

ART and persons without HIV (PWOH). Specifically, we expect greater declines in muscle strength, grip strength/BMI, gait speed, and overall physical function in the INSTI group. Furthermore, we predict that the INSTI group will show increased frailty markers, such as unintentional weight loss, weakness, and slow walking speed, over time. These findings could highlight a critical need for monitoring physical health in PLWH on INSTIs. **DISCUSSION/SIGNIFICANCE OF IMPACT:** PLWH may experience sarcopenia and frailty earlier than those without HIV, and INSTIs might contribute. Given their widespread use, it is essential to assess the link to improve prevention and care strategies for those affected.

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### Human-centered design research: A Blueprint for community engagement

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**OBJECTIVES/GOALS:** Now in its 10th year, Research Jam, Indiana CTSI's Patient Engagement Core, has proven to be an effective approach to patient engagement, foregoing generalized CABs for study-specific groups, personally invested in the research. Here we share our methods to benefit CTSAs seeking deeper engagement. **METHODS/STUDY POPULATION:** Research Jam is unique from patient engagement efforts in other CTSAs in almost every aspect. The composition and background of our team, the methodology to our practice and often our outcomes. This poster will use 10 years of projects, publications, and participant evaluations to explore our approach both quantitatively and qualitatively to see how it has contributed to the Indiana CTSI's commitment to community engagement. **RESULTS/ANTICIPATED RESULTS:** We will present quantitative data from 10 years of participant evaluations illustrating that Research Jams are received positively by those that attend, and qualitative analysis of the evaluations around themes of feeling heard, valued, and integral in research. By finding themes in evaluations across 10 years of studies, with different topics, different population types, and different investigators, we can speculate on what aspects of our approach appeal to the community, contribute to their positivity toward research and researchers, and could be reproducible in other CTSAs. **DISCUSSION/SIGNIFICANCE OF IMPACT:** We use "blueprint" instead of "toolkit" when describing our process, as we hope others can see this not as a tool to fix a problem, but a plan to be iterated on in agreement with the community that will benefit from it. The relationships researchers need to build with communities are not cookie cutter neighborhoods, but rich, colorful and vibrant ones.

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### The role of psychological factors impacting expecting mothers' meal delivery intervention engagement

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**OBJECTIVES/GOALS:** Nearly 42% of adults in the USA have obesity; women are disproportionately affected. Women with obesity that become pregnant are especially prone to developing health condition; thus, aid is needed to achieve appropriate gestational weight gain (GWG). GWG interventions would benefit from examining the

effects of social support and stress has on GWG. **METHODS/STUDY POPULATION:** The proposed study will examine whether expecting mothers' social support predicts their perceived stress. Also, examine whether receiving aid, in the form of weekly meal delivery, changes perceived stress. Lastly, this study will explore if social support mediates the relationship between meal delivery and perceived stress. The study will use data gathered from a pilot GWG intervention focused on providing pregnant women weekly meal delivery. Participants (N = 14) will complete 2 visits at 16–20- and 35–36-weeks gestation, while receiving weekly meal deliveries. Data from both visits will be used for the purpose of this study. Women's social support will be measured using the Multidimensional Scale of Perceived Social Support. While stress will be measured via the Perceived Stress Scale. **RESULTS/ANTICIPATED RESULTS:** Previous behavioral weight loss studies have found that individual who endorse experiencing social support report less perceived stress. Although the relationship has seldomly been examined in pregnant women, similar results are anticipated. Often aid, such as meal delivery, can impact perceived stress and is likely to cause a positive change. To our knowledge, this is the first study to explore whether social support mediates the changes in perceived stress after receiving weekly meal delivery. Therefore, there is no known literature to suggest anticipatory results. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Few studies have examined the association between social support and perceived stress in pregnant women. This study will examine the effects social support has on a pregnant women's stress. The proposed study will aim to identify if meal delivery changes perceived stress. If so, the study will explore if perceived social support mediates this change.

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### Harnessing the power of the participant perspective: CCTST's Research Participant Advisory Group

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**OBJECTIVES/GOALS:** The Research Participant Advisory Group (RPAG) was born out of the concept that, by creating a structured way for researchers to collaborate with research participants and/or community, we can improve, grow, and support clinical/research-based research, from design to dissemination. Three distinct groups exist across our Academic Health Center (AHC). **METHODS/STUDY POPULATION:** The RPAG has 3 groups: The Cincinnati Children's Hospital Research Participant Advisory Council (CCHMC RPAC) addresses clinical research needs, such as research design, recruitment, and consenting. Adult/youth research participants and family members (n = 21) provide feedback about how to improve a research process, form or other research tool. In Cincinnati's underserved West End, the West End Community Research Advisory Board (WE C-RAB; n = 18) focuses on the needs of underserved minority groups and supports researchers wishing to do community-based research. The newly formed University of Cincinnati RPAC (UC RPAC; n = 17) addresses the UC research needs. All groups meet monthly and are offered a meal and incentive. All members have received training in the responsible conduct of research. **RESULTS/ANTICIPATED RESULTS:** Over 70 researchers have brought research challenges to the RPAG groups over the last 8

