affects many vital organs, such as the kidneys, the heart, and vasculature. Participants perceive obesity as important risk factor for high blood sugar and cholesterol levels. Taxi drivers see an association between their health condition and their work as a taxi driver. However, taxi-drivers reported that they are more concerned about the economic well-being of their families than themselves. Taxi-drivers begin to intervene in their own health only when more serious health conditions related to obesity, diabetes, and hypertension developed. (4) Work Stress: The theme "Stress/other risk factors" was derived from 141 concepts. Taxi-drivers perceive their profession with lack of organization and high-stress levels as one of the leading risk factors contributing to obesity, diabetes, and cardiovascular disease. They also attribute a combination of stressful lifestyle, poor diet, lack of exercise, consumption of alcohol and cigarettes as determining factors in developing negative health outcomes. "One participant says; Tenemos el paquete completo" … we have the entire package. (5) Health as a priority: The theme "Health is not a priority" was derived from 120 concepts based on the cab drivers' responses. Taxi drivers prioritize their work while their health takes a back seat. They work long shifts as they feel the pressures of financial responsibilities of their family. They admitted lack of intentions to change their behavior and they consider themselves as "hard headed." Drivers changed their behavior only when serious health conditions develop that require professional medical attention. Taxi drivers explain that the lack of time as being a big factor in pursuing preventative care. (6) Personal Discipline: The theme "Discipline" evolved from 80 concepts derived from the driver's transcripts. Taxi drivers are aware of their lack of organizational skills in general, especially when it comes to the balance between work and a healthy lifestyle. Taxi drivers recognize that not being disciplined results in the development of their obesity and chronic health conditions. Drivers admit that they do not have a fixed schedule, with no direct supervision, and cannot find the time to go to the doctor or change their behavior. (7) Health Education: The theme "Education" was derived from79 concepts noted from the focus group discussion. Taxi drivers know that their lack of health education is affecting them. With little understanding about the severity of the disease process it is difficult to take proactive measures. They are interested in the development of programs that will educate them about obesity, diabetes and CVD prevention. They want to attend programs that can educate them about prevention of obesity, diabetes, and CVD prevention with strong focus on healthy eating. They understand that this would increase their ability to change their unhealthy behavior. (8) Health interventions: The last major theme "Intervention" was derived out of 71 concepts. When asked about possible interventions that might help them towards healthy behaviors, taxi drivers think that the use of technology as a means of education is very effective. They understand the most direct route to reach them is by cellphone, email, and social media such as Facebook. They also feel that it would be good to use this type of communication to not only to inform them about health issues, but to also educate them directly. (b) Application of Health Behavior Model: We employed the HBM, one of the most utilized and easy to understand health models (18, 20–22) to explain the knowledge, perception, and health behaviors of our study participants. The HBM consist of 6 posits: (1) risk susceptibility, (2) risk severity, (3) benefits of action, and (4) barriers to action, (5) self-efficacy, and (6) cues to action [23]. According to the HBM, people's beliefs about their risk and their perception of the benefits of taking action to avoid it, influence their readiness to take action [15, 21–22, 24]. Using the HBM, health behavior can be modified positively if the 6 posits are perceived by the person [23]. According to the results of our study, taxi drivers that participated in our study, do not perceive the severity of their risk. Participants admitted that they go to the doctor and start paying attention to their health condition only when they get seriously sick. Another posit of the HBM, understanding benefit of actions, is also not perceived by taxi drivers. Participants understand that they should be involved in physical activity, but do not pursue physical activity. They stated that they are too busy and tired to exercise daily without realizing the benefits of having a healthy life style. Findings from the focus groups also demonstrate that taxi drivers do not possess self-efficacy, as they are not confident that they are able to change their own health behavior. They openly admitted to having poor discipline, lack of organizational skills, and lack of time management skills. But, they expressed their wish to get information about time management, healthy snacks, places where they can get affordable and healthy food, learn more about different physical activities, and places where they can exercise. The sixth posit of the HBM model is the cues for action which should trigger the action to change behavior. Cues such as physical pain or illness in them or family members of cab drivers, trigger a visit to the physician's office. Cab drivers were open to receiving educational material provided by physicians or health information provided on TV/cellphone about disease prevention. DISCUSSION/SIGNIFICANCE OF IMPACT: Obesity is steadily on the increase in the US population and has become a major public health concern [1–3]. Latinos are at the higher risk of heart diseases such as obesity, hypertension compared to other ethnical groups [3, 13]. There is a higher prevalence of obesity among particular occupational groups with cab drivers having one of the highest obesity prevalence among all professions [5, 7–9, 13]. Obesity risks therefore seem to affect NYC cab drivers who are of Latino background more than others. Surveys conducted in different countries in Asia, Europe, and Africa reported