

ARKANSAS' STRATEGIC HIGHWAY SAFETY PLAN



July 2007

Arkansas' Strategic Highway Safety Plan

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Executive Summary

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law on August 10, 2005. This Federal transportation reauthorization act established a new core highway safety improvement program that focuses on reducing highway fatalities and serious injuries on all public roads. To achieve this goal, 23 U.S.C. 148 requires each State to prepare a strategic highway safety plan (SHSP). The SHSP is a comprehensive plan to improve safety in the State by identifying emphasis areas and listing safety strategies to reduce the number of fatal and serious injury crashes on the State's roadways. Ultimately, the SHSP will serve as a planning guide to increase coordination and cooperation among state and local governments, law enforcement agencies and planning organizations in developing safety programs and promoting highway safety on all public roads.

As specified in SAFETEA-LU, the Arkansas State Highway and Transportation Department (AHTD) will serve as the lead agency in the development and implementation of the SHSP. To ensure that all aspects of highway safety were considered during the development of the SHSP, a Highway Safety Steering Committee was formed in August 2006. This Committee is comprised of representatives from various disciplines of safety related to engineering, enforcement, education and emergency medical services (EMS). A list of representatives and agencies involved in the Steering Committee is shown in Appendix A.

In order to allow for input in the development of the SHSP, the Steering Committee organized and hosted a one-day Safety Summit in Little Rock on November 8, 2006. Over 100 people representing the engineering, enforcement, education and EMS communities attended the Summit. The Summit provided information on highway safety in Arkansas and allowed participants the opportunity to discuss safety needs and strategies to address these needs. Based on comments received at the Summit, information from related research studies and safety plans from other states and crash data, the Steering Committee prepared the SHSP.

From 2002 through 2005, there were 2,343 fatal crashes involving 2,657 fatalities on Arkansas' roadways. The State's 2005 fatality rate was 2.1 fatalities per 100 million vehicle miles (MVM) traveled which is higher than the national 2005 fatality rate of 1.5 fatalities per 100 MVM traveled. The Committee established a goal to reduce the State's 2005 fatality rate from 2.1 fatalities per 100 MVM to 1.8 fatalities per 100 MVM by the year 2010.

To achieve this goal the SHSP identifies six emphasis areas, lists targets within each emphasis area and recommends safety strategies that, when implemented, should reduce the number of fatal and serious injury crashes in that target area. While the reduction in fatal and serious injury crashes is a focal point of the SHSP, consideration will continue to be given to implementing safety improvements at locations where the potential for crashes to occur exists. These could include roads with narrow shoulders or limited sight distance.

To ensure that the overall goals and objectives of the SHSP are consistent with other safety plans in the State, information from the Highway Safety Improvement Program (HSIP) developed by the AHTD, the Highway Safety Plan developed by the Arkansas State Police Highway Safety Office and the Commercial Vehicle Safety Plan developed by the Arkansas Highway Police were considered when preparing the SHSP. In addition, information contained in the American Association of State Highway and Transportation Officials (AASHTO) Strategic Highway Safety Plan (February 2005) was also used as a guide in developing the State's SHSP. AASHTO's Strategic Highway Safety Plan identified 22 emphasis areas that have the most potential to reduce highway fatalities and serious injuries and included issues related to the roadway, drivers and vehicle elements.

To advance the implementation of AASHTO's Plan, the National Cooperative Highway Research Program (NCHRP) developed a series of implementation guides for each of these emphasis areas and these guides were published collectively as NCHRP Report 500. Many of the safety needs listed in NCHRP Report 500 were also relative to Arkansas' safety needs. Consequently, many of the safety strategies identified in the NCHRP Report 500 are also listed as safety strategies in Arkansas' SHSP. While the SHSP recommends specific safety strategies, it is recognized that the feasibility of implementing some of these strategies are contingent upon the availability of funds. Thus, the SHSP does not address the level of funds required to implement these strategies.

In order to reduce the State's 2005 fatality rate from 2.1 fatalities per 100 MVM to 1.8 fatalities per 100 MVM by 2010, the following safety strategies are recommended:

- Increase seat belt usage through:
 - Passage of a primary seat belt law;
 - Sustained and highly visible enforcement of all occupant protection laws;
 - Continued use of high visibility public information and education campaigns;
- Expand the installation of shoulder and centerline rumble strips, rumble stripes, median cable barriers and passing lanes;
- Expand, improve, and maintain roadway visibility features such as markings, signs, and lighting;
- Identify and deter high-risk driver behaviors associated with nonusers of seat belts, impaired drivers, speeders and young and older drivers;
- Continue to improve work zone safety through increased enforcement and public information and education campaigns;
- Continue highway safety improvements as recommended and identified through crash analyses and on-site investigations;
- Improve the accuracy of identifying the location of crashes and the timeliness of entering and accessing the crash data into the State database;
- Improve timely access to crash scenes for emergency medical personnel and first responders;
- Establish and implement a statewide trauma system; and
- Expand the EMS pre-hospital data collection software program for use by local and state providers to target injury types.

Introduction

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law on August 10, 2005. This Federal transportation reauthorization act established a new core highway safety improvement program that focuses on reducing highway fatalities and serious injuries on all public roads. To achieve this goal, 23 U.S.C. 148 requires each State to prepare a strategic highway safety plan (SHSP). The SHSP is a comprehensive plan to improve safety in the State by identifying emphasis areas and listing safety strategies to reduce the number of fatal and serious injury crashes on the State's roadways. Ultimately, the SHSP will serve as a planning guide to increase coordination and cooperation among state and local governments, law enforcement agencies and planning organizations in developing safety programs and promoting highway safety on all public roads.

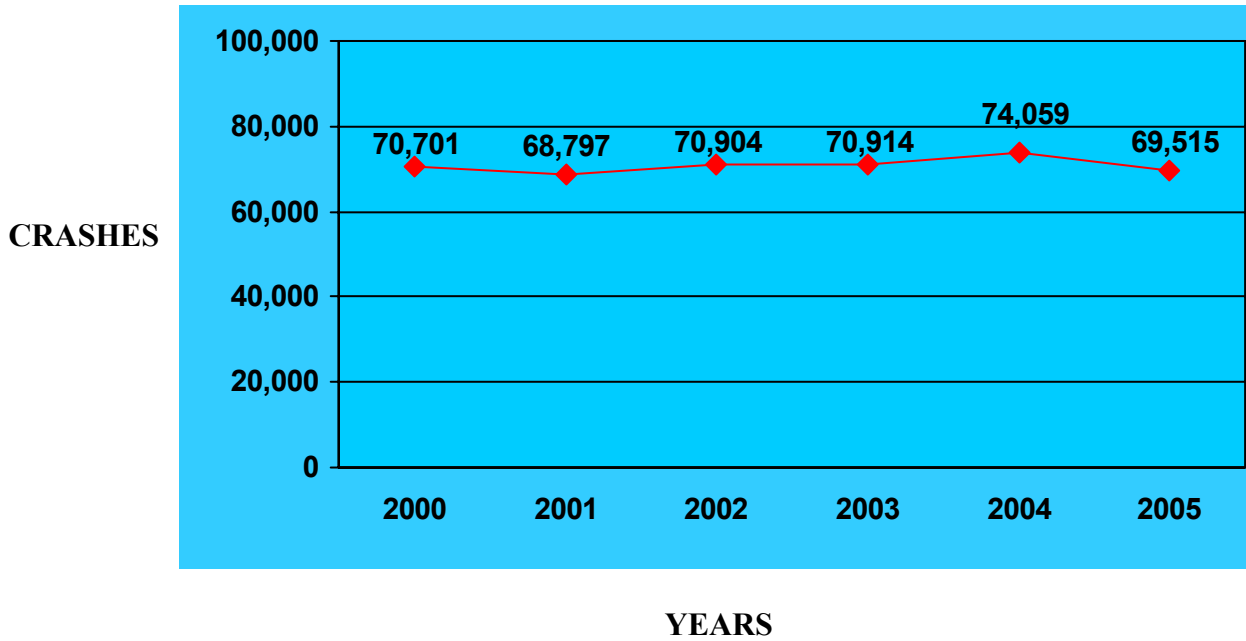
Arkansas continues to have one of the highest fatality rates in the nation. One factor that contributes to the State's high fatality rate is that 85 percent of the State's road system is made up of rural, two-lane roads. Many of these roads have narrow or no shoulders that can contribute to run-off-road crashes. The majority of fatal crashes result in a vehicle leaving the roadway and striking a fixed object and/or overturning. Another factor for the State's high fatality rate is the low seat belt usage rate that can be partly attributed to the lack of a primary seat belt law.

To address these and other key safety issues in the State, a Highway Safety Steering Committee was formed in August 2006 to develop a SHSP for Arkansas. This multi-disciplinary safety committee (Appendix A) is comprised of representatives from the engineering, education, enforcement and emergency medical services (4 Es) sectors. The Committee organized and hosted a one-day Safety Summit on November 8, 2006 to disseminate safety information and provide a forum for key highway safety stakeholders to offer input in the SHSP development. Highway safety professionals from each of the 4 Es led group discussions and helped identify highway safety needs and strategies. Comments from the Summit are shown in Appendix B.

