Safety Data Collection Elements Essential for Modal Comparisons

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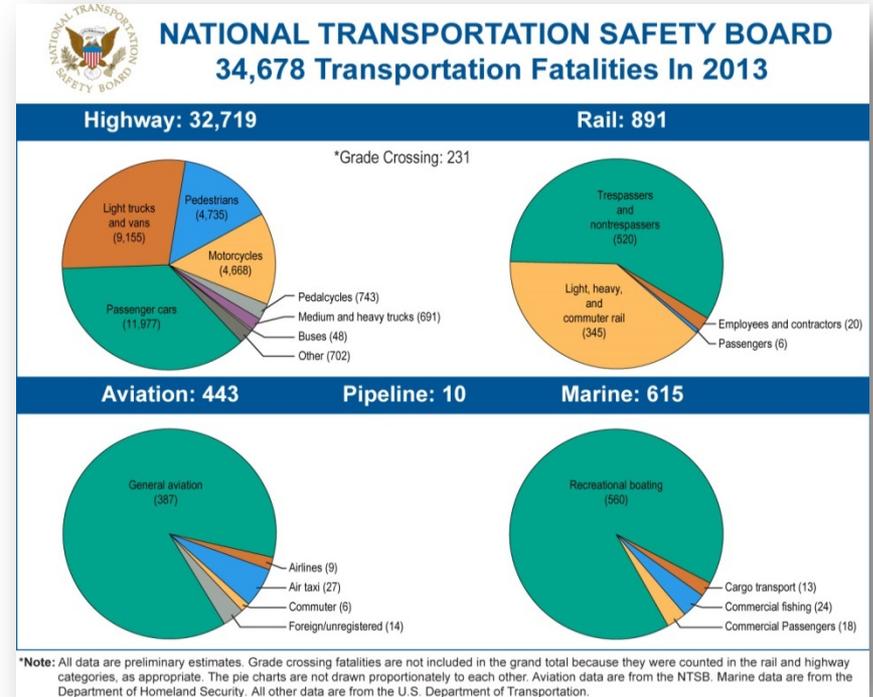
Bureau of Transportation Statistics

Key Questions

1. How is safety data used?
2. What is the most (or least) helpful data collected? Why?
3. What is needed to improve the utility of our safety data?
4. What are some examples of innovative solutions for improving safety data?

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Why Focus on Safety Data?

- Transportation accidents, mostly highway crashes, are a major public health hazard and a leading cause of death and injury in the U.S. and globally.

- Highway deaths and injuries result in substantial economic losses and societal costs.

NATIONAL TRANSPORTATION SAFETY BOARD
34,678 Transportation Fatalities In 2013

Highway: 32,719   Rail: 891

*Grade Crossing: 231

Light trucks and vans (9,155)
Pedestrians (4,735)
Motorcycles (4,668)
Passenger cars (11,977)
Pedalcycles (743)
Medium and heavy trucks (691)
Buses (48)
Other (702)

Trespassers and nontrespassers (520)
Light, heavy, and commuter rail (345)
Employees and contractors (20)
Passengers (6)

Aviation: 443   Pipeline: 10   Marine: 615

General aviation (387)
Airlines (9)
Air taxi (27)
Commuter (6)
Foreign/unregistered (14)

Recreational boating (560)
Cargo transport (13)
Commercial fishing (24)
Commercial Passengers (18)

*Note: All data are preliminary estimates. Grade crossing fatalities are not included in the grand total because they were counted in the rail and highway categories, as appropriate. The pie charts are not drawn proportionately to each other. Aviation data are from the NTSB. Marine data are from the Department of Homeland Security. All other data are from the U.S. Department of Transportation.

Data Uses

- Transportation data is used for the following:
  - Decision-making
  - Identifying and closing gaps
  - Rule-making
  - Planning
  - Research

Most/Least Helpful Data

- Based upon the Office of Management and Budget's *Statistical Policy Directive No. 1*, the <u>most</u> helpful data are:
  - Relevant and timely
  - Credible and accurate
  - Objective
  - Ensures confidentiality
- The <u>least</u> useful data do not meet these criteria.

Improving Safety Data

- Define uniformly across all modes:
  - Accidents/crashes
  - Fatalities
  - Injuries
- Standardize reporting periods and thresholds.
- Provide context to safety data by linking to exposure rates and system usage.
- Enhance data analysis and sharing while ensuring confidentiality.

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Data Sources & Coding Schemes

U.S. Department of Health and Human Services

- **37,938 total 2013 fatalities**
- 35,369 for highway
- Mortality data from the National Vital Statistics System (NVSS)
- Death certificates
- NVSS includes public highway and nonhighway fatalities occurring off-road

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- **34,456 total 2013 fatalities**
- 32,719 for highway
- Highway fatalities from the Fatality Analysis Reporting System (FARS)
- Police accident reports
- FARS predominantly includes highway fatalities on public roads

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Innovative Solutions

- Compile, analyze, and publish multimodal safety data;

- Perform research to ensure data quality and comparability; and

- Make transportation safety data readily accessible and relevant to everyone.

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