

individual Black identity in adulthood. **METHODS/STUDY POPULATION:** We examined whether racial identity, as measured by the regard subsection of the Multidimensional Inventory of Black Identity (MIBI), was impacted by childhood trauma exposure and related to PTSD and depressive symptoms in a sample of pregnant persons (N= 215, Mage=27.5, SDage=5.3) who identified within the Black diaspora, seeking prenatal care at Grady Hospital in Atlanta, GA. The regard subsection of the MIBI determines extent to which individuals feel positively about membership within the Black group (private regard) and the extent to which they think others feel positively about the Black group (public regard). We assessed childhood trauma using Childhood Trauma Questionnaire (CTQ) and depression and PTSD symptoms with Edinburgh Postnatal Depression Scale, and PTSD Checklist for DSM-5, respectively. **RESULTS/ANTICIPATED RESULTS:** Public regard (pubR) and private regard (privR) were significantly negatively correlated with childhood emotional abuse, emotional neglect, and overall childhood trauma exposure (all p's.05). PrivR was significantly negatively correlated with both postpartum depression and PTSD symptoms (p **DISCUSSION/SIGNIFICANCE:** Ethnic-racial identity formation is a critical aspect of our psychological well-being, beginning in childhood and continuing across one's lifespan. Our findings suggest that childhood trauma impacts racial identity in persons of the Black diaspora, which may contribute to negative mental health outcomes, including PTSD and depression.

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Relationships between geospatial factors and adverse outcomes in Medicaid-enrolled children with asthma

Akilah Jefferson¹, Clare C. Brown², Arina Eyimina², Anthony Goudie², Mandana Rezaeiahari², Tamara T. Perry¹, J. Mick Tilford²
¹UAMS, ACRI ²UAMS, COPH

OBJECTIVES/GOALS: To determine the relationship between race/ethnicity, geospatial (place-based) social determinants of health (SDOH; rurality and child opportunity index (COI)), and asthma-related adverse events (AAE: hospitalizations, emergency department (ED) visits) among children with asthma in Arkansas. **METHODS/STUDY POPULATION:** Using the Arkansas All-Payer Claims Database, we conducted a retrospective analysis of children (5-18 years). Medicaid-enrolled children with, 1 asthma diagnosis (ICD-10 J45.xx) for any type of medical event in 2019 were included. Race/ethnicity were self-reported (non-Hispanic White, non-Hispanic Black, Hispanic/Latino). Due to small sample size, all other racial/ethnic groups were classified as Other. Rural-Urban Commuting Area (RUCA) codes were used to determine rural-urban designation using 4-category classification by zip code. COI level was determined by zip code (scale: very low- to very-high opportunity). AAEs were identified using 2019 medical claims. **RESULTS/ANTICIPATED RESULTS:** The cohort (n=25,198) included 38.7% White, 32.9% Black, 6.0% Hispanic, 5.1% Other, and 17.3% Missing race/ethnicity children. Overall, 61.2% live in rural and 38.8% live in urban areas. Among rural children, 33.1% were in very-low, 34.4% low, 20.8% moderate, 11.6% high, and 0.1% very-high opportunity areas. Among urban children, 32.6% were in very-low, 12.4% low, 17.5% moderate, 19.5% high, and 18.0% very-high opportunity areas. Overall, Black children more frequently lived in very-low or low opportunity areas (75.4%). Among rural children, 9.3% had an AAE. White children had highest rates of AAE. Overall, AAE rates were variable by rurality/urbanity and COI

level. **DISCUSSION/SIGNIFICANCE:** Differences in asthma outcomes by race/ethnicity, rurality, and COI level were unexpected, with similar rates of poor outcomes across the cohort. These findings underscore the complexity of the relationships between race/ethnicity, geospatial SDOH, and asthma outcomes.