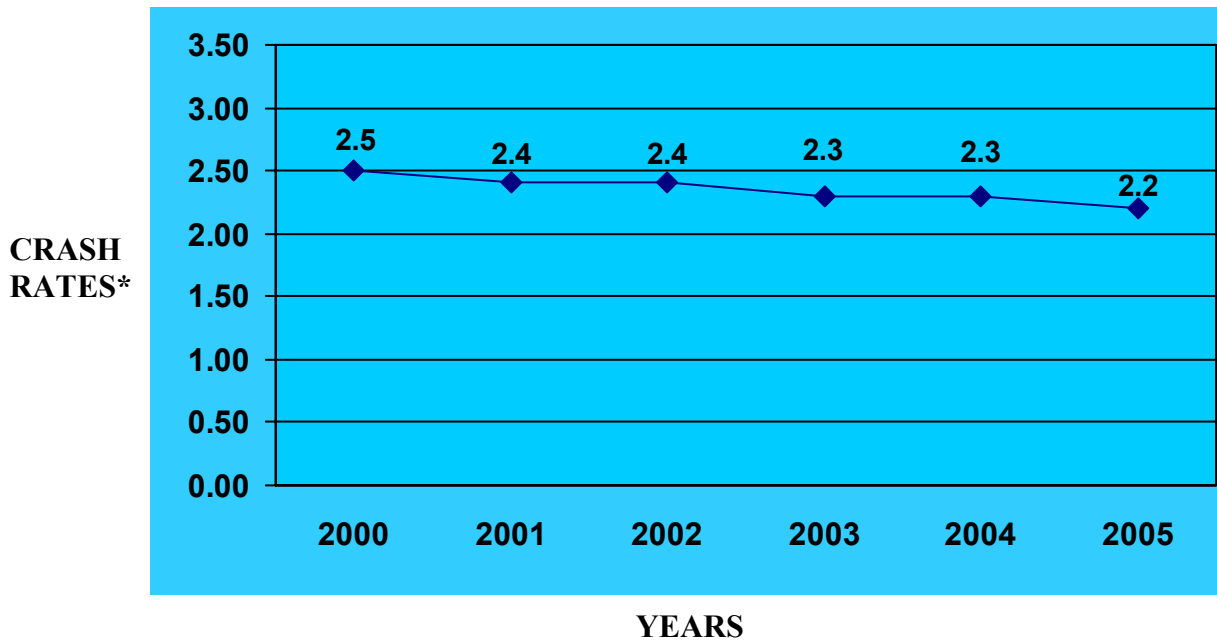
The Steering Committee considered all public comments from the Safety Summit and incorporated some of them into the SHSP. The ultimate goal of the SHSP is to identify the types of projects that, when implemented, will reduce the frequency of fatal and serious injury crashes that currently occur on the State's road systems. Also, consideration will continue to be given to implementing safety improvements at locations where the potential for crashes to occur exists. For example, these could include roads that have narrow shoulders or limited sight distance. Many of the highway safety strategies identified by the Steering Committee were based on effective safety projects in Arkansas, previous research conducted by AASHTO and recognized best safety practices from other States.

The State's 2005 fatality rate of 2.1 fatalities per 100 million vehicle miles (MVM) traveled is above the national average of 1.5 fatalities per 100 MVM traveled. In addition, the State's fatal crash rate of 1.9 fatal crashes per 100 MVM traveled is also above the national average of 1.3 fatal crashes per 100 MVM. The following information shows trends for crashes, fatalities and crash/fatality rates in the State.

