
National Highway Traffic
Safety Administration
South Central Region (Region VI)



Fatality Analysis Reporting System Data Improvement Workshop

NHTSA South Central Region
July 12 -13, 2004
Albuquerque, NM

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Introduction

Fatality Analysis Reporting System (FARS) Data Improvement Workshop

NHTSA South Central Region (Region VI)

July 12-13, 2004

Albuquerque, NM

Meeting Purpose and Goals

On July 12 and 13, 2004, the NHTSA South Central Region called together FARS Analysts and FARS Supervisors from Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, for the purpose of establishing a dialogue between the state staff responsible for the collection and entry of FARS data, and the NHTSA staff. The two-day workshop focused on identifying possible actions that might be taken to address underreporting, missing and incomplete data within the FARS and other state data systems in the key areas of fires, rollovers, alcohol involvement, driver records and restraint usage.

This workshop, attended by approximately 20 people, was facilitated by Elaine Scott from NHTSA's South Central Region and Mr. James Fell, from the Pacific Institute for Research and Evaluation. Mr. Fell was at one time responsible for the NHTSA FARS program, and now works as a researcher who relies heavily on the FARS data. Representatives from NHTSA Headquarters and Regional staffs were also in attendance to learn what they might be able to do to improve the FARS data. State FARS staffs were invited to provide insight from their level toward data problems, and possible solutions. Ken Copeland from the NHTSA South Central Region provided planning support for the workshop and assisted with the breakout sessions. Joe McDonald from Oklahoma also assisted with the breakout sessions.

This report provides an overview of the meeting, the discussions that occurred, and the suggestions that were proposed by the State/NHTSA/consultant staff as possible means for improving the FARS data.

Meeting Format

The one-and-a-half day meeting was held in Albuquerque, New Mexico and followed the agenda shown in Appendix A. After comments from the NHTSA South Central Regional Administrator, Georgia Chakiris and regional staff to set the goals of the meeting, Mr. Fell provided each state with a set of

reports, which served as the basis for most of the discussions to follow. These reports (attached in Appendix B) contain a comparison of each state's FARS data to the regional FARS data, and all of FARS nationally. The focus of these reports was the fire occurrence and rollover rates from each state and the percent of cases with **unknown**, **missing**, and **uncoded** data for the major NHTSA focus areas of BAC information, prior DWIs from the driver record, and restraint usage (including motorcycle helmets).

Throughout the discussions, participants were asked to try to identify potential reasons why the state data was higher or lower than the regional and national averages for fire and rollover rates and for missing data, as well as why their state might be BETTER than the regional or national averages. The participants were also encouraged to identify issues related to the FARS process as a whole, and in particular, actions that the NHTSA regions/headquarters staff, in concert with state FARS staff, might take to improve the system.

Report Format

This report is organized into sections addressing the discussions and observations of the meeting. The sections are organized into roughly the order of the meeting, and end with the state-specific observations as reported out from the breakout sessions.

It is hoped that this discussion of the meeting will serve to provide an outline for similar meeting in other Regions and possible expansion of the discussions from FARS-specific issues to state traffic records systems as a whole. The model, as followed in this meeting resulted in some excellent discussion, concrete action items, and should prove to be an excellent resource for future meetings.

Meeting Discussions

As outlined in the attached agenda, the meeting fell into six major segments:

- NHTSA / Facilitator Introductions and Presentation of Meeting Goals
- NHTSA Facilitator discussion of data reports on state-specific problem areas
- General discussion of data issues by states
- State breakouts to discuss state-specific issues and thoughts, and development of action plans
- State report-out on their suggestions, issues and thoughts
- Final general discussion and NHTSA wrap-up

The remainder of this report will address the observations from each of these meeting segments.

Meeting Notes

Introductions and Meeting Focus

The meeting began with welcoming remarks from Muffett Foy Cuddy, Director of the Transportation Planning Division for the State of New Mexico. Georgia Chakiris, the South Central Regional Administrator also welcomed the attendees and described the goals of the workshop, setting the tone for the discussions to follow. Elaine Scott from the South Central Region then described the logistics for the workshop.

Welcoming Remarks –

Georgia Chakiris, NHTSA South Central Regional Administrator

Ms. Chakiris made the following points during her welcome remarks:

- The NHTSA Administrator has put an emphasis on DATA - There is recognition at the national level that without good data, information such as that gathered by the FARS program, we cannot make good management decisions about our highway safety programs.
- We hope that this workshop will be a step toward improving data within the regions. We want you to have an opportunity to openly discuss those things that can be done to improve the data.
- We are optimistic that you will receive all the tools you need to improve data. We have tried to provide you with some hard data to use in assessing the status of the data in each of your states, and we have tried to provide an environment where we can identify actions that can improve the data at both the state and national levels.
- Based upon your data – we set priorities for the agency (NHTSA) in the traffic safety areas that have the greatest potential to save lives and prevent injuries that result from motor vehicle crashes. We are here to try to improve the data that we use to set these priorities and to evaluate the impact of our programs.
 - We are faced with a wide range of Challenges & Opportunities for Improvement.
 - SAFETEA – the new bill authorizing USDOT contains \$50M each year for the next 6 years to support state safety data improvements.... That's why you are here.

Ms. Chakiris then asked all attendees to introduce themselves and describe their role in the FARS program.

National / Regional / State Data Status

The meeting continued with Mr. James Fell of the Pacific Institute for Research and Evaluation (PIRE) providing each state with statistics about fire occurrence rates, rollover rates, and unknown, missing and uncoded data in the areas of blood alcohol concentrations (BACs) on drivers and pedestrians, prior convictions for driving while intoxicated (DWI) for each driver, and restraint usage.

Mr. Fell provided a brief history of the FARS system and how the data is used, and how important it is to the national highway safety program. He then addressed the following key items.

- The focus for this workshop is to review fire and rollover occurrence rates and **unknown, missing, uncoded** data in key fields with each state, each region and the nation as analyzed for selected years.
- In reviewing data issues, remember – It does not always require a LAW to improve data reporting, it may only need a change in “policy” or a new strategy or a new data source.
- Charge to attendees: “We are here to discover better ways to get better quality data in FARS. We need interaction, communication, and openness. We are here to improve the data....not point fingers or place blame.”
- Address the following “list of questions” as they apply to your state for each key data element we discuss:
 - What is your main data source?
 - Who is your contact?
 - What are some of the barriers?
 - Is the information timely?
 - How can the data be improved?
 - Try to identify problems and possible actions that will improve the data – what help do you need?
 - Try to identify things that may make your data **better** than the region or nation... What are your secrets of success?
- There was then a general review of tabular reports:
 - Reports were distributed showing statistics for each state vs. region and nation
 - Attendees were asked to look at the statistics and be prepared to discuss, in particular, those areas where an individual state was above the region and/or national rates for each of the key data elements.
 - Attendees were asked to think about – and discuss – why their rates might be particularly **better** than the norm (success stories)

Mr. Fell charged the state staff to review their data summaries, consider the possible reasons why fire occurrence might be underreported or why the percent of “unknown” or “missing” data is high and develop a set of **state-specific suggestions** to report out later in the meeting.

General Discussion of Data Issues

Mr. Fell gave a PowerPoint presentation on the issues (see Appendix C). After a general discussion of FARS data definitions, sources and uses, examples of key data rates were presented and discussed. Fire occurrence rates for each state were shown in comparison to the Region as a whole and the Nation. Fire occurrence rates for 2002 ranged from about 3% of all vehicles involved in fatal crashes in Louisiana to 5% in New Mexico. The national rate for all vehicles in FARS for 2002 was 2.9%. Rollover occurrence rates for 2002 ranged from 22% of all vehicles in FARS in Louisiana and Texas to 33% in New Mexico. The national rollover rate for all vehicles in FARS in 2002 was 19.3%. The rates for the South Central Region states for both of these variables appear to be higher than average. There is no *apparent* evidence of underreporting of these data elements.

Unknown and missing data rates for BACs on drivers and pedestrians were variable by state and by year. In general, there appear to be high rates of unknown BACs for pedestrians and surviving drivers. There did not appear to be any unique problem with the access of driver records and the coding of prior DWI convictions within the past three years. The reporting of restraint usage for the most part was better than average in these states.

