RDN; Lori Brand Bateman, PhD, RD; Theresa A. Wynn, PhD; Theolishia Smith, MPH; Yufeng Li, PhD; Mona N. Fouad, MD, MPH

**PURPOSE:** The consumption of fruits and vegetables has been associated with a lowered morbidity and mortality for certain chronic diseases; however, the US population fails to meet the Dietary Guideline recommendations set by the USDA. Compared to white Americans, African Americans are less likely to meet these recommendations, but barriers related to access, consumption, and preferences are not well understood. This study examines potential barriers to fruit/vegetable consumption among an urban, African American population in the southeast.

**METHODS:** This study utilizes baseline data from a larger study to design and implement a policy, system and environment population-level obesity intervention. Data was collected between May and August of 2015 utilizing a modified Behavioral Risk Factor Surveillance System (BRFSS) survey administered to low income African American participants living in two census tracts in Jefferson County, Alabama. The survey collected data on fruit and vegetable intake, physical activity, fried food consumption, sugar consumption, policy issues, and demographics.

**RESULTS:** Participants were 100% African American (n=119) and 50% female with a mean age of 52 years. Median fruit and vegetable consumption was 1.1 and 1.2 per day, respectively. Seventy-five percent of participants stated they were able to purchase fruits and vegetables in their neighborhood. The top four barriers to fruit and vegetable consumption were cost (23%), access (21%), time (15%), and preparation complications (10%).

**DISCUSSION:** We identified potential barriers to fruit and vegetable consumption of African Americans living in two census tracts of Jefferson County, Alabama. Understanding barriers has important implications in increasing fruit and vegetable consumption, as well as influencing health policy and decreasing health disparities in this population.

**KEY WORDS:** policy, system and environment; fruit and vegetable consumption, health disparities, chronic disease

**ACKNOWLEDGEMENTS:** This work was supported by a grant from the National Institute of Minority Health and Health Disparities (U54MD008602) and by Cooperative Agreement Number DP005814, funded by the Centers for Disease Control and Prevention.

**Wen, Huacing, MS****Poster 38****UAB School of Health Professions, Physical Therapy****Racial differences in Obesity in Individuals with Spinal Cord Injury: An Rural-Urban Comparison***Huacong Wen, MS; Yuying Chen, MD, PhD; Amanda L. Botticello, PhD, MPH; Sejong Bae, PhD*

**INTRODUCTION:** In the general population, people living in rural areas are more likely to have worse health outcomes than those living in urban areas. Although racial differences in obesity exist in the spinal cord injury (SCI) population, we know little about the influence of rural/urban residence on racial differences in obesity among people with SCI.

**METHODS:** This is a cross-sectional analysis of survey data from National SCI Database linked with neighborhood data from American Community Survey and US Department of Agriculture Economic Research Service by census tract. 3,385 participants (non-Hispanic white, 66.5%, non-Hispanic black, 22.5%, and Hispanic, 11.0%; men, 79.1%; mean age, 44.3 ± 15.6y; tetraplegia, 54.0%; complete injury, 45.3%; mean duration of injury, 8.3 ± 9.9y) who completed a follow-up assessment during 2006 - 2017 and resided in 2,934 census tracts. Urban tract was considered if a census tract with a population of ≥ 2,500; all other tracts were rural tracts. After controlling for demographic, injury-related and neighborhood (concentrated disadvantaged index) factors, logistic regression analyses were conducted separately for urban and rural groups to estimate odds ratio of being obese (body mass index ≥ 30.0 kg/m<sup>2</sup>) in non-Hispanic black and Hispanic relative to non-Hispanic white.

