

days in the prior week. Using logistic regression, we independently tested the association between presence of pain, the total number of pain sites, and grouped location of pain with program completion, assessing the following a priori candidate confounders: age, race/ethnicity, body mass index, and income. We also tested for interaction of pain and age in influencing completion. RESULTS/ANTICIPATED RESULTS: Seventy-five percent of participants, 185 of 247, completed the program. They had an average age of  $44.2 \pm 11.7$  years, weight of  $244.5 \pm 115.4$  pounds, and BMI of  $41.3 \pm 18.2$ . Fifty-seven percent were African American and 3% were Hispanic. The majority reported preexisting pain (83%), with an average of  $3.4 \pm 2.7$  pain sites. Completers and non-completers did not differ by the total number of pain sites ( $p = 0.2$ ). Having preexisting pain compared to no pain [odds ratio (OR) = 1.3; 95% confidence interval (CI): 0.5–3.4] and to the number of pain sites (OR = 1.0; 95% CI: 0.9–1.1) did not influence program completion after adjusting for the sole confounder, which was age. Likewise, we observed no association between limb/joint pain (OR = 1.1; 95% CI: 0.6–2.1) or back pain (OR = 0.9; 95% CI: 0.5–1.6) with program completion. The association of pain with completion was not modified by age. DISCUSSION/SIGNIFICANCE OF IMPACT: While pain is believed to be a barrier to improving fitness, preexisting pain may not be a strong predictor of completing a holistic lifestyle intervention with a substantial exercise component. Rather, women's commitment to making a healthy lifestyle change may result in program completion irrespective of preexisting pain. Addressing and accommodating pain-related modifications to exercise interventions promise to be more effective than excluding those with pain from participation.

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### Research partnership, community commitment, and the people-to-people for Puerto Rico (#p2p4PUR) Movement: Researchers and citizens in solidarity

Jose G. Perez-Ramos<sup>1</sup>, Hector T. Zayas<sup>2</sup>, Nancy R. Cardona Cordero<sup>2</sup>, Dulce M. Del Rio Pineda<sup>3</sup>, Colleen Murphy<sup>2</sup>, Carmen M. Velez Vega<sup>2</sup> and Timothy De Ver Dye<sup>1</sup>

<sup>1</sup> University of Rochester Medical Center; <sup>2</sup> University of Puerto Rico, Medical Science Campus; <sup>3</sup> Mujeres De Isla, Inc

OBJECTIVES/SPECIFIC AIMS: Island communities face greater environmental risks creating challenges in their populations. A community and participatory qualitative research method aiming to understand community perspectives regarding the ecology and environmental risks of the island of Culebra was performed to develop a community-centered Information and Communications Technology (ICT) intervention (an app). The island of Culebra, a municipality from the archipelago of Puerto Rico is located 17 miles from the eastern coast of Puerto Rico's main island. This ICT—termed mZAP (Zonas, Acción & Protección)—is part of a Translational Biomedical doctoral degree dissertation housed at the University of Rochester's Clinical Translational Science Institute (CTSI) Informatics Core funded by an NIH Clinical Translational Science Award (CTSA). In September 2017, the island of Culebra faced 2 major category hurricanes 2 weeks apart. Hurricane Irma and Hurricane Maria devastated homes, schools, health clinics, and local businesses, disrupting an already-fragile ecological balance on the island. METHODS/STUDY POPULATION: These 2 storms catastrophically affected the archipelago of Puerto Rico. Culebra's geographically isolated location, along with the inefficient response from authorities, exacerbated the stressors caused by these natural disasters, increasing the gap of social determinants of health, including the lack of potable water. Leveraging a community engagement partnership established before the hurricanes by the mZAP participatory research, which naturally halted once the hurricanes hit a new humanitarian objective formed to deliver aid. Along with another NIH funded RCMI Translational Research Network, or RTRN institution (University of Puerto Rico, Medical Science Campus) students and faculty, The Puerto Rico Testsite for Exploring Contamination Threats Program (PROTECT) an NIEHS Funded Grant, and the National Guard, a "people to people" approach was established to ascertain needs and an opportunity to meet those needs. A people-to-people approach brings humanitarian needs, identified directly by the community to the people who need it most; without intermediaries and bureaucratic delays that typically occur during catastrophes. RESULTS/ANTICIPATED RESULTS: The consumption of potable water in plastic bottles and subsequent accumulation of plastic material has proven to be collateral damage of a vulnerable water distribution system creating another environmental hazard on the island of Culebra. Therefore, this humanitarian partnership, worked to delivered community and family sized water filters, providing a safe environmental alternative to drinkable water for the island. The success of this approach, People to People for Puerto Rico (#p2p4PUR), demonstrated the power of genuine community engagement—arising from a previous clinical research partnership—and true established commitment with members of the community. DISCUSSION/SIGNIFICANCE OF IMPACT: Research partnerships can (and should, when needed) lead to humanitarian partnerships that extend beyond research objectives.