Fire Occurrence

Substantial time was then devoted to discussing the possible reasons for underreporting or incomplete data on vehicle fires in FARS. The possible reasons presented were:

- The police accident report (PAR) on the vehicle fire death is not filed.
- The fire death does not meet current FARS definitions.
- The fire is reported in the narrative of the PAR, but missed by the FARS Analyst
- There are policy issues with the case, e.g. privileged information concerning the fire investigation is not available to the FARS Analyst.
- There are administrative problems, e.g. a lack of cooperation from authorities for further details on the fire.
- Communication problems, e.g. not contacting the right person.
- Data source problems, e.g. the fire is not recorded in the PAR.

The FARS Analysts were asked to think about these issues and discuss them in the break-out session.

One of the issues with fire cases in FARS is that a vehicle form is not coded if a vehicle not in transport is parked or stopped off the roadway and struck by a vehicle in transport. Sometimes these stopped vehicles catch fire and an occupant in that vehicle dies as a result of the fire. The case is in FARS, but there is no information coded about the stopped vehicle. New coding procedures will take place in 2005 and those types of vehicles will now be coded with a vehicle data form. This was described by Dennis Flemons from NHTSA Headquarters and appears in Appendix D.

A general discussion of the fire occurrence coding yielded the following observations:

- If there is conflicting information about whether a vehicle fire occurred or not, the FARS Analysts contact the investigating police officers to clarify.
- Only a few states use the medical examiners (ME) or coroners report as a source of fire death, and none routinely compare the police report to the ME report in EVERY case.
- All states use the police diagram and narrative to determine if a fire occurred.
- Some PARS have a distinct box to report a vehicle fire (AR, OK).
- None of the states routinely use the death certificate as a source of fire death (or as a check on the police report). New Mexico does not obtain a copy of the death certificate.

Rollover Occurrence

General observations on rollover coding included:

- Again, if there is conflicting information as to whether a rollover occurred, the FARS Analysts contact the investigating officers.
- Both the PAR diagram and narrative are used.
- New Mexico has a distinct box for rollover occurrence in the PAR.
- Three states use the damage scale in the PAR as a source (AR, LA, TX).

Blood Alcohol Concentration (BAC) Results

General observations include:

- PARS and supplemental reports are the main sources for BAC results.
- ME and coroners reports are also checked.
- No state routinely requests hospital records for BAC data (AR occasionally).
- Most states use police crime laboratory reports for BAC results, as available.
- One state uses Health Department reports for BACs (AR).

Driver Records (for prior DWI convictions)

There do not appear to be any problems with obtaining driver records, including records for out-of-state drivers. There appear to be only a few drivers from Mexico in FARS. No efforts are made to obtain Mexican driver records.

Restraint Usage (including motorcycle helmets)

General observations:

- The PAR is the main source.

- All states have a FARS compatible distinct box in the PAR for restraint usage.
- The ME and coroners reports are NOT typically used as a source of usage or non-usage.
- Only AR occasionally uses EMS reports as a source for restraint usage.
- NO state uses hospital records as a data source for restraint usage.
- AR occasionally uses their news clipping service to determine restraint usage initially.

General Discussion of Data Sources

The availability and usefulness of key data sources was also discussed:

Death Certificates

All states in the Region receive copies of the death certificate for each FARS fatality except NM.

OK – typically receives the death certificate within 1 month of the request.

AR – takes 3-8 months after the request to receive the document.

LA – up to 8 months after the request.

TX – typically 6 months after the request

NM – does not receive copies of the death certificate, but receives a print-out of the Medical Examiner's data base with vital information.

Medical Examiner's / Coroner's Reports

TX, OK, and NM typically receive copies of the ME reports, when requested.

AR – does not receive copies.

LA – has a Coroner system and very seldom receives ME or autopsy reports.

Hospital Reports

None of the states in the Region typically request reports from hospitals nor routinely receive them. These reports could be a source for fire injuries, safety belt usage, and BAC data.

Crime Lab / State Lab Reports

All the states in the Region have access to these reports and use them for BAC and drug presence data. NM reported direct access to their data base.

Emergency Medical Services (EMS) Reports

None of the states in the Region routinely request or receive EMS reports. EMS times are often reported from other sources. EMS reports could be a source for restraint usage and alcohol involvement.

State-Specific Data Issues

On the second day of the Workshop, representatives from the individual states reported out on what they saw as their local problems, some thoughts that they had about what they might do to address those problems, and what “successes” they had (and why).

Oklahoma:

Success Story 1

- Due to a persistent effort from the FARS office, a State statute was changed starting in 2004.
- As a result, the FARS Analyst is now receiving BAC Results from State Crime Lab, OBI, on a routine basis.

Success Story 2

- Contacted and met with the Traffic Records Council.
- As a result, starting in 2004, M.E. Reports are received routinely by e-mail attachment.

Lingering Problem

- EMS Times (individual services – no central authority).
- Trying to obtain this data from the Health Department now.

New Mexico:

Success Story (one week old)

- Reports every 20th of the Month are now received from Office of the Medical Examiner (State Toxicology)
 - ~ 80% by hardcopy and E-mail
 - This substantially improves driver BAC data

Lingering Problem

- Obtaining BACs (or any data) from Indian Reservations
 - Perhaps 20% - 30% of fatalities in NM occur on reservations.

Texas:

Success Story

- Created a spreadsheet in 2003 to send to M.E.s by E-mail. They complete and send back in 3 days.
- Contains BAC, drugs, deceased's name, toxicology information.
- Could add "Death by Fire" to the spreadsheet.

Lingering Problem

- Attempts to obtain BACs from police officers
 - Many don't respond to queries
 - Query by phone
 - Sometimes send letter first, then phone. Letters go to Chiefs.
 - Typically have to leave message.
 - If officer has BAC result, we request that a supplemental report be submitted.
 - Officers may tell us to contact the M.E. Office
 - No second phone calls are made – No time to do so.
 - It was suggested that, perhaps, the Regional Law Enforcement Liaison (LEL) could help.

Louisiana:

Success Story

- Death Certificate problem – flow stopped for 8 Months.
- Re-Established Agreements to get flow directly to FARS Analysts.
- Hope to improve timeliness.

Lingering Problem 1

- BACs received for all fatalities (not just traffic).
- Major chore to weed out non-traffic fatalities.
 - Analyst is working on creating a database to sort results by name
 - Hoping to get officers to include test Kit Number on PAR
 - LA PAR under revision now.
 - It was suggested that, perhaps, "CODES" software could help.

Lingering Problem 2

- Failure to involve the FARS personnel in decisions and processes affecting FARS Unit / FARS Data.

Arkansas:

Success Story

- Attended Coroners' Conference (June '03).
 - Made arrangement for coroners to routinely send BACs.
 - Also persuaded 12 State Police Troops to routinely send BACs.

Lingering Problems

- Persuading police officers to follow up on BAC requests
- Especially trying to get local police to send BACs without multiple requests.
- It was suggested that the Regional LEL might be able to help.

State FARS "Action" Items

The final area of discussion addressed some general issues related to the FARS program, as a whole, and specific "actions" that the state or Regional Office should take to improve the FARS data. The FARS Analysts, FARS Managers, and Regional personnel offered the following observations and suggestions for future action:

Texas

- Will attempt to check death certificates for fire-related death.
- Will check with investigating police officers if there is conflicting information on fires, rollovers, restraint usage, BACs, and other key data.
- Will use ME reports for BAC data.
- Will attempt to make multiple contacts for data with limited staff.
- Will establish and maintain communication with key data source contacts.
- NHTSA Region will check to see if Mexico has Driver Records for Mexican drivers in FARS cases.
- Expect that data reporting on restraint usage will improve due to "Click It or Ticket" mobilizations.

Louisiana

- Will attempt to use death certificates and ME reports to obtain information on fire-related deaths and to obtain BAC data.
- Will use EMS reports, ME reports, and news clipping service to obtain data on restraint usage.

New Mexico

- Will attempt to provide documentation and training for NM records system personnel so that they can better respond to FARS needs.
- Will help NM officials revise the NM PAR to include fire occurrence and rollover occurrence in a separate box.

