

BACKGROUND

National Data. Motor vehicle travel is the primary means of transportation in the United States. Although there have been sharp declines in motor vehicle-related deaths since 1925,¹ traffic crashes remain a leading cause of injury death in the U.S. resulting in more than 40,000 deaths each year, an estimated 500,000 hospitalizations, and 4 million emergency department visits.² It is estimated that an American is injured in a traffic crash every 14 seconds, and every 13 minutes someone is killed.³ The economic cost of motor vehicle crashes in 2000 totaled \$230.6 billion.⁴

Traffic crashes are the leading cause of death for persons 1-34 years of age. Certain age groups are at higher risk for dying in a motor vehicle crash, including children, teenagers, and older adults.⁵ Although child deaths in crashes have declined since 1975, motor vehicle crashes still cause about 1 of every 3 injury deaths among children.⁵ Among children 4-12 years old, crash injuries are the leading cause of death.⁶ Among children 0-14 years of age, Native American children have the highest death rates (3.42 per 100,000 compared to 1.83 and 1.58 for African Americans and whites, respectively).⁵ The risk of motor vehicle crash (MVC) is higher among 16-19 year olds than among any other age group. Per mile driven, teen drivers 16-19 are 4 times more likely than older drivers to crash. In 2001, teens represented 10% of the US population, but accounted for 15% of MVC deaths.⁷ Crash

rates are high largely because of young drivers' immaturity combined with driving inexperience. The immaturity is apparent in young drivers' risky driving practices like speeding and tailgating. At the same time, teenagers' lack of experience behind the wheel makes it difficult for them to recognize and respond to hazards. Crashes involving young drivers typically are single-vehicle crashes, primarily run-off-the-road crashes, that involve driver error and/or speeding. They often occur when other young people are in the vehicle with the young driver, so teenagers are disproportionately involved in crashes as passengers as well as drivers.⁸ Older persons have higher rates of fatal crashes than all but the youngest drivers, especially per mile driven.⁸ This is largely due to their increased susceptibility to injury, particularly chest injuries and medical complications. Since 1975, deaths of older passenger vehicle occupants has increased by nearly 60%.⁹

Oklahoma Data. From 1999-2000, injuries were the 3rd leading cause of death and the leading cause of years of potential life lost before age 75 (YPLL-75) in Oklahoma;⁵ traffic injuries accounted for 11% of all YPLL-75 and 29% of injury deaths. Oklahoma ranks 10th in motor vehicle fatality death rates per 100,000 licensed drivers and 16th in fatalities per 100,000 population.⁹ According to Oklahoma Vital Statistics data, from 1992 to 2001, 6,833 residents were killed in traffic-related events. Of those deaths, 3,707 (54%) were motor vehicle occupants, 568 (8%) pedestrians, 229 (3%) motorcyclists, and 41

(1%) bicyclists. There were 2,283 deaths that were unspecified; it is likely those deaths were occupant deaths. The Oklahoma motor vehicle fatality rate was 32% higher than the U.S. rate (11.7 and 8.8 per 100,000 population, respectively).⁵ In Oklahoma, traffic death rates among rural populations were 74% higher than death rates for urban populations (27.7 and 15.9, respectively). Sixty-four percent of persons who died in traffic crashes were not using a seat belt. From 1992 to 2001, 157 children 0-9 years of age died as a result of a motor vehicle crash; 91 deaths were among children 0-4 years of age.

The traffic fatality rate for males was almost twice that for females (27.5 and 14.2 per 100,000 population, respectively). Fatality rates were highest among teenagers, young adults, and males 75 years of age and older (Figure 1). Thirty-eight percent of persons older than 14 years of age and tested for blood alcohol concentration (BAC) had a positive BAC. More than half of persons 25-44 years of age had a positive BAC (Figure 2). Additionally, more than half of Native Americans had a positive BAC (59%) compared to 39% for African Americans and 36% for whites.

