

adolescent-focused design methodology at every step of the design process, we will ensure that all materials are attractive and engaging to our younger target audience. Exposing children to accessible information about clinical trials at a young age allows us to build their trust in the research process prior to the possible internalization and acceptance of cultural misconceptions. Over time, we hope to see a change in attitudes toward clinical research as well as increased participation, whether from under-represented groups or a younger demographic, and positively contribute to T3 and onwards in the translational continuum. **DISCUSSION/SIGNIFICANCE:** In a rapidly changing world, the best approach to making change is through targeting the younger demographic, the leaders of tomorrow. Our project will allow adolescents to foster a more well-rounded opinion of clinical research, increasing their participation and better paving a more positively received future for translational science as a whole.

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### Exploring facility level differences in medication-based treatment of OUD

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**OBJECTIVES/GOALS:** Medications to treat opioid use disorder (mOUD) are available and can save lives, but are underutilized. We hypothesize that the rate of prescribing varies by treatment facility and these differences will shed light on barriers and facilitators to mOUD utilization. **METHODS/STUDY POPULATION:** We performed an exploratory analysis in MD Clone, a platform which generates non-identifiable synthesized data based on real patient data in the electronic health record (EHR) of St. Louis based hospitals. Our query included adults aged 18-70 with an OUD diagnosis using ICD-9 of -10 codes (opioid abuse, opioid dependence, opioid poisoning, opioid withdrawal) occurring between 2013 and 2022 along with prescriptions for buprenorphine, methadone, or naloxone within 7 days of the condition being entered in the record. We compared the rate of medication prescription within 7 days across settings and facilities where the patients were seen. We propose to replicate this analysis in actual patient records from the EHR following IRB approval. **RESULTS/ANTICIPATED RESULTS:** Our synthetic data comprised 24600 patient diagnoses. After filtering for patients seen in the ER or inpatient 16235 patients remained in the data set. Of these, 4376 fell into one of the categories that clearly warrant treatment with medication. Out of 4376 patients with a qualifying OUD related condition, only 815 (18.6%) received a prescription for any of the medications. Rates of prescribing within facilities varied between 67.2% of eligible patients receiving a prescription at a rural location to 0% at some urban centers. We anticipate similar findings from analysis of patient records obtained from the EHR. We will extend our analysis to explore factors which may be driving the wide difference in prescribing to better understand barriers and facilitators to mOUD utilization. **DISCUSSION/SIGNIFICANCE:** We identify under-utilization with differences across facilities in prescribing mOUD based on preliminary work in synthetic data. If true, this represents a gap in care and opportunity for intervention. By replicating the MD Clone results in patient data from the EHR we will confirm this finding and increase acceptability to clinicians.

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### Exploring stress and inflammation in young children with type 1 diabetes

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**OBJECTIVES/GOALS:** The purpose of this mixed methods project was to gain a comprehensive understanding and generate data on factors, including stress and inflammatory biomarkers, that may negatively impact glycemic levels in children aged 8-12 years with type 1 diabetes (T1D) from underrepresented backgrounds. **METHODS/STUDY POPULATION:** This study employed a two-phase sequential QUAN -> qual mixed methods design. Children and their parents were recruited from a pediatric endocrinology clinic in the southeastern United States. In phase 1 (n=34), we used quantitative methods to measure perceived stress, diabetes distress, cortisol, inflammation (IL-1b, IL-2; IL-6; IL-8; TNF-a; CRP), and glycemic level (HbA1c). Both children and their parent/guardian completed surveys, and children provided salivary and blood samples to measure cortisol and inflammatory markers. Phase 2 qualitative interviews in a subset (n=20) of children and parent/guardians from phase 1 are ongoing; preliminary findings will be included in the presentation. **RESULTS/ANTICIPATED RESULTS:** Mean age of children was 10.47 (sd=1.44), 67.6% were male, and 41.2% were black. HbA1c ranged from 6.8%-15% and only 2 (5.8%) children met ADA recommendations for HbA1c of 7% or less. HbA1c was associated with child reports of perceived stress ( $r = .403, p < .05$ ), but not parent reports of child perceived stress ( $r = -.011, p > .05$ ). Parent reports of perceived stress and diabetes distress in children were not significantly associated with child self-report of perceived stress ( $r = .11, p > .05$ ) or diabetes distress ( $r = .018, p > .05$ ). Exploratory models with PROCESS suggest that cortisol slope and IL-8 moderate the relationship between child's perceived stress and glycemic control. **DISCUSSION/SIGNIFICANCE:** Stressors are emerging that are unique to this population and may help highlight disparities in care. While the study is ongoing, findings may help health professionals identify and mitigate stressors in children with T1D to help maintain optimal glycemic levels.