Arkansas

- Will attempt to use multiple sources (death certificates, ME reports, news clippings) to obtain information on fire-related deaths and rollovers.
- Will suggest tougher legislation so that more drivers are tested for BAC.
- Will attempt to work for a primary safety belt law to get better reporting of restraint usage by police.

Oklahoma

- Will attempt to use multiple sources (death certificates, ME reports, news clippings) to obtain information on fire-related deaths and rollovers.
- Will make extra effort to obtain BAC results on drivers.

Recommendations

1. FARS Analysts should be encouraged to use multiple sources of data for coding fire occurrence and fire-related deaths, restraint usage, and the results of BAC tests.
2. NHTSA Regional staff offered their services to work with the state FARS and traffic records staff to become more active in resolving data access and availability issues within each state
3. FARS Analysts will try to make themselves more aware of the traffic records program activity in their state, and in particular any plans relative to changes to the traffic crash reporting system. They will try to become involved with the State Traffic Records Coordinating Committee (TRCC) in their state, and the Regional staff will try to encourage those who manage the state TRCC to involve the FARS staff.
4. Other NHTSA Regions should be encouraged to conduct similar FARS data improvement workshops on a periodic basis if it serves their needs.
5. FARS analysts nationwide should be encouraged to become active members of their State Traffic Records Coordinating Committees with the goal of improving the quality and use of FARS data in the states
6. Encouragement of top-level policy support and understanding of the mutual importance of FARS data should be sent to departmental officials responsible for oversight of FARS contracts.

Appendix

A

Agenda & Attendees

Meeting Agenda

The following agenda was established for the meeting:

Monday July 12, 2004

- | | |
|------------------------|--|
| 12:00 Noon – 1:00 P.M. | Registration |
| 1:00 P.M. – 1:10 P.M. | Welcoming Remarks:
Muffett Foy Cuddy, Director, Transportation Planning Division
Georgia Chakiris, Regional Administrator, NHTSA
Alan Ho, Safety Engineer, Federal Highway Administration |
| 1:10 P.M. – 1:30 P.M. | Meeting Purpose and Objectives: Elaine Scott, Program Assistant, NHTSA
SCR |
| 1:30 P.M. – 2:30 P.M. | Introduction: Unknown, Missing and Underreporting Data Rates for Key FARS Data Elements—Fire Occurrence, Rollovers, BAC Results, Prior DWIs, Restraint System Usage
Jim Fell, Pacific Institute for Research and Evaluation (PIRE) |
| 2:30 P.M. – 2:45 P.M. | Break |
| 2:45 P.M. – 3:45 P.M. | FARS Key Data Status: National/Regional/State Level (Continuation)
Jim Fell, PIRE |
| 3:45 P.M. – 5:00 P.M. | Data Improvement Opportunities/Best Practices—(1) Reasons for Unknown/Missing Data; (2) Availability of Key Data Sources; (3) FARS Definitions, Underreporting of Vehicle Fires, Other Issues
Jim Fell, PIRE; Kenneth Copeland, SCR |

Tuesday, July 13, 2004

- | | |
|------------------------|--|
| 8:00 A. M. – 8:30 A.M. | Continental Breakfast |
| 8:30 A. M. – 9:15 A.M. | Prior Day's Re-cap—Jim Fell, PIRE; Elaine Scott, SCR |

- 9:15 A. M. – 12:00 P.M. Breakout Work-Groups—Review/Analysis of State Data, Technical Support Needs, Action Steps for Improvement
- Group 1 – AR, LA, NM: Ken Copeland, Regional Program Manager, SCR
- Group 2 –OK, TX: Joe McDonald, OK Highway Safety
- (Mid-Morning Break Included)
- 12:00 Noon – 1:00 P.M. Lunch
- 1:00 P.M. – 2:00 P.M. Reporting of Breakout Sessions by State: Group Leaders
Facilitator: Jim Fell, PIRE
- 2:00 P.M. – 3:00 P.M. Open Discussion of FARS Data Sources, Availability, Definitions, Coding Rules, Potential Solutions, Etc.
All
- 3:00 P.M. – 3:15 P.M. Break
- 3:15 P.M. – 4:00 P.M. Closing Remarks—Jim Fell, PIRE; Georgia Chakiris, SCR

Attendees

Attendees:

FARS Conference

Albuquerque, NM

July 12-13, 2004

Karen Bonds, Supervisor
Gwen Vernon, FARS Analyst
Little Rock, AR

Cynthia Wheeler, Analyst
Karen Coignet, Analyst
Louisiana Highway Safety Commission
Baton Rouge, LA

Robert DeVargas, Supervisor
Jimmy Montoya, Analyst
NM State Highway & Transportation Dept
Santa Fe, NM

Muffett Foy Cuddy, Director
NM State Highway & Transportation Dept
Santa Fe, NM

Alan Ho, Safety Engineer
Federal Highway Administration
Santa Fe, NM

Beverly Baker, Supervisor
Sue Rooks, Analyst
Oklahoma Highway Safety Office
Oklahoma City, OK

Kim Frazier, Supervisor
Arlene Mendez, Supervisor
Texas Department of Public Safety
Austin, TX

Terry Pence, Coordinator
Traffic Safety Section
TX Department of Transportation
Austin, TX

Georgia Chakiris, Regl Administrator
Elaine Scott, Program Assistant
Kenneth Copeland, Program Manager
South Central Region
NHTSA
Fort Worth, TX

**Dennis Flemons, Regional Program
Operations Manager**
NHTSA
Washington, DC

Appendix

B

State Data Reports

The following data reports were provided to the states for review during the meeting.

Appendix

C

Opening Presentation

The following PowerPoint presentation was given to open the Workshop.



Facilitator

James C. Fell
Director, Traffic Safety and
Enforcement Programs

Pacific Institute for Research & Evaluation (PIRE)

Calverton, MD
301-755-2746
fell@pire.org



Fatality Analysis Reporting System (FARS)

- Initiated by NHTSA in 1975
- Contains over 100 unique data elements on each fatal traffic crash occurring in the US each year
- Various data sources used



Fatality Analysis Reporting System (FARS)

- Has become one of the most reliable and most frequently used data system on injury deaths in the *WORLD*
- FARS data analyses are used in evaluations of countermeasures such as .08 BAC limits, graduated driver licensing systems, primary safety belt laws, and repeat DWI offenders sanctions
- FARS data is used to formulate Motor Vehicle Safety Standards, identify safety problems (e.g., fire occurrences in certain vehicles, roll-over rates in SUVs), etc.



Fatality Analysis Reporting System (FARS)

FARS adheres to strict definitions of a fatal crash, e.g.:

- Death from the crash must occur within 30 days
- Crash must involve motor vehicle in transport on a public roadway
- Etc.



Fatality Analysis Reporting System (FARS)

Based upon death certificate and other data sources, an estimated 1000-2000 motor vehicle related deaths occur each year that do not appear in FARS, e.g.:

- Deaths that occur on private property
- Deaths that occur more than 30 days after the crash
- Deaths that occur without a crash (suffocation, fire, battery explosion, etc.)



Fatality Analysis Reporting System (FARS)

Data Sources:

- Police Accident reports (PARs)
- Driver Licensing Records
- Vehicle Registration Files
- Coroner's and Medical Examiner's Reports
- EMS Logs
- Death Certificates
- Hospital Reports
- Roadway Inventories
- Etc.