Severe nonfatal neurologic injuries may result in lifetime disability and costly injuries; a total of 10,336 persons suffered a traumatic brain injury (TBI) in a traffic crash from 1992-2001, including 100 children. Only 29% of persons with TBI were known to be using a seat belt or car seat. During 1994, acute care hospitalization charges for persons with TBI in Oklahoma were estimated at \$37.7 million (unpublished data).

From 1988-2001, 974 individuals in Oklahoma were hospitalized for a traumatic spinal cord injury (SCI) resulting from a traffic

event. The gender-specific rate of traffic-related SCI among males was over twice that for females (3.1 and 1.5, respectively). Eighty-five percent of traffic-related SCI were among vehicle occupants. Of those, the majority were occupants of cars (63%), followed by pickups (25%), vans (4%), sports-utility vehicles (3%), and other or unknown vehicles (6%). Among persons who suffered an MVC-related SCI in which they

Figure 1. Rate of Traffic Deaths by Age Group and Gender, Oklahoma, 1992-2001

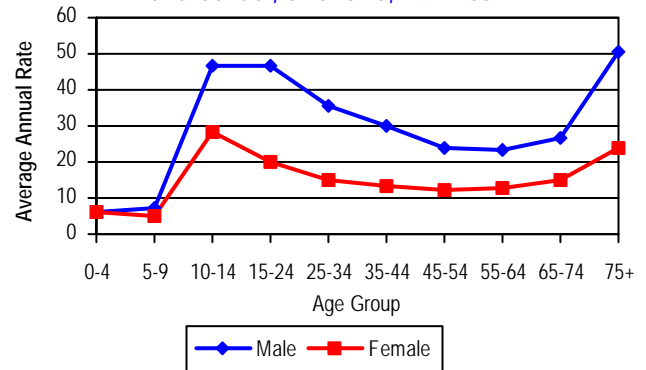
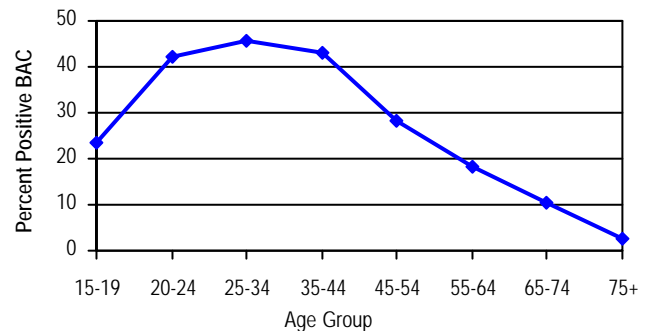


Figure 2. Traffic Deaths by Age Group and Percent Positive BAC, Oklahoma, 1992-2001



were motor vehicle occupants, only 28% were wearing a seat belt at the time of the crash.

Legislation. During the past decade, laws were passed in Oklahoma with a potential to impact traffic injuries and deaths.

- ✓ *Zero Tolerance.* No measurable alcohol for drivers under age 21, 47 O.S. § 11-906.4. Enacted in 1996 with passage of SB 1230, effective November 1, 1996.

- ✓ Lowering of blood alcohol content necessary to convict for DUI to .08, 47 O.S. § 11-902. Enacted in 2001 with passage of SB 437, effective July 1, 2001.
- ✓ Removal of the 55 mile per hour (mph) speed limit, 47 O.S. § 11-801. Enacted in 1996 with passage of SB 685, effective June 12, 1996.
- ✓ Primary enforcement of seat belt law (can only ticket for adult front seat occupants not wearing seatbelts), 47 O.S. § 12-417. Enacted in 1997 with passage of HB 1443, effective November 1, 1997.
- ✓ Child passenger restraint law, 47 O.S. § 11-1112. Originally enacted in 1983 with passage of HB 1005, effective November 1, 1983. Modified to apply to children under 60 lbs. by SB 465, effective July 1, 1995. Modified to apply to children "At least 4 but younger than 13 years of age" by SB 891, effective November 1, 2000.