**RESULTS:** of 3,385 participants, 23.1% were obese and 76.2% living in urban areas. Non-Hispanic blacks (90.7%) and Hispanics (90.1%) were more likely to live in urban areas than non-Hispanic whites (69.3%; p<0.001). Within urban group, Hispanics had the greatest obesity prevalence (30.6%), followed by non-Hispanic blacks (23.5%) and non-Hispanic whites (21.3%; p=0.001). After controlling for demographic, injury-related and neighborhood variations, the difference in obesity between Hispanics and non-Hispanic whites remained significant. Among rural group, a similar trend in racial differences in obesity was observed, but not statistically significant.

**CONCLUSION:** Among people with SCI living in urban areas, Hispanics tend to have a higher prevalence of obesity than other racial groups. Findings could help health care professionals to target groups for obesity prevention and management to reduce racial health disparities for SCI population. Also, a larger sample size is needed to determine racial differences in obesity for people resided in rural areas.

**ACKNOWLEDGEMENTS:** This work is supported by funding from the National Institutes on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant # 90DP0083), the Eunice Kennedy Shriver National Institute of Child Health & Human Development (4R00HD065957-03), and the National Institute of Minority Health and Health Disparities (U54MD008176).

**Williams, Michelle S., BS, MPH, MSPH, PhD****Poster 39****Auburn School of Nursing****Making Breast Screening Convenient: A Community-based breast screening event during a historically Black university's homecoming festivities***Williams, Michelle, PhD, MSPH, MPH, CHES; Young, Catherine; Wells, Jimmie, RN, MSN, OCN; Roberson, Cara, RN; Udemgba, Chigozie, MPH; Hawkins, Odessa, CFNP; McKinney, Shawn, MD, MPH*

**BACKGROUND:** Disparities in breast cancer mortality rates are extremely prominent in Mississippi, where in 2015, the breast cancer mortality rate among non-elderly African American women was nearly twice the mortality rate of their White counterparts (15.9/100,000 vs 8.5/100,000, respectively). The breast cancer mortality disparity in Mississippi is driven by an elevated incidence of invasive breast cancer among non-elderly African American women (47.6/100,000). The National Comprehensive Cancer Network's Clinical Practice Guidelines in Oncology recommend that women begin having clinical breast exams (CBEs) performed every 1 to 3 years by a healthcare provider starting at the age of 25. Evidence shows that CBEs are effective at detecting early-stage palpable cancers.

**PURPOSE:** The Mississippi Collaborative Group on Breast Cancer Disparities conducted a community-based breast screening event to provide the free CBEs and breast cancer risk assessment to non-elderly African American women. Methods: In order to reach our target population, we held the screening event during the homecoming festivities at a historically Black university that is located in a rural county in Mississippi. During the 2 ½ -hour event two healthcare providers conducted CBEs for 26 African American women who ranged in age from 28 to 67.

**RESULTS:** The healthcare providers did not find any palpable masses or nodes among the participants but they did find that 6 women had skin changes on their breasts and 1 woman had an inverted nipple. Nearly one-third of the women who were screened reported never having a breast screening before the event, including 3 women who were over the age of 40. Our providers recommended mammography for participants over the age of 40 and provided tailored breast cancer reduction risk counseling for women they deemed to be at elevated risk.

**DISCUSSION/CONCLUSIONS:** The screening event provided an opportunity for several women who had never had a breast screening to get screened. In addition, the event was a prime opportunity to provide education about breast cancer risk factors, breast cancer screening, and genetic testing to our target population. More community-based screening events are needed in rural and medically underserved areas to make breast screening and risk reduction counseling accessible.