FARS FILES 1975 – 2002

Traffic fatalities: 1.2 million

Drivers : 1.6 million

Vehicles: 1.6 million

Persons: 3.0 million



NHTSA Integrated Project Team Reports

- Safety Belt Use
- Rollover Mitigation
- Impaired Driving
- Vehicle Compatibility
- Data Improvement (soon)



Key Data Elements in FARS for Safety Investigations and Traffic Safety Analyses

- Fire occurrence
- Rollover occurrence
- BAC results
- Prior DWI convictions
- Safety belt and motorcycle helmet usage



OBJECTIVES



**Examine Data Rates for the Years
1975, 1980, 1985, 1990, 1995,
2000, 2001, 2002**

- Fire Occurrence
 - by crash type (single vehicle; multiple vehicle)
 - by vehicle type (e.g. Passenger cars; SUVs; Minivans; Vans; Pickup trucks; Motorcycles; Commercial vehicles; Other)



**Examine Data Rates for the Years
1975, 1980, 1985, 1990, 1995,
2000, 2001, 2002**

- Rollover Occurrence
 - by crash type (single vehicle; multiple vehicle)
 - by vehicle type (e.g. Passenger cars; SUVs; Minivans; Vans; Pickup trucks; Motorcycles; Commercial vehicles; Other)



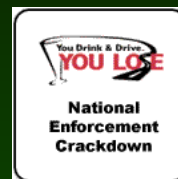
Determine Unknown, Missing, Uncoded Data Rates for the Years 1975, 1980, 1985, 1990, 1995, 2000, 2001, 2002

- Reporting for BAC results:
 - Fatally injured drivers
 - Surviving drivers
 - Fatally injured pedestrians
 - In crosswalk
 - Not in crosswalk



Determine Unknown, Missing, Uncoded Data Rates for the Years 1975, 1980, 1985, 1990, 1995, 2000, 2001, 2002

- Prior DWI convictions for drivers (within past 3 years)
 - BAC=.00
 - BAC=.01-.07
 - BAC=.08-.09
 - BAC=.10-.14
 - BAC=.15+
 - Test refused
 - Test not given
 - Tested, results unknown
 - Unknown if tested



Determine Unknown, Missing, Uncoded Data Rates for the Years 1975, 1980, 1985, 1990, 1995, 2000, 2001, 2002

- Restraint system use for each motor vehicle occupant:

Aged 0–15

Aged 16-20

Aged 21+

For each vehicle type

Passenger cars

SUVs

Minivans

Vans

Pickup trucks

Other



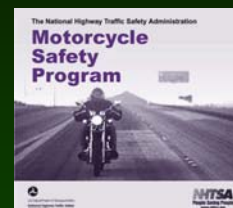
Determine Unknown, Missing, Uncoded Data Rates for the Years 1975, 1980, 1985, 1990, 1995, 2000, 2001, 2002