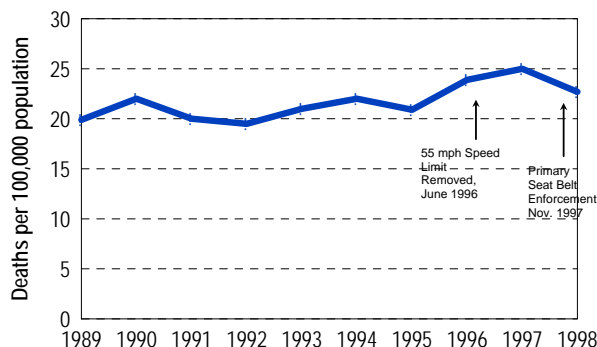
The impact of legislation over the past decade has not been empirically analyzed, however, removal of the 55 mph speed limit, may correlate to an increase in traffic deaths, while primary enforcement of the seat belt law may correlate with a decrease in traffic deaths (Figure 3).

HEALTHY OKLAHOMANS YEAR 2010 OBJECTIVES FOR TRAFFIC SAFETY

To guide prevention efforts over the next 10 years, the following objectives were modeled after National Healthy People 2010 objectives to be the framework for the Injury Free Oklahoma: Strategic Plan for Injury and Violence Prevention for reducing traffic deaths and injuries. Baseline data was identified for each objective and target setting was modeled

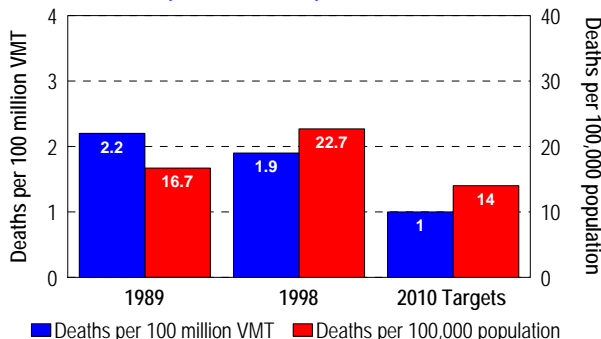
after National Healthy People 2010. Developmental objectives indicate areas do not have baseline data and need to be placed on the agenda for data collection. They address subjects of sufficient importance that investments should be made over the next decade to measure their change.

Figure 3. Traffic Deaths and Legislation, Oklahoma, 1989-1998*



*Oklahoma Vital Statistics, 1989-1998. Includes E codes 810-819, 958.5, 968.5, and 988.5.

Figure 4. Historical and 2010 Targets Traffic Deaths per 100 million VMT* and Deaths per 100,000 Population**, Oklahoma



*Oklahoma Crash Facts 1998, Office of Highway Safety.
**Oklahoma Vital Statistics, 1998.

1. Reduce deaths and injuries caused by motor vehicle crashes (MVC) (Figure 4).

1a. Deaths per 100,000 population

1998 Baseline: 22.7* 2010 Target: 14.0

1b. Deaths per 100 million vehicle miles traveled

1998 Baseline: 1.9* 2010 Target: 1.0

*Crude rate

Data sources: OSDH Vital Statistics data, 1998 (includes E codes 810.0-819.9, 958.5, 968.5, 988.5) for deaths per 100,000 population; *Oklahoma Crash Facts*, Oklahoma Department of Public Safety, 1998, for deaths per 100 million vehicle miles traveled.

1c. Reduce nonfatal injuries caused by motor vehicle crashes to 1,189 nonfatal injuries per 100,000 population.

Baseline: 1,505 nonfatal injuries per 100,000 were caused by motor vehicle crashes in 1998 (crude rate)
Target setting: 21% reduction
Data source: Oklahoma Crash Facts, Department of Public Safety, 1998

1d. Reduce deaths and injuries caused by alcohol- and drug-related motor vehicle crashes.

Alcohol/drug MVC deaths per 100,000 population
Baseline: 5.1* **2010 Target:** 4.0
 Alcohol/drug MVC injuries per 100,000 population
Baseline: 143.0* **2010 Target:** 65.0
 *Crude rate
Data source: Oklahoma Crash Facts, Department of Public Safety, 1998

1e. Reduce the proportion of adolescents in grades 9-12 who report they rode during the previous 30 days with a driver who had been drinking alcohol.

