

## Introduction

- Trauma is the leading cause of morbidity and mortality in children
- Trauma involving the skeletal spine or spinal cord can lead to significant injuries requiring significant healthcare resources
- The objective of this study was to analyze the incidence and evaluate the clinical outcomes of spinal injuries in the pediatric population presenting to a Level 1 Trauma Center

## Results

	GSW (n=24)	BLUNT (n=68)	p-value
<b>Demographics</b>			
Age, avg (SD)	14.5 (4.3)	14.6 (3.5)	0.9
Male Sex, n (%)	20 (83.3)	41 (60.3)	<b>0.05</b>
Black Race, n (%)	20 (83.3)	37 (54.4)	<b>0.01</b>
Injury Severity Score, avg (SD)	17.6 (8.8)	18.7 (13.4)	0.7
<b>Outcomes</b>			
Spinal Surgery, n (%)	1 (4.2)	9 (13.2)	0.5
Hospital Length of Stay, avg (SD)	14.1 (13.3)	7.5 (10.2)	<b>0.01</b>
ICU Length of Stay, avg (SD)	7.8 (10.6)	3.9 (5.6)	<b>0.03</b>
Spinal Cord Injury, n (%)	11 (45.8)	7 (30.2)	<b>0.001</b>
Mortality, n (%)	2 (8.3)	5 (7.3)	1.0

**Figure 1.** Results of univariate analysis of demographics and outcomes between GSW and BLUNT.

## Methods

- Retrospective chart review was performed from 2016-2022 at an urban Level 1 Trauma Center
- Pediatric patients presenting to the emergency department with spinal injury (bony or cord) were included
- Patients were stratified into two groups based on mechanism: gunshot wounds (GSW) and blunt injury (BLUNT)
- Univariate analysis was performed

## Summary

- 92 patients were included with 26.1% sustaining GSW
- No difference in age nor Injury Severity Score
- Black race and male sex were both more prevalent in the GSW group
- GSW has a higher incidence of spinal cord injury, longer hospital length of stay, and longer ICU length of stay
- No difference was found in mortality or spinal surgery

## Conclusions

- Penetrating trauma to the spine has a higher association with spinal cord injury when compared to blunt trauma

## References

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