## Wise, Jenni, RN, MSN

Poster 40

UAB School of Nursing

### The Potential Role of the African American Church in Increasing HIV-testing and Awareness of Status in the Rural South

Wise, Jenni, MSN, RN; Lanzi, Robin, PhD, MPH; Ott, Corilyn, PhD; Footman, Alison, MPH; Arya, Brook; Hardy, Claudia, MPA; Walker, Cordia; Latham, Charles; Alexander, Mark, PhD; Stockett, Romeo, PhD; Daniels, George; Alexander, Mark, PhD; & Kempf, Mirjam-Colette, PhD, MPH

Socioeconomic disparities and cultural context drive the disproportionate incidence of HIV-infection in Black Americans. While Blacks represent 12% of the US population, they constitute 42% of individuals living with HIV. Traditional platforms to increase HIV-testing and awareness of status have been largely unsuccessful due to socioeconomic barriers, mistrust of the medical system, and social stigma. Newer initiatives, including community-based partnerships and faith-based platforms, are being considered for their usefulness in overcoming barriers and increasing awareness of status. The purpose of this study was to gain a deeper understanding of the barriers and facilitators influencing HIV-testing and awareness of status in a rural, Southern, predominantly Black town, and to assess the best platforms for increasing testing within the community. We sought the perspectives of community (n = 8) and faith-based leaders (n = 10) during two focus groups. Two coders conducted qualitative analyses to extract themes. We found that social, organizational, and individual contexts influenced HIV-testing and awareness of status within the community. Inadequate availability of resources, rampant cultural and faith-based stigma, and knowledge deficits frequently manifested through denial and fear served as common barriers to HIV-testing and awareness of status. Faith-based leaders were recognized as critical to improving awareness of status through their substantial role in the community, culturally placed credibility and trust, and access to the population. For faith-based platforms to be effective, knowledge-deficits and attitudes and messages of stigma must be addressed. Due to the cultural importance of spirituality in Black American communities, faith-based initiatives should be considered as alternative platforms to increase HIV-testing and awareness of status, thus alleviating health disparities in this vulnerable population.

## Wolfe, Joseph, MS, PhD

Hamilton II

UAB College of Arts & Sciences, Sociology

### Wealth and Obesity Among Midlife Adults

Wolfe, Joseph D., Ph.D.; Baker, Elizabeth H., Ph.D.

**PURPOSE:** Our current understanding of the SES-obesity relationship is primarily based on measures of education, occupation, and income, but as one enters midlife, wealth becomes an importation indicator of social status, determinant of lifestyle, and source of protection against stressful financial shocks. Nevertheless, we know little about the relationship between wealth and obesity in midlife and whether this wealth-obesity relationship varies by gender and race.

**METHODS:** Data were obtained from the National Longitudinal Survey of Youth 1979 (NLSY-79), a representative and longitudinal sample of U.S. men and women. The analysis uses population-averaged (PA) models to examine the association between the components of wealth and obesity for 6,979 NLSY-79 respondents net of education, occupation, income, and sociodemographic controls.

**RESULTS:** The results provide evidence of a robust association between wealth and midlife obesity but also reveals heterogeneity in the wealth-obesity associations across components of wealth and social groups. The wealth-obesity relationship is strongest among black and white women and is driven by home value and savings. For black and white men, the probability of obesity is similar to the overall proportion of obesity and remains relatively stable across quartiles of wealth.

**DISCUSSION/CONCLUSIONS:** The association between wealth components and obesity is complex. Differences by sex and race need to be explicitly recognized when modeling this association. Approaches that rely on a single measure of net worth may conceal important mechanisms linking SES and obesity.

**ACKNOWLEDGEMENTS:** Research reported in this manuscript was supported by the National Institute on Minority Health and Health Disparities of the National Institutes of Health under Award Number U54MD000502. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

**Yang, Leila**

UAB College of Arts &amp; Sciences, Chemistry

**Tea Consumption, but Not Coffee or Alcohol Intake, Is Associated with Glycemic Control of Older Adults Living with HIV***Yang, Leila; Overton, E. Turner, MD; Willig, Amanda L., PhD, RD*

**INTRODUCTION:** Despite increased lifespan with antiretroviral therapy, people living with HIV (PLWH) bear a 3.8% higher prevalence of diabetes compared to the general adult population. Intake of coffee, tea, and alcohol is associated with diabetes control in the general population. Therefore, our objective was to evaluate the association of these beverages with diabetes-related health outcomes of PLWH age = 50.

