

firearm injuries are associated with county-level poverty, defined as the percentage of the population living below the federal poverty line. Rates will be calculated by determining county level population within subgroups using the National Historical Geographical Information System database. We will also conduct regression analyses to adjust for confounding variables selected based on evidence from prior research. Some of these variables include age, sex, race, urbanicity, and the social vulnerability index. **RESULTS/ANTICIPATED RESULTS:** An abundance of prior research has demonstrated differences in firearm injury by age, sex, and race. Prior studies have also shown that poverty is associated with higher rates of firearm-related deaths among youth. Based on that foundational data, we anticipate that regression analyses will demonstrate that counties with higher poverty levels will have higher rates of fatal and non-fatal firearm injuries, even after controlling for other known risk factors. **DISCUSSION/SIGNIFICANCE:** Findings from this study will contribute to growing evidence on the role of poverty in the burden of firearm injuries and mortality. This will have policy implications regarding the allocation of public health resources and interventions aimed at reducing firearm-related injuries and deaths in Maryland.

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### **Bearing a higher burden: Black and Latinx community perspectives on the Impact of COVID-19**

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**OBJECTIVES/GOALS:** During earlier periods of the pandemic, Black and Latinx populations in Michigan have suffered higher rates of infection, hospitalization, and deaths when compared to Whites. We conducted this study to understand how Black and Latinx residents perceived this disproportionate burden. **METHODS/STUDY POPULATION:** In 2021, 40 semi-structured interviews were conducted virtually in English or Spanish with Black (n=24) and Latinx (n=16) residents in Michigan areas highly impacted by COVID-19: Genesee, Kent, Washtenaw, and Wayne counties. Using a Community-Based Participatory Research (CBPR) approach, we partnered with leaders from 15 community-based organizations and health and human service agencies to develop research questions, an interview protocol, and to interpret the data. We used the data analysis software Dedoose (ver 4.12) for inductive coding (IRR=0.81). This study is a part of the NIH Community Engagement Alliance (CEAL) Against COVID-19 initiative. **RESULTS/ANTICIPATED RESULTS:** Participants described the significant impact of the pandemic in terms of physical and mental health, job security, and the sheer number of deaths among loved ones. They attributed the impact to comorbidities and social determinants of health disparities exacerbated by the pandemic, including

income, housing, access to healthcare, as well as systemic racism. They noted being overrepresented among frontline workers with higher exposure to COVID-19, limited or misinformation about the virus, language barriers, and difficulty with social distancing. Cultural norms that promote being in close proximity, such as inter-generational households, and loss of trusted community leaders were also noted. **DISCUSSION/SIGNIFICANCE:** Findings reflect the needs of Black and Latinx community members in Michigan and the discussions they feel are important to highlight. We must work strategically with partners and the community to provide transparency and effective leadership, and prioritize addressing systemic disparities in SDoH.

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### **Biopsychosocial Well-being and Identity: Variation in the Experience of Allostatic Load and Depression by Identity Status Using NHANES 2017-2020 Data\***

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**OBJECTIVES/GOALS:** Chronic stress has vast implications for health. Pathophysiological dysregulation, as evidenced by allostatic load, is associated with increased morbidity and mortality. Health disparities exist in both the incidence and outcomes of chronic stress. This study investigates the intersection of identity, allostatic load, and depression. **METHODS/STUDY POPULATION:** A nationally representative sample of pre-pandemic health data from the 2017-2020 cycle of the National Health and Nutrition Examination Survey (NHANES) was used to assess variation in depression and allostatic load by identity status. Datasets containing biomarker, mental health, and identity data were merged using Stata. An index of allostatic load was created by generating quartiles for nine biomarkers of cardiovascular (cholesterol, triglycerides, systolic and diastolic blood pressure), metabolic (glucose, body mass index, albumin, creatinine), and immune (c-reactive protein) functioning, and summing the total high risk biomarkers per person. Depression scores were averaged across nine items from the patient health questionnaire, and dichotomous identity variables (e.g., race) were generated. **RESULTS/ANTICIPATED RESULTS:** People identifying as female ( $t = 8.25, p < .001$ ) or Black ( $t = 7.18, p < .001$ ) have higher allostatic load scores, whereas people identifying as White ( $t = -2.64, p < .01$ ) or Asian ( $t = -3.80, p < .001$ ) have lower allostatic load scores. People identifying as female ( $t = 10.76, p < .001$ ), White ( $t = 2.66, p < .01$ ), or Another/Mixed race ( $t = 6.23, p < .001$ ) have higher levels of depression, whereas people identifying as Asian ( $t = 9.17, p < .001$ ) have lower levels of depression. Multiple regression analyses indicate a significant effect of depression on allostatic load when controlling for sociodemographic variables ( $B = 0.33, SE = 0.05, t = 7.02, p < .001$ ). The identity\*depression interaction increases allostatic load for females ( $B = 0.43, SE = 0.10, t = 4.21, p < .001$ ) and racial/ethnic minority males ( $B = 0.25, SE = 0.10, t = 2.62, p < .01$ ). **DISCUSSION/SIGNIFICANCE:** This study highlights differences in the experience of allostatic load and depression based on identity. Depression exerts an independent and moderating effect on allostatic load. Findings have implications for health disparity research, and highlight the dynamic intersection of identity, mental, and physical health in the face of chronic stress.