and underrepresented communities' participation in clinical trial research is low. Lack of information has been proposed as a barrier to clinical research enrollment of minoritized populations. METHODS/STUDY POPULATION: Brain Train, a cluster randomization trial, evaluated the role of education in increasing willingness to participate in research. A 3 segment program was developed whereas segment 3 had two versions: clinical trial education or healthy brain aging video. Brain Train was presented to multicultural communities with participants of at least 50 y/o throughout WNY. The primary outcome measure is evaluating the percent change in responding yes to would you be interested in participating in a clinical trial? before and after segment 3. The secondary outcome measure and exploration of barriers are measured by a Research Attitude Questionnaire. Demographic information such as age, race, gender, socioeconomic status, and educational attainment is collected. The statistical model is a generalized linear mixed model. RESULTS/ANTICIPATED RESULTS: Sixteen sessions with 281 participants were completed to generate the pilot dataset. We see 59.29 % of individuals answered yes before segment 3 and 46.02% answered yes after the educational intervention. Our data shows there is a 13.3% decrease in clinical trial participation interest after the educational intervention. Through our RAQ responses, our data shows significance when it comes to our participants'answers to questions regarding society needing to devote more resources to medical research (p=0.04). Trust emerged as the most significant barrier when it comes to one's willingness to participate in medical research and clinical trials (p=0.03). DISCUSSION/SIGNIFICANCE: Our preliminary results from the first sixteen events suggest that the power of education is not sufficient to overcome barriers to clinical trial participation for underrepresented communities. Instead, trust appears to be the most significant barrier. Trust building strategies should be explored to answer this research question.

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Effects of institutional racism on social determinants of heath and increased rates of mortality and morbidity amongst premature infants born to Black mothers

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OBJECTIVES/GOALS: Premature birth and its complications are among the largest contributions to infant death within the US. The rates of premature birth and infant death are significantly higher among African Americans. Therefore, there is an urgent need to understand the biological and social drivers of this health disparities to improve birth outcomes. METHODS/STUDY POPULATION: This is a retrospective cohort study of premature infants (< 28 weeks estimated gestational age, birth weight < 1500g) born within 2018 and 2021 to mothers who identify as either African American, or White/Caucasian Non-Hispanic and are cared for at Saint Louis Children's Hospital Neonatal Intensive Care Unit. EPIC collected data will include maternal and fetal factors and social determinants of health (SDOH). ICD-9, ICD-10 codes for primary outcomes include grade 3-4 Interventricular Hemorrhage, moderate-severe Bronchopulmonary Dysplasia, Stage 2+ Necrotizing Enterocolitis, and moderate-severe Retinopathy of Prematurity. Will develop a composite variable score using the SDOH for risk/no risk using that

for each disease outcome and mortality. Will use Chi-square test or T-test to compare groups. RESULTS/ANTICIPATED RESULTS: We are currently in the data collection phase of the study, but we anticipate seeing an increase in risk of all-cause morbidity as well as all-cause mortality for infants born to Black mothers compared to infants born to White mothers. We anticipate higher levels of disadvantage (increased area deprivation scores) and lower access to the goods and services deemed necessary for appropriate care of Black mothers and subsequent relation to outcomes for their infants. DISCUSSION/SIGNIFICANCE: Following analysis and assessment of that analysis we will discuss these findings and the impact on the general population and the needs for improvement and implementation of interventions upstream in the care of the vulnerable and special mother-baby-dyad population.

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Enhancing Engagement of Nursing Home Staff and Leaders in Intervention Development

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OBJECTIVES/GOALS: Recruiting under-resourced, rural nursing home (NH) staff to clinical research has proven especially difficult during COVID-19. The goal for this study was to leverage an existing group of NH providers to seek their opinions on the development of a novel person-centered risk management intervention for residents with dementia. METHODS/STUDY POPULATION: This study used community engagement studios (CES) to connect and engage with community experts (NH staff and leaders) attending, or in close vicinity to, a NH provider conference in Denver, Colorado July 25-30, 2022. Led by an experienced moderator and an assistant moderator using a semi-structured discussion guide, two CES were completed with 14 community experts. Community experts took part in a 90-minute facilitated and recorded discussion to gain their perspectives on the DIGNITY (Decision-making in aging and dementia for autonomy) study procedures and instruments along with recommendations for how to improve the acceptability, feasibility, and likelihood of intervention success. The local IRB determined this study to not be human research. RESULTS/ANTICIPATED RESULTS: Community experts most often identified as white/Caucasian (64%) females (93%) holding jobs in NHs as direct-care nurse/nursing aide (n=5), nurse supervisor/director (n=4), other NH leadership (n=3), nursing aide union organizers (n=2), and state surveyor (n=1). The primary outcomes of the CES were suggestions that could be used to adapt the elements of the study design. Following CESs, transcripts were reviewed and summarized on a rapid feedback table. The study team made changes to five of the six intervention elements based on expert feedback. Most experts (79%) agreed that the DIGNITY intervention was acceptable, appropriate, and feasible to implement in the NH community. DISCUSSION/SIGNIFICANCE: This study highlighted the voices of NH staff and leaders that is often underrepresented in research development and provides critical information for how to adapt a novel intervention for future testing in rural NH communities. Results also support the usefulness of CES as a method to develop practical interventions in NH communities.