Baseline Data:
 Developmental objective.
Possible data source:
 OSDH Youth Risk Behavior Survey, 2002

1f. Increase the use of seat belts to 92% (Figure 5).

Baseline: 70% usage in 2002.
Target setting: National objective
Data source: Oklahoma Seat Belt Observation Study: Summer 2000, Institute for Public Affairs, University of Oklahoma

1g. Increase the use of car seats to 100% (Figure 5).

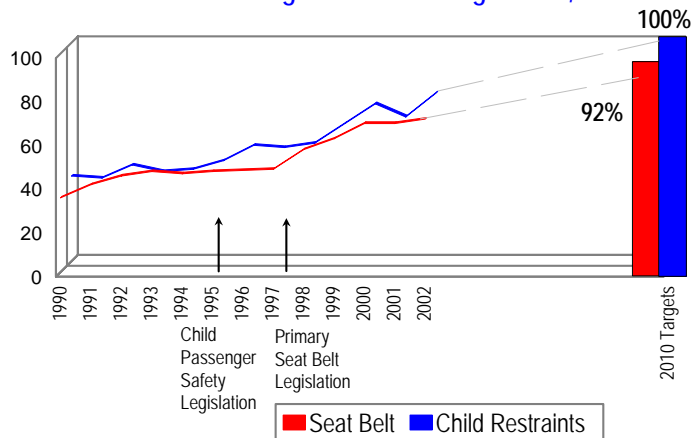
Baseline: 77% usage in 2002.
Target setting: Total coverage
Data source: Oklahoma Seat Belt Observation Study: Summer 2000, Institute for Public Affairs, University of Oklahoma

2. Reduce nonfatal neurologic injuries.

2a. Reduce nonfatal head injuries to 54.2 hospitalizations per 100,000 population.

Baseline: 75.2 hospitalizations for nonfatal head injuries per 100,000 population in 1999 (crude rate)
Target setting: 28% reduction
Data source: Traumatic Brain Injury Surveillance System, Injury Prevention Service, 1999 (includes ICD-9-CM codes 800.0-801.9, 803.0-804.9; 850.0-854.1; 959.01)

**Figure 5. Historical and 2010 Targets
 Seat Belt and Child Passenger Restraint Usage Rates, Oklahoma**



*Oklahoma Seat Belt Observation Studies and Oklahoma Car Seat Observation Studies (1990-2000).

2b. Reduce nonfatal spinal cord injuries to 2.0 hospitalizations per 100,000 population.

Baseline: 3.6 hospitalizations for nonfatal spinal cord injuries per 100,000 population in 1999 (crude rate)

Target setting: 44% reduction

Data source: Traumatic Spinal Cord Injury Surveillance System, Injury Prevention Service, 1999 (generally includes ICD-9 codes 806, 952, but must have a neurologic deficit)

2c. Increase the use of helmets by bicyclists less than 15 years of age to 50 percent.

Baseline: 19 percent of bicyclists wore helmets in 2000

Target setting: 163% increase

Data source: Behavioral Risk Factor Surveillance System, Oklahoma State Department of Health, 2000

3. Reduce pedestrian deaths and injuries.

3a. Reduce pedestrian deaths to 0.7 deaths per 100,000 population.

Baseline: 1.4 pedestrian deaths per 100,000 occurred in 1998 (crude rate)

Target setting: 50% reduction

Data source: OSDH Vital Statistics data, 1998 (includes E codes 810-819 (.7)).

3b. Reduce nonfatal pedestrian injuries to 14.1 nonfatal injuries per 100,000 population.

Baseline: 19.0 nonfatal pedestrian injuries per 100,000 occurred in 1998 (crude rate)

Target setting: 26%

Data source: Oklahoma Crash Facts, Department of Public Safety, 1998

PREVENTION STRATEGIES

There are several prevention strategies that have been proven effective through research and evaluation to reduce traffic deaths and injuries. These strategies are briefly described below.

