

STUDY POPULATION: While the survey is based on the CDC Youth Risk Behavior Surveillance System (YRBSS), there was community need for an expanded survey and thus a workgroup was formed to create the Galveston Youth Risk Survey, including members from UTMBs Institute for Translational Sciences, a number of other UTMB departments and Centers, the Research, Education, and Community Health (REACH) Coalition, several school districts, Teen Health Clinic, and a variety of other community health organizations with vested interest. The survey was administered in November 2020 via ScanTron and REDCap to two local high schools with populations greater than 2,000. CDC guidelines for administration of the YRBSS were followed. **RESULTS/ANTICIPATED RESULTS:** A total of 2,428 students completed the survey from GISD and DISD. The survey provided insight into the following categories, with mental health emerging as a pressing issue, specifically stress and depression, particularly among females. All results are reported in several contexts, including comparisons by gender, grade, and ethnicity, a comparison to state and national statistics when available, as well as risk trends from previous surveys. Demographics Safety, including driving, violence, and bullying Mental Health: stress, depression, suicidal ideation, and ACEs Human Trafficking Substance Use, including smoking, alcohol, marijuana, and other drug use Sexual Behaviors, including contraceptive use Body Weight and Body Image Health Conditions Home Life: Support and Security **DISCUSSION/SIGNIFICANCE:** The report has been presented to the school districts, immediate stakeholders, REACH membership, and the general public. Several presentations have been given to groups to report the findings. Workgroups will now be formed to address the needs of our students, as well as a possible follow-up survey to look at data specific to COVID-19 and mental health.

126

How Weight Stigma Affects Weight-Related Health in Adolescents and Young Adults: Public Health Research with Implications for Translation into Clinical Practice

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OBJECTIVES/GOALS: Weight stigma, or discrimination and devaluation of people due to high body weight, is associated with higher prevalence of concerning health consequences (e.g., depressive symptoms, body dissatisfaction). This public health research investigated how experiencing weight stigma affects weight-related health outcomes in a cohort of young people. **METHODS/STUDY POPULATION:** 1,534 Project EAT 2010-2018 participants were surveyed as adolescents (mean age=14.4 years) and eight years later as young adults (mean age=22.2 years). Participants were asked how often they were teased about their weight. Outcomes included body mass index (BMI), nutrition habits (intake of breakfast, fruit, vegetables, sugar-sweetened beverages, fast-food), sedentary/activity behaviors (moderate-to-vigorous physical activity, screen time, sleep duration), and disordered eating behaviors (unhealthy weight control behaviors, extreme weight control behaviors, dieting, chronic dieting, overeating, binge eating). Regression models were adjusted for BMI, sociodemographic characteristics, and, in longitudinal models, the outcome assessed at baseline. **RESULTS/ANTICIPATED RESULTS:** Experiencing weight stigma was cross-sectionally significantly associated with higher BMI, shorter sleep duration, and higher prevalence of all six disordered eating behaviors during both adolescence and young adulthood. It was also significantly associated

with longer screen time in adolescence, and with lower breakfast frequency, higher intake of sugar-sweetened beverages, and higher intake of fast-food during young adulthood. Weight stigma in adolescence significantly predicted higher BMI and higher prevalence of overeating and dieting in young adulthood. For example, adolescents who were teased about their weight had a higher mean BMI (28.2 kg/m² [95% confidence interval: 27.8-28.7]) in young adulthood compared to those who had not been teased (26.4 kg/m² [95% confidence interval: 26.1-26.8]). **DISCUSSION/SIGNIFICANCE:** Findings add to the growing body of evidence that weight stigma may pose a threat to weight-related health. Because many clinicians are unaware of this evidence and healthcare settings are common sources of weight stigma, next steps include writing a research proposal that aims to decrease weight stigma conveyed to patients in clinical practice.

127

Reciprocal Innovation Workshops: Identify Shared Health Challenges for Mutual Benefit in Global Health

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OBJECTIVES/GOALS: Our concept of reciprocal innovation (RI) supports global health (GH) research partnerships that address shared health challenges for mutual benefit in both high and low- and middle-income (LMIC) settings. To advance this GH approach, the Indiana CTSI launched a RI program building on longstanding global health partnerships in East Africa **METHODS/STUDY POPULATION:** A core component of the program is annual RI workshops to promote reciprocal approaches in GH, identify priority areas for reciprocal research, and link investigators and stakeholders across settings. The first meeting in 2019 was in-person and focused on identifying health priority areas from the perspective of Indiana stakeholders. The second meeting was held virtually and focused on priority areas in East Africa. The third meeting focused on shared priority areas and discussing potential RI research projects. Agenda sessions include (1) presenting successful examples of funded RI projects; (2) breakout groups to share proposal ideas in preparation for the RI grants program; (3) building partnerships with colleagues in similar fields **RESULTS/ANTICIPATED RESULTS:** As of 2021, three RI workshops have been held with an average of 60 attendees at each workshop. Participants identified several overlapping priority areas for research and RI in Indiana and East Africa, including research in chronic disease, substance abuse, infant and maternal health, and access to healthcare. A Global Health Innovation Exchange of RI projects was created to support connections between locally- and globally-focused investigators. The repository is used to share updates on project progress, outcomes, and published materials. Workshops have also been used to explore a reciprocal innovation virtual platform to facilitate and foster more regular collaborations between globally and locally-focused investigators and pursue research projects on shared health challenges for mutual benefit **DISCUSSION/SIGNIFICANCE:** The collaboration at the stakeholder meetings set the foundation for continued partnership building, strong proposals for RI grants, and dissemination and translation of successful RI projects. To leverage momentum from

the meetings, we are building a virtual RI platform to connect PIs across multiple CTSA's and increase the footprint of RI efforts

