

stigma beliefs compared to participants who opted-out of in-office, $p = .001$. Participants who opted out of in-home viewed the therapist as less credible compared to participants who did not opt of any arm, $p = .004$. Multiple regression analysis found that baseline patient satisfaction, stigma beliefs, and credibility beliefs were not predictive of PTSD treatment outcomes, $p > .05$. DISCUSSION/SIGNIFICANCE OF IMPACT: Combat PTSD patients may opt out of in-office therapy due to mental health stigma beliefs, and visibility in mental health clinics may be a concern. For patients who opted out of in-home therapy, lack of credibility may have decreased participants' desire for therapists to enter their home. Despite concerns of mental health stigma and the credibility of the therapy in certain treatment arms, patients in each treatment arm significantly improved in PTSD symptomatology. Moreover, patient characteristics, including satisfaction, stigma, and credibility of the therapy, did not significantly predict treatment outcomes, which demonstrates the robustness of Cognitive Processing Therapy.

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Prostate cancer multiparametric MRI comparison study of 3T versus 7T in terms of lesion detection and image quality*

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OBJECTIVES/GOALS: The goal of this study was to perform a comparative, multi-reader, retrospective clinical evaluation of prostate multiparametric MRI (mpMRI) at 3 Tesla (3T) vs. 7 Tesla (7T) primarily in terms of prostate cancer localization. Subjective measures of image quality and artifacts were also evaluated. METHODS/STUDY POPULATION: Nineteen subjects were imaged at 3T and 7T between March 2016 and October 2018 under IRB-approved protocols. Four radiologists retrospectively and independently reviewed the data, and completed a two-part assessment for each dataset. First, readers assessed likelihood of cancer using Prostate Imaging Reporting & Data System (PI-RADS) guidelines. Accuracy of cancer detection was compared to findings from prostate biopsy. The numbers of correctly or incorrectly classified sextants were summed across all four readers, then used to summarize detection performance. Second, readers assigned a score on a five-point Likert scale to multiple image quality characteristics for the 3T and 7T datasets. RESULTS/ANTICIPATED RESULTS: Sensitivity and specificity of 3T and 7T datasets for sextant-wise cancer detection were compared by paired two-tailed t-tests. Readers identified more sextants harboring cancer with the 3T datasets while false-positive rates were similar, resulting in significantly higher sensitivity at 3T with no significant differences in specificity. Likert scores for image quality characteristics for 3T and 7T datasets were compared by applying paired two-tailed t-tests to mean scores of the four radiologists for each dataset. Readers generally preferred the 3T datasets, in particular for staging and assessment of extraprostatic extension as well as overall quality of the contrast-enhanced data. DISCUSSION/SIGNIFICANCE OF IMPACT: Readers agreed 7T prostate mpMRI produced images with more anatomic detail, though with equivocal clinical relevance and more pronounced artifacts. Reader unfamiliarity with 7T images is a major extenuating factor. Forthcoming technological developments are anticipated to improve upon the results.

4022

Recruiting hidden and sensitive populations: methods for recruitment of pregnant women who regularly use cannabinoids

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OBJECTIVES/GOALS: Prenatal cannabinoid use is increasing and more studies are needed to describe the neurodevelopmental impact on the fetus. However, pregnant cannabinoid users are a "hidden population," which makes identification of these individuals for research difficult. Our study will employ three methods of recruitment and evaluate the success of each method. METHODS/STUDY POPULATION: We will recruit a total of 40 women in the third trimester of pregnancy who regularly use cannabinoid products thought to contain tetrahydrocannabinol (THC) and/or cannabidiol (CBD) throughout their pregnancies, and 20 control pregnant women who do not use those products. The purpose of this study is to evaluate the effects of prenatal cannabinoid use on the neurodevelopment of their offspring over the first year of life. We will employ three recruitment methods. First, targeted recruitment will occur in two university-based obstetrical clinics, where the obstetrician will present the study material and contact information. Second, we will utilize social media advertisements targeted to a specific demographic of Facebook users. Finally, we will employ the traditional method of distributing flyers in a non-targeted manner. We will track methods of recruitment success and gather information from the mothers on their preferences for recruitment approaches. RESULTS/ANTICIPATED RESULTS: Recruitment will start in January 2020 and continue for several months. We anticipate that the targeted method will yield the highest number of participants, and participants with the best fit for the inclusion criteria. However, it is possible that those women will be deterred by fear of having their drug use status revealed to their care providers, even though all research activity will occur independently from clinic visits and will not be transmitted to the electronic health record. The inclusion of a control group will also help foster "anonymity" for participants. The social media method has the potential for the greatest reach, but we expect many of these potential participants will fail to meet inclusion/exclusion criteria, as this is not as targeted as the first method. We anticipate a similar issue with the flyer-based approach. DISCUSSION/SIGNIFICANCE OF IMPACT: Optimizing recruitment of hidden and sensitive populations is crucial for clinical and translational research. Our goal is to identify strategies that can lead to best practices for engagement of those populations. Our conclusions could be applied in recruitment of sensitive populations for other clinical and translational research projects.