Seat belt use — Seat belts are estimated to reduce the risk of death among front seat car occupants by 45% and the risk of moderate to critical injury by 50%.^{10,11} Among occupants of light trucks, seat belts are estimated to reduce fatal injury by 60% and moderate to critical injury by 65%. In addition, the data suggests that seat belts may reduce hospital admissions by 65 percent and hospital charges by 67 percent. Between 1975 and 1999, it is estimated that 123,000 lives were saved by seat belt use.^{10,11} To be most effective, seat belts should be worn properly: over the shoulder, across the chest, and low across the hips. Seat belts, when properly worn, have been shown to protect against fetal harm among pregnant women.^{12,13}

Oklahoma's current law requires seat belts to be worn by the driver and front-seat passengers (see Car Seat Use for information about children). Oklahoma has a primary enforcement law meaning that an officer can stop and cite a driver if the driver or front seat passenger are not buckled. Overall seat belt use in Oklahoma among drivers and front seat passengers increased from 40 percent in 1992 to 70 percent in 2002. Seat belt usage was highest among automobile occupants (76%) compared to pickup occupants (58%).

Car seat use — Motor vehicle injuries are a prominent cause of death and disability for children of all ages. The trauma causing most deaths and disabilities occurs a fraction of a second after a crash, when an unrestrained child strikes the vehicle interior. In addition to injuries in crashes, many children are injured during non-crash incidents such as striking the vehicle interior

during a sudden stop, turn, or swerve and are most common among unrestrained children 1-4 years of age. Research has found that the correct use of car safety seats may reduce fatal injury by 70% among infants less than one year of age, and 47% for toddlers (1-4 years of age) in passenger cars.^{14,15} Among infants and toddlers in light trucks, car safety seats are found to reduce fatal injury by 58% for infants and 59% for toddlers.¹⁵ Oklahoma law requires that all children less than 4 years of age be buckled in an approved car seat. Children 4-12 years of age are required to be buckled in a car seat or seat belt regardless of their seating position in a vehicle. Car seat use in Oklahoma increased from 44% in 1992 to 78% in 2002.

Booster seats — Once a child outgrows a convertible car seat that fits children 40 pounds and 40 inches (approximately 3 years of age), parents often use a seat belt to restrain the child. However, seat belts are designed for persons 4'9" tall and weighing approximately 80 pounds (approximately 9 years of age). Belt-positioning booster seats lower the risk of injury in crashes by 59% compared to the use of vehicle seat belts.¹⁶

Car seat inspection clinics — Studies have indicated that as many as 4 out of 5 car seats may be installed incorrectly.¹⁷ Children may be severely injured or killed if they are improperly restrained. Common errors include facing the seat the wrong direction, using the wrong car seat for a child's height and weight, not buckling the car seat in tightly enough with the vehicle seat belt, and putting a rear-facing infant seat in front of an air bag. Car seat inspection clinics where trained child passenger safety technicians inspect car seats for correct installation, make necessary corrections, and educate parents and caregiver, are available through several Oklahoma organizations including, the Oklahoma SAFE KIDS Coalition, county

health departments, and Emergency Medical Services Authority in Oklahoma City and Tulsa.

Car seats for children with special needs — Children with disabilities who are not able to sit in an approved car seat should also be properly secured. There are protective restraints available for children with special needs such as premature or low birth weight infants, small children in hip spica casts, larger children who have full body casts, and children with poor trunk and head control.