**METHODS:** We recruited 60 PLWH age = 50. All participants completed 24-hour diet recalls on three separate days with staff using ASA-24 Automated Recall System. Coffee, tea, and alcohol consumed, along with complimentary condiments, were converted into standard serving sizes. Glucose levels were measured using the Stanbio SIRRUS analyzer, hemoglobin A1c using the Siemens DCA Vantage system, and triglyceride levels using a lipid panel. Wilcoxin-Rank Sum Test and Spearman Correlations were used to investigate the association of beverage intake with laboratory values (blood glucose, hemoglobin A1c, and triglyceride levels).

**RESULTS:** Median age was 54.5 years (range 50-68); median BMI was 26.9 kg/m<sup>2</sup> (range 17.8-42.5). Overall diet quality was poor with a median fiber intake of 16 gm/day, and only 21% of participants consuming recommended dietary protein levels. Twelve participants were diabetic (20%), 23 consumed coffee (38%), 27 consumed tea (45%), and 13 consumed alcohol (22%). Median blood glucose level was 92 (range 61-224); median hemoglobin a1c level was 5.8 (range 4.2-9.3); median triglyceride level was 142.5 (range 48-776). Greater tea intake was associated with lower hemoglobin a1c ( $p = 0.04$ ). Median total sugar serving was 5.1 (range 0-28.3). Once total sugar servings were controlled for, no additional trend was observed between the beverages studied and laboratory values. Pre-existing diabetic conditions did not influence the effect of tea, coffee, and alcohol intake on diabetic control.

**CONCLUSIONS/DISCUSSION:** Despite a small sample size, tea intake was associated with lower hemoglobin a1c. The significant amount of sugar added to these beverages possibly negates the health benefits of consumption. Nutrition counseling on appropriate condiments for these beverages could benefit PLWH. Further studies with larger sample sizes are needed to examine the impact of coffee, tea, and alcohol on glycemic control.

**ACKNOWLEDGEMENTS:** This study was supported by NIH NIAID/UAB CFAR (P30-AI27767), CNICS (1R24-AI067039-1), and the Mary Fisher CARE Fund and was completed under the mentorship of Dr. Amanda Willig.





# 2019 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. Chastity Bradford, Dr. Markus Bredel, and Dr. Sigrid Ladores



## Excellence in Mentoring Award for Undergraduate Students

“Dr. Bradford has been a long-time mentor to me, other students, faculty, teachers in the local community, and young students in the local community. Dr. Bradford truly cares about her students, research, and community. This is shown in her efforts as a mentor and humanitarian. She does not settle for mediocrity. Dr. Bradford never rests as she has gone far and beyond her initial tasks. Her versatility as a mentor and her dedication to me, as she mentors throughout the years, are the reasons why she would be an excellent recipient of the Excellence in Mentoring Award.”

Kennedy Harris

### Chastity Bradford, PhD

Assistant Professor, Biology  
Tuskegee University

Nominated by Kennedy Harris, Tuskegee University

Short Term Research Experience for Under-Represented Persons (STEP-UP) Program Participant



## Excellence in Mentoring Award for Graduate or Medical Students

“A mentor is someone who sees more talent and ability within you, than you see in yourself, and helps bring it out of you. Dr. Bredel continues to bring out the talents and abilities that he sees in me and encourages me to never give up on my dreams. Having someone to push me to my limits is beneficial in both the laboratory and the clinic. He continues to help me grow to become a physician scientist that achieves for both knowledge and compassionate care.”

Zachary White, MS

### Markus Bredel, MD, PhD

Professor of Radiation Oncology  
Sharon A. Spencer Distinguished Endowed Chair in Translational Radiation Oncology  
University of Alabama at Birmingham

Nominated by Zachary White, MS, University of South Alabama Medical School

Summer Cancer Research Education Program (SCREP) Participant



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

“Most importantly, Dr. Ladores is someone that I not only look up to, but also aspire to be like due to her professionalism, knowledge, compassion, drive, productivity, and selflessness. She is someone who puts her students and mentees before herself and devotes her undivided attention, when not required, to assure understanding and success. I attribute my success as a PhD student, researcher, and new faculty member to Dr. Ladores' mentorship and support.”