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Relationships Between Self-Perceived Risk of HIV, Behavioral Risk of HIV, and Self-Reported Pre-Exposure Prophylaxis (PrEP) Utilization Among Young Men Who Have Sex with Men of Color at Risk for HIV Infection: Findings From a Prospective Cohort Study

Jonathan Warus¹, Marco A. Hidalgo², Carolyn Wong¹, Johanna Olson-Kennedy¹

¹Children's Hospital Los Angeles ²University of California Los Angeles

OBJECTIVES/GOALS: To improve our delivery of HIV prevention services by evaluating associations between self-perceived risk of HIV, objective risk for HIV based on sexual risk, and self-reported lifetime PrEP use. This will expand our current understanding of an essential component of decision making for PrEP uptake in young men who have sex with men (YMSM). **METHODS/STUDY POPULATION:** The population consists of participants in the Healthy Young Men (HYM) observational cohort study (16-24-year-old YMSM of color at risk for HIV in Los Angeles). Secondary analysis was conducted using an existing data set to test associations between self-perceived risk of HIV, behavioral sexual risk, and self-report of lifetime PrEP use at baseline. **RESULTS/ANTICIPATED RESULTS:** The HYM cohort consists of 397 HIV-negative young men who have sex with men from Los Angeles; 21% identify as African American/Black, 59% as Latinx, and 20% as multiethnic. Of these participants, 90% were aware of PrEP and 86% were eligible for PrEP according to CDC behavioral risk criteria; however, only 23% had ever been prescribed PrEP. We hypothesize that those who have utilized PrEP will report higher self-perceived risk of HIV infection and will have stronger correlation between self-perceived and objective risk for HIV. Associations will be tested using appropriate chi-square tests. **DISCUSSION/SIGNIFICANCE:** Self-perceived risk of HIV is proposed as a strong predictor of engagement in HIV prevention. This has been widely understudied in youth in the context of accessing PrEP. A better understanding of the role of self-perceived risk is essential to create and improve interventions to increase PrEP uptake as well as to improve PrEP service delivery for youth.

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Researcher and Stakeholder Partner Perspectives on Engaged Research During the COVID-19 Pandemic

Mary E. Grewe¹, Simone Frank¹, Laura Villa Torres^{1,2}, Milenka Jean-Baptiste^{1,3}, Alicia Bilheimer¹, Alexandra F. Lightfoot^{1,3}

¹North Carolina Translational and Clinical Sciences Institute, University of North Carolina, Chapel Hill, NC ²Public Health Leadership Program, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC ³Department of Health Behavior, Gillings School of Global Public Health, University of North Carolina, Chapel Hill, NC

OBJECTIVES/GOALS: We sought to explore how the COVID-19 pandemic impacted community and stakeholder engagement in

research from both researcher and stakeholder partner perspectives and to identify challenges, strategies, and other facilitators affecting their experience, including those related to virtual engagement. **METHODS/STUDY POPULATION:** We conducted semi-structured interviews with ten researchers and eight stakeholder partners who conducted or collaborated on stakeholder-engaged health research during the COVID-19 pandemic (March 2020 onwards). Potential participants were identified purposively and through snowball sampling. Interviews were conducted via Zoom, recorded, and transcribed for analysis. The transcribed data were qualitatively analyzed through an iterative process involving memoing and consensus coding using inductive and deductive codes. We reviewed memos and code reports to identify and describe key categories and themes. **RESULTS/ANTICIPATED RESULTS:** The challenges and facilitators identified varied based on factors such as geographic scope of the partnership (local vs national) and previous engagement type (virtual vs in-person). Many challenges were related to virtual engagement, such as dealing with distractions, limited access to Internet, or difficulty forming relationships online, or to wellbeing and personal circumstances, such as feeling burnt out, managing increased caregiving responsibilities, or concern about risk of illness if conducting in-person activities. Facilitators identified included having strong existing partnerships, utilizing strategies to enhance virtual engagement, adapting activities to manage risk of in-person interactions, and showing support to stakeholder partners. **DISCUSSION/SIGNIFICANCE:** By better understanding challenges and facilitators affecting experiences of both researchers and stakeholder partners engaging in research during the COVID-19 pandemic, we can develop strategies and resources to better support research partnerships during future health emergencies.

