Thirty-five percent of these had significant (≥F2) liver fibrosis at baseline and half had elevated ALT (mean 47.5, SD ±55 IU/ml). Forty-three percent switched to TAF from another oral antiviral. Most switched due to lack of coverage by health insurance.

DISCUSSION/SIGNIFICANCE OF FINDINGS: HOPE is a CHB cohort dedicated to collecting research samples and providing antiviral treatment. It is the foundation for the CHB translational research program at the University of Maryland School of Medicine. The availability of paired viremic and virally suppressed, HIV/CHB, and resolved HBV research samples are strengths of HOPE.

Data Science/Biostatistics/Informatics

Transitions of Care among Patients with Diabetes in the Deep South: Factors Associated with Hospital Readmissions
Cassidi C. McDaniel and Chiahung Chou
Auburn University Harrison School of Pharmacy

ABSTRACT IMPACT: Because diabetes disproportionately affects residents in the Deep South, identifying factors increasing the risk of hospital readmissions unique to this population can translate to tailored interventions and strategies to improve transitions of care and patients’ health outcomes. OBJECTIVES/GOALS: Patients with diabetes (PWD) are susceptible to hospital readmissions due to inadequate transitions of care (TOC). To better understand how to improve TOC, the objective of the study is to identify factors associated with readmissions among PWD in Alabama disproportionately affected by diabetes. METHODS/STUDY POPULATION: This retrospective cohort study utilizes electronic health record data from an urban health system in Alabama. The study population includes adults (≥18 years old) diagnosed with diabetes who were hospitalized between 2016 and 2020. Women who are pregnant during hospitalization or diagnosed with gestational diabetes are excluded. Patient’s index hospitalization is identified with a 3-month washout period preceding admission. The primary outcome is all-cause 30-day readmission. Characteristics are compared between patients with and without readmissions. Factors significantly associated with readmissions are identified with multiple logistic regression, adjusted for potential confounders. RESULTS/ANTICIPATED RESULTS: The sample size is expected to be around 30,000 individual PWD. Anticipated results include estimation of the all-cause 30-day readmission rate experienced by the PWD in Alabama. It is expected that various factors will be associated with either higher or lower odds of readmission, interpreted via odds ratios and 95% confidence intervals. Factors investigated are driven by previously identified risk factors of admission from the literature, including but not limited to sociodemographic variables, lab values (A1C, glucose, serum albumin, serum sodium, etc.), vital signs (blood pressure), comorbidities, medications, length of stay, insurance coverage, geographic location, and social history. DISCUSSION/SIGNIFICANCE OF FINDINGS: This study identifies cord plasma metabolites as possible modifiers or mediators linking prenatal acetaminophen exposure and ADHD risk. For children below the median cord 5-MTX level, the odds of ADHD were 3.29 (95% CI [1.56, 7.16], p=0.002) for the third tertile of acetaminophen compared to the first tertile. This association attenuated among those above the median 5-MTX level: 2.23 (95% CI [0.98, 5.21], p=0.059), suggesting a protective effect. Tryptophan, an essential amino acid and precursor of serotonin, was positively associated with the primary outcome was physician-diagnosed ADHD between the ages of 3 and 16 years. Exploratory analyses and multiple logistic regressions were used to examine the association of these candidate metabolites with both unmetabolized cord plasma acetaminophen levels and with incident risk of ADHD, adjusting for covariates of maternal and child characteristics. RESULTS/ANTICIPATED RESULTS: Of the 583 children, 257 had ADHD and 326 had neurotypical development. Two promising results have been found thus far. 5-methoxytryptophol (5-MTX), a neuroendocrine molecule which also has antioxidant and immunomodulatory properties, was inversely associated with acetaminophen and ADHD risk. For children below the median cord 5-MTX level, the odds of ADHD were 3.29 (95% CI [1.56, 7.16], p=0.002) for the third tertile of acetaminophen compared to the first tertile. This association attenuated among those above the median 5-MTX level: 2.23 (95% CI [0.98, 5.21], p=0.059), suggesting a protective effect. Tryptophan, an essential amino acid and precursor of serotonin, was positively associated with acetaminophen and ADHD. Next steps include mediation analysis with tryptophan and analyses for other metabolites. DISCUSSION/SIGNIFICANCE OF FINDINGS: This study identifies cord plasma metabolites as possible modifiers or mediators linking prenatal acetaminophen exposure and childhood ADHD, which may offer insight into a mechanistic pathway. The study findings have implications for FDA, clinical, and public health guidelines regarding safe use of acetaminophen during pregnancy.

A cross-sectional study of dietary patterns and nutrient intakes in the oldest old*
Ashley C. Flores1, Yi-Hsuan Liu1, Xiang Gao1, G. Craig Wood2, Brian A. Irving3, Christopher D. Still2, Gordon L. Jensen4 and Diane C. Mitchell5
1The Pennsylvania State University; 2Geisinger Health System; 3Pennington Biomedical Research Center; 4University of Vermont

ABSTRACT IMPACT: Understanding dietary patterns and nutrient intakes of the aging population may help address concerns and
Effects of Race and Demographics on Use of Physical Restraints in the Emergency Department

Ambrose H. Wong, MD, MScEd, Travis Whitfill, MPH, Emmanuel C. Ohuabunwa, MD, MBA, Jessica M. Ray, PhD, James D. Dziura, PhD, Steven L. Bernstein, MD and Richard Andrew Taylor, MD, MHS
Department of Emergency Medicine, Yale School of Medicine

ABSTRACT IMPACT: Within three EDs in a regional health system in Connecticut, African American race, male gender, non-Hispanic ethnicity, lack of private insurance, and homelessness were associated with significant odds of being physically restrained during a visit. OBJECTIVES/GOALS: Agitated patient encounters in the Emergency Department (ED) are on the rise, and physical restraints are used to protect staff and prevent self-harm. However, these are associated with safety risks and potential stigmatization of vulnerable individuals. We aim to determine factors that are associated with odds of being restrained in the ED. METHODS/STUDY POPULATION: We conducted a retrospective cohort analysis of all patients (≥18 yo) placed in restraints during an ED visit to three hospitals within a large tertiary health system from Jan 2013-Aug 2018. We undertook descriptive analysis of the data and created a generalized linear mixed model with a binary logistic identity link to model restraint use and determine odds ratios for various clinically significant demographic factors. These include gender, race, ethnicity, insurance status, alcohol use, illicit drug use, and homelessness. Our model accounted for patients nested across the three EDs and also accounted for multiple patient visits. RESULTS/ANTICIPATED RESULTS: In 726,417 total ED visits, 7,090 (1%) had associated restraint orders. Restrained patients had an average age of 45, with 64% male, 54% Caucasian and 29% African American. 17% had private insurance, 36% endorsed illicit substances, 51.4% endorsed alcohol use and 2.3% were homeless. African Americans had statistically significant odds of being restrained compared to Caucasians with adjusted odds ratio (AOR) of 1.14 (1.08,1.21). Females (AOR 0.75 [0.71, 0.79]) had lower odds of being restrained compared to males while patients with Medicaid (AOR 1.57 [1.46, 1.68]) and Medicare (AOR 1.70 [1.57, 1.85]) had increased odds compared to the privately insured. Illicit substance use (AOR 1.55 [1.46, 1.64]), alcohol use (AOR 1.13 [1.07, 1.20]) and homelessness (AOR 1.35 [1.14, 1.16]) had increased odds of restraint use. DISCUSSION/SIGNIFICANCE OF FINDINGS: We showed statistically significant effects of patient demographics on odds of restraint use in the ED. The increased odds based on race,