that taxi, truck, and bus show that drivers are at a higher risk of developing obesity, diabetes, and hypertension [5, 8–11]. This study is the first to evaluate the knowledge, perception, and behaviors of NYC Latino taxi cab drivers with respect to obesity. The study uncovers factors and barriers that contribute to their behavior, and identify possible ways that can modify their behavior and decrease their chances of developing obesity. The study results demonstrated that Latino immigrant taxi drivers perceive themselves at a high risk for obesity development. As the result of discussions with focus groups, the eight dominant themes were identified. Participants perceive their risk susceptibility and understand that working as a driver is a sedentary occupation with lack of physical activity significantly contributing to obesity development. Additionally, taxi drivers report that their unhealthy diet is a major factor that contributes to their weight gain. Taxi drivers perceive their poor diet as the result of the food they consume being high in fat content. Due to financial constraints and their cultural diet requirements, they feel limited to unhealthy food options. They acknowledge the risk that poor diet contributes to obesity, high cholesterol, obesity development. Participants also expressed that work stress is another important factor. Busy traffic, lack of organization, financial stress to support their families-push them to work prolonged hours. Participants also admitted that in their leisure time, they use alcohol, smoke cigarettes, and watch TV, instead of going to the gym, because they feel too tired to exercise. Taxi drivers perceive their barriers as a lack of education and knowledge about healthy food choices, places where they can buy healthy affordable snacks, information about physical activities, stress management skills, and organizational skills. Other perceived barriers that prevent them from leading healthy lifestyle include lack of discipline, lack of time for physical activity, economic uncertainty, financial responsibility and the perception that the wellbeing of their families is more important than themselves and their health. HBM is a widely used model that helps to identify perception of risks of unhealthy behavior, barriers to healthy behavior, actions taken by patients to stay healthy, self-efficacy, and commitment to goals. Based on the Glasgow theory, the core of health behavior models is the identification of the barriers and self-efficacy [25]. Our study is unique as it involves using the HBM to explain the basis of taxi cab drivers' behavior. Results of our research study showed that our participants perceived barriers very well. However, lack of self-efficacy, lack of perceiving benefits of action, lack of cues to action, and lack of understanding the risk of disease severity explain why taxi drivers have greater risk for obesity among occupations, and are not ready to embrace health behavior modification. This qualitative study shows us where the window of opportunity for intervention lies, how we can intervene and modify the health behavior of the at-risk NYC Latino cab driver population. By Glasgow theory, self-efficacy is an important factor in behavior modification models [25]. If the barriers that are perceived by participants as too high, and self-efficacy is low, one can intervene by improving self-efficacy. Bandura has offered ways to increase patients' self-efficacy by using three strategies: (a) setting small, incremental, and achievable goals; (b) using formalized behavioral contracting to establish goals and specify rewards; and (c) monitoring and reinforcement, including patient self-monitoring by keeping records [20]. We can also improve perception of the benefits of action by providing cues to action namely education during the office visits, by providing reading materials, and the use of modern technology (emails, interactive Web sites, apps, etc.). A study was conducted in South Asia, encouraging taxi drivers to exercise through the use of pedometers [7]. This study provides an example of ways to motivate taxi drivers, improve their self-efficacy, overcome barriers, and provide cues to action. As one of the theories that can explain and help in behavioral modification, the Health Belief model includes the impact of the environment and elements of social learning. Using this model, we were able to differentiate and identify the factors that influence their behavior that need to be addressed by health care workers and public health representatives to improve obesity related risks among inner city taxi cab drivers in NYC.

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Relationship between preexisting pain and completion of a community-based wellness program

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OBJECTIVES/SPECIFIC AIMS: New Beginnings is a 12-week community-based behavioral intervention for improving health, strength, and wellness through a holistic approach to coaching that supports lifestyle change. The program serves predominantly low-income, minority women. Given the substantial focus on exercise, including resistance training, we aimed to test whether pain at baseline is associated with program completion in a prospective cohort. METHODS/STUDY POPULATION: At the entry of the New Beginnings program, women completed a survey that included a body map of sites at which they experienced pain for most

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 ± 11.7 years, weight of 244.5 ± 115.4 pounds, and BMI of 41.3 ± 18.2. Fifty-seven percent were African American and 3% were Hispanic. The majority reported preexisting pain (83%), with an average of 3.4 ± 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

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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

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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 disproportionally 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 χ^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

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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