

required in some. **DISCUSSION/SIGNIFICANCE:** When crises necessitate rapid action in communities, the depth of prior investments in building and maintaining relationships makes a difference in how rapidly and successfully partners can work together to address a crisis like the COVID-19 pandemic. Funders and Academic researchers should invest broadly in communities to enable rapid responses.

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The Impact of Minimum Volume Thresholds on Geographic Access to Stroke Thrombectomy

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OBJECTIVES/GOALS: At least 15 stroke thrombectomies per proceduralist per year are required for Thrombectomy-Capable and Comprehensive Stroke Centers. We sought to estimate the potential impact of these minimum volume thresholds on geographic access to stroke thrombectomy (ST). **METHODS/STUDY POPULATION:** Using the Florida State Inpatient Database, we will identify patients discharged with acute ischemic stroke from 2015-2019 and all non-federal facilities that performed ≥ 1 ST procedure per year. We will then calculate the proportion of stroke patients who live within 20, 65, 115, 165 and 200 miles (correlating with estimated ground transport times of 1, 2, 3, 4 and 5 hours, respectively) of centers that perform ST using ArcGIS software and evaluate the impact of varying the threshold ST volume required by each facility on this proportion. We will then perform multiple two proportion z-tests to compare proportions of patients within driving distance over time. **RESULTS/ANTICIPATED RESULTS:** We hypothesize that over time, and particularly after the pivotal trials of ST were published in 2015, that the number of facilities that perform ST have increased over time, which would increase the geographic access to ST. We also hypothesize that since the Joint Commission set the minimum procedural volume for proceduralists at Thrombectomy-Capable and Comprehensive Stroke Center to 15 per year, this would work to increase regionalization and could work to decrease geographic access to ST. However, we hope to elucidate the net impact of the interplay between these two opposing factors on regionalization of care over time which is currently unclear. **DISCUSSION/SIGNIFICANCE:** Current ST volume thresholds have focused on technical proficiency but may impact regionalization of care and geographic access to ST. Since access to ST is time-sensitive, a data-driven approach and better coordination on a regional level may be necessary to ensure timely access to ST.

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Caregiving burden and resilience: a mixed methods analysis in dyads managing a VAD in the home*

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OBJECTIVES/GOALS: Caregivers of patients with ventricular assist devices (VAD) are invaluable contributors to patient health, but they may experience psychological symptoms or worsening quality of life related to caregiving. We aimed to explore VAD caregiving burden and resilience comparing high and low burden patient-caregiver

dyads. **METHODS/STUDY POPULATION:** Using a convergent mixed-methods design, we conducted semi-structured interviews and collected self-reported surveys from patient-caregiver dyads. Patients (n=10, mean age 55.8 years) were mostly white males implanted as destination therapy. Caregivers (n=10, mean age 52.6) were mostly white females. Most dyads were spousal (n=6). Caregiver burden was measured with the Zarit Burden Interview Scale, using the median score to categorize lower and higher burden dyads (median = 12, IQR = 8). Data were analyzed using deductive and inductive coding for thematic analysis. **RESULTS/ANTICIPATED RESULTS:** Lower and higher burden dyads described the shared burden experience of 1) hyper-vigilance and uncertainty immediately post-implant and 2) changing relationship roles. Lower burden dyads were more likely to be able to take on responsibilities outside of caregiving. Contextual differences among higher burden dyads included higher financial strain, less social support, worse quality of life (both patients and caregivers) and worse heart failure severity compared to lower burden dyads. All dyads were resilient, using coping strategies like cognitive reframing, positivity, and adaptation to new roles. Higher burden dyads were more vulnerable to coping fatigue and were more likely to express that the VAD had irreversibly changed their life. **DISCUSSION/SIGNIFICANCE:** VAD caregiver-patient dyads differ in their levels of caregiver burden. Burden experiences and resilience mechanisms may inform future interventions to reduce caregiver burden in diverse VAD dyads. Knowledge of the caregiver experience and factors contributing to burden can inform the healthcare team in providing essential caregiver support.

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Development and Validation of a Survey Measuring Over-the-counter Medication Protection Motivation

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OBJECTIVES/GOALS: A major barrier to older adult (65+) over-the-counter (OTC) safety is the lack of actionable research on factors affecting older adult decisions during OTC selection. This goal of this study is to develop and validate a survey instrument based on the Protection Motivation Theory to measure older adults perceived risk of OTCs. **METHODS/STUDY POPULATION:** The 24-item OTC Protection Motivation survey underwent revision using a consult from the UW Survey Center as well as rigorous cognitive interviewing and pilot testing with 8 older adults. It was administered to 103 community-dwelling older adults. OTC misuse data was gathered from 15 of the participants. OTC misuse evaluated by three pharmacy experts on the basis of OTC appropriateness given participants age, existing conditions, concurrent medication use, and intention to adhere to label guidelines. Multivariate linear regression was used to examine the relationship between OTC misuse and protection motivation. Exploratory factor analysis (EFA) was used to determine a model of best fit to describe the factor structure of the OTC Protection Motivation survey. **RESULTS/ANTICIPATED RESULTS:** The EFA yielded a 5-factor model of protection motivation, which included the components of deliberative risk perception, a combination of experiential and affective risk perception, threat severity, protective behavior intent, and perceived efficacy in protective behavior engagement. The EFA-based item reduction resulted in a final 18-item OTC Protection Motivation survey. **DISCUSSION/SIGNIFICANCE:** Older adults, who have the lowest health literacy levels, are responsible for 30% of OTC medication use

and 61.5% of emergency department visits due to adverse drug events. This study is the first to characterize the relationship of OTC protection motivation and OTC misuse to inform patient-centered interventions for older adult OTC safety.

