Identifying Accidental Passenger Vehicle Non-transport Incidents in the NVSS

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Purpose

. . . establish a method to collect and maintain data on the number and types of injuries and deaths involving [passenger] motor vehicles ... in nontraffic, noncrash events

“SAFETEA-LU”, Public Law 109-59, Title II, Sec. 10305
ICD-10 E-Codes (External cause of injury)

• **Mechanism of the event**
  ♦ what caused the injury (ex. motor vehicle crash, a firearm, a drug or a fall)

• **Manner of death**
  ♦ intent behind the death (unintentional, suicide, homicide, legal intervention or act of war, and unknown intent)
First Cut

• Exclude transport deaths
• Exclude intentional deaths
• Exclude firearm deaths
• Include unintentional deaths and deaths of unknown intent from external causes
• 61,116 potential cases in 2003
• 63,978 potential cases in 2004.
Identify Passenger Vehicle Deaths

- Passenger vehicles (passenger cars, utility vehicles, pickup trucks, vans)
- Perform character string searches of narratives
  - medical information
  - place of injury
  - description of how the injury occurred
Character String Search Keywords

• Body type identifiers
  ♦ CAR, AUTO, AUTOMOBILE, TRUCK, PICKUP, PICKUP, SUV, VEHICLE, VAN, TAXI, JEEP, CONVERTIBLE and SEDAN

• 15 most common vehicle makes
  ♦ to identify other cases where these names (e.g., FORD or HONDA) were used instead of the generic body type

• Approximately 3,000 cases identified
Review Remaining Narratives

- Was a motor vehicle involved? (reduce false positives)
- Was motor vehicle a passenger vehicle?
Does narrative indicate the vehicle was a factor in the injury?

- Injury occurred inside the vehicle
- Injury occurred while a person was entering, exiting, or falling from a vehicle
- Injury involved a person outside the vehicle who came in contact with the vehicle
- Injury involved a person outside the vehicle who came in contact with a vehicle emission (such as fire, smoke, exhaust, gasoline, battery acid, or radiator fluid)
Data Analysis Limitations

- ~17 percent records-no injury description-used codes/medical narrative
- Keywords omitted or misspelled
- Narratives only report ‘truck’ or ‘vehicle’
- Some non-passenger vehicles
- Some non-transport fatalities may meet NHTSA crash definition
Resolutions

- Many different search strategies and classifications were attempted
- NHTSA believes that ‘limitations’ did not have major effect on results
NiTS 2007: Noncrash Fatalities
Source: NVSS 2003 & 2004

Annual Average = 588
Noncrash Child Fatalities
Source: NVSS 2003 & 2004

Children (14 and under)

- Hypothermia: 62%
- Vehicle window asphyxia: 11%
- Struck by object: 9%
- Carbon monoxide poisoning: 9%
- Other: 9%

Annual Average = 44
### Not in Traffic Surveillance

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