**FIGURE 1
STATEWIDE TOTAL CRASHES**

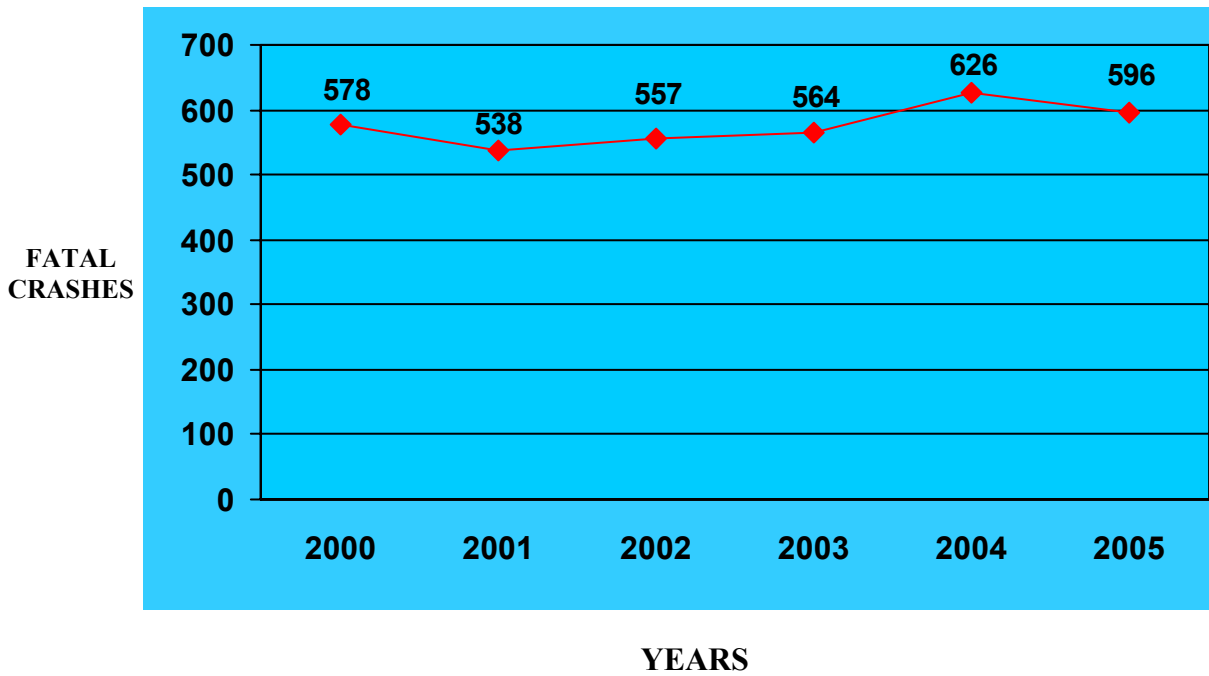


STATEWIDE CRASH RATES*

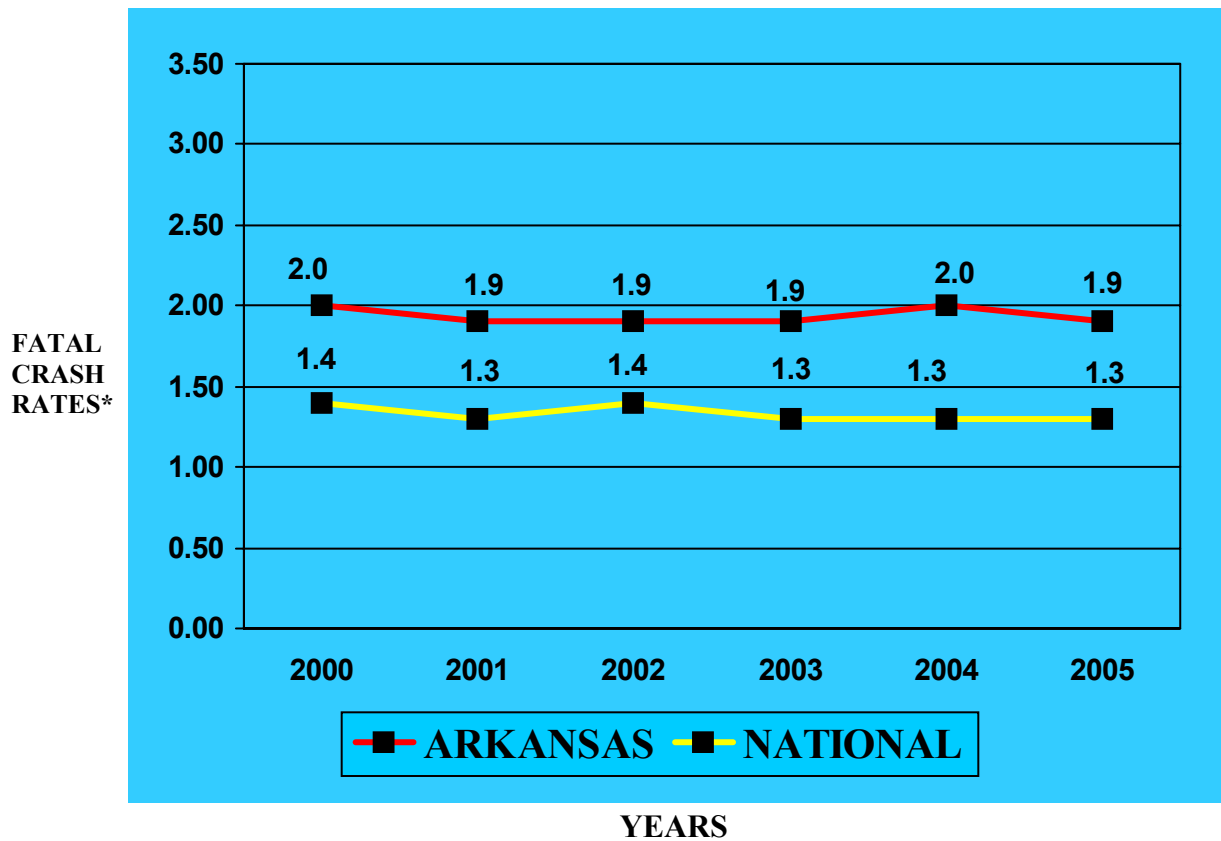


*Crashes per million vehicle miles

**FIGURE 2
STATEWIDE FATAL CRASHES**

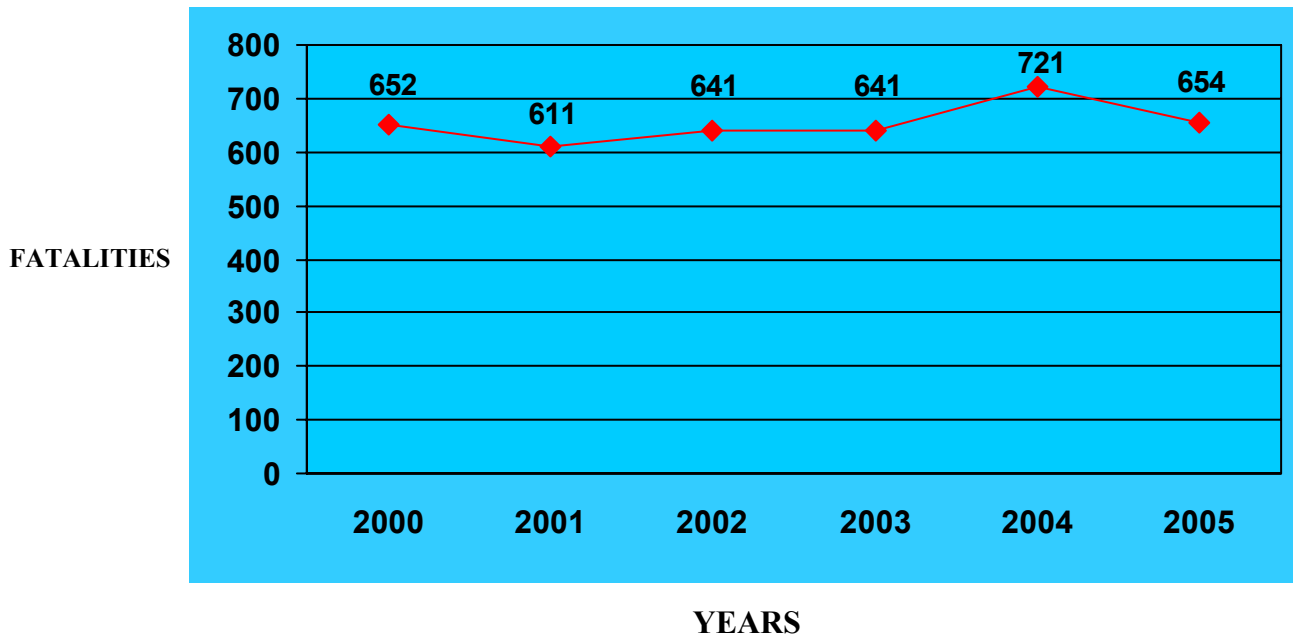


**FATAL CRASH RATES*
STATE VS NATIONAL**

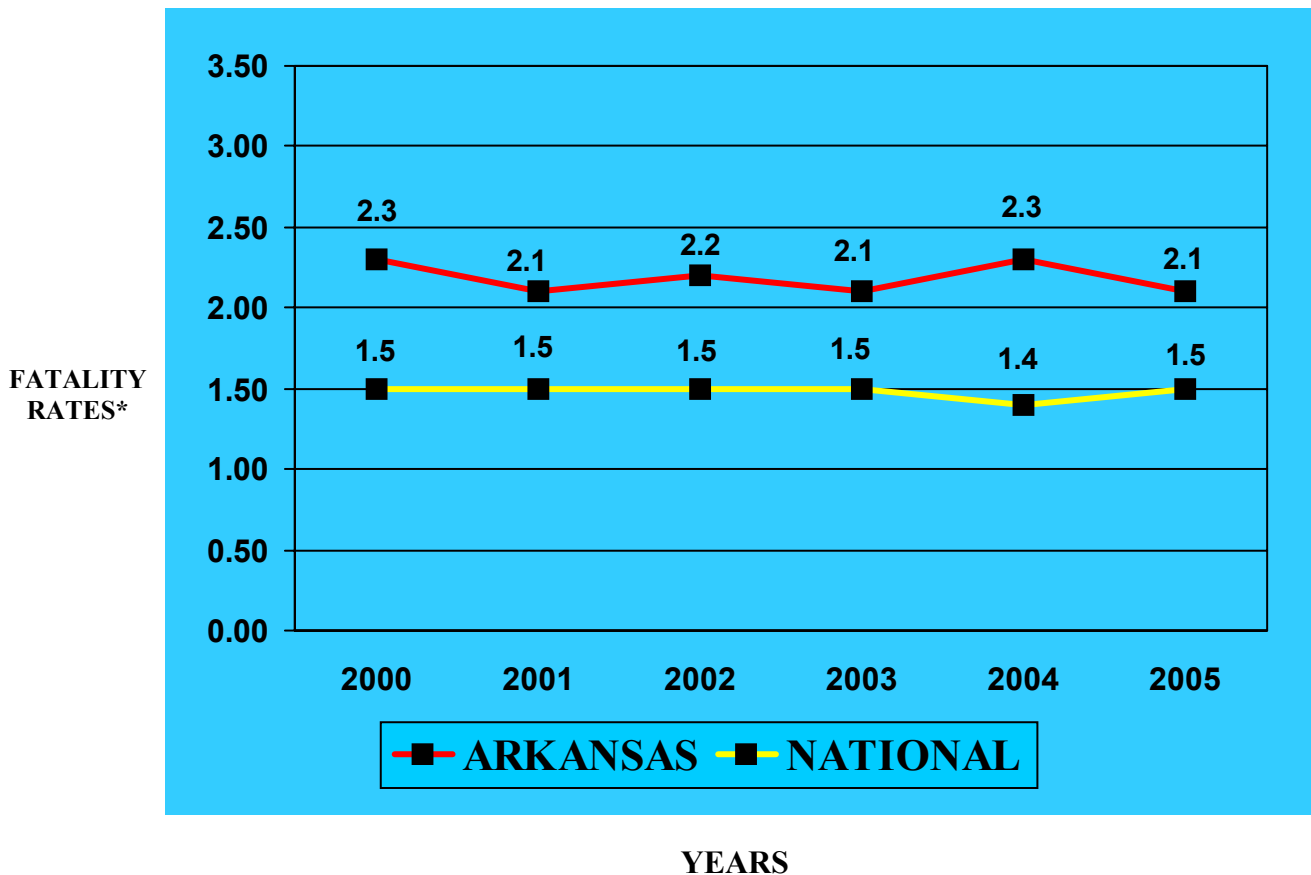


*Crashes per 100 million vehicle miles

**FIGURE 3
STATEWIDE FATALITIES**



**FATALITY RATES*
STATE VS NATIONAL**



*Fatalities per 100 million vehicle miles

Shared Responsibility

Safe roadways are a shared responsibility among the federal, state, county and city governments. These responsibilities include the planning, programming, designing, constructing and maintaining of roads and the enforcement of all traffic laws. Another responsibility is to provide timely response to crash scenes by EMS personnel. As shown on Table 1, the state highway system carried 79 percent of the total vehicle miles traveled in 2005, yet had a fatal crash rate that was lower than the county road system. Possible reasons for the high crash rate on the county road system include the number of rural, two-lane roads with narrow shoulders, limited clear zones and higher roadway speeds. The city street system had the lowest fatal crash rate, but highest crash rate. This is possibly due to the fact that travel is more congested but at lower speeds and also increased exposure to conflict due to the number of at-grade intersections in urban areas. Figure 4 shows fatal crash rates by road system.

TABLE 1

ALL CRASH RATES BY ROAD SYSTEM IN 2005

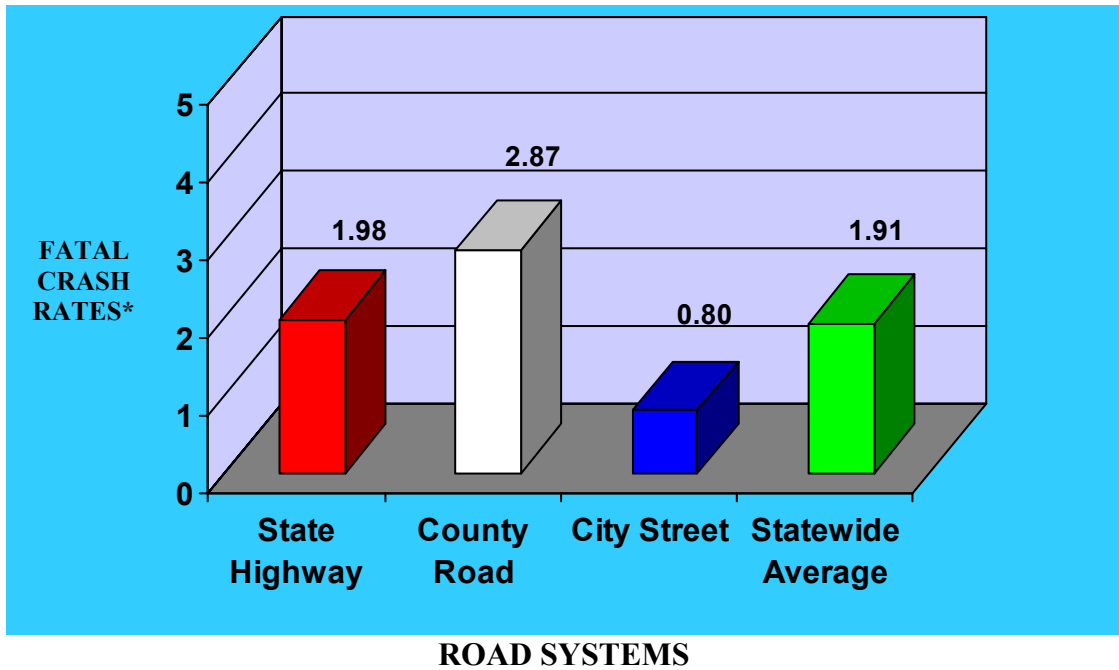
System	Annual MVM*	Total Crashes	Crash Rates Per MVM	Fatal Crashes	Fatal Crash Rates Per 100 MVM
State Road	24,763	43,808 ⁽¹⁾	1.77	491 ⁽¹⁾	1.98
County Road	2,578	4,428	1.72	74	2.87
City Street	3,895	21,279	5.46	31	0.80
Totals	31,236	69,515	2.23	596	1.91

⁽¹⁾ Includes interchange ramps and frontage roads

* million vehicle miles

FIGURE 4

FATAL CRASH RATES BY ROAD SYSTEM IN 2005



*Crashes per 100 million vehicle miles

To ensure that all levels of government continue to offer a safe and efficient transportation system, both roadway safety and driver safety issues must be considered and key components must be in place that include:

- › An adequate crash data collection and analysis system;
- › Well-trained and equipped law enforcement agencies;
- › Well-trained engineers, planners, and roadway operations and maintenance personnel;
- › Well-trained state, county, and city governmental agencies;
- › An effective emergency medical and trauma system composed of well-trained and equipped personnel strategically located around the state for quick response to roadway crashes; and
- › Roadway users well-trained and educated in good driving behaviors, regulations, and safe “share the road” practices among the various types of vehicle operators.