128

Creating a data repository of sociomic factors to further characterize clinical outcomes and disease progression in patients with asthma

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OBJECTIVES/GOALS: To assemble publicly-available, proprietary, and geocoded datasets about social, environmental, behavioral, and psychological exposures experienced by children with asthma, to provide a technical overview of data aggregation, management, and integration processes utilized, and to build predictive models using sociome and clinical data. **METHODS/STUDY POPULATION:** Publicly-available data involving census information, crime, green space, building permits, vacant and abandoned buildings, traffic (City of Chicago data portal), pollution and weather (National Oceanic and Atmospheric Administration), and noise (Array of Things project) were assembled. We placed a local instance of the Pelias geocoder on the UChicago Center for Research Informatics HIPAA-compliant infrastructure. The UChicago Clinical Research Data Warehouse will be leveraged to obtain clinical information for children diagnosed with asthma at UChicago Medicine between 2007 and 2021. The address of each child will be subjected to geocoding, and this information will be aligned with imported sociome data. A model will be built to account for each sociome elements contribution to asthma outcomes. **RESULTS/ANTICIPATED RESULTS:** Here we are creating sustainable and scalable ways for collecting, standardizing, and sharing real-world sociome data, simultaneously linking those data back to patient information. With this work, we aim to demonstrate feasibility of a data-commons-as-a-service for clinical and sociome data and to provide technical specifications and descriptions of processes employed. Creating generalizable and scalable infrastructure to support research of social and environmental impacts on clinical outcomes is critical, and our work will provide a framework to be used in other disease states. Further, this infrastructure will facilitate the application of advanced analytical tools and visualization platforms to accelerate the study of diseases and lead to new insights into factors influencing outcomes. **DISCUSSION/SIGNIFICANCE:** Beyond focusing on and treating biological mechanisms of disease, advancing health also requires addressing adverse consequences of sociome factors on clinical outcomes. We describe an innovative process to comprehensively codify and quantify such information in a way suitable for large scale co-analysis with biological and clinical data.

130

Examining the Role of Community Engagement Studios & Community Experts in Translational Research: A Thematic Analysis

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OBJECTIVES/GOALS: 1. Describe the importance of community engaged research. 2. Explore the impact of participating in

Community Engagement Studios from the perspective of the community expert. 3. Explain how Community Engagement Studios can positively impact clinical and translational sciences. **METHODS/STUDY POPULATION:** Stakeholders who participate in CE Studios are defined as community experts (CEs); care-givers, patients, researchers, etc. They are not classified as research participants, but rather consultants, who are designated with the task of providing input on the specified research study. CEs were recruited in a variety of formats such as clinics, social media, and other community-based settings. To be eligible for the study, CEs had to participate in at least one CE Studio prior to data collection. Data was collected from an online survey from April to September of 2019. One hundred and fifteen CEs participated in the study. We conducted thematic analysis on a total of 233 participant responses to three open-ended questions assessing attitudes towards research, desire to engage in research, and understanding of research. **RESULTS/ANTICIPATED RESULTS:** Ten major themes emerged from the data: involvement, togetherness, trust, value, confidence, community engagement, community connectedness, encouraging others to participate, increase knowledge and awareness, and respect. A major overarching theme of inclusion was presented in the data. Findings from this study indicate that CE Studios provide a space for CEs to gain a better understanding of the multi-faceted research process, offer insight into ways to include historically excluded populations, and increase trust, confidence and respect for researchers and the research process. Moreover, community experts felt connected to their community by participating in CE Studios and expressed interest in encouraging others to participate. **DISCUSSION/SIGNIFICANCE:** CEs are a crucial component of the research process, and their experiences should be utilized and reflected upon as we work to reduce health disparities. CE Studios serve to build trust, identify strategic areas of improvement in research, and provide a foundation to introduce community members to the multiple ways to engage in research.

131

Healing the Community: Lessons Learned from VaccinateLA, USC's Response to the COVID-19 Pandemic in Los Angeles Neighborhoods of Color

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OBJECTIVES/GOALS: To increase vaccination rates in Black and Latino communities, specifically in South LA and the Eastside of LA. **METHODS/STUDY POPULATION:** Multimedia campaign combined with vaccine navigation and assistance, led by the SC CTSI and conducted by an interdisciplinary team from 14 schools at USC and CHLA, >160 community partners. **RESULTS/ANTICIPATED RESULTS:** VaccinateLA was a highly interdisciplinary and multifaceted project that demonstrated increased vaccination rates in Black and Latino communities in South LA and Eastern part of LA. We vaccinated over 1000 people, facilitated vaccines for almost 10k people and reached 1.37M people through our digital campaign. **DISCUSSION/SIGNIFICANCE:** We have used community vaccine navigators, pop-up clinics, narrative storytelling and other unique approaches to encourage vaccine uptake in communities of color. We plan to expand activities to parents and children in these communities, encourage booster uptake, and evaluate and disseminate the program widely.