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## Background

- Firearm-related injury (FRI) is the leading cause of death in children and adolescents in the United States<sup>2</sup>
- The majority of Adolescent Firearm Injury (AFI) tends to impact males, racial minorities and those living at or below 150% of the poverty line<sup>1,3</sup>
- There has been little characterization of firearm injury patterns in female youth

## Objective

- To characterize recent trends in female AFI in a large, urban US city

## Methods

- Retrospective review of citywide adolescent trauma registry
  - January 2016 - June 2021
  - 3 major trauma centers
- Inclusion criteria:
  - Adolescents, defined as age 11 to 21 years
  - FRI defined by ICD9/10 codes
- Dickey-Fuller testing and linear regression were used to determine changes over time in the number and proportion of females injured

## Results

**Table 1. Citywide AFI**

Variable	Overall	Male	Female	p-value
<b>Age</b> (mean, median, years)	18.1, 19	18.2, 19	17.6, 18	0.016*
<b>Race</b>				
Black	1260, 86.5%	1105, 87.4%	155, 80.7%	
White	104, 7.1%	84, 6.6%	20, 10.4%	
Asian/Pacific Islander	7, 0.5%	6, 0.5%	1, 0.5%	
American Indian	3, 0.2%	3, 0.2%	0, 0.0%	
Unknown	82, 5.6%	66, 5.2%	16, 8.3%	0.111
<b>Ethnicity</b>				
Hispanic or Latino	63, 4.3%	57, 4.5%	6, 3.1%	
Non-Hispanic or Latino	1370, 94.1%	1195, 94.5%	175, 91.1%	
Unknown	23, 1.6%	12, 0.9%	11, 5.7%	<0.001*
<b>Mechanism of Injury</b>				
Self-Inflicted	47, 3.2%	42, 3.3%	5, 2.6%	
Intentional Injury	1083, 74.4%	947, 74.9%	136, 70.8%	
Unintentional Injury	187, 12.8%	156, 12.3%	31, 16.1%	
Undetermined	139, 9.5%	119, 9.4%	20, 10.4%	0.441
<b>Injury Severity</b> (mean, median)	12.7, 10	12.9, 10	12.4, 9	0.845 <sup>‡</sup>
<b>Mortality</b>	191, 11.8%	174, 12.3%	17, 8.9%	0.080

Table 1 – citywide pattern of AFI in Atlanta, GA stratified by gender

\*denotes p-value <0.05, <sup>‡</sup>denotes Mann Whitney U Test

**Figure 1. Monthly AFI Affecting Females**

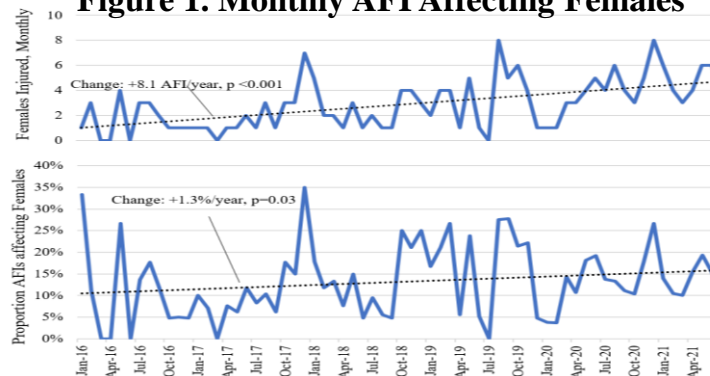


Figure 1 – count and proportion by month of AFI affecting female adolescents with linear regression coefficients. The time series for the number of females injured over time was non-stationary on Dickey-Fuller testing (p<0.01)

## Results

**Figure 2. Yearly AFI by Gender**

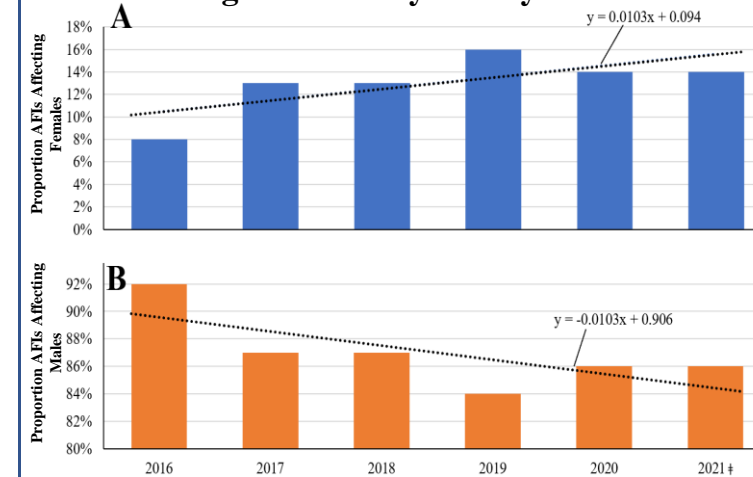


Figure 2 - Yearly proportion of all AFI affecting (A) females and (B) males. <sup>‡</sup>Data includes first six months of 2021

## Conclusion

- The incidence of female AFI in Atlanta, GA is increasing at a greater rate than that of their male counterparts
- Our results indicate that female adolescents represent a high-risk demographic for firearm violence
- FRI is considered a national public health crisis; therefore, interventions targeting prevention of youth firearm violence should intentionally involve female adolescents