years, leading to improved consent forms, more targeted recruitment, clearer language and a more streamlined screening process. RPAG member surveys indicate a greater understanding of clinical research challenges, critical health issues, and how research can benefit them. The WE C-RAB has improved community recruitment efforts, as well as survey and study design. Researchers highlight the importance of feedback in creating greater study participant engagement, indicating deeper understanding of the community/participant perspective and how to work “with” community. Ongoing WE C-RAB-faculty partnerships have led to at least 3 federally funded grants. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The 3 RPAGs provide the versatility to meet the needs of the diverse research spectrum across the AHC. This includes the type of research as well as the level or degree of participant/community engagement needed. RPAGs create greater connection and understanding leading to better participant experiences and the promise of better health outcomes.

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### **Feasibility of building a community-based gardening initiative**

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**OBJECTIVES/GOALS:** Community gardening can foster healthy behaviors among low-income communities. This project aimed to develop a community garden. The primary objectives of this project are (1) assessing the need for and perspective on a community garden at the childcare center, (2) installing the garden, and (3) engaging children in gardening education. **METHODS/STUDY POPULATION:** This project took place at a childcare center in Harrisburg, PA. Most (74.6%) residents identified as Black or Hispanic/Latino. Every child at the center was eligible for free or reduced lunch. A listening session was held with directly impacted community members to discuss the need for a community garden. Four caregivers, 1 early childhood educator and a master gardener ( $n = 6$ ) attended the listening session, in which they shared their personal strengths and challenges in growing food. Attendees provided suggestions on what foods they wanted to grow. Children enrolled in the center's summer program ( $n = 50$ ) were then invited to participate in weekly gardening activities for 9 weeks. Activities were targeted to preschoolers (3- to 5-year-olds). Older children enrolled in the summer program were welcome to participate. **RESULTS/ANTICIPATED RESULTS:** Feedback from the listening session was positive. Attendees provided ideas on what to grow and shared interest in expanding the garden to the broader community. Project staff installed four garden beds and planted a variety of herbs (basil, mint, and lavender), fruits (strawberry and melon), and vegetables (tomato, squash, pepper, and onion). Roughly 20–50 children were engaged in the garden each week. Eight weeks into the project, one member from the broader community noticed the garden's growth and expressed gratitude to the staff, stating “I saw you when you first started planting. This is great what you are doing for the kids.” Children and the center's staff responded positively to the activities. The staff expressed verbal gratitude for the project and were enthusiastic about maintaining the garden. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Developing a community garden was feasible in this sample and shows potential to (1) increase

children's food literacy and vegetable acceptance and (2) bridge the gap from farm to early childcare education. The project's success paves way for future gardening initiatives that address food access issues within other diverse low-income populations.

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### **Assessing feasibility of including participants in user experience (UX) design for genetic testing digital education platform (Genesis Ai)**

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**OBJECTIVES/GOALS:** The study is designed to co-develop a genetics education digital platform with community participants. Diverse populations, especially African American communities, are less likely to participate in genetic testing and clinical trials. To increase participation and community input, we want community participants across Louisiana. **METHODS/STUDY POPULATION:** A cross-sectional, mixed-methods study will be conducted to assess interest in learning about genetics through a digital education platform and to adapt the platform based on participant feedback. Specific Aim 1 will be achieved by recruiting a diverse cohort and collecting demographic data to identify participants' characteristics. For Specific Aim 2, 35 community participants will be enrolled as a co-design team to complete 5-week educational modules. Feedback from focus groups will guide iterative platform refinements, ensuring the platform is culturally tailored and user-friendly. **RESULTS/ANTICIPATED RESULTS:** For Specific Aim 1, we anticipate that the majority of participants will express interest in learning about genetics through the digital platform, with demographic data revealing a diverse participant pool, predominantly from African American and Hispanic communities. For Specific Aim 2, we expect that all 35 co-design team members will complete the 5-week modules. Feedback from the focus groups is anticipated to highlight the need for more user-friendly navigation, culturally tailored content, and enhanced visuals. These insights will guide the refinement of the digital platform for improved engagement and accessibility. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This study addresses a critical translational barrier – underrepresentation of African descended communities in genetic testing. By developing a culturally tailored, digital platform to engage these populations, the project aims to reduce health disparities, enhance genetic literacy, and foster inclusivity in genomic research.

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### **Assessing the effects of balance training on executive functions and BDNF biomarkers in Alzheimer's disease patients**

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**OBJECTIVES/GOALS:** As the aging population increases, maintaining cognitive and physical health becomes crucial. Executive functions (EF), including reaction time, sustained attention, and spatial memory, are essential for daily life and independence in older