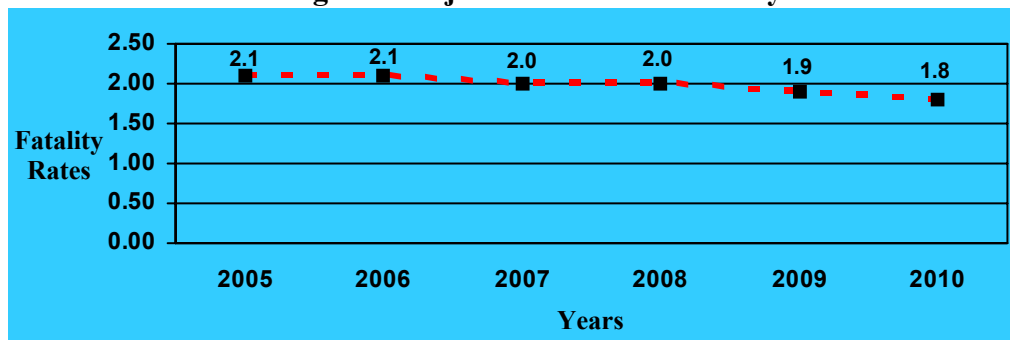
Safety Strategies

In order to reduce the number of fatal and serious injury crashes on Arkansas' roadways, the SHSP recommends the implementation of specific safety strategies. The SHSP does not address every safety strategy currently being implemented in the State nor does it address every type of crash problem. Its focus is on implementing strategies that provide the greatest potential to reduce fatal and serious injury crashes on all public roadways. Most of the strategies focus on roadway improvements to reduce run-off-road crashes and on driver safety programs.

The combination of air bags and lap and shoulder belts offers the most effective safety protection available for passenger vehicle occupants. In 2005, 69 percent of the vehicle occupants killed in traffic crashes on Arkansas' roadways were not restrained. National data has shown that at least 52 percent of passenger car occupants who died in car crashes were not belted. Further studies have shown that the use of seat belts can improve survivability in severe crashes by over 50 percent. Implementation of the following strategies is recommended to reduce the State's fatality rate to 1.8 fatalities per 100 MVM by the year 2010 as shown in Figure 5.

- Increase seat belt usage through:
 - Passage of a primary seat belt law
 - Sustained enforcement of all occupant protection laws
 - Continued use of public information and education campaigns
- Expand the installation of shoulder and centerline rumble strips, rumble stripes, median cable barriers and passing lanes;
- Expand, improve and maintain roadway visibility features such as markings, signs, lighting and signals;
- Identify and deter high-risk driver behavior associated with nonusers of seat belts, impaired drivers, speeders and young and older drivers;
- Continue to improve work zone safety through innovative design, increased enforcement and public information and education;
- Continue highway safety improvements as recommended and identified through crash analyses and on-site investigations.
- Improve the accuracy of identifying the location of crashes and in the timeliness of entering and accessing the crash data into the state database;
- Improve timely access for emergency medical personnel and first responders;
- Establish and implement a statewide trauma system; and
- Expand the EMS pre-hospital data collection software program for use by local and state providers to target injury types.

Figure 5
Existing and Projected Statewide Fatality Rates



Overview of Emphasis Areas and Targets

Through extensive data analyses, findings from the NCHRP Report 500 and comments from the Safety Summit, six key emphasis areas and specific targets within each emphasis area are identified and addressed in the SHSP. The Safety Summit provided information on the status of highway safety in Arkansas and allowed participants the opportunity to discuss safety needs and strategies to address these needs. Public comments from the Safety Summit are shown in Appendix B.

Emphasis Area I – Serious Crash Types

- > Targets
 - Run-Off-Road Crashes
 - Crashes with Fixed Objects
 - Intersection Crashes
 - Rear-End Crashes
 - Head-On Crashes
 - Work Zone Crashes
 - Railroad Crossing Crashes

Emphasis Area II – High-Risk Drivers

- > Targets
 - Nonusers of Occupant Protection Devices
 - Drivers with BAC .08+
 - Speeders/Aggressive Drivers
 - Young Drivers - Under Age 21
 - Older Drivers - Age 70 and Older
 - Distracted or Fatigued Drivers
 - Unlicensed Drivers or Drivers with Revoked or Suspended Licenses

Emphasis Area III – Special Vehicles

- > Targets
 - Pickup Trucks
 - Commercial Vehicles
 - Motorcycles

Emphasis Area IV - Special Roadway Users

- > Targets
 - Pedestrians
 - Bicyclists

Emphasis Area V - Emergency Medical Services

- > Targets
 - Pre-Hospital Emergency Medical Personnel
 - First Responders, Truck Drivers, Tow Truck Operators, Bystanders
 - Access to Crash Sites
 - Development of Statewide Trauma System
 - Pre-Hospital Data Collection System and Analysis
 - Proper Restraints for Transporting Children

Emphasis Area VI - Traffic Records: Data Collection and Analysis

- > Targets
 - Data Collection and Entry
 - Data Analysis
 - New Technologies

EMPHASIS AREAS, TARGETS, AND STRATEGIES

Emphasis Area I – Serious Crash Types

Arkansas continues to have one of the highest fatality rates in the nation. According to 2005 Fatal Analysis Reporting Systems (FARS) data, almost two-thirds of the State’s fatalities resulted from lane departure crashes. As shown on Table 2, run-off-road crashes resulted in a large number of fatalities and serious injuries. Of the total run-off-road crashes, over 66 percent involved striking a fixed object. Seven serious crash types have been identified that contribute to the frequency of fatal and serious injury crashes. Information for each of these types of crashes follows.

> Targets

- Run-Off-Road Crashes
- Crashes with Fixed Objects
- Intersection Crashes
- Rear-End Crashes
- Head-On Crashes
- Work Zone Crashes
- Railroad Crossing Crashes

TABLE 2 SERIOUS CRASH TYPES 2002-2005				
CRASH TYPE	TOTAL FATAL/ SERIOUS INJURY CRASHES	% OF TOTAL	TOTAL FATALITIES	% OF TOTAL
Run-Off-Road	6,509	37.3%	TOTAL FATALITIES	40.8%
Struck Fixed Objects	4,315	24.7%	TOTAL FATALITIES	24.0%
Intersection	3,536	20.3%	TOTAL FATALITIES	16.1%
Rear-End	1,599	9.2%	TOTAL FATALITIES	3.4%
Head-On	910	5.2%	TOTAL FATALITIES	11.7%
Work Zone	522	3.0%	TOTAL FATALITIES	3.0%
Railroad Crossings	50	0.3%	TOTAL FATALITIES	1.0%
Total	17,441*	100%	TOTAL FATALITIES	100%

* Crashes can be classified as more than one type of crash (e.g., run-off-road and fixed objects crashes); therefore adding these numbers together will represent more than the actual number of crashes/fatalities that occurred during these years.

Run-Off-Road Crashes

Years - 2002-2005

Fatal/Serious Injury Crashes - 6,509

Fatalities - 1,447

The Problem

In Arkansas, there were 6,509 fatal/serious injury crashes and 1,447 fatalities related to run-off-road crashes from 2002 to 2005. More than 63 percent of the fatalities in 2005 involved run-off-road type crashes. The most common harmful events that occur when a vehicle leaves the roadway are rollover or striking a fixed object. Generally, a rollover crash that results in a driver being ejected from the vehicle indicates the nonuse of seat belts. When vehicles leave the road, the roadway environment including trees, embankments, utility poles and other fixed objects influences the crash severity. Since the majority of run-off-road crashes result in a vehicle striking a fixed object, fixed object crashes are discussed as a separate target area. The strategies listed below focus on keeping the vehicle on the road.

Strategies

- Maintain, expand and improve roadway visibility features such as signs, markings and lights, where appropriate
- Deploy centerline and shoulder rumble strips and rumble stripes, where appropriate
- Improve shoulders and surface texture, where possible and where cost effective
- Design and maintain shoulders to eliminate edge drop-offs, where appropriate
- Train and educate roadway users to safely recover after leaving the roadway and train and educate roadway users on the benefit of seat belt use

Crashes with Fixed Objects

Years - 2002-2005

Fatal/Serious Injury Crashes - 4,315

Fatalities - 851

The Problem

When a motorist unintentionally departs the roadway, the vehicle will most likely roll over or strike a fixed object. Three of the most commonly fixed objects that are struck are trees, utility poles or embankments. Single vehicle fatal crashes where a tree, utility pole or embankment was struck accounted for 39 percent of all single vehicle fatal crashes in 2005. Vehicles are more likely to impact an object when drivers lose control and an object is close to the road. The strategies listed below reduce the chances of an errant vehicle striking a tree, utility pole or embankment.

Strategies

- As appropriate, provide adequate clear zones
- As appropriate, remove or delineate trees
- As appropriate, relocate or delineate poles
- As appropriate, improve grade of embankments to provide an adequate area for recovery
- As appropriate, utilize safer roadside hardware practices to minimize crash severity and shield hazards
- As appropriate, remove abandoned structures near roadway

Intersection Crashes

Years - 2002-2005

Fatal and Serious Injury Crashes - 3,536

Fatalities - 571

The Problem

Although intersections are a small part of the overall highway system, they are the point at which traffic movements most often conflict with one another. Nationally, about one in every four fatal crashes occurs at or near an intersection, one third of which are signalized. The two most common crashes that occur at intersections involve left turns and being struck in the rear. Fatal and serious injury crashes at signalized intersections usually are a result of non-compliance with the traffic signal. Crashes at unsignalized intersections generally occur when one or more of the vehicles are traveling at a high rate of speed and/or fail to yield. Other potential causes of crashes may be limited sight distance, design/layout of intersection, limited spacing to merge into traffic and improper use or timing of traffic control devices.

Strategies

- Install advance warning signs and transverse rumble strips, as appropriate
- Improve signs, markings and visibility of the intersection, as appropriate
- Improve sight distance and horizontal and vertical alignment, as appropriate
- Improve intersection lighting and signal timing, as appropriate
- Install turn lanes, as appropriate
- Increase enforcement of intersection violations, i.e., red light running, regulatory signs, as appropriate
- Educate roadway users on intersection traffic controls
- Utilize proper planning and design of access to public roadways in the vicinity of the intersection, as appropriate

- Consider driveway closures and/or relocations in the vicinity of the intersection and use of roundabouts, as appropriate

Rear-End Crashes

Years - 2002-2005

Fatal and Serious Injury Crashes - 1,599

Fatalities - 122

The Problem

Many safety problems in urban areas and at intersections can be traced to difficulties in accommodating left turning vehicles. A key strategy for minimizing collisions (angle, rear-end, sideswipe) for left turning vehicles is to provide exclusive left-turn lanes, particularly on high-volume roads in urban areas. Left-turn lanes allow separation of left turn and through traffic streams, thus reducing the potential for rear-end collisions. Because they provide a sheltered location for drivers to wait for a gap in opposing traffic, left-turn lanes may encourage drivers to be more selective in choosing a gap to complete a left turn maneuver. Also, rear-end crashes become more severe in higher speed locations, especially on rural roadways. Other factors include driver inattention, speeding and following too close.

