

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**

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**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**

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**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<sup>st</sup> 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.