

The Influence of Social Determinants of Health Across the Craniofacial Fracture Care Continuum: A Systematic Review

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INTRODUCTION

- Social Determinants of Health (SDoH) are critical non-clinical drivers that fundamentally shape health disparities and patient outcomes across surgical specialties
- While their influence is acknowledged, a comprehensive evaluation of how these factors impact the entire facial fracture care continuum, from initial injury risk to postoperative recovery, is necessary to identify systemic inequities
- Understanding the cumulative effect of socioeconomic barriers is essential for developing targeted, evidence-based interventions that promote health equity in facial trauma care
- This study addresses the need for a systematic synthesis of existing literature to delineate how SDoH creates a cycle of disadvantage for vulnerable patient populations

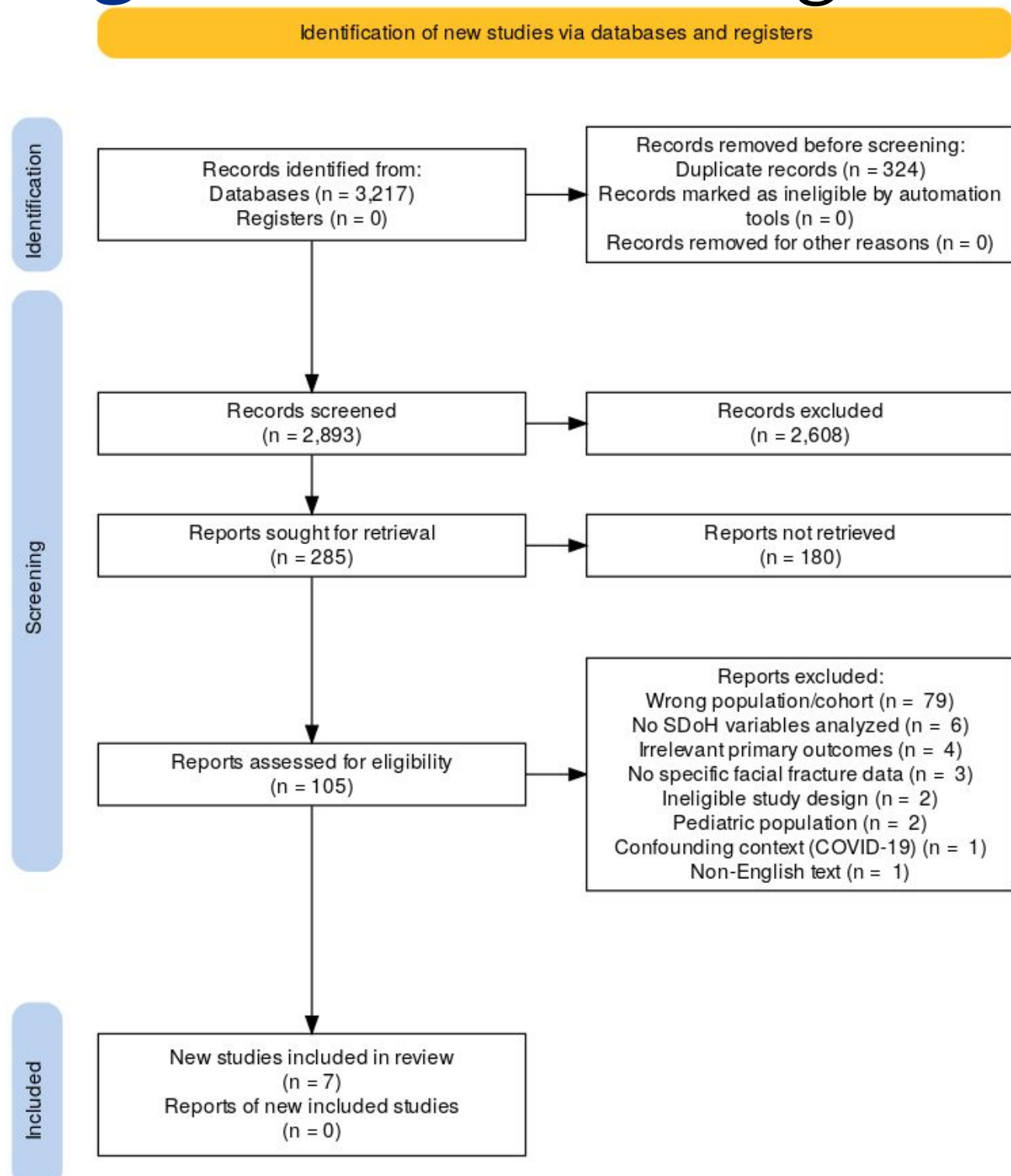
GOAL/HYPOTHESIS

- This study aimed to systematically evaluate the impact of Social Determinants of Health (SDOH) across the facial fracture care continuum, from injury risk to postoperative recovery