Strategies

- Install continuous, two-way, left-turn lanes, as appropriate
- Install and lengthen left-turn lanes, as appropriate
- Improve channelization at or near intersections, as appropriate
- Improve signal timing and phasing at intersections, as appropriate
- Increase enforcement in urban areas, as appropriate.

Head-On Crashes

Years - 2002-2005

Fatal and Serious Injury Crashes - 910

Fatalities - 413

The Problem

Nearly 12 percent of the Arkansas traffic fatalities from 2002 to 2005 were attributed to head-on crashes. Head-on crashes occur when vehicles leave the driving lanes to the left, crossing either the centerline of an undivided road or the median of a divided highway. One major factor related to head-on crashes is roadway geometrics such as vertical and horizontal curves that limit sight distance and restrict passing opportunities. In these type situations, the driver may attempt to overtake another vehicle and subsequently cause a fatal/serious injury crash. Other contributing driver factors related to head-on crashes are inattention, driver fatigue, speeding and overcorrecting by a driver. One cause of overcorrection could be shoulder drop-offs. The University of Arkansas Mack-Blackwell National Rural Transportation Study Center reported that passing lanes reduce crash rates in rural areas by 25 percent by enhancing passing opportunities. The strategies listed below reduce the chance of vehicles crashing head-on by providing additional lanes for passing opportunities and alerting drivers that they are about to leave their driving lane and be exposed to potential head-on crashes. The use of centerline rumble strips on one location in Arkansas (Highway 7) and in other States has proven to be effective in reducing head-on crashes on undivided roadways. The use of median cable barrier has also proven to be effective and economical in reducing head-on crashes caused by a vehicle crossing the median on divided roadways.

Strategies

- Install medians, median cable or equivalent barrier, where appropriate
- Install centerline rumble strips, where appropriate
- Construct passing lanes on rural, two-lane roads, where appropriate
- Train and educate roadway users on passing zone markings and proper passing
- Enhance enforcement of improper or illegal passing, where appropriate
- Maintain shoulders and eliminate drop-offs, where appropriate

Work Zone Crashes

Years - 2002-2005

Fatal and Serious Injury Crashes - 540

Fatalities - 105

The Problem

From 2002 to 2005, there were 540 fatal/serious injury crashes resulting in 105 fatalities in all construction/maintenance work zones in Arkansas. As a result of the 1999 Interstate Rehabilitation Program (IRP), the number of Interstate reconstruction projects created more work zones than normal in the State. The increased construction activity of the IRP resulted in 71 fatal crashes involving 87 fatalities in Interstate work zones from 2000 to 2005. The primary driver factors related to work zone crashes are driving too fast for conditions and inattention. Increased public awareness, education and enforcement along with properly designed work zones are key factors in improving work zone safety.

Strategies

- Provide work zone safety training to AHTD personnel, public agencies, contractors and law enforcement agencies
- Design work zones that adequately and safely meet the road users' needs
- Provide work zone information to the public
- Address the special needs of motor carriers in work zones, where appropriate
- Implement signing, striping and innovative designs and technology, where appropriate
- Increase enforcement of work zone traffic laws, where appropriate

Railroad Crossing Crashes

Years - 2002-2005

Fatal and Serious Injury Crashes - 50

Fatalities - 35

The Problem

Arkansas continues to average about 70 railroad crossing crashes per year at public, at-grade crossings. Currently, over 1,800 or 66 percent of public railroad crossings in the State have no active protection. Based on studies from the Federal Highway Administration, installation of active warning devices has proven to be an effective method to reduce the frequency of crashes at railroad crossings.

Strategies

- Install and/or upgrade active and passive warning devices at railroad crossings where warranted
- Close redundant crossings, where appropriate
- Continue to utilize Operation Lifesaver programs and increase awareness of the dangers at railroad crossings
- Increase enforcement of railroad crossing violations, where appropriate
- Construct railroad overpasses as funds are available and where appropriate

Emphasis Area II - High-Risk Drivers

Extensive data analyses have identified several high-risk driver categories that pose significant traffic safety problems as shown in Table 3. State data and information from the FARS were used to identify high-risk drivers. Also, information contained in the State’s Highway Safety Plan, prepared by the Arkansas Highway Safety office, was used to identify high-risk drivers. It should be noted that data was not available for distracted/fatigued drivers and unlicensed drivers. However, these drivers were identified in the NCHRP Report 500 as potential high-risk drivers. As previously stated, an increased usage of occupant protection devices has the most potential to reduce the State’s fatality rate. Figures 4 and 5 show usage rates for seat belts and child restraint.

> Targets

- Nonusers of Occupant Protection Devices
- Drivers with Blood Alcohol Content (BAC) .08+
- Speeders/Aggressive Drivers
- Young Drivers - Under Age 21
- Older Drivers - Age 70 and Older
- Distracted or Fatigued Drivers
- Unlicensed Drivers or Drivers with Revoked, or Suspended Licenses

TYPE DRIVER	DRIVERS KILLED
Nonusers of Occupant Protection Devices	1,104
Drivers with BAC .08+	564
Speeders/Aggressive Drivers	452
Young Drivers - Under Age 21	323
Older Drivers - Age 70 and Older	185
Distracted or Fatigued Drivers	Not Available
Unlicensed Drivers or Drivers with Revoked or Suspended Licenses	Not Available

FIGURE 6

**ARKANSAS
SEAT BELT USAGE RATES
(From Observational Use Survey)***

* Drivers and front seat passengers; no survey in 1997; surveys conducted by Arkansas Highway Safety Office

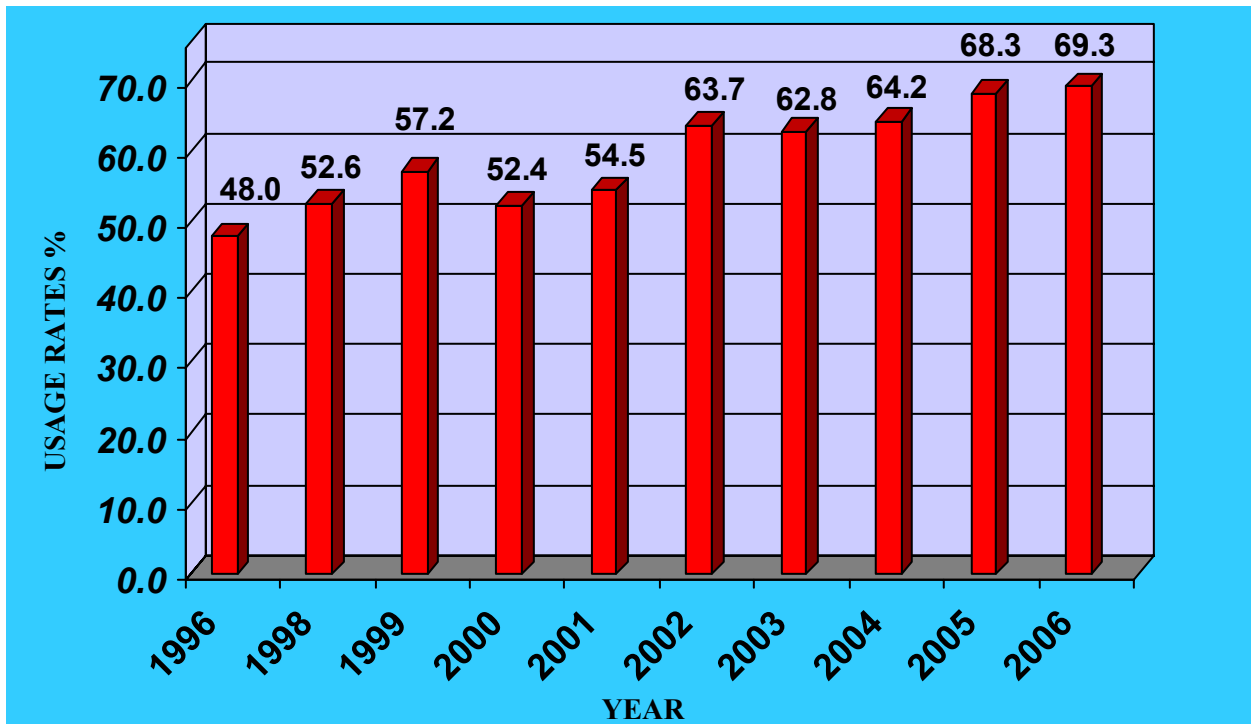
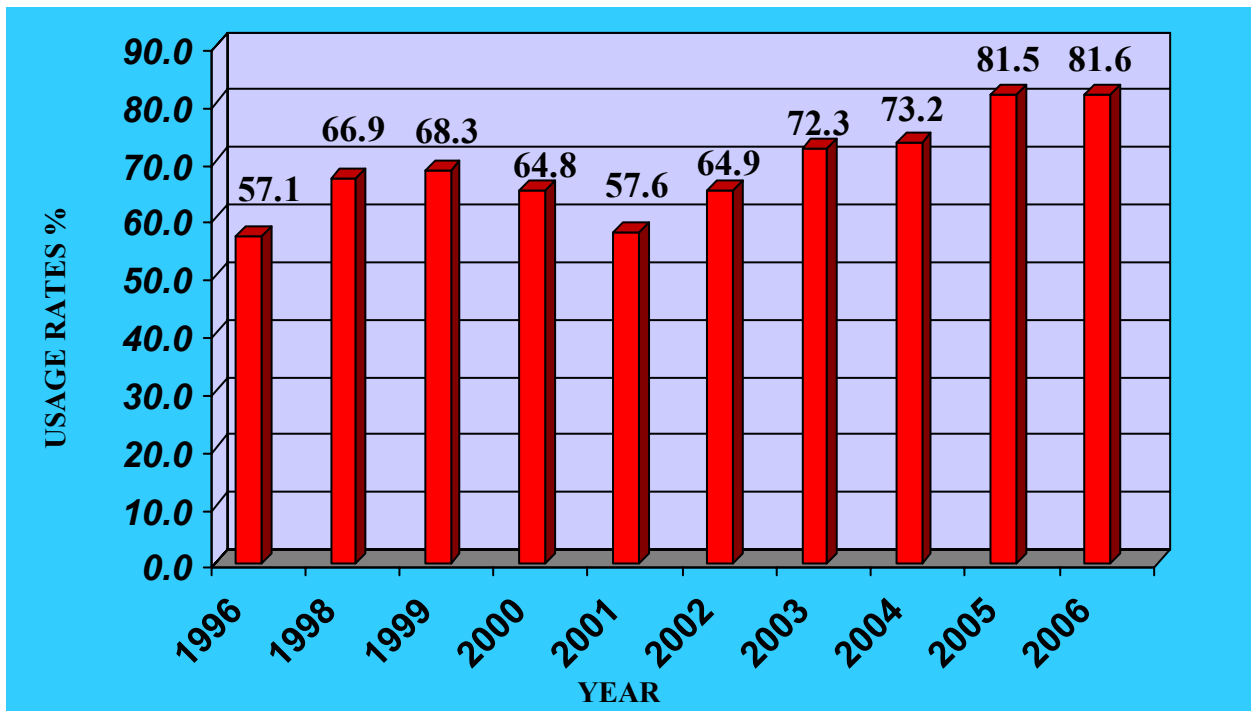