Graduated licensing - Graduated driver licensing (GDL) systems are designed to phase in beginning drivers to full driving privileges through a three-stage process as they mature and develop their driving skills, instead of the traditional approach in which a young driver gets unrestricted driving privileges after passing a test.^{18,19,20} Evaluations of these systems have demonstrated crash reduction impacts of up to 16% among Oregon males,²¹ 5-9% in Maryland and California,¹⁹ 9% in Canada²¹ and 8% in New Zealand.²² In North Carolina, the number of fatal crashes among 16 year-old drivers dropped by 57% from 1996-1999, and the number of nonfatal injury crashes dropped by 27%.²³ In Michigan overall crash risk for 16 year-olds was reduced by 25%.²⁴ Model GDL systems have a minimum age of entry (usually 15 1/2) and require one to two full years to complete a 3-tiered licensing program: learning stage, intermediate stage, and full licensure. Graduated licensing ensures that the initial driving experience is accumulated under lower-risk conditions, usually imposing a nighttime driving restriction and passenger limits for young novice drivers. In a 1994 report to Congress, National Highway Traffic Safety Administration (NHTSA) showed that driver's education alone did not significantly reduce crashes among teenagers.²⁵ Other subsequent reports indicate that, in fact, it

may even be detrimental.²⁶ Currently, NHTSA recommends integrated driver's education training, taught progressively, into graduated licensing systems.

Addressing the needs of mature drivers –

As people age, their ability to drive a motor vehicle may be compromised by a variety of functional impairments. Because the number of older drivers is increasing, there is a need to develop screening procedures for license renewal and regulatory control that are fair, accurate, and can be administered cost-effectively. The National Highway Traffic Safety Administration has a research project entitled "Model Driver Screening and Evaluation Program."²⁷ The Model Program has identified tools for evaluation of drivers' functional capabilities.

The Oklahoma Department of Public Safety has a mature drivers program with a Medical Advisory Board. The DPS may place restrictions upon a driver at a physician's request. In Oklahoma, there are no additional tests required for license renewal (including vision tests) beyond the initial drivers license test. Physicians need to be aware of the medical conditions that interfere with driving abilities and be willing to make recommendations for driving restrictions. Primary-care physicians may be reluctant to make such recommendations. Referrals to *geriatric specialists trained in assessing driving abilities and making recommendations for restrictions* are needed. Mature individuals may also need retraining to improve their driving skills after a serious illness. In Oklahoma, there is one rehabilitation facility in the state that can assess driving abilities through road testing, and provide needed retraining when functional abilities for driving are inadequate. Currently, medical insurance does not cover this type of assessment because impaired driving ability is not considered a medical necessity. *Adequate transportation systems for the elderly* may be

the most promising strategy to prevent older persons from driving when they are no longer able. The NHTSA, Federal Highways Administration (FHWA), the Federal Transit Administration, the Administration on Aging, and the National Institute on Aging have jointly proposed programs to assess transportation for the elderly. Simple methods proposed to regulate problem older drivers tend to place unnecessary limitations on drivers who do not pose safety problems and the development of appropriate assessment measures based on empirical evidence are needed.²⁸

Preventing Alcohol and Drug Impaired Driving

Lowering the legal blood alcohol concentration (BAC) limit

—Scientific evidence shows that driving skills begin to deteriorate markedly at 0.05 BAC. Lowering the legal BAC limit has proven successful in reducing alcohol-related MVC injuries in many states. Some states that have enacted 0.08 laws have experienced a 5% greater post-law decline in the proportion of alcohol-related fatal crashes than neighboring states without 0.08 laws. Since 2001, Oklahoma's legal BAC limit is 0.08.

Maintaining minimum legal drinking age laws

—Minimum legal drinking age laws specify an age below, which the purchase and consumption of alcoholic beverages is not permitted. In Oklahoma, a person must be 21 years of age to purchase alcohol. Increasing the minimum age for alcohol purchase to 21 has been shown to decrease the number of fatal alcohol-related MVCs among teenagers.

