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### Perceptions of the Vaccinated and Unvaccinated to Inform Translation to Health and Public Health Practice

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**OBJECTIVES/GOALS:** Translating the science of vaccines to health and public health practice requires understanding how vaccine risks and benefits are understood and applying that knowledge to community translation. During the pandemic the lack of this knowledge became apparent. **METHODS/STUDY POPULATION:** Through the PACER community engagement special interest group of the ACTS, the University of Florida(UF)/Florida State University and 5 other CTSIs community engagement programs received Center for Disease Control and Prevention funding for the Program to Alleviate National Disparities in Ethnic and Minority Immunizations in the Community (PANDEMIC) to translate vaccinations into the community. At UF, HealthStreet's Community Health Workers, CTSI Mobile Health Vehicle nurses, and Institute of Food and Agricultural Sciences extension agents collaborated to engage adults throughout the North and Central part of the state on their vaccine status and perceptions and to offer them vaccines. **RESULTS/ANTICIPATED RESULTS:** Through UF, 4,587 people have been interviewed in community settings using the Survey of Perceptions; 25% (1,125) had not received any COVID-19 vaccine. Among differences in perceptions, those vaccinated versus unvaccinated perceived people to be getting vaccines because they cut down on disease spread (28.9% vs. 15.2%), and perceived people NOT to be getting vaccinated because of misinformation/ignorance (27.1% vs. 11.0%) and political beliefs (16.3% vs. 6.7%). Both vaccinated and not perceived lack of trust as a reason to not get vaccinated (41.3% vs 46.4%). When asked what people were doing instead of vaccination, those vaccinated versus unvaccinated responded that people were doing nothing/very little much more often (40.6% vs. 21.8%) but were less likely to say 'trying to stay healthy' (9.1% vs. 18.9%). **DISCUSSION/SIGNIFICANCE:** The science of translating from bench through clinical trials and to common health and public health practice requires knowledge of reasons for successful adoption. This survey adds to knowledge of perceptions towards vaccines that inhibit translation and biases toward the vaccine-hesitant.

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### Pharmacy Students Explore Use of an Electronic Medication Adherence Device

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**OBJECTIVES/GOALS:** To examine pharmacy students' and patients' perspectives on use of an automatic pill dispenser (APD) and adherence device, and secondly, to identify patient characteristics impacting selection of an APD. This knowledge will assist pharmacists in making appropriate device recommendations that improve medication adherence and effectiveness. **METHODS/STUDY POPULATION:** One hundred fifty-three pharmacy students participated in a personal APD simulation, living the life as a person taking medication. Students then each identified an actual patient exhibiting medication nonadherence from pharmacy records

at their work setting, provided them with an APD free of charge and instructed them on its use. The students later interviewed their patients and reported on their patients' ability to use the APD, as well as their perspectives (likes and dislikes) on the features of the device. Students identified individual patient characteristics associated with successful use of the APD. This new knowledge will aid these future pharmacists in making recommendations for medication adherence devices for their patients. **RESULTS/ANTICIPATED RESULTS:** In general, patients perceived more difficulty with use of the 10 APD features than did students. Over half of the patients indicated that the following features were a distinct advantage in adherence: individual medication compartment size, method of loading medications, alarm, flashing light, ability to lock the dispenser, and method of retrieving the medication from the device. Patients felt that the biggest disadvantage was its bulky size and lack of portability. In spite of individual difficulties with use, the research findings showed that persons who are elderly, homebound, have memory problems, take multiple medications and/or have complex regimens are most likely to benefit from the device features and exhibit improved adherence to their prescribed medication regimen. **DISCUSSION/SIGNIFICANCE:** Medication adherence rates in the U.S are agreed upon to be about 50% - highly relevant to health-care practitioners since several studies suggest a correlation between adherence and improved health outcomes. Pharmacists must be knowledgeable about non-adherence tools and consider patient characteristics when recommending an adherence aid.

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### Preliminary Validation of the Arabic Global Neuropsychological Assessment

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**OBJECTIVES/GOALS:** Language is the main barrier to equitable access of neuropsychological resources. In our preliminary study, using an Arabic translation of the Global Neuropsychological Assessment (GNA), we assessed 27 Arabic-speaking participants and compared them to English-speaking controls. Our goal was to assess the Arabic GNA's validity and feasibility. **METHODS/STUDY POPULATION:** The Global Neuropsychological Assessment (GNA) is a brief 15-minute assessment of cognition. 27 Arabic-speaking participants were recruited and assessed with the GNA and an Arabic translation of the Montreal Cognitive Assessment (MoCA) by community health workers (CHWs). 17 English-speaking participants GNA data were gleaned from a previous validation study and compared to the Arabic sample via independent samples t-tests. Correlations between the GNA sub-tests and Arabic-translated MoCA are reported in the Arabic-speaking sample. **RESULTS/ANTICIPATED RESULTS:** Independent samples t-tests revealed that Arabic and English-speaking groups significantly differed on education (Arabic: M = 10.3, SD = 3.4, English: M = 15.4, SD = 2.43 t(41) = 6.2, p < .05) but not age (p > .05). A one-way ANCOVA model controlling for education revealed that Arabic and English-speaking groups were not significantly different in any GNA subtest (all p's > .05) except for the perceptual comparison task (Arabic: M = 22.4, SD = 6.9, English: M = 38.4, SD = 9.9, p <