FIGURE 7

**ARKANSAS
CHILD RESTRAINT USAGE RATES
(From Observational Use Survey)***

* No survey in 1997; surveys conducted by Arkansas Highway Safety Office



Nonusers of Occupant Protection Devices

Years - 2002-2005

Fatalities - 1,385

The Problem

NHTSA has shown that the use of safety belts can improve one's chances to survive a severe crash by approximately 50 percent. In addition, the combination of air bags and lap and shoulder belts offer the most effective safety protection for vehicle occupants. According to Arkansas' 2006 Seat Belt Use Observational Survey, (conducted by the Arkansas Highway Safety Office) 69.3 percent of front seat occupants were buckled up. This is lower than the estimated national seat belt use rate of 83 percent. Data obtained from the 2006 Child Restraint Use Observational Survey conducted by the Arkansas State Police Highway Safety office revealed that 81.6 percent of children under age 15 years were also restrained.

From 2002 to 2005, 2,016 motor vehicle occupants died in traffic crashes where the use or nonuse of occupant restraints was known. Of these occupants, 1,385 or 69 percent were persons not restrained by seat belts. Of the total occupants killed, there were 1,104 drivers killed that were not restrained. Data also shows that seat belt use in pickup trucks is only 58.4 percent compared to 72.4 percent in other passenger vehicles. To increase occupant protection device usage in the State, the following strategies have been identified.

Strategies

- Adopt a primary seat belt law.
- Educate law enforcement personnel and driver licensees about the occupant protection component of the Graduated Driver License (GDL) Law*
- Aggressively enforce the primary use of the occupant protection component of the GDL law, where appropriate
- Aggressively enforce the secondary occupant protection law through selective traffic enforcement projects (STEP), where appropriate
- Educate parents, caregivers, and grandparents about the child safety seat law and the proper selection and installation of child safety seats and booster seats
- Continue and expand public information and education campaigns to educate the general public and target groups about the importance of occupant protection
- Increase use of changeable message boards and signs encouraging restraint use as part of focused, short-term enforcement campaigns, where appropriate
- Increase emphasis on occupant protection mobilizations and campaigns (e.g., Click It or Ticket, Buckle Up In Your Truck)

* Arkansas' Graduated Drivers License Law has three levels: a learner license, an intermediate license and a regular license. Key provisions include a driver having no crash or traffic infraction within a certain period of time and seat belt usage for all occupants.

Drivers with BAC Level .08+

Years - 2002-2005

Fatalities - 564

The Problem

Alcohol impaired driving is among the most common factor related to motor vehicle fatal crashes in the nation. From 2002 to 2005, approximately 39 percent of all traffic fatalities were alcohol/drug related in Arkansas. Recent trends show that alcohol/drug related fatalities may be increasing in Arkansas. Part of the increase could be attributed to better reporting of BAC tests and improved training in field sobriety tests by police officers.

Strategies

- Educate business owners and alcohol servers on the dangers of impaired driving
- Strict enforcement of the impaired driving laws through STEP and sobriety checkpoints, where appropriate
- Continue to train law enforcement agencies in standardized field sobriety testing (SFST)
- Adopt an open container law
- Develop and implement a public awareness campaign focusing on impaired driving among the young driver
- Educate judges/prosecutors on impaired driving laws
- Improve Driving While Intoxicated tracking system

Speeders/Aggressive Drivers

Years - 2002-2005

Fatalities - 452

The Problem

Speeding, driving too fast for conditions and careless/prohibited driving were the primary operator factors involved in 27 percent of the fatal crashes in Arkansas in 2005. Other unsafe driving practices that contribute to traffic crashes are following too close and failure to yield. Although not captured on the crash report, aggressive driving is perceived as becoming more prevalent. Unsafe driving practices exhibited by the aggressive driver include following too close, flashing headlights, making rude gestures or forcing another vehicle off the road. Also, aggressive driving tends to involve high-risk drivers that speed, drink while driving or do not wear a seat belt.

Strategies

- Expand use of speed monitoring and changeable message signs to promote highway safety during focused, short-term highway safety campaigns, where appropriate
- Enhance targeted corridor and STEP efforts, where appropriate
- Educate roadway users on the dangers of aggressive driving and the rules of the road
- Promote the use of new technology to identify speeding and aggressive driving
- Use context sensitive solutions to control speed, e.g. traffic calming

Young Drivers - Under Age 21

Years - 2002-2005

Fatalities - 323

The Problem

In Arkansas from 2002 to 2005 there were 323 fatalities involving drivers under 21 years of age. This represented about 10 percent of all fatalities during this period. Nationally, young drivers are over represented in traffic crashes. They account for only 10 percent of all licensed drivers but are involved in 31 percent of all traffic crashes. Primary factors that contribute to this statistic are high-risk behavior such as speeding, alcohol use, nonuse of seat belts, and lack of education and experience in safe driving practices. One common factor noted on many crash reports is overcorrecting by the young driver when his/her vehicle runs off the road.

Strategies

- Strict enforcement of the Graduated Driver License Law, where appropriate
- Expand the availability of driver education programs in the schools
- Educate young and novice roadway users on all aspects of safe driving
- Expand enforcement programs that target young drivers
- Adopt stronger provisions to the GDL Law

Older Drivers - Age 70 and Older

Years - 2002-2005

Fatalities - 185

The Problem

From 2002 to 2005 there were 185 fatalities in crashes involving drivers 70 years of age and older. This represents about ten percent of the total fatalities during this period. An aging population will result in a growing number of older drivers. Older drivers have a higher crash rate than any other age group except teenagers. The older driver's risk of being involved in a crash may be increased due to normal physiological changes that accompany aging including slower reaction time, reduced depth perception and decreased visual acuity, especially at nighttime.

Strategies

- Maintain and enhance roadway visibility features such as signing, striping and lighting and other appropriate design features, as appropriate
- Support driver education classes for older drivers through the AARP
- Educate older drivers and their families and friends about the driving risks associated with certain prescription drugs and physical conditions associated with aging
- Investigate enhanced driver license testing procedures

Distracted or Fatigued Drivers

(No crash data available)

The Problem

Though data is not readily available, distracted/fatigued driving is perceived to be a major driver safety issue today. AASHTO's Strategic Highway Safety Plan has identified driver inattention and fatigue as a contributing factor in 30 percent of all crashes. This rate may actually be even higher, but due to the reluctance of drivers to provide information, the factor is not reported. Inattentive drivers include those that may be temporarily distracted by something inside or outside the vehicle, may be drowsy or fatigued or may be preoccupied with something other than driving. The following strategies are aimed at decreasing the occurrence of distracted/fatigued driving.

Strategies

- Deploy centerline and shoulder rumble strips, rumble stripe edge lines, and transverse rumble strips, where appropriate
- Expand available parking in rest areas, where appropriate
- Educate roadway users and employers on the dangers of distracted and fatigued driving
- Consider new data on driver distraction field of crash report for analysis

Unlicensed Drivers or Drivers with Revoked or Suspended Licenses

(No crash data available)

The Problem

Research from AASHTO indicates that a number of drivers continue to drive after their driving privileges have been suspended or revoked. Nationally, one of every five fatal crashes involves at least one driver who is not properly licensed. Some 75 percent of drivers with suspended/revoked licenses continue to drive. In addition, a number of people continue to drive even though their cognitive and motor skills have degenerated to levels that make them unsafe drivers. Strategies to promote safe driving practices are listed.

Strategies

- Continue to enforce the administrative license revocation law
- Link State databases of driver records
- Provide simulator, electronic media for self-assessment and improvement of driver skill through defensive driving classes and insurance sponsored programs

Emphasis Area III - Special Vehicles

Three types of special vehicles were identified as target areas. Crashes involving large commercial vehicles (gross vehicle weight of 10,001 pounds or more), pickup trucks and motorcycles often pose increased risk of fatal or serious injuries. In 2005, large trucks accounted for eight percent of the vehicles involved in fatal crashes in the nation. An analysis of driver-related factors in fatal crashes between large trucks and passenger vehicles indicates that passenger vehicle driver errors are cited in more than two-thirds of the crashes. Since crashes involving large vehicles stem from a variety of causes, a comprehensive effort to reduce them must focus on behavioral, engineering and operational issues. It is also important that timely and accurate data be available to identify crashes involving large trucks. Many of the issues identified in this plan were addressed in the State's Commercial Vehicle Safety Plan for the Arkansas Motor Carrier Safety Assistance Program.