- Motorcycle helmet usage for riders

Aged 0– 15

Aged 16–20

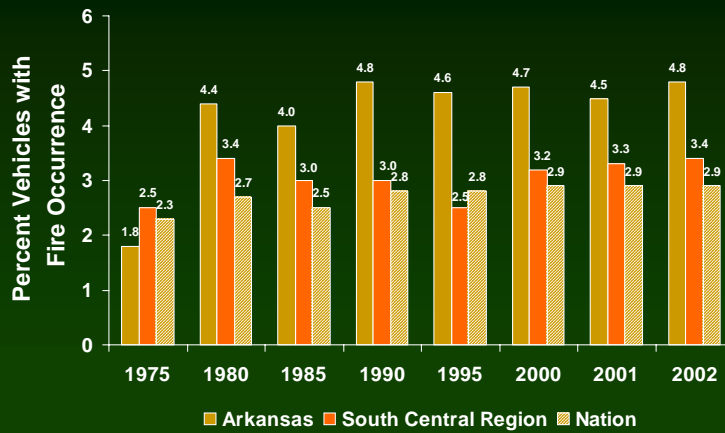
Aged 21+



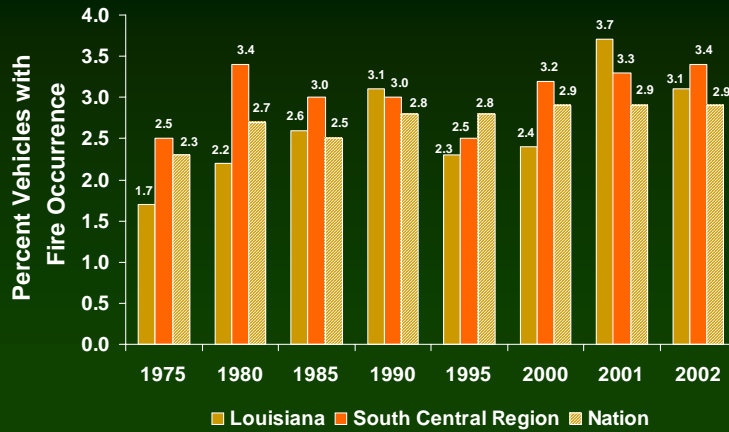
SAMPLE RESULTS



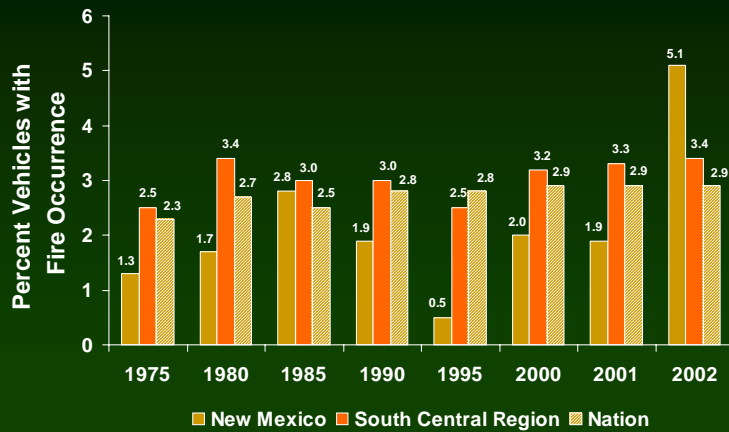
Fire Occurrence Rates Arkansas



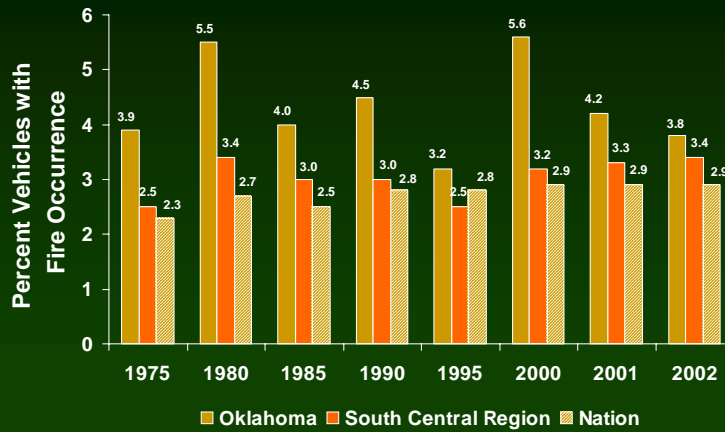
Fire Occurrence Rates Louisiana



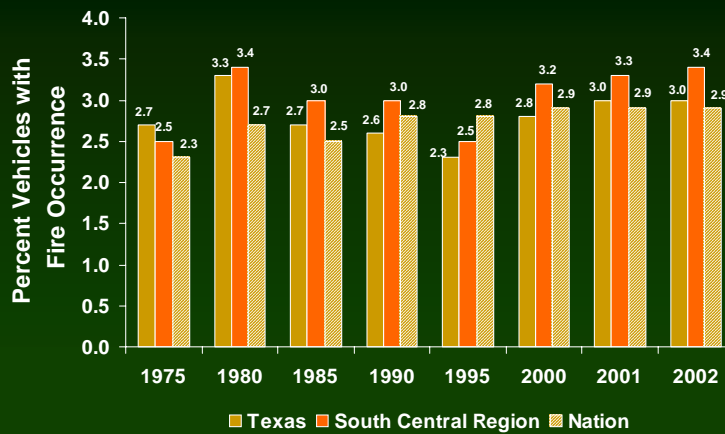
Fire Occurrence Rates New Mexico

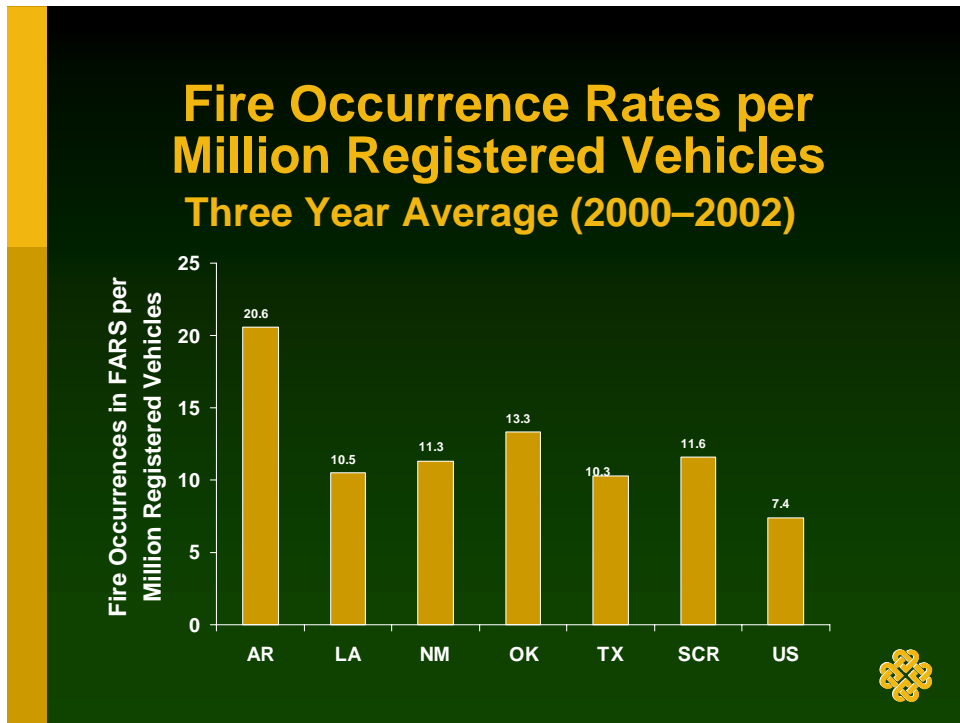
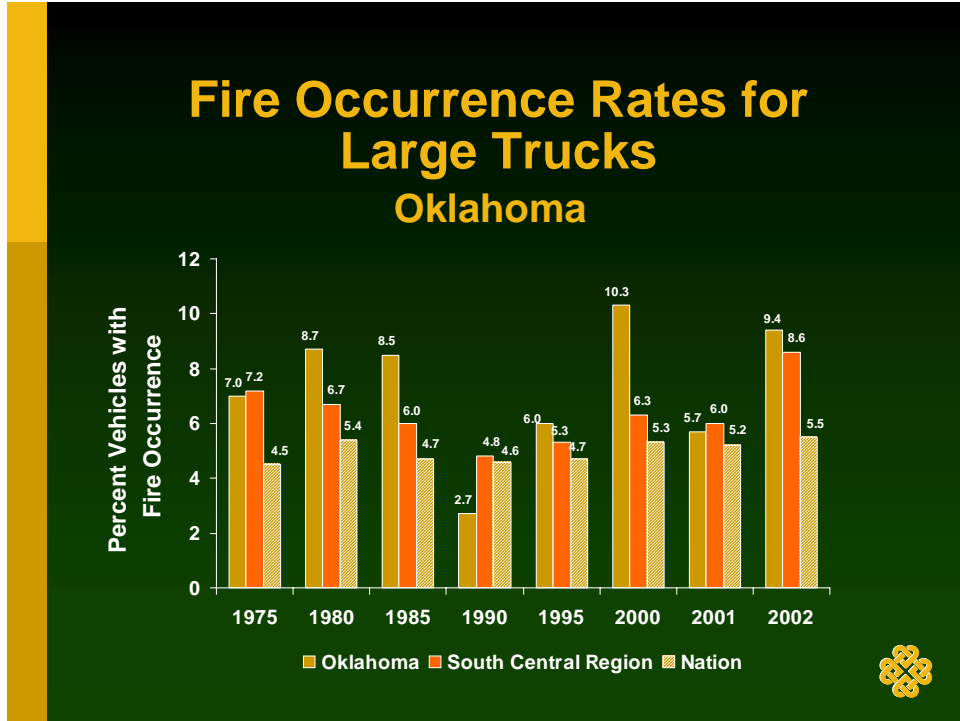