Zero Tolerance Drinking Laws for Persons Less than 21 Years of Age

—Laws establishing a lower legal BAC for persons less than 21 years of age are strongly recommended.²⁹ Oklahoma currently has a "zero tolerance" law, which prohibits drivers

less than 21 years of age from driving with any measurable amount of alcohol (usually above 0.02) in their system. A zero tolerance law allows law enforcement officials to require a breath test from a driver less than 21 years of age if the officer has probable cause to believe the driver has been drinking. If the driver refuses the test or the test reveals any measurable alcohol level, then the driver is subject to sanctions, including loss of his or her driver's license. In 1997 following enactment of the zero tolerance law in Oklahoma, alcohol involvement in crashes among 15-19 year-olds dropped by 16% from 3,173 in 1997 to 2,659 in 2000 (Oklahoma Office of Highway Safety, Oklahoma's 2003 problem identification. 2002 edition.).

Sobriety Checkpoints – Sobriety checkpoints are designed to systematically stop drivers to assess their level of alcohol impairment. The goal is to deter alcohol-impaired driving by increasing the perceived risk of arrest.²⁹ Sobriety checkpoints have been effective in reducing alcohol-impaired driving, alcohol-related crashes, and associated fatal and nonfatal injuries in a variety of settings and among various populations.²⁹

Server training and designated driver programs — Server training programs teach waiters, waitresses, and bartenders how to identify customers who are already intoxicated so they can avoid serving intoxicated customers. High-quality, face-to-face training, when accompanied by strong management support, is effective in reducing the level of intoxication among patrons.²⁹

Identification and referral of impaired drivers through emergency department protocols – Alcohol/drug-impaired persons treated for injuries in an emergency department as a result of a motor vehicle crash are identified and referred for substance abuse treatment. A brief

screening and intervention protocol is conducted in the emergency department.³⁰ Many people who drive while intoxicated interact with the health care system through Emergency Medical Services (EMS). The rationale of this intervention is to identify persons with alcohol abuse/dependence problems who may be at further risk for alcohol-related crashes. There is evidence that high-risk patients will be responsive to the intervention.^{31,32,33,34,35} However, further research will be needed to determine the effects on drinking and driving.

Driving while intoxicated tracking systems —National Highway Traffic Safety Administration and the National Commission Against Drunk Driving has recommended that states develop comprehensive driving while intoxicated (DWI) tracking systems at the case level to improve the documentation of repeat DWI offenders. Inadequate data and tracking systems often allow chronic repeat offenders to circumvent the judicial system, and avoid DWI penalties and sanctions. Additionally, improved DWI tracking systems and data collection will improve the ability to evaluate the effectiveness of DWI countermeasures.³⁶

Preventing Bicycle Injuries Among Youth and Adolescents

Bicycle helmet campaigns — Bicycle helmets have been found to be 85 to 88 percent effective in reducing or preventing brain injuries.³⁷ If every person wore a helmet while riding, one life would be saved every day, and one brain injury would be prevented every 4 minutes.³⁸ Organized, community-wide bicycle injury prevention programs focusing on increasing bicycle helmet use have shown promise.³⁹ Successful helmet interventions have used a broad scope that combines media announcements, bike rodeos, and free or discounted helmets. Additionally, bicycle

helmet interventions among children have been found to be successful when parents participate, and when other riding partners also wear helmets (whether adults or children).⁴⁰ Free helmet distributions have been effective in increasing helmet use among groups of low socioeconomic children. In Oklahoma, community-based bicycle helmet programs have been implemented since 1993. Reported bicycle helmet use among children statewide has increased from 4 percent in 1992 to 19 percent in 2000. Oklahoma traumatic brain injury surveillance data documented a 43 percent decrease in bicycle-related traumatic brain injuries among children 5-9 years of age and a 45 percent decrease in children 10-12 years of age from 1992 to 2000. While all of the factors that contributed to this decline are not known, increasing education and helmet use in program communities across the state likely contributed to the decline in injuries.

Preventing Pedestrian Injuries

Roadway countermeasures — Roadway countermeasures such as: 1) converting two-way streets to one-way streets; 2) installing adequate roadway lighting; 3) requiring

sidewalks be constructed in new rural and suburban housing subdivisions; 4) installing barriers to physically separate pedestrians from vehicles; 5) installing pedestrian crossing signs in unusually hazardous locations; and 6) utilizing crossing guards in school zones have proven effective in reducing the number of pedestrian injuries.

