medical records on TriNetX LLC using the standard ICD-10 code or through a digital phenotype, involving grouping codes for the individual components. Percentage of patients with MetS not captured with the standard code was identified. In addition, disparities in blood pressure, glucose, lipid-lowering medication, and lifestyle intervention between the coding schemas were assessed, shedding light on healthcare inequities and informing targeted interventions. Odds ratios (RR) were presented for all outcomes. RESULTS/ANTICIPATED RESULTS: Patient demographics and lab values were similar between the standard code and digital phenotype cohorts. Of the 4.3 million individuals aged 50 to 80 identified as having MetS using the digital phenotype in the TriNetX research network, only 1.78% of participants shared the standard code. Individuals with the digital phenotype for MetS were at lower odds in receiving glucose lowering medication (OR: 2.11, 95% CI: 1.98–2.13, p <0.001) and exercise or nutrition-based intervention advice (OR: 1.76, 95% CI: 1.55–1.96, p <0.001) after controlling for demographics and lab values for each MetS component. DISCUSSION/SIGNIFICANCE: This project utilized TriNetX to create a digital phenotype for MetS, and suggests most patients are not coded for it using the standard ICD-10 system. This is troublesome given those with the standard code are less likely to receive certain interventions.

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Sociodemographic and Hospital-Level Characteristics Associated with Hospital-Onset Bacteremia in the Neonatal Intensive Care Unit

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OBJECTIVES/GOALS: The primary objective is to measure the independent association of hospital-level and sociodemographic variables on the rate of hospital-onset bacteremia among infants admitted to the neonatal intensive care unit in a United States of America retrospective cohort. The secondary outcome will be relative blood culture collection rate. METHODS/STUDY POPULATION: The study is an analysis of a retrospective cohort comprised of infants admitted to 322 neonatal intensive care units (NICUs) in the United States of America between 2016-2021. The primary outcome will be hospital-onset bacteremia (HOB), defined as a positive blood culture with a bacteria or fungi after day 3 of admission. Independent risk factors will include birthweight, postnatal age, central venous catheter presence, sociodemographic variables (race, ethnicity, insurance status and ZIP code-level demographic data from the US Census American Community Survey (ACS), and hospital-level variables. Infants will be stratified by sociodemographic groups and a Poisson model will be utilized to measure the adjusted association between risk of HOB and clinical and hospital-level variables. RESULTS/ANTICIPATED RESULTS: I anticipate that infants in sociodemographic groups with a history of socioeconomic marginalization will have a higher unadjusted rate of HOB; however, sociodemographic variables will not be independently associated with HOB risk after adjusting for markers of hospital quality and acuity, such as quartiles of the following: mean admissions per year, percentage of infants born <1500g, annual blood culture contamination rate, and percentage infants born at another facility. DISCUSSION/SIGNIFICANCE: Neonatal bacteremia has high morbidity and mortality; however, its contribution to known infant mortality inequities is unknown. This study will estimate the burden of infant HOB stratified by sociodemographic groups and measure the independent association of sociodemographic and hospital-level variables on the adjusted rate of HOB.

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Clinical, Socioeconomic, and Facility Factors Influencing Receipt of Autologous Breast Reconstruction: Analysis of the National Cancer Database

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OBJECTIVES/GOALS: The goal of this study is to leverage a national database to see if autologous reconstruction rates differ in patient and clinical characteristics, readmission rates, and overall survival (OS) compared to other forms of reconstruction. Autologous reconstruction has not been looked at in this way before. METHODS/STUDY POPULATION: • Aim 1: Use the National Cancer Data Base to construct three patient cohorts for women under 70 and above 18 treated surgically for breast cancer with A) mastectomy only, B) implant-based reconstruction, and C) autologous breast reconstruction. • Aim 2: Examine receipt rates of surgical intervention in Cohorts A vs. B vs. C based on clinical and patient demographic/socioeconomic characteristics. • Aim 3: Compare readmission and overall survival (OS) rates for Cohorts A vs. B vs. C while controlling for age and other key variables. RESULTS/ANTICIPATED RESULTS: Based on the literature, we expect rates of autologous reconstruction (Cohort C) to be lower for patients of minority backgrounds compared to white individuals. In addition, we do not expect overall survival to differ between implant-based (Cohort B) and Cohort C reconstruction. Still, we expect mastectomy-only (Cohort A) survival to vary from the two cohorts even when adjusting for different clinical factors, as similar but smaller studies have shown. Finally, we expect readmission rates to be higher for Cohort C, compared to Cohorts A & B, as it is a more complicated procedure typically done in academic institutions with skilled surgeons. DISCUSSION/SIGNIFICANCE: Autologous reconstruction is now considered the gold standard due to its ability to restore the breast shape with higher patient satisfaction and superior long-term outcomes. Multiple studies have documented ongoing racial disparities in post-mastectomy breast reconstruction and autologous reconstruction, with lower rates and referrals.

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Characteristics of Medicare patients receiving peripheral vascular interventions for peripheral artery disease differ by outpatient site of service

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OBJECTIVES/GOALS: Endovascular peripheral vascular interventions (PVIs) are increasingly utilized for the treatment of peripheral artery disease (PAD). We aimed to assess characteristics of patients

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