Fire Occurrence Rates Oklahoma

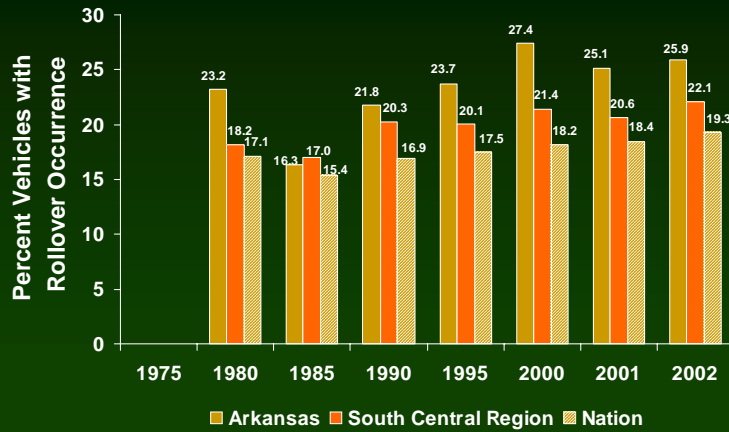


Fire Occurrence Rates Texas

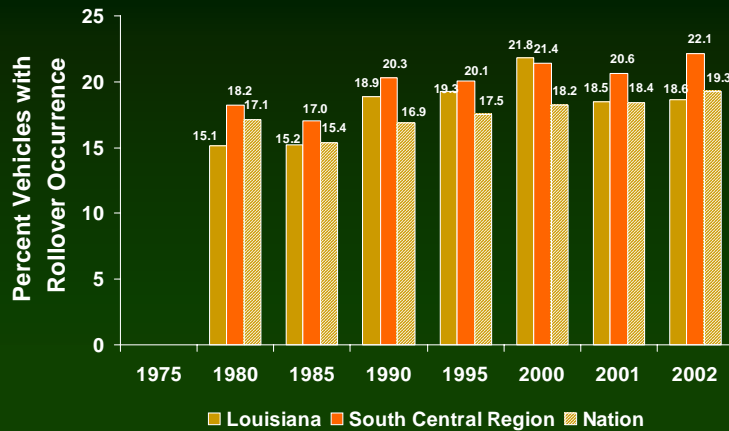




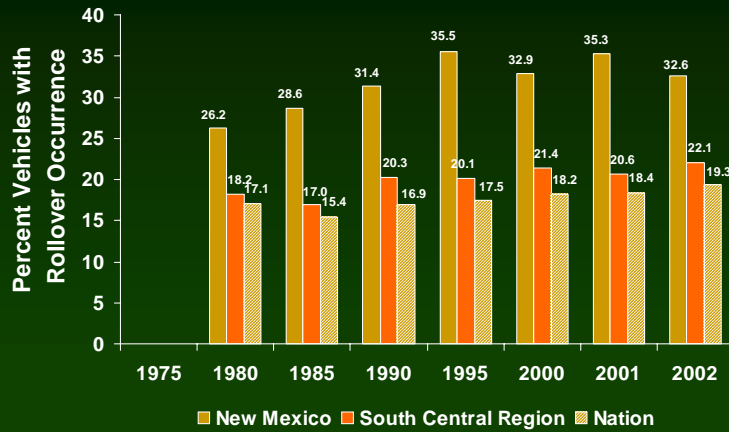
Rollover Occurrence Rates Arkansas



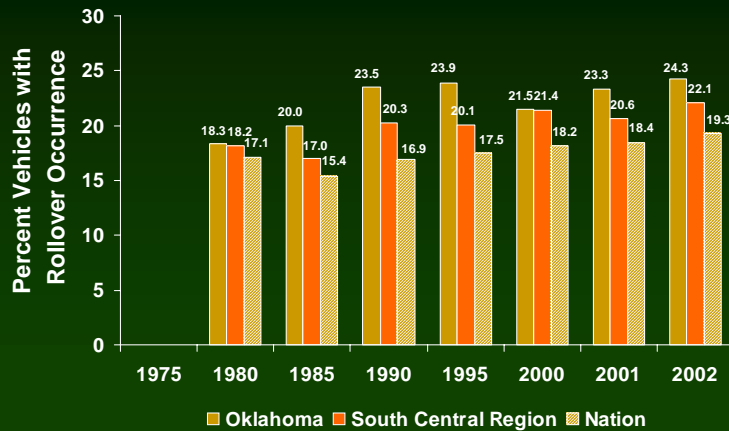
Rollover Occurrence Rates Louisiana



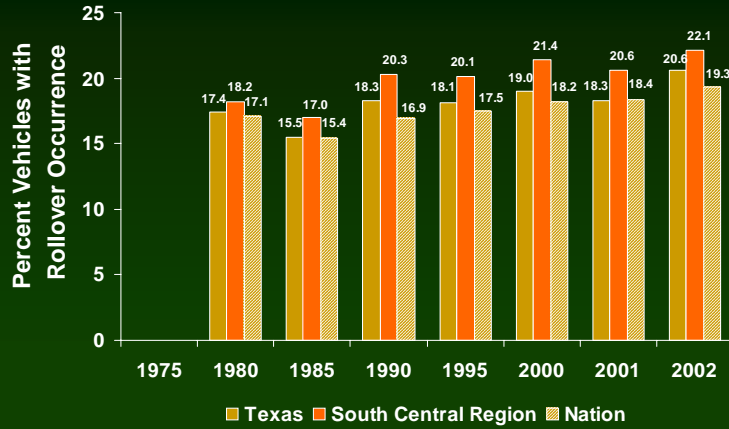
Rollover Occurrence Rates New Mexico



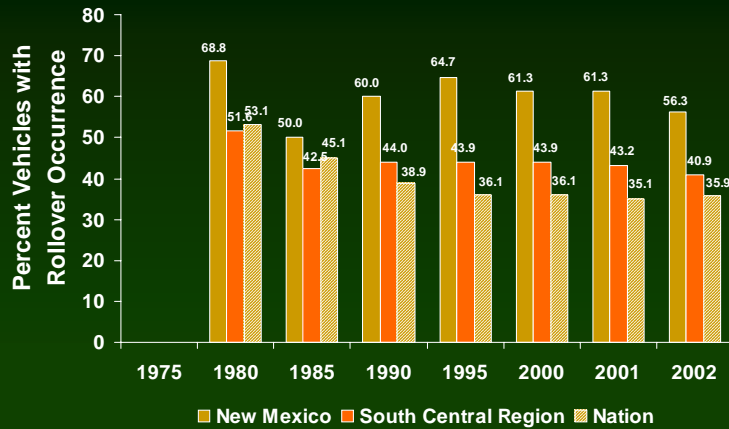
Rollover Occurrence Rates Oklahoma



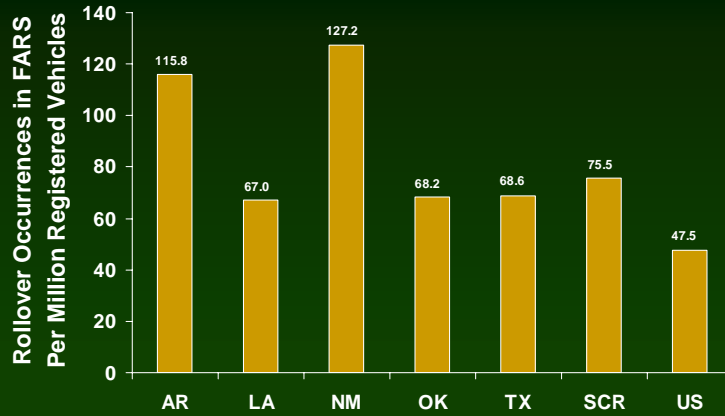
Rollover Occurrence Rates Texas



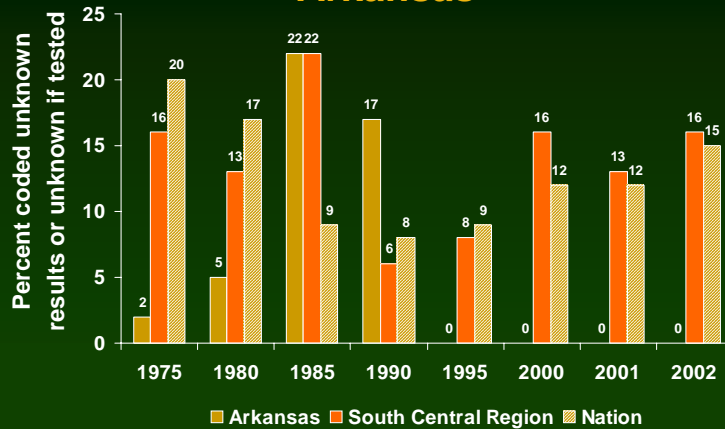
Rollover Occurrence Rates for Sport Utility Vehicles (SUVs) New Mexico



Rollover Occurrence Rates per Million Registered Vehicles Three Year Average (2000–2002)



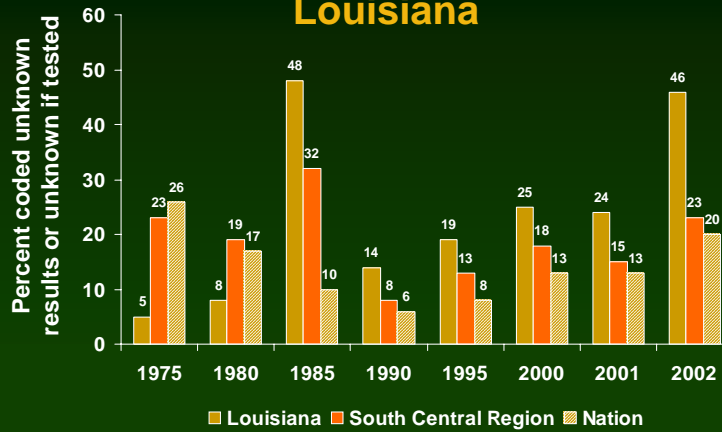
BACs for Drivers in FARS Unknown/missing data rates Arkansas



BACs for Fatally Injured Pedestrians in FARS

Unknown/missing data rates

Louisiana



BACs for Driver Fatalities in FARS

Oklahoma

	Percent with			
	Known BAC Results	Unknown Results	Not tested	Unknown if tested
1997	43	0	56	1
1998	64	1	34	2
1999	80	0	11	9
2000	78	0	13	9
2001	61	0	34	5
2002	76	0	19	5



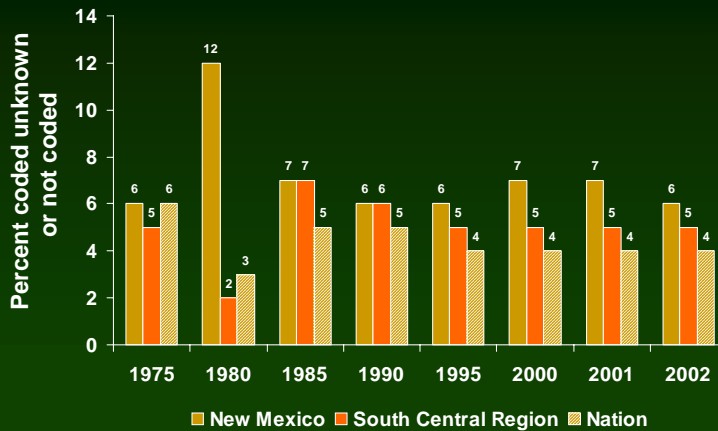
BACs for Surviving Drivers in FARS Texas

