



The Hidden Victims of the Vaping Epidemic: Children

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Introduction

- Vaping has rapidly gained popularity and has become the most common utilized form of tobacco among adolescents since 2014.
- The purpose of this study was to determine the true scope of the vaping epidemic with identification of all Vaping –Associated Injuries/Illnesses (VAI) and Product Associated Vaping Injuries (PAVI) in the United States.

Methods

- Identified case entries of injuries associated with vaping in the Consumer Product Safety Commission’s National Electronic Injury Surveillance System (NEISS) between 2014 and 2018.
- Statistical analysis was performed using Stata/IC 15.1. Significances of trends and group comparisons were determined using adjusted Wald tests with P values <0.5 considered significant.

Overall Demographics of Patients Presenting to U.S. Emergency Departments with Injuries Associated with Vaping (2014-2018)			
Variable	Percentage	Standard Error	95% Confidence Interval
Age			
0 to 3 Years	59.8%	8.2%	43.3% - 76.3%
18 to 30 Years	19.3%		
All Other Ages	20.9%	5.3%	10.2% - 31.6%
Sex			
Male	66.2%	4.9%	56.4% - 76.0%
Female	33.8%	4.9%	24.0% - 43.6%
Race			
White	62.4%	8.6%	45.1% - 79.7%
Black	4.0%		
Hispanic	2.1%		
Other ^a	5.6%		
Race Not Specified	28.0%	8.3%	11.3% - 44.7%
Disposition			
Treated and Released	85.6%	6.1%	73.3% - 97.8%
Treated and Admitted	8.2%		
Location			
Unknown	34.2%	5.8%	22.4% - 46.0%
Home	58.5%	5.4%	47.5% - 69.5%
Other ^a	7.3%		

Results

- Injuries were observed in white (62.4%), black (4%), Hispanic (2.1%), and race not specified (28.0%).
- 58.5% sustained a PAVI in their own home with 8.2% of them requiring hospital admission
- PAVI most commonly occurred in patients 0-3 years of age (59.8%).
- Burn injuries and poisoning were the most common, affecting 29.0% and 61.5%, respectively.
- Mechanism’s of injury were accidental ingestion of liquid (61.5%) and explosions of vaping-associated products (22.4%)

Discussion

- First study to identify vulnerable infants and toddlers as collateral victims in the escalating vaping epidemic.
- Recommend careful and comprehensive reporting of all VAIs to identify and understand the true scope of this surging public health crisis. Only then, may we begin to construct detailed initiatives and campaigns to protect the hidden victims of vaping: children.