Crash data shows that pickup truck drivers are overrepresented in fatal crashes, especially rollover crashes. Crash data also shows the number of motorcycle crashes has almost tripled in the past ten years from 576 crashes in 1996 to 1,706 crashes in 2005. Part of this can be attributed to the increase in motorcycle riders and lack of rider education. More than 68 percent of motorcycle fatalities included a motorcyclist who was not wearing a helmet.

> Targets

- Pickup Trucks
- Commercial Vehicles
- Motorcycles

Vehicles Involved in Fatal Crashes and Fatalities		
2002-2005		
SPECIAL VEHICLE	VEHICLES INVOLVED IN FATAL CRASHES	TOTAL FATALITIES
Pickup Trucks	912	1,041
Commercial Vehicles	404	486
Motorcycles	241	247
Total	1,557	1,774

Pickup Trucks

Years - 2002-2005

Vehicles Involved In Fatal Crashes - 912

Fatalities - 1,041

The Problem

Nationwide, ejection from a vehicle accounts for 27 percent of all passenger vehicle occupant fatalities. Pickup trucks are much more likely to rollover than passenger cars due to their high center of gravity. The ejection rate for occupants of pickup trucks in fatal crashes was twice the rate for passenger car occupants. Ejection from a vehicle normally occurs when an occupant is not properly restrained. Seat belt use data shows that restraint usage in pickup trucks was only 58.4 percent compared to 72.4 percent for other passenger vehicles in Arkansas.

Strategies

- Continue to promote “Buckle Up In Your Truck” and other occupant restraint campaigns such as “Click It or Ticket”
- Provide public information and education through use of rollover demonstration devices at county fairs, rodeos, etc., as appropriate
- Continue to provide Public Service Announcements related to rollover and ejection in pickup truck crashes

Commercial Vehicles

Years - 2002-2005

Vehicles Involved In Fatal Crashes - 404

Fatalities - 486

The Problem

Nationally, one out of eight (12%) traffic fatalities resulted from a collision involving a large truck (vehicles having a gross vehicle weight rating of 10,001 pounds or more). Most of the fatalities are occupants of other vehicles or non-occupants, such as pedestrians and bicyclists. While large trucks are over represented in fatal crashes because of their size and weight, crash analyses have shown that passenger vehicle driver errors are cited in more than two-thirds of the crashes. Driver fatigue of a truck driver is a major contributing factor of fatal crashes involving large trucks. Other concerns are unsafe conditions of many trucks, such as the tires, brakes and steering systems.

Strategies

- Identify high-crash corridors involving commercial vehicles and initiate appropriate engineering and enforcement interventions, where appropriate
- Offer commercial vehicle fatigue management programs, e.g., “Master Alertness Program”
- Identify carriers with unsafe practices (e.g., hours of service, drug and alcohol, unqualified drivers)
- Enhance the inspection process of commercial vehicles, as appropriate
- Educate roadway users, motor carriers and the agriculture community on commercial vehicle performance, visibility, and regulations including the No-Zone Program, hazardous materials, Highway Watch, etc.

Motorcycles

Years - 2002-2005

Vehicles Involved in Fatal Crashes - 241

Fatalities - 247

The Problem

The State's motorcycle helmet law that required helmet usage by all riders was repealed in 1997. The current helmet law requires helmet usage only for riders less than 21 years of age. Of the motorcyclists without helmets who were killed, five percent were under the age of 21 years. A 2004 observational motorcycle helmet survey conducted by the Arkansas State Police showed a helmet usage rate of 49.5 percent, a decrease from 96 percent usage in 1996. Many motorcyclists are involved in crashes when other drivers fail to see them or use poor judgment of the speed and distance from motorcycles. In addition, many motorcyclists are novice and do not have proper driver education to operate a motorcycle in a safe manner. Following are strategies to improve motorcycle safety.

Strategies

- Provide motorcycle rider education programs
- Promote motorcycle awareness information in driver courses, driver manual and licensing test
- Increase number of programs designed to discourage drinking and biking, e.g., Ride Straight Program
- Educate roadway users on motorcycle performance, visibility, etc.
- Adopt a motorcycle helmet law for all ages

Emphasis Area IV - Special Roadway Users

Though Arkansas has over two million licensed drivers, thousands of Arkansans rely on non-motorized transportation options such as walking and bicycling. While both forms of transportation have the potential to provide physical and health benefits, users also have the potential to sustain serious or fatal injuries if involved in a crash.

While pedestrians and bicyclists alike have primary responsibility for their own safety, the motoring public also has a responsibility to share the road in a safe manner with these road users. As expected, when a pedestrian or bicyclist is involved in a traffic crash, the potential for harm is much greater among these vulnerable road users. Federal-aid funds provided for the Safe Routes to School Program, initiated under SAFETEA-LU, will be used to plan, develop and implement safety projects for these roadway users near schools with students in kindergarten through 8th grade.

> Targets

- Pedestrians
- Bicyclists

TABLE 5	
Special Roadway Users	
2002-2005	
OTHER ROADWAY USERS	TOTAL FATALITIES
Pedestrians*	149
Bicyclists*	13

*Fatalities involving collision with a motor vehicle

Pedestrians

Years - 2002-2005

Fatalities - 149

The Problem

Because of Arkansas' rural population, pedestrian fatalities comprise only about six percent of the total traffic fatalities in the State. Many occur in areas where there is inadequate lighting and sidewalks. Over 80 percent of these fatalities occurred at nighttime. Nationwide, over 21 percent of the traffic fatalities were pedestrians. The following are strategies to improve pedestrian safety.

Strategies

- Improve lighting in selected urban locations, where appropriate
- Improve pedestrian signs and road markings and provide pedestrian crosswalks, where appropriate
- Enhance intersection and roadway design to be more pedestrian friendly using current design standards and guidelines, where appropriate
- Implement an awareness campaign emphasizing the risks to pedestrians on crossing high volume/speed roadways
- Provide pedestrian safety education programs in elementary and middle schools through the Safe Routes to School Program

Bicyclists

Years - 2002-2005

Fatalities - 13

The Problem

Bicycle fatalities represented only a small portion of the total motor vehicle fatalities in Arkansas from 2002 to 2005. However, as the interest in bicycling increases, so does the potential of crashes with motorized vehicles. Following are strategies to improve bicycle safety.

Strategies

- Increase bicycle safety educational programs in the elementary and middle schools through the Safe Routes to School Program
- Encourage communities to support bicycle safety programs
- Increase enforcement of bicycle laws
- Increase bicycle helmet distribution programs
- Provide bicycle paths and lanes that are properly marked and striped, where appropriate

Emphasis Area V - Emergency Medical Services

No amount of preventive measures can deter all highway crashes, fatalities and injuries. After traumatic injuries are sustained, the minutes following a crash are critical to saving a victim's life and minimizing the effects of the injuries. The keys in reducing traffic fatalities and injuries are to reduce ambulance response time, improve patient access, ensure that well-trained pre-hospital medical professionals are available, continue and improve the efforts of a treatment and injury data collection system, provide for the safe transport of patients, and develop and establish a statewide trauma system.

> Targets

- Pre-Hospital Emergency Medical Personnel
- First Responders, Truck Drivers, Tow Truck Operators, Bystanders
- Access to Crash Sites
- Development of Statewide Trauma System
- Pre-Hospital Data Collection System and Analysis
- Proper Restraints for Transporting Children

<u>EMT Level</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Basic/Ambulance	3,811	4,004	3,959
Intermediate 85	132	162	160
Paramedic	1,365	1,374	1,419
Total EMTs	5,308	5,540	5,538

Data obtained from the Section of EMS & Trauma Systems, Arkansas Department of Health & Human Services, April 2006.

Pre-Hospital Emergency Medical Personnel

The Problem

Recruitment and retention of Emergency Medical Technicians (EMTs) are concerns expressed by all parties involved in emergency medical services (EMS). The EMS system has seen a slight increase of 230 EMTs over the last three years as shown in Table 6. This increase is not enough to keep up with demand and EMS are experiencing a personnel shortage that will eventually have an impact on communities across the State. The level of medical expertise provided at the crash scene is an important factor in improving patient outcomes. The following strategies are recommended.

Strategies

- Provide public service announcements regarding the pre-hospital emergency care profession
- Inform established State and National associations related to the pre-hospital emergency care field
- Promote the EMS profession at local high schools and career development seminars
- Encourage local fire department and emergency response team members to obtain an Arkansas EMT certification
- Provide bystander care training programs targeting safety emergency response personnel, new drivers, truck drivers and tow truck operators

Access to Crash Sites

The Problem

Many crash victims die at the crash scene before EMS can arrive to render care. Both the timeliness and accessibility of responding to a crash may have an impact on patient survivability. Responding ambulances sometimes are unable to cross medians safely due to the size and weight of the vehicles. Ambulance response time may increase in areas that do not have sufficient median gaps installed frequently. The following strategies are recommended.

Strategies

- Provide median gaps on roads, where appropriate, for EMS vehicle to access crashes in areas with high densities of vehicles
- Educate the public about proper driving responses when yielding to emergency vehicles
- Ensure that ambulance services are included in public involvement for the development of highway, road and street projects to provide input on access to crash sites both during and after construction
- Install acceleration/deceleration lane for response vehicles at median gaps, where appropriate
- Increase signage and enforcement regarding median gaps, where appropriate
- Develop appropriate incident management programs in large urban areas
- Publicize the “Move It” law by distributing brochures and developing public information campaigns. The “Move-It” law applies to property damage only crashes but may reduce the possibility of secondary crashes

Development of Statewide Trauma System

The Problem

A trauma system is a comprehensive statewide system where a traumatically injured patient is expediently transported to a facility with the appropriate equipment and resources to provide the optimum medical care for the individual. Arkansas is the only State without a designated trauma center and one of only three states without a functioning trauma system. Current law authorizes a trauma system, but does not include funds to support it. Funding would provide financial incentives for hospitals, physicians, ambulance services and rehabilitation facilities to participate in a statewide trauma system. Trauma centers save lives because they have the right personnel and equipment for required care and treatment of the traumatically injured patient. A statewide system coordinates resources to improve local response to injuries, most often from automobile crashes. The following strategies are recommended.