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RESPECTFUL CLOSURE OF A CEnR DNA INTEGRITY STUDY

Martha Arrieta¹, Frederick P. Whiddon², L. Lynette Parker¹, Frederick P. Whiddon², Erica Sutherland¹, Frederick P. Whiddon², Robert W. Sobol³

¹Center for Healthy Communities ²College of Medicine, University of South Alabama ³Brown University, Department of Pathology and Laboratory Medicine and Legorreta Cancer Center

OBJECTIVES/GOALS: Methods for recruitment and retention of participants in research have been extensively discussed, but procedures to end studies in a way that is respectful to participants and keeps them engaged are seldom described. We relate the procedures to close a study focused on genomic DNA damage and DNA repair capacity in a longitudinal population sample. **METHODS/STUDY POPULATION:** Data collection, which included the provision of 30 ml blood sample along with a health status survey and anthropometric measurements, was discontinued earlier than anticipated during the fourth of a five-year Community Engaged Research (CEnR) study focused on residents of historically marginalized, low wealth communities. In collaboration with the project's Community Advisory Board, we devised a strategy to inform study participants of the study closure, which included: 1) attempts at one-on-one contact via phone, 2) provision of a study closure packet, 3) periodic mailing of study updates through study year five, 4) sustained interaction with participants through invitations to participate in

additional research projects. **RESULTS/ANTICIPATED RESULTS:** Among 149 participants (65% female, 99% of African American descent), 106 (71%) have been reached by phone. The communication included: 1) expressions of gratitude for their participation; 2) explanation of study findings to date; and 3) assurance that data analysis continued. Among those reached, 96% agreed to ongoing communication and 97% agreed to be contacted about future studies. We continue procedures to reach the remaining 43 participants. Over the study closure period, two qualitative studies offered opportunities for participants to join in focus groups (FG). The first one queried perceptions of community-based research. The response rate was 66% among 65 persons invited. The second study, focused on COVID-19 knowledge and invited 39 individuals with 24 scheduled to participate (62% response rate). **DISCUSSION/SIGNIFICANCE:** Translational research views the participant as an active partner. Study closure offers an opportunity to foster a long-lasting participant-research institution partnership, while also promoting participants' broad engagement and familiarity with research. Respectful research closure is an important step in CEnR.

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Sex Differences in Cardiac Damage in Aortic Stenosis

Sharanya Mohanty¹, Benjamin S. Wessler²

¹Tufts University ²Tufts Medical Center

OBJECTIVES/GOALS: Sex differences in aortic stenosis (AS) are vastly underestimated, contribute to disparities in treatment and worse outcomes for women including disproportionately higher mortality rates. This study aims to investigate sex differences in extent of cardiac damage (CD) from pressure overload in AS that may help account for the observed disparities. **METHODS/STUDY POPULATION:** CD in AS refers to a series of pathologic changes in the myocardium that occur due to chronic pressure overload imposed on the left ventricle by a progressively stenotic aortic valve (AV). These changes are associated with poor outcomes and lower survival in patients with AS. To acquire a deeper understanding of the factors and mechanisms affecting differences in the long-term survival and management of patients with AS, we are proposing to assess baseline stage of CD on echocardiography, and changes in transvalvular hemodynamics and CD stage (I^o CD) over time, in patients with moderate and severe AS at one of 2 large tertiary-care hospitals in MA. We also plan to assess time to and performance of aortic valve replacement (AVR), stratified by hemodynamic severity of stenosis and CD stage, and their interaction with sex. **RESULTS/ANTICIPATED RESULTS:** We hypothesize that women will have a higher stage of CD on their initial echocardiogram (TTE), demonstrating moderate or greater severity of AS, than men with the same hemodynamic severity of valvular stenosis. We additionally hypothesize that those with more advanced cardiac damage stage will likely have masking of transvalvular progression on echocardiogram. Finally, we anticipate that women will have AVR performed less frequently than men and will have minimal improvement in their Kansas City Cardiomyopathy Questionnaire (KCCQ) scores post-AVR indicative of more heart failure symptoms and a lower quality of life. **DISCUSSION/SIGNIFICANCE:** This study will seek to better understand sex-based differences in extent of cardiac damage to pressure overload in aortic stenosis (AS) to minimize treatment and outcome disparities for women and allow for more individualized and patient-centered care.