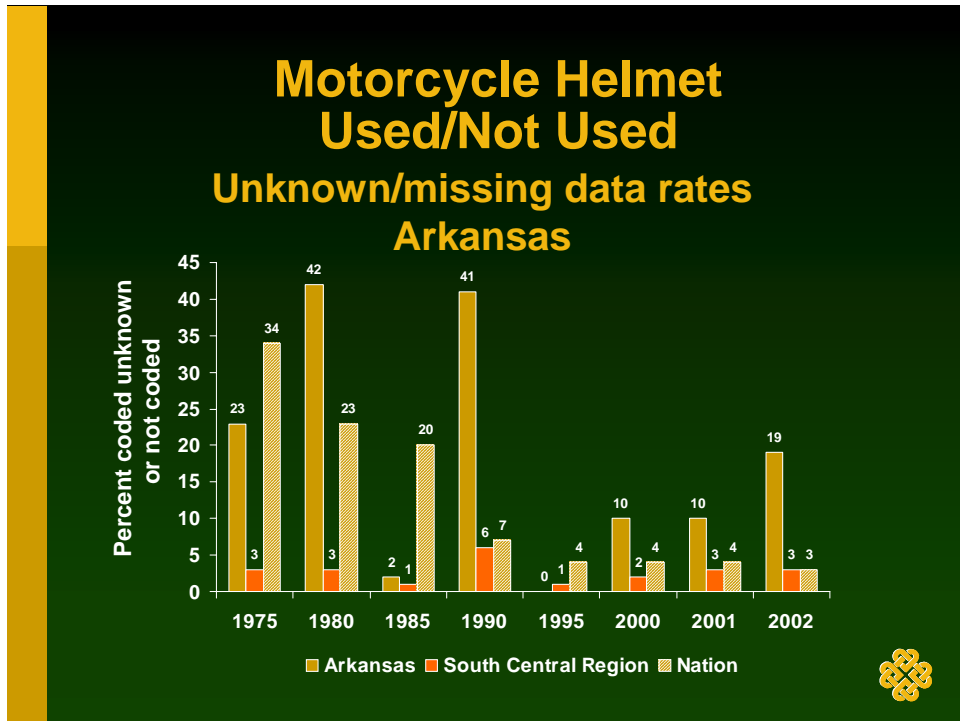
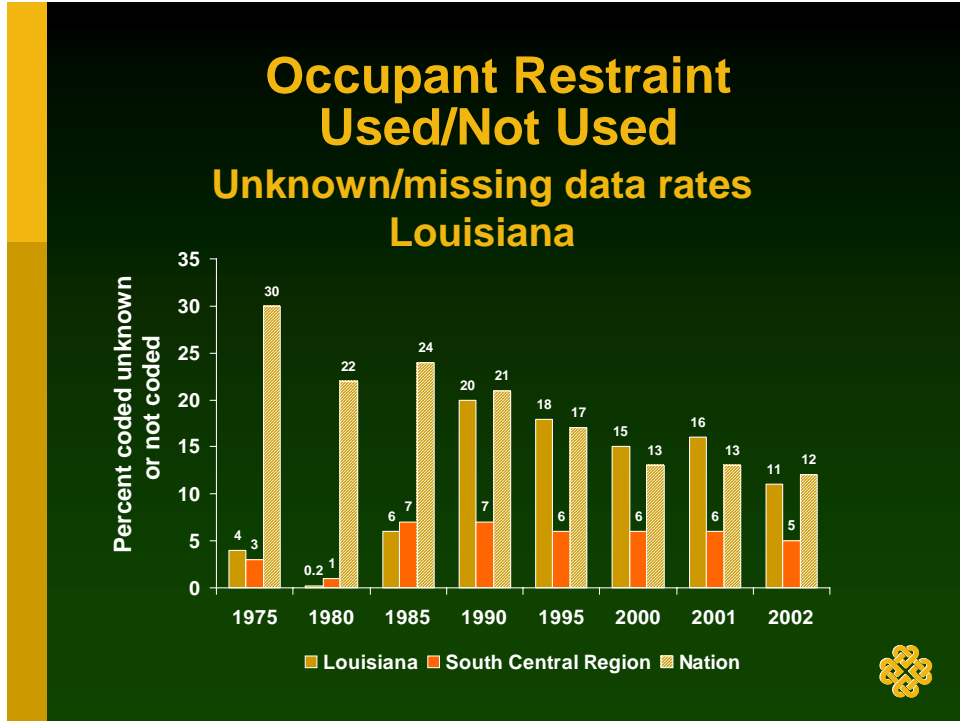
Percent with

	Known BAC Results	Unknown Results	Not tested	Unknown if tested
1997	25	1	66	8
1998	22	9	69	0
1999	22	10	68	0
2000	16	17	67	0
2001	15	13	72	0
2002	14	13	73	0



Prior DWIs for Drivers in FARS Unknown/missing data rates New Mexico





FIRES



Reasons for Under-Reporting or Incomplete Data on Fires in FARS

- PAR not filed
- Fire death does not meet current FARS definition
- Fire reported in narrative of PAR, missed by FARS Analyst
- Policy issues (privileged information concerning fire investigation not available to FARS Analyst)
- Administrative problems (lack of cooperation from authorities for further details on fire)
- Communication problems (not contacting the right person)
- Data Source problems (e.g., fire not recorded in PAR)
- Other _____



Data Quality Issues Related to Fire Analysis in State and National Data Files

Friedman Research Corporation

for

Motor Vehicle Fire Research Institute

December 5, 2003



Fire Related Variables

- Identify the location of fires on vehicle, engine fire, dash fire and sources of ignition
- Most forms do not have the ability to distinguish between pre, post or non-impact fires



Coding Recommendations

- Explicit box for fires
- Sequence of events for each vehicle
- Fire code in prominent position on PAR for each vehicle
- Standardize coding across states with regard to crashworthiness issues or accident causation
- Avoid analysts interpretation requirements with regard to fire incidence
- PARs standardized



Recommendations for National & State Accident Files: Fire Information

- Explicit clear pre/post impact fire coding by vehicle is needed
- Have police attach fire department records to police report



Recommendations for National & State Accident Files: Linkages between Databases

- Linkage system between death registry and FARS to avoid undercounting of fatal accidents.
- Many states have no requirement to report the subsequent death of a vehicle occupant to the police. Analysis for underreporting to FARS should be done.



FARS

- Need to make available to FARS analyst standardized fire information for correct coding of fire incidents
- Define guidelines for analysts regarding inclusion of fatal rear end fires with stationary vehicle
- Analysis of FARS data to calibrate the underreporting of fatalities and fire cases
- Immediate need to assess the magnitude of the underreporting problem



DATA QUALITY



Reasons for High Unknown or Missing Data Rates for Other Key Data

- Legal barriers (in obtaining desired data)
- Policy issues (privileged information)
- Administrative problems (lack of cooperation)
- Communication problems (not contacting the right person)
- Data Source problems (e.g., information is not collected)
- Other _____



DISCUSSION

- What is data source? (PAR, medical examiner, driver record, etc.)
- Who is the contact person?
- What are the barriers?
 - Legal
 - Administrative
 - Policy
 - Communication
 - Etc.
- How can unknown/missing/underreporting data rates be lowered?



QUESTIONS?



Appendix

New Coding for 2005

D

The following new coding procedures will be used in FARS starting in 2005 regarding the collection of data on parked or working motor vehicles:

Collection of Data on Parked/Working Motor Vehicles Issues to Headquarters From Coding Committee Meeting June 14-18, 2004 Las Vegas, NV

Attendees: In attendance were Laura Bunch, Linda Butler, Sandi Cole, Bonny Hathaway, Kathy Jones, Mike Perondi, Harley Polverelli, Mike Sowvlen, Robin Turley, Pat Winters, Jan Voss. Dennis Flemons from headquarters and Ken and Sandie Hackman, John McDonough and Paula Cummings from NISR, also attended.

Coding of Motor Vehicles Not In-Transport

1. FARS will now code motor vehicles "Not In-Transport" that are struck within the Trafficway boundaries; i.e., Parked Motor Vehicles, Motor Vehicles Stopped off the Roadway, and Working Motor Vehicles.
2. Motor vehicles "Not In-Transport" outside the boundaries of the trafficway would not be coded (i.e., in parking lots, dealership lots, or on private property).
3. On the case structure screen, change "Number of Non-Motorists" to "Number of Non-**Occupants**."
 - a. The count for this field will now only include Person Types 04 (Occupant of a Non-Motor Vehicle Transport Device), 05 (Pedestrian), 06 (Bicyclist), 07 (Other Cyclist), 19 (Unknown Type of Non-Motorist), and some of Person Type code "08" (Other Pedestrian, i.e., skaters, wheel chair occupants, other persons on pedestrian conveyances).