METHODS

- Study Design:** A PRISMA-compliant systematic review identified studies examining associations between SDOH and facial fracture outcomes across multiple databases
- Data Extraction:** Data on injury risk, inpatient processes, and readmissions were extracted and synthesized
- Pooled Cohort:** A total of seven studies met the pre-defined eligibility criteria, yielding a pooled cohort of 895,333 patients

Figure 1: PRISMA Diagram



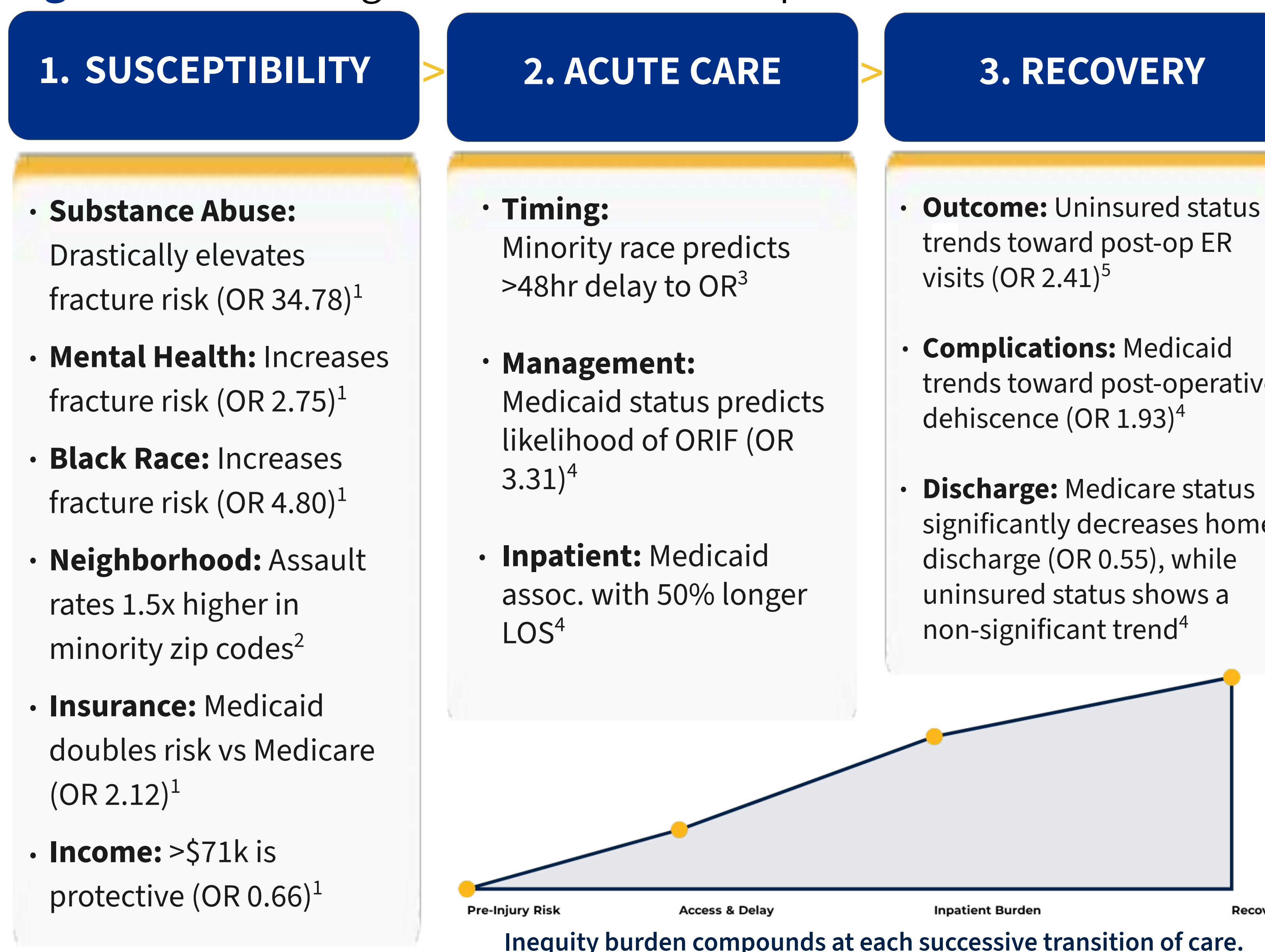
METHODS (CONT.)

