



VEHICLE RAMMING ATTACKS

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NJHCC South Region 1/23/25

Agenda

Background

Epidemiology

Examples

Preparedness

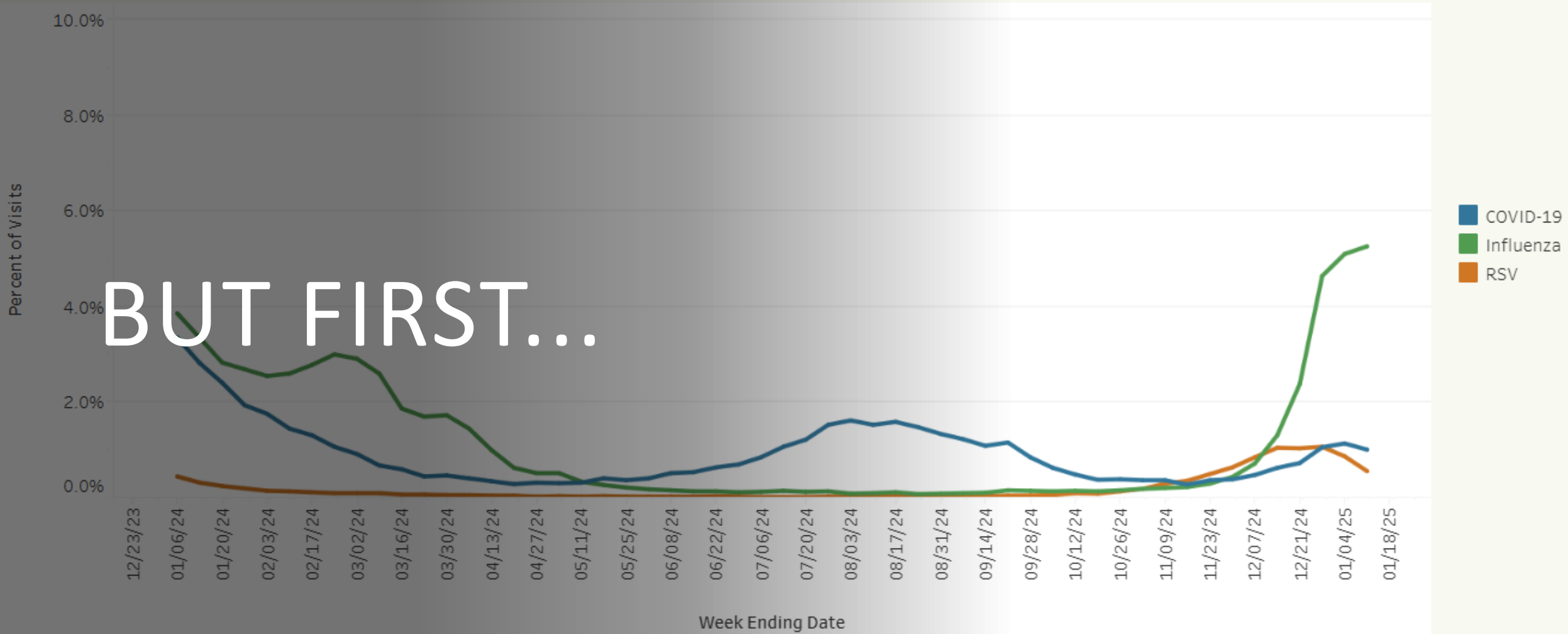
Emergency Department Visits

Start Date

1/6/2024

End Date

1/11/2025



OEMS guidelines

- Surgical mask when caring for patients with flu-like symptoms
- N95 for aerosolizing procedures
- Consider masking patient with suspected flu-like illness



PPE



Background

After Covid, increase in outdoor activities, dining

Vehicle ramming relatively rare but became more common just prior to pandemic

Ease of access to vehicles, minimal planning, increasingly popular for lone actors


