

Identifying Non-Crash Fatalities Using the National Vital Statistics System

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ICD-10 External Cause of Injury

- **Mechanism of the event**
 - ◆ **Transport accident (V01-V99)**
 - ◆ **Exposure to excessive natural heat (X30)**
 - ◆ **Caught, crushed, jammed or pinched in or between objects (W23)**
- **Manner of injury**
 - ◆ **Accident (V01-X59)**
 - ◆ **Intentional Self-Harm (X60-X84)**
 - ◆ **Assault (X85-Y09)**

First Cut

- **Used 2003 and 2004 mortality data in National Vital Statistics System (NVSS)**
- **Include accidents and undetermined intent**
 - ◆ **Exclude self-harm and assault**
- **Exclude transport and firearm accidents**
- **61,116 potential cases in 2003**
- **63,978 potential cases in 2004**

Identify Passenger Vehicle Deaths

- **Wanted Non-Crash (Non-Transport) Deaths Involving Passenger Vehicle**
- **Perform character string searches of narratives for all cases in 1st cut**
 - ◆ **medical information**
 - ◆ **place of injury**
 - ◆ **description of how the injury occurred**

Character String Search Keywords

- **Body type identifiers**
 - ◆ **CAR, AUTO, AUTOMOBILE, TRUCK, PICK-UP, PICKUP, SUV, VEHICLE, VAN, TAXI, JEEP, CONVERTIBLE and SEDAN**
- **15 most common vehicle makes**
 - ◆ **Identify other cases where these names (e.g., FORD or HONDA) were used**

Review Remaining Narratives

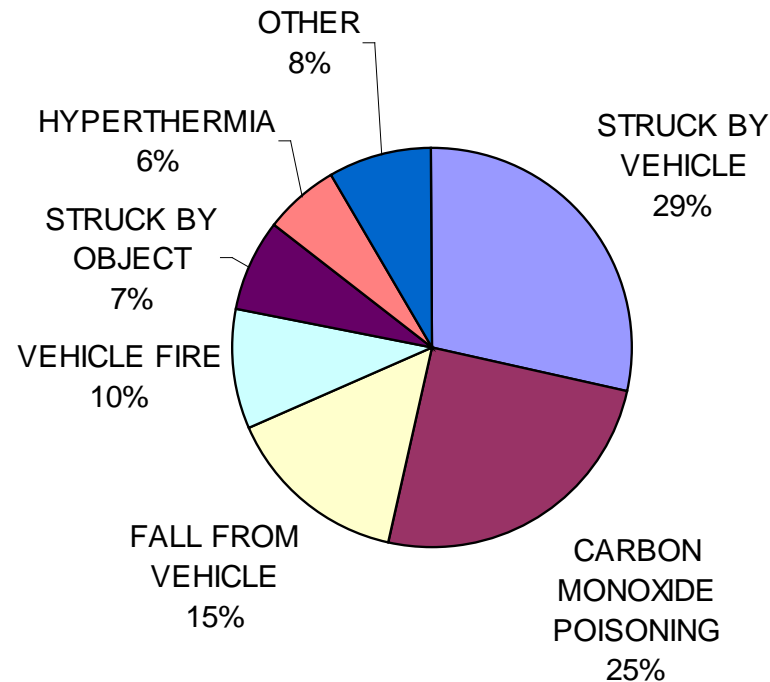
- **Approximately 3,000 cases identified for review**
- **Was a motor vehicle involved?**
 - ◆ Reduce false positives such as “car” for cardiac
- **Was motor vehicle a passenger vehicle?**
 - ◆ Remove non-passenger vehicles such as garbage “truck”

What does “involved” mean?