Table 1: Database Synthesis

First Author (Year)	Data Source	Sample Size
Derakhshan (2024)	State Inpatient Databases (NY, MD, FL)	1,277
Hyman (2016)	National Trauma Data Bank (NTDB)	518,106
Mancera (2022)	Single Center (Urban Level I)	410
Musavi (2021)	National Inpatient Sample (NIS)	78,730
Perla (2022)	National Inpatient Sample (NIS)	268,809
Wang (2024)	Nationwide Emergency Dept Sample (NEDS)	27,239
Yu (2023)	SEDD / SASD (CA, NY, FL)	762
Total Pooled Analysis Sample: 895,333 Patients		

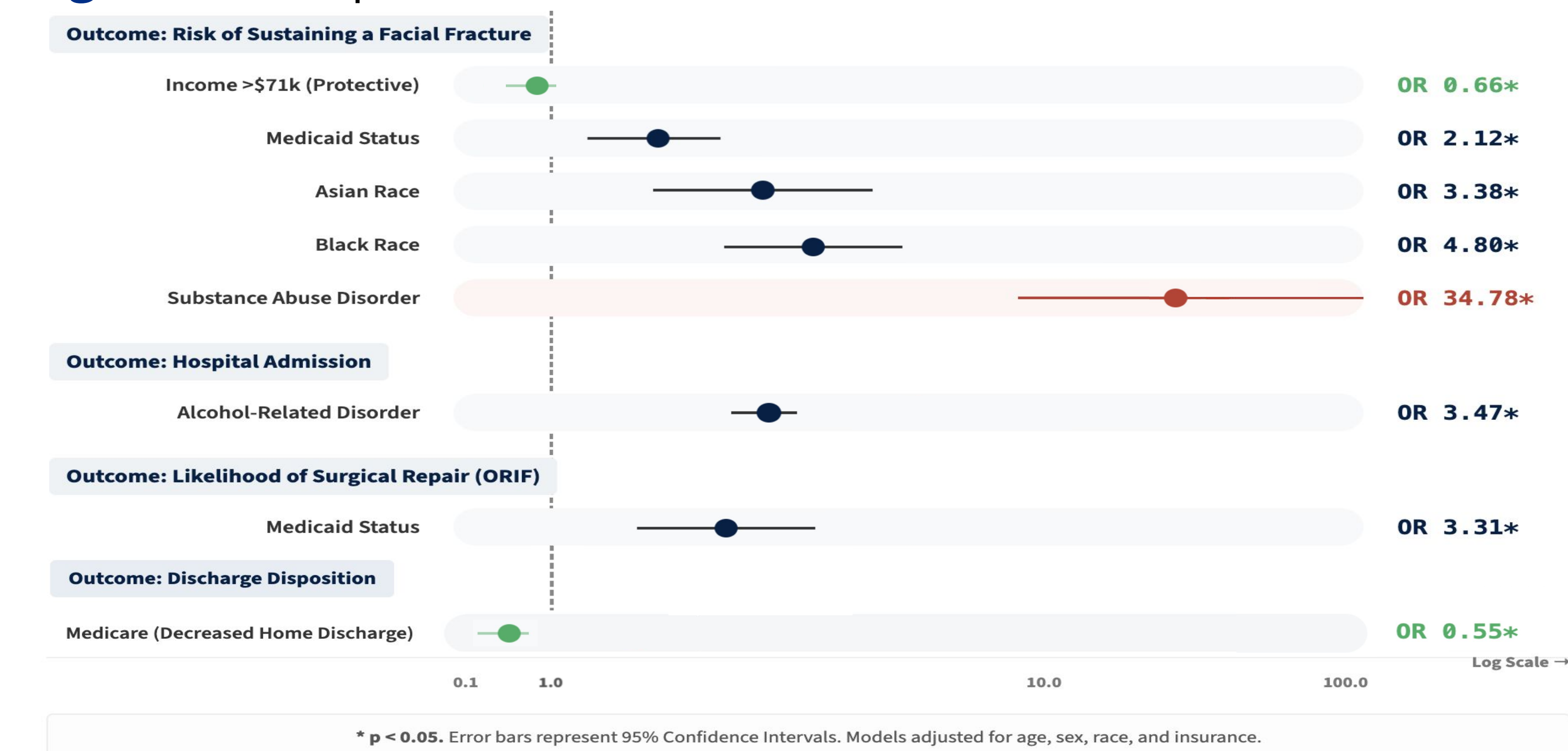
RESULTS

Figure 2: The 3-Stage Care Continuum Map



RESULTS (CONT.)

Figure 3: Independent Multivariate Predictors of Outcomes



CONCLUSION/DISCUSSION

- SDOH create cumulative disadvantages, amplifying facial fracture susceptibility and recovery barriers
- Significant disparities exist across race, demographics, income, and health status at every stage of care
- Variations in study design and SDOH measurement underscore the need for standardized, prospective investigations to delineate modifiable pathways and guide evidence-based interventions promoting health equity

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