- b. The count will no longer include occupants of working motor vehicles which used to be included in Person Type code "08."
 - c. The count also will no longer include Person Type code "03" (occupants of parked motor vehicles).
 - d. These changes will be handled through training and a new Vehicle Level variable, "Unit Type" (see 6, a, below).
4. On the case structure screen, "Number of Vehicle Forms Submitted" will now include Motor Vehicles "Not In-Transport," i.e. Parked Motor Vehicles, Motor Vehicles Stopped off the Roadway, and Working Motor Vehicles struck within the Trafficway.
- a. This change will be handled through training and a new Vehicle Level variable, "Unit Type" (see item 6, a, below).
5. Accident Level Form:
- a. Change name of A3 – "Number of Non-Motorists" to "Number of Non-**Occupants.**"
6. Vehicle Level Form:
- a. Add new element at the beginning of the form called "Unit Type, with the following codes:
 - Motor Vehicle In-Transport
 - Parked Motor Vehicle or Motor Vehicle Stopped Off Roadway*
 - Working Motor Vehicle*
 - b. Specific elements will be coded on the Vehicle Level form by the analyst for Parked Motor Vehicles and Motor Vehicles Stopped off the Roadway (see item "d," below). The remaining elements will be left blank by the MDE (see item "d," below). These vehicles will be coded as "2" under Unit Type.
 - c. Working Motor Vehicles will be coded just like a motor vehicle in transport, and they would be coded "3" under the new element "Unit Type."
 - d. For Motor Vehicles Parked or Stopped off the Roadway (within the Trafficway), the MDE will present the following elements for the FARS analyst to code (or the MDE will leave it blank, as noted in italics, below):
 - V4 – Number of Occupants
 - V5 – Registration State
 - V6 – Registered Vehicle Owner
 - V7 – Vehicle Make
 - V8 – Vehicle Model
 - V9 – Body Type
 - V10 – Model Year
 - V11 – VIN

* Within Trafficway

* Within Trafficway

- V12 – Bus Use
- V13 – Special Use
- V14 – Emergency Use
- *(MDE Leave Blank V15-Travel Speed, V16-Vehicle Maneuver, V17-Crash Avoidance Maneuver, V18-Rollover, and V19--Jackknife)*
- V20 – Impact Point-Initial/Principal
- *(MDE Leave Blank V21 – Vehicle Role)*
- V22 – Underride/Override
- V23 – Extent of Deformation
- *(MDE Leave Blank V24 – Manner of Leaving the Scene)*
- V25 – Motor Carrier ID
- V26 – Vehicle Configuration
- V27 – Vehicle Trailing
- V28 – Number of Axles
- V29 – Gross Vehicle Weight Rating
- V30 – Cargo Body Type
- V31 – Hazardous Cargo
- *(MDE Leave Blank V32 – Sequence of Events)*
- V33 – Most Harmful Event
- V34 – Related Factors – Vehicle Level
- V35 – Fire Occurrence

e. V6 – Registered Vehicle Owner:

- Change code “0” to read: Not Applicable, Vehicle Not Registered, **Motor Vehicle Parked/Stopped Off Roadway.**

f. The Vehicle Level Coding Form Layout

- We will shade the element blocks for those eight elements that would not be coded by the analyst for Motor Vehicles Parked/Stopped off the Roadway.

7. Driver Level:

a. Driver Presence (D4)

- Add new code “4 – Parked Vehicle/Motor Vehicle Stopped off Roadway/Working Motor Vehicle.
- For Working Vehicles code only Driver Presence (code “4”) and Related Factors.
- For motor vehicles parked/stopped off the roadway, code only Driver Presence (code “4”) and analyst will tab to Related Factors and zero-fill Related Factors.

b. MDE would leave blank all other elements, the way “Driverless” vehicles are treated.

- If the MDE can be programmed to put blanks in the skipped fields, without tabbing, this would be a time-saving feature for the analyst. If this can be done, this feature could be extended to “Driverless” vehicles, as well (Driver Presence code, “2”)

- c. If the MDE could be programmed to zero-fill Driver Level-Related Factors as well as put blanks in the skipped fields, this would be an even greater timesaving feature.

8. Person Level:

- a. Code all persons in parked/stopped off roadway and working vehicles (injured and non-injured).
- b. Person Type (P8)
 - We will continue to use Person Type “03 - Occupants of Motor Vehicles Not In-Transport” for all occupants in parked motor vehicles/motor vehicles stopped off the roadway. It will not matter what actual seating position they are in (e.g., occupant sitting behind the wheel of the vehicle would not be coded “01 – Driver”
or
“02 – Passenger.” See “f” – Seating Position, below).
 - For occupants of working motor vehicles, we will now use Person Type “03 - Occupant of Motor Vehicle Not In-Transport” instead of “08 – Other Pedestrian.”
- c. All Alcohol and Drug elements (P16 – P21):
 - The analysts should code if they have the information, but if the information is not available, they should code as “Not Reported.”
- d. Air Bag Availability/Deployment (P11)
 - Change code “00-Non-Motorist” to “Non-**Occupant**.”
- e. Non-Motorist Location (P15)
 - Change element name to “Non-**Occupant** Location.”
 - Occupants of working motor vehicles and motor vehicles parked/stopped off the roadway will be coded as “00 – Vehicle Occupant,” instead of codes “01-99.”
- f. Seating Position (P9):
 - Change code “00 – Non-Motorist” to “Non-**Occupant**.” We are placing the occupants of parked and working motor vehicles in the proper seating position.
- g. P9 – P14:
 - Will be coded for all occupants of parked/stopped off the roadway motor vehicles and working motor vehicles.
- h. Non-Motorist Striking Vehicle Number (P5):
 - Change element name to “Non-**Occupant** Striking Vehicle Number.”

Code “00 – Not Applicable-Vehicle Occupant” should be changed to read:
 “Not Applicable - ***Occupant of a Motor Vehicle In-Transport/Not In-Transport.***”

- i. Coding Guideline: A parked motor vehicle can be a striking vehicle if set in motion striking a pedestrian, another parked motor vehicle, or a motor vehicle in transport. If any of these situations occur, the striking parked vehicle’s unit number will be recorded as the Non-Motorist Striking Number.

9. First/Most Harmful Event and Sequence of Events:

- a. Change “Collision with Motor Vehicles” codes and layout in coding manual to read:
Collision Involving Motor Vehicles In-Transport
 12 –Motor Vehicle In-Transport on Same Roadway
 13 –Motor Vehicle In-Transport on Different Roadway
 54 –Motor Vehicle ***In-Transport Strikes or is Struck by Cargo, Persons or Objects*** Set-in-Motion ***from/by*** Another Motor Vehicle In-Transport

Collisions Involving Motor Vehicles NOT In-Transport

- 14 –Parked Motor Vehicle ***or Motor Vehicle Stopped Off the Roadway***
- 45 –Working ***Motor Vehicle (construction, maintenance or utility vehicles only)***

10. Set-in-Motion Concept:

- a. How we treat accidents where a motor vehicle in transport sets in motion something which strikes another motor vehicle in transport will not change, with exception of the following:
 - Coding of First/Most Harmful Event and Sequence of Events
 - In a two-vehicle accident, Code “54” – will now apply for both vehicles.
 - This past year the coding manual instructed the analyst to code one vehicle as code “12” and the other as “54.”
- b. Code “54” will not apply to Motor Vehicles Parked/Stopped off the Roadway and Working Motor Vehicles when struck by something set in motion by a motor vehicle in-transport.

Other Issues:

1. Hit and Run:

- a. Capture passengers who flee the scene of an accident. We currently have a related factor for drivers who leave the scene.
- b. Related Factors – Person Level:
 - Add new code “86 – Passenger Fled Scene.”

- 2. Recommendation to ITAP for Consideration: When NATEK is conducting the Q.C. procedures to create the end of the year report, look at the override reports to see if an

override was done and an explanation recorded, before NATEK contacts the analyst to request an explanation for the questioned coding. The analyst should have already documented the explanation for the coding with the override. Documented overrides have two purposes:

- a. They give NISR/Dennis Flemons a chance to see why people have to override a case to see if any changes need to be made to coding/edit checks, and
 - b. They give NATEK a chance to see if they have any problems.
3. ITAP Issue: It takes too long to fill out the trouble form on ITAP's bulletin board. It's easier to just send an e-mail.