- **Inside the vehicle**
 - ◆ Heat-related death inside vehicle
- **While entering or exiting**
 - ◆ Fall while exiting stationary vehicle
- **Outside the vehicle**
 - ◆ In contact with the vehicle
 - Crushed while working under vehicle
 - ◆ In contact with vehicle emission
 - Carbon monoxide poisoning in garage or house

NiTS 2007: Noncrash Fatalities

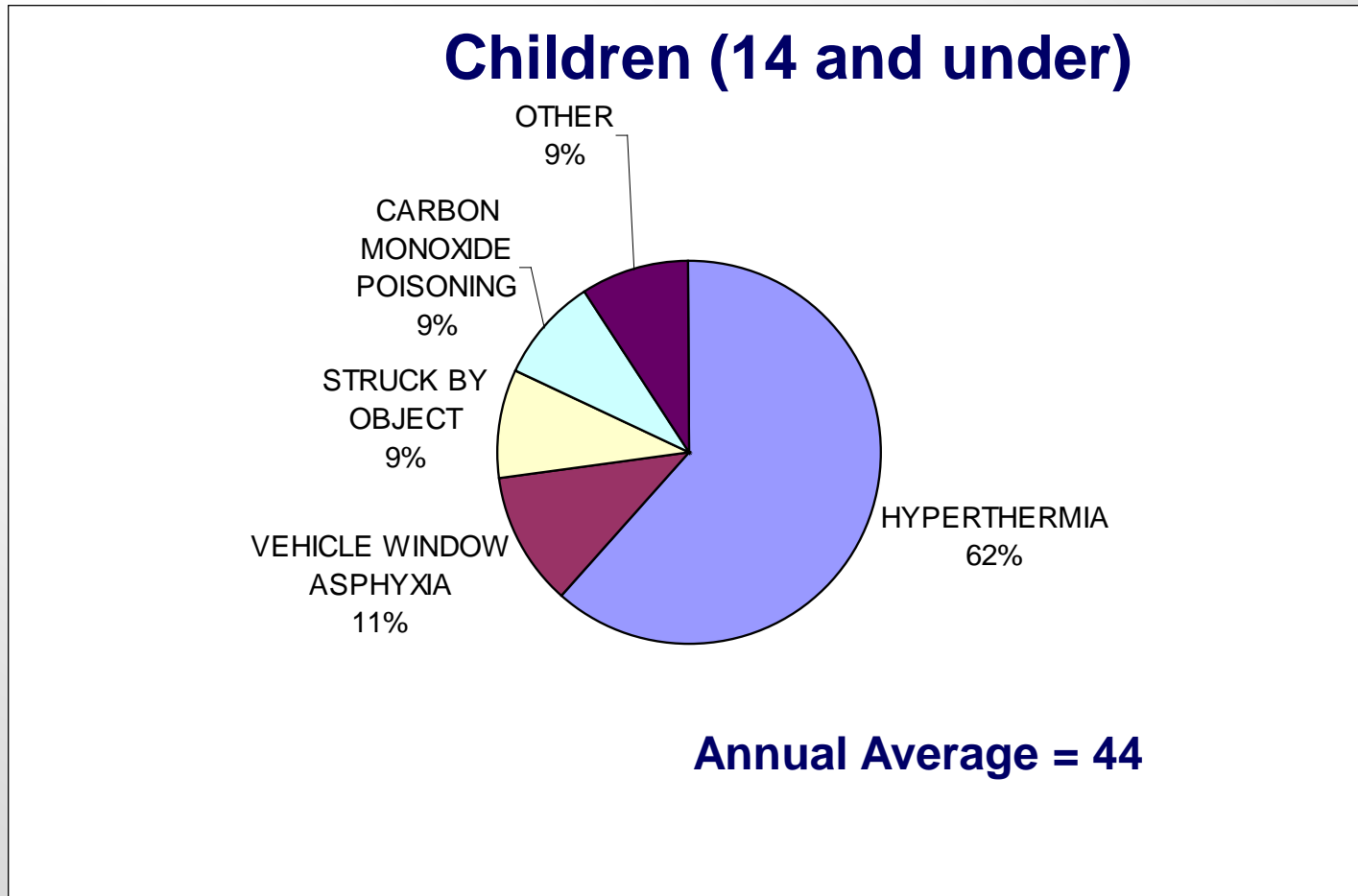
Source: NVSS 2003 & 2004



Annual Average = 588

Noncrash Child Fatalities

Source: NVSS 2003 & 2004



Data Analysis Limitations

- **Relies on narratives**
 - ◆ **17% records no injury description**
 - Used medical narrative
 - ◆ **Keywords omitted or misspelled**
- **Relies on intent coding**
 - ◆ **Cases where effect of external cause was heatstroke and sunstroke (T67)**
 - ◆ **In 2007/2008, 22% coded intentional**
 - Other assault or other maltreatment