positively associated with PA across all groups (β ranges=: .07-.11, p<.001), and depression remained significant across all groups (β ranges=-.11 to -.14, p<.001). For models 2-4, only parent care remained significant for the neither asthma nor OB group (β =.04, p<.001). DISCUSSION/SIGNIFICANCE OF FINDINGS: Results demonstrate that although parent care is an important protective factor for youth PA engagement, it is less impactful when additional risk factors (e.g., depression) are present, particularly among the highest risk group (comorbid asthma/OB). Thus, clinical support is needed in addition to parent support among higher risk youth.

Translational Science, Policy, & Health Outcomes Science

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Characterization of Clinical and Immunological Laboratory Features in Multiple Sclerosis Patients with COVID-19

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ABSTRACT IMPACT: Better understanding of the factors impacting disease severity and immunological response of MS patients on disease modifying therapy will enable better recommendations for vaccination options and risk mitigation strategies OBJECTIVES/GOALS: The Coronavirus Disease 2019 (COVID-19) and global health crisis has raised health concerns for patients with multiple sclerosis (MS). We aim to study the clinical characteristics, immunological laboratory data, and immunoglobulin response in patients with MS and COVID-19, to identify factors impacting disease severity and immune response. METHODS/STUDY POPULATION: Database search was done using DataDirect to search for MS patients who had tested positive for COVID-19 at the University of Michigan hospital. Patients with a positive nasopharyngeal swab polymerase chain reaction (PCR) for COVID-19 between March 1 and September 2020 were included. The primary outcome was the immunological laboratory data and immunoglobulin levels and the secondary outcome was their disease severity. We collected demographics, neurological history, MS treatment, Expanded Disability Scale Score (EDSS), comorbidities, and COVID-19 characteristics. A 7-point ordinal scale previously used to assess disease severity was used. Univariate and multivariate analyses will be performed to assess relationships between the collected variables. RESULTS/ANTICIPATED RESULTS: A total of 17 patients, mean age 53 (SD 11.6) years, mean disease duration, 6.2(SD 4.1) years were analyzed. 41% of patients had relapsing remitting multiple sclerosis, 17% had primary progressive MS. (88%) patients were on Disease Modifying Therapy (DMT) at the time of COVID-19 diagnosis. 2 patients died from COVID-19 complications. There was a higher proportion of patients with higher disease severity receiving Ocrelizumab. Only one patient showed positive IgG to SARS-CoV-2 after the resolution of infection. CBC with differential was obtained and a longitudinal follow-up of labs will be done. Regression analysis will be done to check the association between the use of DMT, immunological response, and COVID disease severity in them. The impact of COVID-19 on MS relapse, EDSS, and MRI activities will also be studied. DISCUSSION/SIGNIFICANCE OF FINDINGS: Recommendations to continue current DMT have been made, however, the immune response has not been correlated with the individual's risk profile. Certain therapies may interfere with mounting a protective immune response of COVID-19 and this knowledge is crucial when advising patients regarding the choice of vaccine and risk mitigation strategies.

44191

As Food Insecurity Worsens During COVID-19, Negative Mental Health Impact on Community Members Increases

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ABSTRACT IMPACT: For community engagement to be impactful and reduce health inequity, it needs to address timely needs in the community, including COVID-19 impacts. Here, we describe how pre- and post-COVID-19 food insecurity worsened mental health among community members served by HealthStreet University of Florida community engagement program. OBJECTIVES/GOALS: COVID-19 impacts the economic vitality and the mental health of communities; research and engagement activities must consider the context in which we are practicing and the needs of our community members. METHODS/STUDY POPULATION: HealthStreet, the University of Florida community engagement program, sends Community Health Workers (CHWs) where people congregate to assess social determinants of health and medical histories, used to make referrals to services and research opportunities. CHWs conducted follow-up COVID-19 assessments measuring perceived stress, loneliness, depression, anxiety, binge drinking, and opioid use, as well as high blood pressure and food insecurity. Here, we consider mental health outcomes among 1,300 adults who reported being food insecure either at some time in the past 12 months at baseline, or at the COVID-19 follow-up assessment, and completed both. Chi-Square Test was used to determine p-values. RESULTS/ANTICIPATED RESULTS: Overall, at the COVID-19 follow-up assessment, 37.1% (of 1,300) were still food insecure during COVID-19 (same), 20.3% (had become food insecure during COVID-19 (worse) and 42.6% were no longer food insecure (better). Those who were no longer food insecure were more likely to report less stress, while those still food insecure were more likely to report the highest stress and loneliness (p<0.0001), while the worse off group was in the middle. Those who stayed food insecure were most likely to report depression and anxiety, and also high blood pressure and using opioids (p<.05) compared to those getting worse or better. Binge drinking behavior was not significantly different across groups. DISCUSSION/SIGNIFICANCE OF FINDINGS: Community engagement activities across CTSIs must be sensitive to the needs of their communities. HealthStreet findings show that new and continuing food insecurity negatively influence mental health problems, pointing to the need for engagement to address multiple problems.

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Risk of Prolonged Opioid Use After Intensive Care Unit Admission*

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ABSTRACT IMPACT: This is the first examination of risk factors for prolonged opioid use after an ICU stay and will inform efforts to