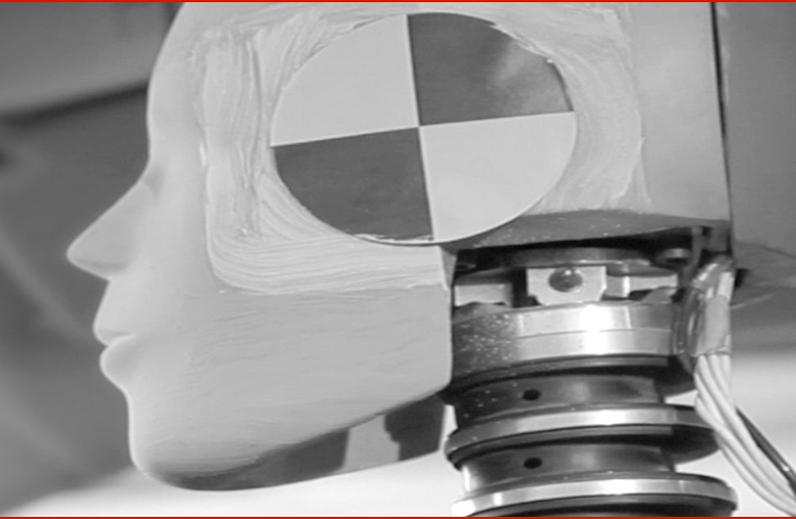


National Highway Traffic Safety Administration



# NHTSA Data Collection and Reporting: Drowsy Driving

Drowsy Driving Forum 2015



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# Records-Based Data Collection for Drowsy Driving

- Fatality Analysis Reporting System (FARS)
  - Census of all fatal motor vehicle crashes in United States
  - State data sources include:
    - Police crash reports
    - Registration and licensing
    - Death certificates/medical examiners reports
    - Highway Department data
    - Hospital and EMS reports
- National Automotive Sampling System General Estimates System (GES)
  - National sample of police-reported crashes
    - Police crash report

# Investigation-Based Data Collection for Drowsy Driving

- National Automotive Sampling System Crashworthiness Data System (CDS)
  - National sample of police-reported crashes
  - Investigations, interviews, records review, vehicle inspection and measurements
  - Focused on vehicle performance and response during crash
- National Motor Vehicle Crash Causation Survey
  - National sample of police-reported crashes
  - Investigations, interviews, on-scene data collection
  - Focused on causation of crash

# Drowsy Driving and Model Minimum Uniform Crash Criteria

- MMUCC recommendations
  - Person-level data element: Condition at time of crash (recommended for motorists and non-motorists directly related to crash)
    - Apparently Normal
    - Physically Impaired
    - Emotional (depressed, angry, disturbed, etc.)
    - Ill (sick), Fainted
    - **Asleep or Fatigued**
    - Under the Influence of Medications/Drugs/Alcohol
    - Other
    - Unknown

# FARS/GES Data Elements

- Driver Condition at Time of Crash
  - Drowsy driving captured as recommended in MMUCC – **asleep or fatigued**
  - In addition to MMUCC recommended attributes, FARS/GES also includes attributes for various physical impairments
  - Directions for database coders is to select all that apply to the driver (if noted by the police in any section of the PAR); no limit to how many can be coded

# Various State Crash Reports

N/A	N/A	Condition of Driver Contributing to the Crash	P2
<input type="radio"/>	<input type="radio"/>	1. No Defects	
<input type="radio"/>	<input type="radio"/>	2. Eyesight Defective	
<input type="radio"/>	<input type="radio"/>	3. Hearing Defective	
<input type="radio"/>	<input type="radio"/>	4. Other Body Defects	
<input type="radio"/>	<input type="radio"/>	5. Illness	
<input type="radio"/>	<input type="radio"/>	6. Fatigued	
<input type="radio"/>	<input type="radio"/>	7. Apparently Asleep	
<input type="radio"/>	<input type="radio"/>	8. Other	
<input type="radio"/>	<input type="radio"/>	9. Unknown	

Select the option that *best describes...*

Condition At Time of Crash	
1 Apparently Normal	<input type="checkbox"/>
3 Asleep or Fatigued	
5 Ill (sick) or Fainted	
6 Seizure, Epilepsy, Blackout	
7 Physically Impaired	
8 Emotional (depression, angry, disturbed, etc.)	
9 Under the Influence of Medications/Drugs/Alcohol	
77 Other, Explain in Narrative	
88 Unknown	

Any relevant condition (*only one entry*)

One choice – combines driver maneuvers, some distraction, and some conditions

★ DRIVER FACTORS	
DRIVER # 1	# 2
<input type="checkbox"/>	<input type="checkbox"/> NONE
<input type="checkbox"/>	<input type="checkbox"/> CELL PHONE USE
<input type="checkbox"/>	<input type="checkbox"/> OBSTRUCTED VIEW
<input type="checkbox"/>	<input type="checkbox"/> FAILED TO YIELD ROW
<input type="checkbox"/>	<input type="checkbox"/> DISRGRD TRAF SIGN
<input type="checkbox"/>	<input type="checkbox"/> TOO FAST FOR COND
<input type="checkbox"/>	<input type="checkbox"/> MADE IMPROPER TURN
<input type="checkbox"/>	<input type="checkbox"/> WRONG SIDEWAY
<input type="checkbox"/>	<input type="checkbox"/> FOLLOW TOO CLOSELY
<input type="checkbox"/>	<input type="checkbox"/> IMPROPER LANE CHNG
<input type="checkbox"/>	<input type="checkbox"/> IMPROPER BACKING
<input type="checkbox"/>	<input type="checkbox"/> IMPROPER PASSING
<input type="checkbox"/>	<input type="checkbox"/> IMPROPER SIGNAL
<input type="checkbox"/>	<input type="checkbox"/> IMPROPER PARKING
<input type="checkbox"/>	<input type="checkbox"/> FATIGUE / DROWSY
<input type="checkbox"/>	<input type="checkbox"/> ILL / BLACKOUT
<input type="checkbox"/>	<input type="checkbox"/> UNKNOWN
<input type="checkbox"/>	<input type="checkbox"/> OTHER (Explain)

# Limitations in Data Collection

- Limited by official records
  - Burden of proof
  - Self-reporting
  - Deceased/incapacitated drivers
  - Depth of information on PAR
  - Inconsistency across PARs
- No measurement (such as BAC for alcohol) or established definition of what is considered drowsy
- Confluence of multiple/other conditions

# Data Reporting

- 800 fatalities in 2013 *reported* to have involved a drowsy driver (2.4% of all fatalities)
- 713 fatal crashes in 2013 *reported* to have involved a drowsy driver (2.4% of fatal crashes)
- Key is *reported* - if not *reported* in FARS/GES, is that because the driver was not drowsy, there was no opportunity to record drowsy, or it was unknown to the official?
- Compare to distracted driving with FARS/GES coding or alcohol with measurement criteria

*Safer drivers. Safer cars. Safer roads.*



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