IT'S ALL FUN AND GAMES UNTIL SOMEONE GETS HURT: AN ANALYSIS OF TRAMPOLINE INJURIES IN THE PENNSYLVANIA TRAUMA SYSTEM

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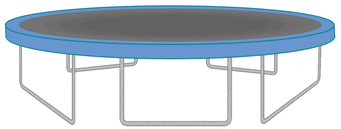
Background of the Study

It is well known that trampolines can be a particular source of danger, especially in children. We sought to examine the profile of those patients with trampoline injuries in the Pennsylvania Trauma System



Research Question/Hypothesis

We hypothesized there would be certain injury patterns predictive of trampoline injuries.

Methods

Patients submitted to Pennsylvania Trauma Outcome Study (PTOS) 2016-2018

Trampoline related injury*

(n=107)

- Patient demographics
- Clinical variables
- Abbreviated Injury Scale (AIS)- *trampoline group only*
- ** Determined by ICD10 activity code*

Non-trampoline related injury

(n= 602,943)

- Patient demographics
- Clinical variables

Results

	Trampoline	Non-Trampoline	p-value
Age, mean (±SD)	13.04 (±11.87)	48.58 (±26.68)	<0.001
Age under 10 years (%)	49.53	7.55	<0.001
Male sex (%)	57.01	60.75	0.889
Race			<0.001
White (%)	72.90	77.70	
Black (%)	7.48	14.18	
Hispanic Ethnicity (%)	14.95	4.70	<0.001
ISS, mean (±SD)	5.56 (±3.53)	10.88 (±9.42)	<0.001
Shock Index, mean (±SD)	0.80 (±0.19)	0.69 (±0.47)	0.018
SD = standard deviation; ISS = injury severity score			

Table 1. Patient demographics and clinical variables.

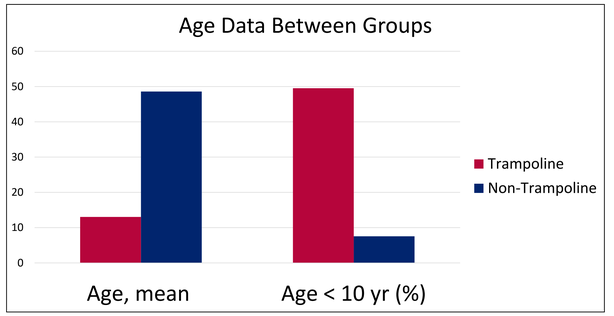


Figure 1. Age differences between the trampoline and non-trampoline injury patient cohorts.

Results

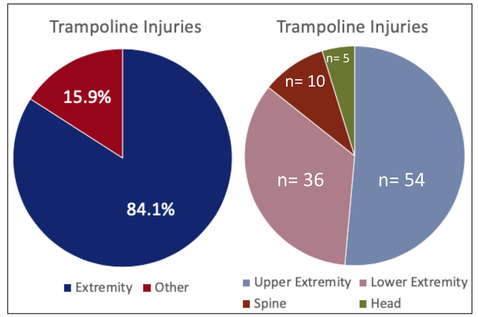


Figure 2. Patients who sustained an injury to an extremity compared to other body region.

Figure 3. Graph comparing the number of patients who sustained each type of injury above.

Conclusion

These results help better understand the demographic, physiologic and anatomic patterns surrounding trampoline injuries, with upper extremity injuries being most prevalent.

Current government standards recommend that no child under age 6 should use a full-sized trampoline; however, based off of the study results, we advise that this age be increased to 10.