Serious Injury Data Collections

- Fatality Analysis Reporting System (FARS)
- Crash Report Sampling System (CRSS)
- Crash Investigation Sampling System (CISS)
- Crash Injury Reporting Engineering Network (CIREN)
- Special Crash Investigations (SCI)
Anatomy of a FARS Case

- Crash Report
- EMS Report
- Toxicology Report
- Death Certificate
- Vehicle Registration
- Driver Records
- Roadway Classification
- Crash Report Supplement

FARS CASE
Crash Report Sampling System

Sample of police-reported crashes involving:

- All types of motor vehicles
- Motorists and Non-motorists
- Property-damage crashes
- All injury severities
- KABCO injury coding
CRSS: 60 Data Collection Sites Nationwide
People Injured and Injury Rates Per 100 Million VMT

Sources: GES 1988-2015; CRSS 2016-2020; FHWA

Injury Rate per 100 M VMT

People Injured

Sources: GES 1988-2015; CRSS 2016-2020; FHWA
Crash Investigation Sampling System

- Representative sample of police-reported crashes involving at least one passenger vehicle towed from the scene
- Trained crash technicians collect detailed data, document scene, measure crush on vehicles, and interview occupants
- Used for countermeasure development
- ~4,000 cases annually
- Over 600 data elements
- AIS 2015 coding
- Injury causation scenarios
CISS Data Collection Sites

Presently: 32 sites

Ultimately: 73 sites
Special Crash Investigation

- Investigations include any incidents (crash & non-crash) of interest to the agency, particularly: Office of Defects Investigation, Vehicle Safety Research, & Rulemaking
- Cases are identified and initiated solely on agency need
- Includes ADS, ADAS and electric/battery powered vehicles
- High-profile or mass casualty events like school bus & motorcoach crashes are coordinated with the National Transportation Safety Board
CIREN

- Purposive sample
- ~180 crashes/year
- Case initiated from patient
- Full inspection of case subject’s vehicle
- Full access to acute care records and imaging
- AIS 2015 coding plus comprehensive, in-depth engineering/medical review and injury causation assessment
Serious Injury Data at Work

• Research Reports & Notes
  • “MAIS (05/08) Injury Probability Curves as Functions of Delta V”
  • “Female Crash Fatality Risk Relative to Males for Similar Physical Impacts”
  • “Passenger Vehicle Occupant Injury Severity in Police-Reported Crashes by Vehicle Age and Model”

• Regulatory Analyses & Evaluations
  • Target Crash Population for Crash Avoidance Technologies in Passenger Vehicles
  • Evaluation of Child Restraint System Effectiveness
Federal Motor Vehicle Safety Standards

- Occupant Protection in Interior Impact (208)
- Head Restraints (202)
- Roof Crush Resistance (216)
- Child Restraint Systems (213)
- Rear Impact Protection (224)
- Occupant Crash Protection (208)
- Side Impact Protection (214)
- Seating Systems (207)
- Child Restraint Anchorage Systems (225)
- Fuel System Integrity (301)
## KABCO to MAIS Translators

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Source: 2017-2019 CISS and 1982-1986 Old-NASS
Frontal Crash Risk
Sample Design & Weighting Details

- CRSS: Design Overview, Analytic Guidance, and FAQs
  - [https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812509](https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812509)
- CRSS: Sample Design and Weighting
  - [https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812706](https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812706)
- CISS: Design Overview, Analytic Guidance, and FAQs
  - [https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812801](https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812801)
- CISS Sample Design and Weighting
  - [https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812804](https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812804)
Thank you!

For more data and assistance please visit or email:

https://cdan.dot.gov/ | NCSAResquests@dot.gov