

BACKGROUND

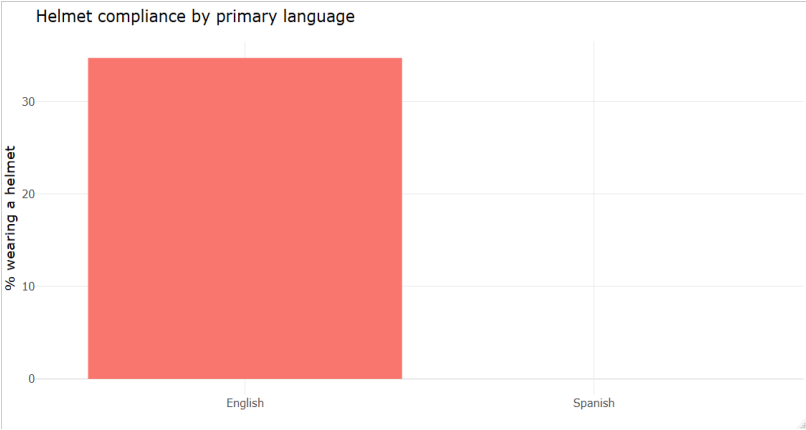
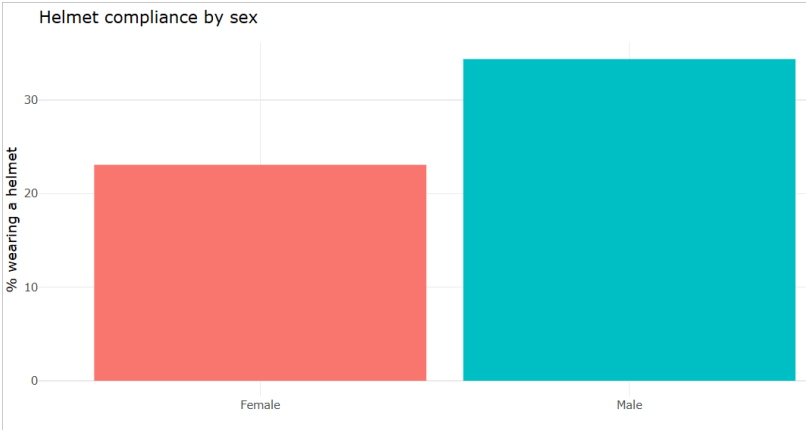
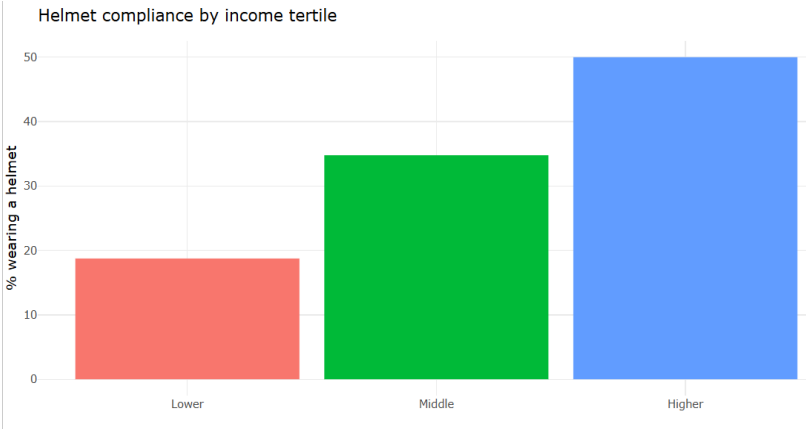
The benefits of helmet use are well established. Studies show bicycle helmets reduce risk of head injury, but less than 50% of children consistently wear a bicycle helmet. There are no studies that examine solely the pediatric bicycle helmet compliance in Nevada. Examining helmet compliance within this context allows for actionable points of intervention in public health, legislation, and community safety.

PURPOSE

The relationship between helmet compliance among children and income level, age, biological sex, and guardians' primary language in Southern Nevada

METHODS

A retrospective chart review between 2015 and 2019. Patients aged 5–14 years were identified using ICD-10 codes to identify visits secondary to a bicycle crash. Helmet compliance was the primary binary outcome compared to the independent variables of income level, age, sex and primary language. Chart abstraction was performed manually and validated using Claude (Anthropic), a large language model.



RESULTS

In our population, overall helmet compliance was 32.5%. Helmet compliance appeared to increase with income level, though not with statistical significance ($p = 0.166$). No significant association was found for sex (Male 34.4% vs. Female 23.1%; $OR = 1.75$, $p = 0.529$) or primary language (English 34.7% vs. Spanish 0.0%; $p = 0.168$). Older children were substantially more likely to be helmeted (Spearman $\rho = 0.38$, $p = 0.001$), and this association persisted in adjusted analysis ($OR = 1.39$ per year, 95% CI 1.12–1.73, $p = 0.003$).

CONCLUSIONS

Helmet compliance in children riding a bicycle in Southern Nevada falls short of the national average. Helmet compliance was low at 32.5%. The associations between compliance and income, sex, and primary language were not statistically significant in our study. These findings showcase the need for an expansive prospectively collected sample to target helmet compliance among Nevada's growing cyclist population.

REFERENCES

See Poster Author for Reference List