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### Exploring the role of maternal exposure to violence in post-partum weight retention among WIC program participants in Puerto Rico

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**OBJECTIVES/GOALS:** Evaluate if exposure to violence is associated with post-partum weight retention among WIC participants, which can lead to overweight/obesity due to metabolic adaptations

associated to new adapted weight. If confirmed, it would highlight the need for revision of screening for violence exposure as social determinant of health among participants. **METHODS/STUDY POPULATION:** Nested cohort study among women enrolled in the Baby Act Trial (BAT) who have been enrolled to the active study phase and completed the Accountable Health Communities Health Related Social Needs survey from the Centers for Medicare & Medicaid services as the source of evidence of exposure to violence. BAT recruitment engaged women in their third trimester who were active participants of the Puerto Rico Women, Infants and Children Program (PRWIC), and planned to enroll their infant in the program. Anthropometric measures were documented at the following time points: prior to pregnancy, at delivery, and 12 months post-partum. Of the 530 women recruited to the study, 291 have completed study measures for inclusion into this exploratory analysis from this ongoing trial. **RESULTS/ANTICIPATED RESULTS:** A Total of 301 participants have met the criteria for inclusion in this preliminary analysis. Mean age among mothers was 26.5 years (SD 5.3), 46.6% had High School level education attainment or less, and 43.3% were actively working at the time of recruitment. Twelve percent of participants had BMI above 35 at 6 months post-partum, while the prevalence of violence exposure was reported as follows for each type of encounter: 3.3% responded yes to physical violence by friends of family, 9.7% reported exposure to insults or inappropriate treatment by any person including family or friends, 2% having been threatened by anyone including family or friends, 6.3% reported having been yelled/cursed at or insulted by anyone including family or friends. Even more concerning is that 7.5% reported severe social vulnerability. **DISCUSSION/SIGNIFICANCE:** Results reveals importance of providing integrated care in social assistance program. Participants belongs to vulnerable population with social determinants of health that affect the health care they receive. It shows that providing nutritional assistance it's not enough to being healthy because other components also play a role in overall health.

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### **Feasibility and Anticipated Acceptability of Community Health Worker-facilitated HPV Self-sampling**

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**OBJECTIVES/GOALS:** This community-engaged study explores Community Health Workers (CHWs), perspectives on i) barriers to cervical cancer screening and ii) the acceptability and feasibility of CHW-facilitated HPV self-sampling as a means of reducing existing cervical cancer disparities. **METHODS/STUDY POPULATION:** Semi-structured in-depth interviews were conducted with 15 CHWs in 2021 to gain insights into barriers to cervical cancer screening and the acceptability and feasibility of CHW-facilitated self sampling in their communities. Recruitment began in Lake County then expanded to East Chicago after initial interviews revealed that some community members seek care in this area. An IRB approved email was sent out to community partners' mailing lists inviting CHWs to join a 30–60 minute interview. Participants received a \$25 electronic gift card as compensation. Interviews were audio recorded, transcribed and then analyzed by the study team, using a combination of inductive and deductive coding. The Socio-Ecological Model was used as a guiding framework to analyze multilevel barriers and facilitators to screening. **RESULTS/**

**ANTICIPATED RESULTS:** CHW-facilitated HPV self-sampling shows promise of mitigating (without eliminating) several existing barriers to cervical cancer screening, with six key considerations. Privacy (for most), time saved, and comfort were perceived to be major facilitators for acceptability, with concerns about the novelty of this approach, trust in provider (as opposed to CHW) expertise, and lack of privacy at home (for some) emerging as barriers. In terms of feasibility, synergies with existing CHW work, and some community members' prior experience with self-sampling were found to be facilitators, with CHW's self-efficacy in providing adequate support and limited time constituting areas of concerns for feasibility. Considerations for adoption included CHW training, gender concordance, safety and respect, among others. **DISCUSSION/SIGNIFICANCE:** In light of national calls to engage CHWs in screening delivery and leverage self-sampling, this study provides CHW perspectives as key stakeholders on a screening model that directly engages them, providing insights that can inform successful implementation to increase screening in Lake County and similarly underserved contexts in the US.

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### **Filling the Gap: Perspectives from a long-standing Community Engagement Advisory Board on conducting community-engaged research that emphasizes the needs of communities**

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**OBJECTIVES/GOALS:** Community Engagement Advisory Boards (CEAB) serve as a vital resource for engaging and partnering with communities in research. The purpose of this project is to describe the perspectives of members of a long-standing CEAB in providing input and promoting research that aligns with the needs, experiences, and concerns of the communities they represent. **METHODS/STUDY POPULATION:** Three 90-minute focus groups were conducted with a subset of a CEAB (n=17) (M years spent with CEAB =7.3) affiliated with the Center for Clinical and Translational Science at the University of Illinois-Chicago. Members areas of expertise include perspectives from faith-based organizations, community organizing, public health and working with diverse populations. Transcribed audio recordings of the focus groups were coded using thematic analysis wherein two authors coded independently, followed by audited discussion and final consensus codes. Main themes were identified after reviewing final codes. **RESULTS/ANTICIPATED RESULTS:** CEAB members described the bi-directional nature of their role serving as a conduit between research institutions and their communities, identified strategies to promote research literacy in communities, called for researchers to take a proactive approach in forming and sustaining community partnerships, and helped identify opportunities to promote community engagement in more creative and feasible ways. Additionally, CEAB members identified perceived opportunities for the board as a whole to be more involved in Chicago communities to further their role as a liaison between the university and the community. **DISCUSSION/SIGNIFICANCE:** These findings may have implications for investigators to better address community priorities in research by understanding unique local realities as well as help other CTSA hubs' to leverage their communities' expertise.