Dr. Leigh Ann Bray

### Sigrid Ladores, PhD, RN, PNP, CNE

Associate Professor, School of Nursing  
University of Alabama at Birmingham

Nominated by Leigh Ann Bray, PhD

Health Disparities Research Education Program (HDREP) Participant





## 17 YEARS OF IMPROVING HEALTH, IMPROVING LIVES

**2002**

- MHRC established
- REACH 2010 grant awarded and Community Health Advisors begin work



**2003**

- NIMHD awards MHRC a National Center of Excellence Phase I

**2004**

- Charles Barkley supports young investigators with a major gift



**2005**

- MHRC approved as a UAB UWRIC
- 1st UAB Health Disparities Research Symposium
- MSM/TU/UAB Cancer Partnership established
- Dr. Mona Fouad receives Sullivan Award

**2006**

- WALK Feel Alive & Healthy Happy Kids programs begin
- Community Advisory Board established
- Annual gala raises more than \$238,000



**2002-2010**

**2007**

- MHRC receives NIMHD Phase II Center of Excellence Funding
- MHRC Excellence in Mentoring Award established
- CDC funds REACH US



**2008**

- Dr. Mona Fouad appointed to NIMHD Advisory Council
- Center name changed to Minority Health & Health Disparities Research Center
- Young Professionals Board is established



**2009**

- Young Professionals Board holds first Casino Royale fundraising gala
- Maya Angelou is a special guest at 6th MHRC gala



**2010**

- Charles Barkley is a special guest at the 7th MHRC fundraising gala
- Health and Economic Development Summit partners with the Centre for Health and Development in the UK



**2011**

- NIMHD funds Center of Excellence Phase III
- UAB HealthSmart, a health education and wellness facility, opens in the heart of downtown Birmingham



**2011-2019**

**2015**

- 10th annual UAB Health Disparities Research Symposium



**2012**

- NIMHD awards U54 funding for MidSouth TCC to study social determinants of health
- US-UK Communities for Health Partnership formed with University of Staffordshire, UK
- First Lady Michelle Obama visits Healthy Happy Kids childhood obesity prevention program



**2016**

- REACH Parks Rx launches
- UAB HealthSmart moves to Medical Towers



**2013**

- NIMHD funds two more U54 centers for African American Men's Health and Health Policy



**2017**

- UAB chosen as a STEP-UP coordinating research site for a national research program, funded by NIDDK
- YP Board introduces Harlem in the 'Ham fundraiser, raising \$65,000 for Healthy Happy Kids



**2014**

- CDC awards U58 grant for Birmingham REACH for Better Health



**2018**

- MHRC receives a U54 grant from NIMHD to establish the Obesity Health Disparities Research Center
- Since 2002, the MHRC has returned more than \$163M in external funding to UAB
- Mona Fouad inducted into National Academy of Medicine



### **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 has been 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)

### **Obesity Health Disparities Research Center (OHDRC)**

The UAB Obesity Health Disparities Research Center is driven to reduce obesity and obesity related health disparities in Alabama. The Center, an MHRC initiative funded through the NIMHD's Centers of Excellence program, supports transdisciplinary, multi-level, and multi-domain research to understand the complex contributors to obesity and obesity related health disparities. We foster collaborative research, support early stage investigators, and join forces with our neighbors to build healthier communities. By connecting research and communities, we create better health for all.

[uab.edu/medicine/obesity](http://uab.edu/medicine/obesity)

### **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)

Supported by grants from the NIH/NIMHD: 2P60MD000502-10, U54MD000502, U54MD008602