.05). Arabic GNA subtests correlated with each other as expected. Logical memory delayed recall was modestly correlated with the MoCA total score ( $r = .386$ ,  $p < .05$ ). **DISCUSSION/SIGNIFICANCE:** Our preliminary results suggest that the Arabic translation of the GNA is suitable for assessment of Arabic-speaking individuals. Brief educable assessments like the Arabic GNA are essential to meet the needs of these English new language populations and reduce the need for live translations that reduce the reliability of assessment.

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### **Proof of Concept: An EHR-fueled Risk Surveillance Tool for Managing Care Delivery Equity in Hospitalized African Americans with Congestive Heart Failure**

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**OBJECTIVES/GOALS:** 1) Characterize racial differences in congestive heart failure care delivery. 2) Examine the extent to which specific clinical roles were associated with improved care outcomes (i.e., hospitalizations, readmissions, days between readmissions, and charges) of African Americans (AA) with CHF. **METHODS/STUDY POPULATION:** EMR data was extracted from the Arkansas Clinical Data Repository (AR-CDR) on patients (ages 18-105) who received care between January 1, 2014 and December 31, 2021. Variables included age, sex, race, ethnicity, rurality, clinical diagnosis, morbidities, medical history, medications, heart failure phenotypes, and care delivery team composition. Binomial logistic regression ascertained the effects of these variables on patient's care outcomes. A Mann Whitney-U test identified racial differences in outcomes. Psychometrically, classical test theory and item response theory assessed items for the risk surveillance tool. **RESULTS/ANTICIPATED RESULTS:** The study identified 5,962 CHF patients who generated 80,921 care encounters. The results revealed the disproportionate impact of CHF prevalence, hospitalizations, and readmissions on AAs. AAs had a significantly higher number of hospitalizations (i.e., 50% more) than Caucasians. Specific clinical roles (i.e., MDs, RNs, Care Managers) were consistently associated with 30% or greater decrease in odds of hospitalization and readmission, even when stratified by heart failure phenotype. Classical test theory results (e.g., Cronbach's alpha; 0.88) indicated the set of items on the risk surveillance tool accurately reflect a patient risk for improved outcomes. **DISCUSSION/SIGNIFICANCE:** The findings stimulate the need for 1) EHR-based tools that manage care delivery equity and 2) investigations of specific clinical roles in risk stratifying and operationalizing the care plans of AAs, advancing formal access-to-care frameworks by ensuring access to clinical roles that are associated with improved outcomes.

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### **Provider-identified barriers to recommending low-intensity treatments for patients awaiting mental health care**

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**OBJECTIVES/GOALS:** Waiting for psychotherapy is a major barrier to care and associated with negative outcomes. Individuals waiting for treatment may be particularly well-suited to receive low-intensity treatments (LITs), but few providers recommend LITs. We investigated provider-identified barriers to recommending LITs for patients on treatment waiting lists. **METHODS/STUDY POPULATION:** We recruited mental health professionals via social media and professional association listservs to participate in a brief survey. Participants were asked about their current waiting list practices and attitudes towards low-intensity resources for patients waiting for treatment. Participants were prompted to provide additional thoughts on recommending LITs for patients on waiting lists in an open-ended text box. Two members of the research team independently coded responses into themes, resolved discrepancies, and achieved total consensus. **RESULTS/ANTICIPATED RESULTS:** 141 mental health providers participated in the survey, and 65 (46%) provided a response to the open-ended question. The emerging themes included: Patient Barriers, Research Evidence/Efficacy, Feasibility, Patient Personal Contact, Patient Appropriateness, Liability, Systemic Problems, Trust in Programs, Downplaying Distress, Additional Resources, and Positive Attitudes. Providers were particularly concerned with giving a generalized intervention without having conducted a full evaluation or assessment with a patient. Many providers also reported concerns pertaining to the legal and ethical liability of providing LITs when a patient is not being seen face-to-face by a provider. **DISCUSSION/SIGNIFICANCE:** Many of the themes we identified parallel those identified in previous literature. Some barriers we identified from our providers, when thinking about integrating LITs on waiting lists, highlight the need for professional guidelines to address legal and ethical liability, as well as billing and reimbursement procedures.

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### **Relationships between Childhood Trauma Exposure, Mental Health, and Black-Identity in Black Pregnant Persons\***

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**OBJECTIVES/GOALS:** Racial identity, one's perception of that identity, and their perception of how others view their racial identity influences mental health. We aimed to assess the relationship between childhood trauma exposure, post-traumatic stress disorder (PTSD), and postpartum depression symptoms with