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Social and Health Determinants Influencing Adherence and Access to Treatment for Hearing Loss in Puerto Rican Adults

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OBJECTIVES/GOALS: The main objectives are to obtain a preliminary profile of the adult Puerto Rican patient with hearing impairment and to identify the factors, variables and barriers that these patients face accessing intervention and adhering to it. **METHODS/STUDY POPULATION:** Adults between the ages of 21 and 64 years old were surveyed using a questionnaire with items guided to obtain information regarding their socio-demographic and health characteristics and the variables associated to treatment access and adherence to the intervention plan. A descriptive approach will be used to create the sample profile and an age stratified analysis will be used to interpret the empirical data. The identified variables associated to treatment access and adherence will be identified and analyzed to study if there is a possible geographic zone and socio-economical association. **RESULTS/ANTICIPATED RESULTS:** Preliminary results suggest that regardless of the subject's age and degree of hearing loss their socio-economical strata is a decisive factor in treatment adherence as well as the lack of medical insurance coverage for therapy, hearing prosthesis and assistive technology for the hearing-impaired. Access to service was found to be a barrier associated to the subjects geographical place of origin. **DISCUSSION/SIGNIFICANCE:** Research findings suggest that there is an association between the socio-economical status of the Puerto Rican hearing impaired patient, the lack of medical coverage and the level of treatment adherence. Patients from a lower socio-economical status and remote towns exhibited less adherence which points to a health disparity for this population.

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Evaluating Interest in Clinical Trial Participation for the Treatment of Pediatric Food Allergy

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OBJECTIVES/GOALS: Roughly 8% of children in the United States have a diagnosed food allergy (FA). The ubiquity of most food allergens increases the potential for accidental exposures. Clinical trials (CT) are used to test novel treatments for FA. This project will evaluate the influence of biopsychosocial factors on interest in CT participation for pediatric FA. **METHODS/STUDY POPULATION:** This project is subsumed under the FORWARD study (5R01AI130348-04), a multisite study currently underway at four pediatric FA clinics across the United States. Eligible participants include patients and families who meet the following criteria: 1) New clinic visit presenting for a possible FA complaint and/or has a physician diagnosis in a follow-up clinic visit; 2) child is between the age of 6-months and 12

years at intake visit; 3) are English speaking, and 4) no history of developmental disorders. Parents are asked to complete an intake survey, followed by a series of quarterly surveys administered via REDCap. A single variable from the intake survey queries interest in CT participation; quarterly surveys assess FA knowledge, attitudes, health beliefs, and management practices. **RESULTS/ANTICIPATED RESULTS:** To date, 890 families have completed the intake survey. Working hypotheses include: 1) parents of older children and children with a higher condition severity rating will report greater levels of interest in CT participation; 2) parents with greater FA knowledge, more health management beliefs that support action, and less FA-related anxiety, will report greater levels of interest in CT participation; 3) relative to White families, African American families will be less interested in participating; 4) families with >1 child with FA will report greater levels of interest in CT participation; 5) families who are uninsured, low-SES, and are unemployed will report lower levels of interest in CT participation; and 6) families with higher educational attainment will report lower levels of interest in CT participation. **DISCUSSION/SIGNIFICANCE:** This study will advance decision science, address existing disparities, and have far-reaching clinical implications. This novel approach will enhance our ability to predict who is at the greatest risk of anaphylaxis and help healthcare providers identify families who could benefit from experimental treatment options for pediatric FA.

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Effect of maternal exposure to violence at different life stages on the risk of obesity among postpartum women

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OBJECTIVES/GOALS: Determine if exposure to violence at different life stages (childhood versus recent exposure) in postpartum women is associated to increased risk of weight retention more than 1 year and no more than 2 years after delivery, thus increasing health risk in short and long term. **METHODS/STUDY POPULATION:** Participants will be recruited from a cohort of post-partum women who received services from the Puerto Rico Women and Children Program (PR WIC) during pregnancy and postpartum period as per PR WIC established criteria. Families that have completed their participation in a Lifestyle intervention trial will be paired 2:1 with eligible nonparticipants that fulfill trial enrollment criteria. Language, culture validated instruments will be used to document maternal violence exposure in childhood and recent exposure, defined as within the last 12 months. To assess weight retention, pre-pregnancy weight will be compared to actual weight at the moment of evaluation, anthropometric measurements (weight, length, body composition, and fat mass) will be used to determine the health risk category for each participant. **RESULTS/ANTICIPATED RESULTS:** Expected results will be that there is an association between violence exposure and weight retention among post-partum women, thus influencing their weight status. The use of the questionnaires as screening tool for history of violence and whether recent or childhood exposure should be considered a health risk during pregnancy and post-partum predisposing women to adipose tissue related disorders.