

# The Effect of Area Social Deprivation on Health Behavior and Health Care Utilization in an Adult Trauma Population

Jaclyn Portelli Tremont, MD MPH; Ursula Adams, MD MBA; Alexa Holloway, MS; Ian Kratzke, MD; Sarah McIntyre, MSN, CEN, TCRN; Pascal Osi Udekwu, MBBS MBA/MHA; Crystal Pressley, MD, MPH

## Background

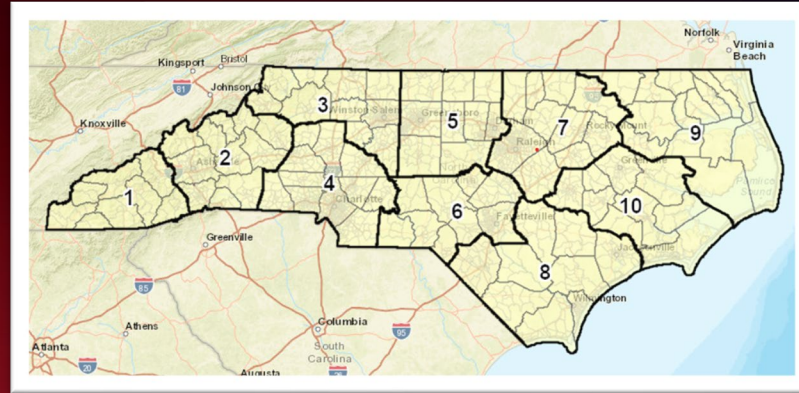
- Social determinants of health are: “the conditions in which we are born, live, work, play, worship, and age”
- These factors are associated with health outcomes, perhaps more so than traditional demographic metrics
- The State Center for Health Statistics (SCHS): collects population-level data on social determinant metrics. There are three primary domains in the database: social and neighborhood resources, economics, and housing and transportation.

## Objective

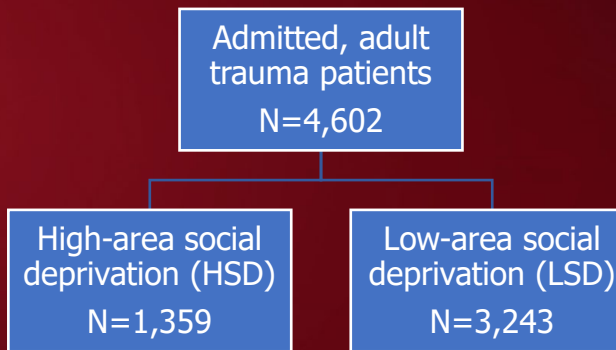
- Compare patients from high-area deprivation (HSD) and low-area deprivation (LSD)
- Examine differences in demographics, injury characteristics, clinical outcomes, and healthcare utilization

## Methods

- Institutional, retrospective study of trauma patients admitted to a Level I trauma center between January 2019 and December 2020.



NC map with defined regional Social Determinant Indices



## Results

- Patients in HSD cohort: more likely to be male, uninsured, and identify as a non-White race or ethnicity
- Admitted to the ICU less frequently (31.5% vs 35.5%) than patients in the LSD cohort after adjustment for injury severity (OR 0.84, 95% CI 0.71-0.98).
- Only 6.7% of patients in the HSD cohort were discharged home with additional services compared to 8.9% in the LSD cohort

## Future Opportunities

- HSD patients may be less likely to have established access to healthcare and preventative services
- Hospitalization for traumatic injury is an opportunity for:
  - Entrance into the healthcare system
  - Establishment of regular care
  - Connections to community resources

HSD Effect on Clinical Outcomes	aOR (95% CI)	P-value
ICU admission	0.84 (0.71, 0.98)	0.03
Discharged home with services	0.73 (0.57, 0.94)	0.02

### References:

NC Institute of Medicine. Healthy North Carolina 2020: A Better State of Health. Morrisville, NC: NC Institute of Medicine; 2011.  
 Spruce MW, Thomas DM, Anderson JE, et al. Trauma as an entry point to the health care system. *JAMA Surg.* 2020;155:982-984.  
 Phelos HM, Kass NM, Deeb AP, Brown JB. Social determinants of health and patient-level mortality prediction after trauma. *J Trauma Acute Care Surg.* 2022;92(2):287-295.  
 doi:10.1097/TA.0000000000003454