Epidemiology

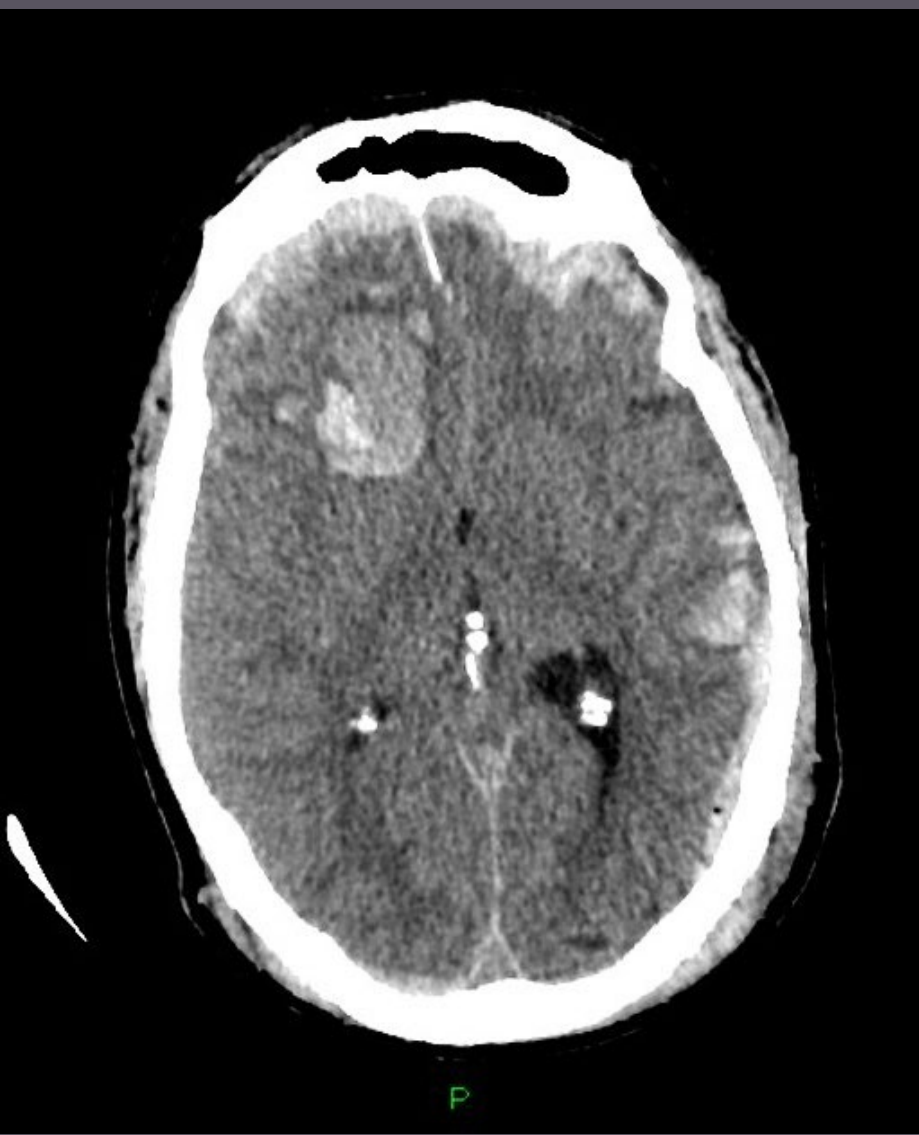
- 257 attacks involved some type of vehicle between 1970 – 2019
- 808 fatalities, 1715 injuries (excluding 9/11)
- 76 West Bank and Gaza strip, 25 USA, 16 Israel, 14 UK



Trauma Surgery
& Acute Care Open

Democratization of terrorism: an analysis of vehicle-based terrorist events

Ryan Scott Houser  1,2,3



Injury pattern

Blunt, non-penetrating trauma

Higher severity of injury and mortality than general pedestrian injury

More intubated, higher surgical procedures

Decelerating vehicles vs deliberate acceleration

Shoved away (extremity and pelvis) vs

Pushed towards (severe head trauma)

Nice, France

Bastille Day, 2016

19-ton cargo truck

Ramming attack, shooting,
stampede

86 people killed

434 injured



Berlin, Germany

Christmas market, 2016

Semi-trailer truck

12 dead

56 injured



Charlottesville, Virginia

August 2017

Dodge Challenger into
crowd of protestors

1 dead

35 injured



Waukesha, Wisconsin

Christmas parade, 2021

Ford Escape driven past barricades

6 dead

62 injured

Special population



Prevention

Barriers

- concrete
- vehicle

Traffic calming measures





THANK YOU!