

June 2022

Predictive Factors for Length of Hospital Stay in Pediatric Dog Bite Patients

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Recommended Citation

Alessio-Bilowus, Dominic; Kumar, Nishant; Ridelman, Elika Ph.D; and Shanti, Christina MD, "Predictive Factors for Length of Hospital Stay in Pediatric Dog Bite Patients" (2022). *Medical Student Research Symposium*. 169.

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Title: Predictive Factors for Length of Hospital Stay in Pediatric Dog Bite Patients

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Introduction: Dog bite injuries are a source of significant morbidity in the United States, with children being at increased risk compared to adults, yet there is a lack of published data on factors affecting hospital length of stay (LOS) in pediatric patients.

Methods: A full-text retrospective chart review was conducted of all patients presenting to our urban, academic pediatric surgery unit for dog bite injuries between January 2016 and May 2021. Multiple demographic and clinical variables were examined prior to, during and after hospital stay. All data was analyzed using IBM SPSS Statistics V22.0 to compare the impact of each variable on hospital LOS.

Results: 739 pediatric patients were evaluated and treated for dog bite injuries during the study period, of which 349 were admitted for inpatient care. Hospital length of stay ranged from 1 to 34 days, with a mean of 2.9 days and median of 2.0 days. Our analysis revealed two major predictors of increased length of stay: presence of bone fracture (n = 45, mean LOS = 5.3 days, p = 0.00), and prior medical comorbidity, including infection of the wound prior to the encounter (n = 24, mean LOS = 4.3 days, p = 0.04). Demographic and other clinical variables were not associated with statistically significant increases in LOS.

Conclusions: Pediatric patients admitted for dog bite injuries have significantly longer inpatient LOS when they present with bone fractures or significant medical comorbidities including prior wound infection.