Research may subsequently be adapted based on new realities associated with natural disasters and the altered nature of existing partnerships, allowing for a rapid response to communities need. Further, #p2p4PUR was not only able to channel a partnership humanitarian response but also created an opportunity to reflect on how the commitment between members of society and academia (researchers) can create beneficial bilateral relationships, always putting the community needs first. The resulting shared experience elevates community interest and engagement with researchers, and helps researchers see communities as true partners, rather than—simply—research subjects.

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### Symptom endorsement in bipolar patients of African Versus European ancestry

Margaret Akinhanmi, Joyce E. Balls-Berry, Suliman El-Amin, Jennifer Geske, Colin Colby, Christi Patten, Joanna Biernacka and Mark A. Frye

Mayo Clinic

OBJECTIVES/SPECIFIC AIMS: Learning Objectives of this session: Identify possible reasons for misdiagnosis of bipolar patients of African ancestry by reviewing differences in symptom presentation between African American (AA) and European American (EA) bipolar individuals. Introduction: Bipolar disorder is a chronic mental illness with a prevalence rate up to 5.5% of the US population and is associated with substantial personal and economic morbidity/mortality. Misdiagnosis is common in bipolar disorder, which can impact treatment and outcome. Misdiagnosis disproportionately affects racial/ethnic minorities; in particular, AAs are often misdiagnosed with schizophrenia. There is interest in better understanding the contribution of differential illness presentation and/or racial bias to misdiagnosis. METHODS/STUDY POPULATION: Patients and Methods Utilizing the Genetic Association Information Network (GAIN) public database, this study compared clinical phenomenology between bipolar patients of African Versus European ancestry (AA=415 vs. EA=1001). The semi-structured Diagnostic Interview for Genetic Studies (DIGS) was utilized to evaluate individual symptom endorsement contributing to diagnostic confirmation. A  $\chi^2$  test was used to compare group differences in DIGS harvested mania and psychosis sections, and overview of psychiatric medications. RESULTS/ANTICIPATED RESULTS: Results: The symptom of auditory hallucination was significantly more endorsed in AA bipolar patients than EA bipolar patients (57.9% AA vs. 36.1% EA,  $p \leq 0.0001$ ). Conversely, the symptom of elevated or euphoric mood was significantly less endorsed in AA bipolar patients than in EA patients (94.6% AA vs. 97.5% EA,  $p = 0.027$ ). AA, in comparison to EA bipolar patients, had a significantly higher prevalence of lifetime exposure to haloperidol (36.9% AA vs. 29.4% EA,  $p = 0.017$ ) and fluphenazine (12.3% AA vs. 6.7% EA,  $p = 0.004$ ). In contrast, AA, in comparison to EA bipolar patients, had a significantly lower prevalence rate of lifetime exposure to lithium (52.5% AA vs. 74.2% EA,  $p < 0.0001$ ), and lamotrigine (13.7% AA vs. 35.6% EA,  $p < 0.0001$ ). DISCUSSION/SIGNIFICANCE OF IMPACT: Conclusion: The higher rate of psychotic symptom endorsement and lower rate of core manic symptom endorsement represent differential illness presentation that may contribute to misdiagnosis in African-American bipolar patients. The higher rate of high potency typical antipsychotic treatment and lower rate of classic mood stabilizing treatment may also contribute poorer bipolar treatment outcome. While structured diagnostic interviews are the gold standard in diagnostic confirmation, this study is limited by lack of knowledge of clinician/expert interviewer interpretation of symptom endorsement which may contribute to symptom misattribution and misdiagnosis. Incorporation of additional African American participants in research is a critical future direction to further delineate symptom presentation and diagnosis to serve as validation for these results.

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### The influence of health insurance stability on racial/ethnic differences in diabetes control and management

Alison G. M. Brown, Nancy R. Kressin, Norma Terrin, Amresh Hanchate, Jillian Suzukida, Sucharita Kher, Lori L. Price and Amy LeClair

Tufts University

OBJECTIVES/SPECIFIC AIMS: The aim of this study is to examine if stable health insurance coverage is associated with improved type 2 diabetes (DM) control and with reduced racial/ethnic health disparities. METHODS/STUDY POPULATION: We utilized EMR data (2005–2013) from 2 large, urban academic health centers with a racially/ethnically diverse patient population to longitudinally examine insurance coverage, and diabetes outcomes (A1C, LDL cholesterol, BP) and