

## **Social Determinants of Health and Adverse Health Outcomes in an Urban Community Hospital in Northwest Indiana**

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**Background.** Social determinants of health (SDOH) are underlying contributing factors of health inequities. Facility-based SDOH screenings inform targeted care, community resource referrals, and actions. St. Mary Medical Center (SMMC), an urban hospital in Northwest Indiana, was first acute care hospital in the state to pilot comprehensive SDOH screenings and referrals using the Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE), a nationally recognized and validated tool. This study is part of a three-phased Community Based Participatory Research (CBPR) partnership between SMMC and IUSM-NW to examine and address SDOH from January 2021-January 2025. This study's research questions are: What is the distribution of adverse health outcomes by demographics and by SDOH in SMMC's inpatients?

**Methods.** This descriptive study analyzed a limited dataset generated from EPIC™ by SMMC. It included demographics, behavioral, health outcomes, and SDOH measures for adult inpatient visits from January 2021 to June 2022. Data analysis was conducted in SPSS 28.0 using descriptive statistics and tests of association ( $p < 0.05$ ) including One-way ANOVA, Kruskal Wallis H, Chi-square, and Fisher's Exact. This study was exempted by Indiana University Human Research Protection Program (IRB #14040).

**Results.** The sample comprised 4370 patients, majority non-Hispanic (90.4%), White (75.7%), older adults (median age 65, IQR = 24), and publicly insured (76.3%). 30-day readmissions accounted for 9.1%. The top three discharge diagnoses were diseases of the circulatory system (20%), digestive system (12.4%), and injury (7.5%). Discharge diagnoses differed significantly ( $p < .001$ ) by family income, insurance type, stress presence, race, ethnicity, and sex. 30-day readmission was significantly associated with housing risk ( $p = .036$ ) and insurance type ( $p < .001$ ).

**Conclusions.** This study underscores the role of SDOH in influencing health outcomes and the importance of continuous SDOH screenings. This study will inform subsequent advanced analysis, the program evaluation, and the translation-to-action phase of the CBPR project.