Trends in the Acuity of Consumer Products Caused Head and Neck Injuries in the Emergency Department

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Introduction

Emergency departments (EDs) are the front lines of acute care in the U.S., increasingly relied upon as barriers to primary care grow and healthcare costs rise

Head and neck injuries make up a significant portion of ED visits, with many linked to everyday consumer products regulated by the U.S. Consumer Product Safety Commission (CPSC)

Understanding trends in injury type, acuity, and disposition is critical for improving prevention, triage, and resource allocation and has direct implications for otolaryngology practice

Methods

Retrospective analysis of ED data from 2014 to 2023 using the National Electronic Injury Surveillance System (NEISS), maintained by the U.S. CPSC

Primary Outcome: ED disposition – treated and released, transferred, admitted, observation, left AMA (Against Medical Advice), mortality

Secondary Outcomes: Injury site distribution and trends over time.

Results

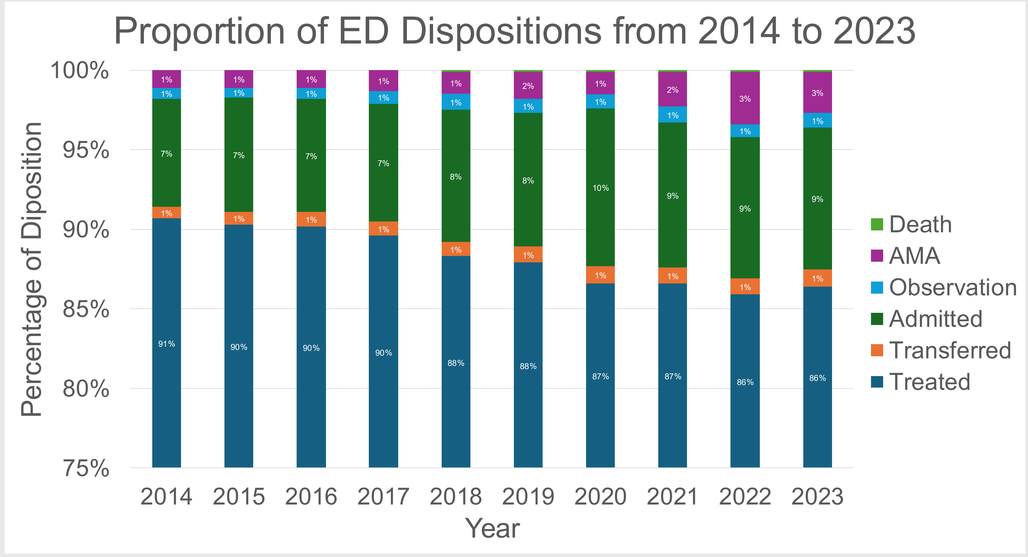

Figure 1. Proportion of emergency department disposition for consumer product related head and neck injuries, 2014 to 2023. Admissions rates have risen from 7% to 9% and AMA rates nearly doubled from 1% to 3%. Mortality remained near 0%.

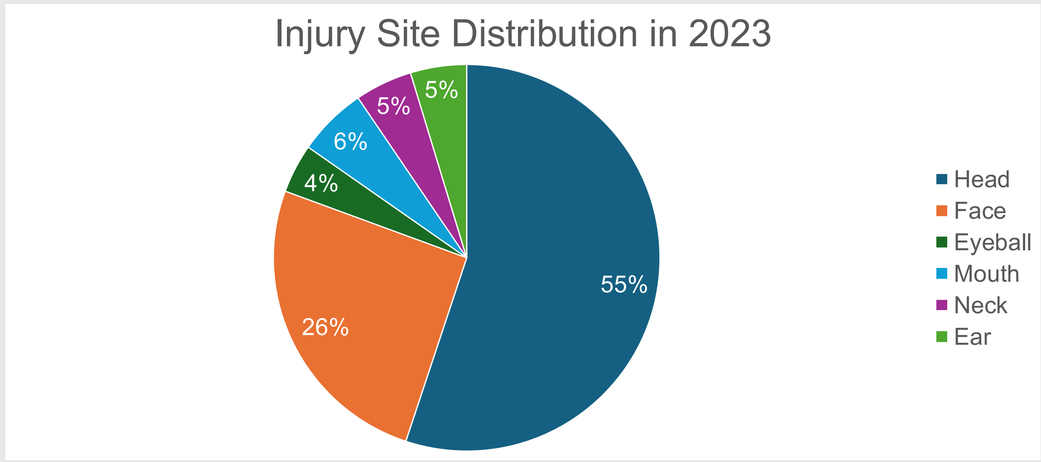

Figure 2. Injury site distribution for consumer product related head and neck injuries presenting to U.S. EDs in 2023. Head and facial injuries account for the majority of cases, with mouth, neck, ear, and eyeball injuries representing smaller proportions. These trends reflect a steady pattern over the past decade, with head and facial injuries consistently representing the majority of cases from 2014 to 2023.

Discussion

More Severe Injuries: Rising admissions and AMA rates point to higher acuity head and neck trauma in EDs

ENT Impact: Head and facial injuries dominate, increased expertise needed in airway management, fracture repair, and otologic evaluation

Care Gaps: Increased AMA rates raise concerns for missed diagnoses and untreated complications

Future Directions

1. Identify specific high-risk products contributing to head and neck injuries
2. Evaluate demographic and socioeconomic factors linked to injury severity and disposition
3. Assess regional variation in head and neck injury related ED utilization

References

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