Strategies

- Establish and implement a statewide trauma system, as appropriate
- Determine and obtain funding sources, as appropriate
- Educate legislators and general public about the benefits of a trauma system
- Enhance data collection regarding traumatic injuries

Pre-Hospital Data Collection System and Analysis

The Problem

Data management standards are changing on the federal level. The National Emergency Management Services Information System (NEMSIS) has asked all States to collect data following a provided list of data elements. Even though data collection has been successful in Arkansas for ten years, present elements do not match the National standard and the system will have to be updated to meet the request. The following strategies are recommended.

Strategies

- Update system to meet NEMSIS data elements
- Provide training sessions for EMT providers
- Provide funding support for yearly technical and maintenance agreements, as appropriate
- Provide injury and treatment reports to governmental agencies

Proper Restraint for Transporting Children During Emergency Response

The Problem

The proper restraint of children during an emergency transport in an ambulance creates a very unique situation. Many ambulance services may not be equipped for safely transporting pediatric patients. Services are often allowing parents to hold children or are using adult size equipment to restrain infants and small children. Improper equipment to restrain children could cause additional injury during transport. The following are recommended strategies.

Strategies

- Adopt new laws or regulations for transporting infants and small children in ambulances
- Educate EMTs on how to properly restrain pediatric patients during transport
- Provide funding for EMS services to purchase proper equipment, as appropriate
- Seek approval for mandated equipment and annual inspections, as appropriate

Emphasis Area VI - Traffic Records: Collection and Analysis

In 2005, there were 69,515 reported crashes in Arkansas. Accurate, timely and accessible crash data are all important elements in an effective highway safety program. In particular, crash data are used to conduct crash analyses for identifying possible high crash rate locations. The Arkansas State Police has implemented the traffic and criminal software (TraCS) program in all its troop headquarters. This automated computer crash program will ultimately allow for wireless collection and transmission of crash data. This will include the use of modems to accurately identify the exact location of a crash. Crash data is also used to focus enforcement and education efforts for the high-risk drivers as discussed in Emphasis Area II.

> Targets

- Data Collection and Entry
- Data Analysis
- New Technologies

The Problem

There is a need to have the most accurate and timely crash data available for use in identifying high crash rate locations. The use of “old” data may not accurately reflect the existing conditions of a location. Currently, there is a six-month backlog of crash data entry. Implementation of TraCS should reduce the backlog. In addition, the use of wireless modems with the crash reports, will enhance the crash location process. The following strategies are recommended.

Strategies

- Expand the TraCS program for use by local law enforcement agencies for automated crash reporting, as appropriate
- Incorporate Global Positioning Systems and other Intelligent Transportation Systems to more accurately identify crash locations
- Utilize new crash analysis programs and techniques to determine the cost benefit of selected improvements, where appropriate
- Continue to involve the Traffic Records Coordinating Committee in recommending improvements to the traffic records program
- Promote better data linkage between agencies involved in the crash reporting process, as appropriate
- Continue to implement the recommendations of the State’s Traffic Records Assessment, as appropriate
- Continue to improve the accessibility of crash data to various agencies, as appropriate

Implementation and Evaluation

This Strategic Highway Safety Plan (SHSP) was prepared by the Arkansas Highway Steering Committee as a planning guide for all safety advocates to promote safety on the State’s road system. The Plan identifies key highway safety issues and needs and recommends specific safety strategies to address these needs. In particular the Plan identifies six key emphasis areas and targets within each area that should be the focus of ongoing safety programs.

To augment the implementation of the SHSP, coordination with other safety plans in the State is essential. The use of funds for selected projects from the various safety programs in the State should be consistent with those programs identified in the SHSP. For example, strategies and projects included in the annual Motor Carrier’s Safety Assistance Program Commercial Vehicle Safety Plan, the State’s Section 402 Highway Safety Program, the Highway Safety Improvement Program (HSIP) and the Metropolitan and Statewide Transportation Plans should be similar to those in the SHSP. It is anticipated that the implementation of the SHSP will result from ongoing and continued collaborative efforts of the Steering Committee and also from those agencies most involved in safety programs in the State.

SAFETEA-LU requires States to evaluate the SHSP on a regular basis to ensure the accuracy of the data and priority of proposed improvements. After the adoption of the SHSP by the Arkansas State Highway Commission, the Steering Committee will evaluate the Plan on an annual basis to update the data and measure the effectiveness of various safety projects. The evaluation will not be limited to just HSIP related projects but will include all types of safety projects mentioned in the SHSP. Each Emphasis Area will be evaluated by the lead agency most responsible for that particular area as shown below and listed on page i. Other agencies may also assist in these evaluations as needed. Specific evaluation criteria for each Emphasis Area will be the responsibility of the lead agency.

<u>Emphasis Area</u>	<u>Lead Agency</u>	<u>Other Agencies</u>
Serious Crash Types	AHTD	MPOs
High-Risk Drivers	AHSO	DFA, ASP
Special Vehicles	AHP	ASP, AHSO
Special Roadway Users	AHTD	AHSO
Emergency Medical Serv.	DHHS	AHTD
Traffic Records	AHSO	AHTD

Implementation of the strategies listed in the SHSP will enhance highway safety and should help the State achieve its goal to reduce the current fatality rate of 2.1 fatalities per 100 MVM to 1.8 fatalities per 100 MVM by the year 2010.

Appendix A

Arkansas Highway Safety Steering Committee

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The following agencies served in an advisory capacity:

Federal Highway Administration
Federal Motor Carrier Safety Administration

Appendix B

Summary of Comments from Safety Summit

Education Issues

Issue 1 **Youth Education**

Strategies

- Curriculum development for K-8 grades
- Public Service Announcements on children's TV
- Billboards
- Educational CD ROM
- Form "Saved by the Belt" Groups

Issue 2 **Adult Education**

Strategies

- PSAs
- Retest as driver gets older
- Required defensive driving courses based on driver's license points
- New laws incorporated in driver manual & test
- Publish drivers' arrests
- Alcohol server training

Issue 3 **Defensive Driving Classes**

Strategies

- Make more available
- Standardize curriculums
- Provide incentives to take classes

Issue 4 **Young Driver Education (Grades 9 and up)**

Strategies

- Better understanding of road signs
- Occupant safety
- Underage drinking
- Driver distraction
- Include in health curriculum
- Mandate Drivers' Education class

Issue 5 **Child Passenger Safety**

Strategies

- Enhanced sanctions for violators
- Guidelines to simplify installation of CSS
- Educate law enforcement
- Child Passenger Safety technicians at hospitals/human service agencies
- More PSAs

Emergency Medical Services Issues

Issue 1 **Better Access Roads to Interstate Highways**

Strategies

- Provide acceleration/deceleration lane for response vehicles at median crossings
- Decrease distance of median crossings for emergency vehicles on the Interstate
- Increase signage on the Interstate
- Enforcement of authorized vehicle use at median crossings

Issue 2 **Public's Disregard to Yield to First Responders/Ambulances**

Strategies

- PSAs
- EMS being able to cite drivers by adding videotaping
- Owner of vehicle being ultimately responsible for citations
- Educate drivers by adding more info to driver's test/drivers education (school presentations)
- Increase penalties in regard to emergency vehicles/accidents (must draft legislation)
- Widen shoulders for two-lane traffic
- Provide education for hills and blind spots
- Pull to the right and slow down

Issue 3 **Providing Trauma Systems for the Residence of Arkansas**

Strategies

- Create trauma systems
- Finance trauma systems
- Mandatory seatbelt law and funding support
- Trauma systems presentation
- PSAs
- Using a state lottery to fund trauma systems
- Trauma registry and data collections
- Educate legislators/politicians

Issue 4 **Proper Restraints for Children Transported in Ambulances**

Strategies

- Each vehicle required to have child restraints
- Funding sources to assist ambulance services in purchasing child restraints
- Develop standards for Arkansas regarding child restraints
- Educate ambulance services on the types of child restraints used. Mandated continuing education on child restraints and emergency vehicle operations
- Develop mother/child restraint system

Issue 5 **Location of Accident Identifiers, Mile Markers, Street Signs,
House Numbers, and Tracking Cell Phones**

Strategies

- A statewide, enhanced 9-1-1 system
- Encourage code enforcement for house identifiers
- Funding for the technology, cell phone GPS systems
- State requirement for GPS information for new developments
- State mandated repository for all maps (city/county reporting)
- Uniformity on numbering and naming roads

Enforcement Issues

Issue 1 Lack of Primary Seat Belt Law

Strategies

- Grass roots public support is needed
- Educate state and county officials on the purpose, need and benefits of primary law
- All KEY State Agencies need to fully support the passage of a primary law

Issue 2 Educate Judges and Prosecutors on Highway Safety Laws for Sentencing

Strategies

- Develop information that summarizes the various highway safety laws
- Statistics on violators of highway safety laws
- Educate Judges and Prosecutors on resources required to catch violators.

Issue 3 Lack of Resources for Officers

Strategies

- Increase training for officers on highway safety laws
- Improve equipment for officers
- Better cooperation with partners to improve use of existing resources
- Improve pay and benefits to keep experienced officers
- Extend resources with new technology

Issue 4 Enforcing Driving and Drinking Laws

Strategies

- Increase use of covert enforcement techniques

Issue 5 Lack of Helmet Law

Strategies

- Mandatory motorcycle riding education

Engineering Issues

Issue 1 **Run-Off-Road Crashes**

Strategies

- Rumble strips – shoulder and centerline; rumble stripes
- Wider clear zones
- Surface texture
- Improved signing and markings
- Median barriers and guardrails

Issue 2 **Intersections**

Strategies

- Sight distance
- Traffic control devices
- Turn lanes
- Roundabouts
- Rumble strips – transverse
- Better geometrics

Issue 3 **Work Zones**

Strategies

- Public information and education
- Speed control
- Variable Message Signs
- Proper design

Issue 4 **Emergency Turnarounds**

Strategies

- More frequent and identifiable
- Deceleration/acceleration lanes

Issue 5 **Secondary Crashes**

Strategies

- Incident Management
- Enforcement