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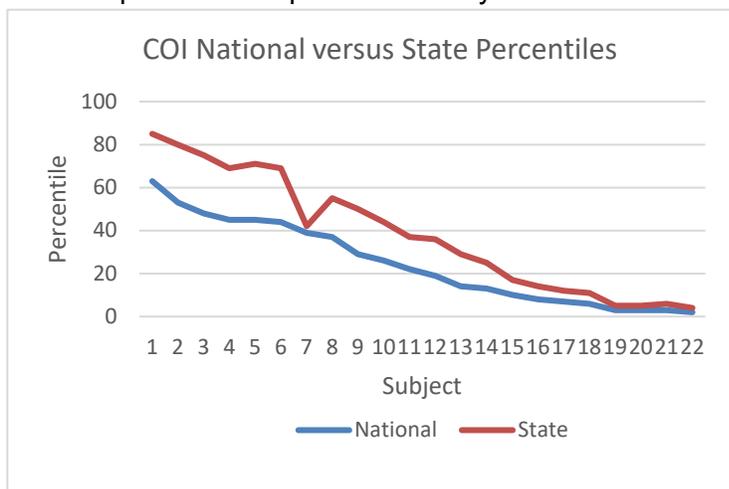
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### “Building Blocks of Ballistic Trauma: Investigating How Childhood Opportunity Index Influences Pediatric Gunshot Fracture Outcomes”

Background: With over 13,000 pediatric gunshot wound cases presenting to the emergency department annually, pediatric gunshot injuries are devastatingly prevalent. However, injury outcomes are often not studied in light of social determinants of health. Childhood opportunity index (COI) provides a composite score that is a measure of a neighborhood opportunity level specific to pediatric populations. Lower COI within a community has been found to be associated with pediatric gunshot violence. Socioeconomic challenge is also associated with poorer outcomes following trauma and surgery. This study aims to investigate how COI may influence the outcomes of pediatric patients who sustain bone fractures secondary to ballistic trauma in the New Orleans region.

Methods: In this retrospective cohort study, Children’s Hospital of New Orleans (CHNOLA) Trauma registry was queried to identify patients under the age of 18 diagnosed with an extremity, spine, or pelvis ballistic fracture between January 2018 and June 2023. The medical record was then queried for demographics, injury details, and outcomes. National and state level percentile COI was collected based on patient census track using publicly available data from <https://www.diversitydatakids.org/child-opportunity-index>.

Results: Twenty-two records are included in these preliminary results. Subjects were on average  $13.5 \pm 4.2$  years of age and 82% (18/22) male. Twenty (91%) of subjects were African American. Only two complications were identified including one wound infection and one reoperation. The low complication rate precluded analysis for associations. State percentile mean COI was  $38.2 \pm 5.7$ . National percentile mean COI was  $24.5 \pm 4.1$ . The national percentile was statistically lower than the state percentile ( $p < 0.0001$ ).



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Conclusions: Data collection is ongoing to increase sample size needed for analysis. The divergence in state and national COI highlights the socioeconomic challenges faced by Louisiana patients relative to the rest of the Nation.