Pedestrian safety programs for school-age children — Children are especially vulnerable to pedestrian death because they face traffic threats that exceed their cognitive, developmental, behavioral, physical and sensory abilities.⁴¹ Research has shown that engineering modifications have the potential for a much greater impact on pedestrian injuries than education and enforcement.^{42,43,44,45} Additionally, some researchers have recommended changes in policies to encourage walking and bicycling for short trips.⁴⁵ Programs that employ a combination of strategies including school-based education programs and adult accompaniment to and from school such as Safe Routes to School programs^{46,47,48,49,50,51} have been shown to reduce the risk of pedestrian injury.

RECOMMENDATION

2. Increase the proper use of child passenger restraints for children who are transported in vehicles to 100%. (continued)

3. Decrease traffic injuries due to impaired drivers.

IMPLEMENTATION PLAN

- 2b. Seek funding to provide free or low-cost car seats and parental education on the proper use of the car seats to families meeting the eligibility criteria for the Women's, Infants, and Children (WIC) program through county health departments by 2005.
- 2c. Conduct car seat inspection clinics and provide training to certify child passenger safety (CPS) technicians and trainers in county health departments on an ongoing basis.
- 2d. Provide ongoing technical updates for certified child passenger safety technicians on an ongoing basis.
- 3a. Promote enforcement of the current drinking and driving laws and the penalties for DUI on an ongoing basis.
- 3b. Partner with the Oklahoma Office of Highway Safety, the Oklahoma Highway Patrol, the Association of Chiefs of Police, the American Automobile Association, and other agencies to conduct an educational campaign through the media and junior and senior high schools on the prevention of driving under the influence of alcohol and drugs by 2005.
- 3c. Support the enforcement of DUI/DWI penalties, Oklahoma's ALR (administrative license revocation) law, DRAM shop laws, minimum drinking age laws, and zero tolerance laws on an ongoing basis.
- 3d. Prepare a White Paper on the problems with the current state of DUI/DWI enforcement in Oklahoma addressing the DUI/DWI data tracking systems by 2005.
- 3e. Conduct an education campaign through the media and senior citizens groups to reduce traffic injuries due to older drivers with medical conditions that impair their ability to drive by 2005.
- 3f. Prepare reports from trauma registry data on traffic injuries and the involvement of drug and alcohol impaired driving on an ongoing basis.

RECOMMENDATION

4. Increase bicycle helmet use to 50%.
5. Reduce pedestrian deaths and injuries among persons of all age groups.
6. Review drivers licensing standards in Oklahoma and make recommendations for change where necessary.

IMPLEMENTATION PLAN

- 4a. Seek funding to purchase and distribute bicycle helmets to children under 15 years of age, and conduct bicycle safety education in county health departments and schools by 2006.
- 4b. Work with Turning Point communities to identify funding sources to conduct bicycle safety programs and incentive programs including designating alternate bike paths that are separated from traffic routes by 2005.
- 4c. Support helmet use rules for children that ride bicycles to school and city ordinances that require the use of helmets for bicycle riders on an ongoing basis.
- 5a. Partner with communities to identify safe walking routes separating walk paths from traffic routes (see also recommendation 4b) by 2005.
- 6a. Review drivers licensing standards for all age drivers including mature drivers, and monitor model programs for mature/impaired drivers by 2005.
- 6b. Provide educational materials to organizations working to strengthen the Graduated Drivers Licensing laws in Oklahoma to meet the recommendations for best practices by 2005. *The National Highway Traffic Safety Administration and the American Association of Motor Vehicle administrators recommends that a basic graduated licensing system should include three-stage provisional licensing system (learner's permit, intermediate license, and full license). Restrictions are recommended during each provisional stage (e.g. restrictions on night time driving, limits on the number of passengers under 21 years of age, and requiring a licensed driver over 21 years of age in the front seat, etc.). A driver's education component is recommended in the learner's permit stage (driving skills training) and the intermediate stage (advanced driver's education).²¹*

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