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

17547

Transitions of Care among Patients with Diabetes in the Deep South: Factors Associated with Hospital Readmissions

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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 disproportionally 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 readmission 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: Findings will establish evidence-based knowledge about TOC for PWD in the Deep South, specifically Alabama. Identifying factors associated with readmissions among PWD in Alabama will inform TOC intervention studies tailored to populations in the Deep South to effectively mitigate readmissions.

22566

Identifying metabolic mechanisms linking prenatal acetaminophen exposure to childhood attention-deficit hyperactivity disorder*

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ABSTRACT IMPACT: This study has implications for understanding early developmental mechanisms of ADHD and for guidelines regarding safe use of acetaminophen during pregnancy. OBJECTIVES/GOALS: Prenatal acetaminophen exposure has been associated with childhood attention-deficit hyperactivity disorder (ADHD), but the underlying mechanism is unknown. This prospective birth cohort study aims to identify linkages between specific metabolites in umbilical cord plasma and the association of prenatal acetaminophen exposure and ADHD. METHODS/STUDY POPULATION: The sample was a subset of the Boston Birth Cohort that included 583 mother-newborn dyads followed at Boston Medical Center from 1998 to 2018. Metabolites were measured from cord plasma collected at birth. Based on existing literature, the analyses focused on candidate metabolites involved in neuroendocrine, inflammation, and oxidative stress pathways. The 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.

28201

A cross-sectional study of dietary patterns and nutrient intakes in the oldest old*

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ABSTRACT IMPACT: Understanding dietary patterns and nutrient intakes of the aging population may help address concerns and

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