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Relationship between recent drinking history, subjective response to alcohol, and sex in HRV in non-dependent drinkers

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OBJECTIVES/GOALS: Previous research has shown acute and chronic alcohol effects on cardiac function, including elevated heart

rate (HR) and lowered heart rate variability (HRV). This study aimed to examine the relationship between cardiac reactivity and subjective response following intravenous (IV) alcohol in non-dependent drinkers. **METHODS/STUDY POPULATION:** Non-dependent drinkers (N = 46, average age = 25.2) completed a human laboratory IV alcohol self-administration (IV-ASA) session. Subjective response to alcohol was assessed using the Drug Effects Questionnaire (DEQ) and Alcohol Urge Questionnaire (AUQ). Drinking behavior was assessed using the Alcohol Timeline Followback (TLFB) and Alcohol Use Disorders Identification Test (AUDIT). HR was recorded using the Polar Pro Heart Rate monitor throughout the session. HRV measures were calculated using guidelines determined by the Task Force of the European Society of Cardiology and The North American Society of Pacing and Electrophysiology. **RESULTS/ANTICIPATED RESULTS:** Recent drinking history as measured by the AUDIT and TLFB was not significantly different by sex. Results showed heavier drinking measures (AUDIT and TLFB) were positively associated with HRV measures (all p-values < 0.02). Those who reported a greater increase in alcohol craving (AUQ score) and wanted more alcohol (DEQ) following an alcohol prime, showed a greater change in HRV (p < 0.005). When examining HRV change from baseline throughout the priming session, there was a significant sex interaction for NN50 (p < 0.03) and a trend for PNN50 (p-value < 0.07). **DISCUSSION/SIGNIFICANCE OF IMPACT:** Acute IV alcohol alters cardiac reactivity measures in non-dependent drinkers. Future directions include examining the role of sex in HRV changes during alcohol consumption during IV-ASA. Understanding the effect of alcohol on cardiac reactivity and physiology may help characterize those at risk for alcohol use disorders.

4577

Resistant hypertension potentiates the risk of End-Stage Kidney Disease among African-Americans independent of APOL1 genotype in the Million Veteran Program

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OBJECTIVES/GOALS: African-Americans have a 3-fold higher risk of end-stage kidney disease (ESKD) compared to Whites due in part to APOL1 risk alleles. Whether resistant hypertension (RH) magnifies the risk of ESKD among African Americans beyond APOL1 is not known. We examined the interaction between RH and race on ESKD risk and the independent effect of RH beyond APOL1. **METHODS/STUDY POPULATION:** We designed a retrospective cohort of 240,038 veterans with HTN, enrolled in the Million Veteran Program with an estimated glomerular filtration rate (eGFR) >30 ml/min/1.73m². The primary exposure was incident RH (time-varying). The primary outcome was incident ESKD during a 13.5 year follow up: 2004-2017. Secondary outcomes were myocardial infarction (MI), stroke, and death. Incident RH was defined as failure to achieve outpatient blood pressure (BP) <140/90 mmHg with 3 antihypertensive drugs, including a thiazide, or use of 4 or more drugs. Poisson models were used to estimate incidence rates

and test additive interaction with race and APOL1 genotype. Multivariable Cox models (with Fine-Gray competing-risks models as sensitivity analyses) were used to examine independent effects. **RESULTS/ANTICIPATED RESULTS:** The cohort comprised 235,046 veterans; median age was 60 years; 21% were African-American and 6% were women, with 23,010 incident RH cases observed over a median follow-up time of 10.2 years [interquartile range, 5.6-12.6]. Patients with RH had higher incidence rates [per 1000 person-years] of ESKD (4.5 vs. 1.3), myocardial infarction (6.5 vs. 3.0), stroke (16.4 vs. 7.6) and death (12.0 vs. 6.9) than non-resistant hypertension (NRH). African-Americans with RH had a 2.6-fold higher risk of ESKD compared to African-Americans with NRH; 3-fold the risk of Whites with RH, and 9.6-fold the risk of Whites with NRH [p-interaction<.001]. Among African-Americans, RH was associated with a 2.2-fold (95%CI, 1.86-2.58) higher risk of incident ESKD in models adjusted for APOL1 genotype and in the subset of African-Americans with no APOL1 risk alleles, RH was associated with an adjusted 2.75-fold (95% CI: 2.00-3.50) higher risk of incident ESKD. **DISCUSSION/SIGNIFICANCE OF IMPACT:** RH was independently associated with a higher risk of ESKD and cardiovascular outcomes, especially among African-Americans. This elevated risk is independent of APOL1 genotype. Interventions that achieve BP targets among patients with RH could curtail the incidence of ESKD and cardiovascular outcomes in this high-risk population. **CONFLICT OF INTEREST DESCRIPTION:** None.

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Septic Shock Epidemiology and Sociodemographic Predictors of Mortality: Results from One Florida Data Trust Cohort

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OBJECTIVES/GOALS: Septic shock is a lethal condition. Research suggests that overall sepsis mortality varies by race, but less is known about demographic differences in septic shock mortality. Our objectives were to describe the septic shock population using a large, statewide data repository and identify demographic predictors of septic shock mortality. **METHODS/STUDY POPULATION:** This was a retrospective review of patients with septic shock in the One Florida Data Trust from 2012-2018. Patients were classified as having septic shock if they received vasopressors and had either 1) an ICD-9 or 10 code for septic shock or 2) an ICD-9 or 10 code for infection and an ICD-9 or 10 code for organ dysfunction. Demographic data and place of residence prior to admission was collected. The primary outcome was 90 day mortality. T-test and chi-square tests were used to test association of individual predictors and mortality. Multiple logistic regression was used to identify predictors of mortality after adjustment for other variables. Level of significance was set at 0.05. SAS v9.4 (Cary, NC) was used for analyses. **RESULTS/ANTICIPATED RESULTS:** There were 11,790 patients with septic shock. The mean(SD) age was 61(16) years. With regard to race/ethnicity 66% identified as white, 27% as black, 3.7% as Hispanic, and 3.5% as other races (non-white, non-black, non-Hispanic). Most