Preventing Injuries in Arkansas

A Resource for State Policy Makers

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Dear Arkansas Policy Maker,

Injuries, such as those resulting from motor vehicle and all-terrain vehicle crashes and from sports-related concussions, are a significant problem for Arkansas, especially where children are concerned. Unintentional injuries are the leading cause of death for children in the state, and our infant and child mortality rates are extremely high compared to the rest of the country. Arkansas ranks in the top five states for deaths of children 1-14 years of age and in the top 10 for teenagers 14-18 years of age.

While the number of injuries and deaths vary across the state, every county in Arkansas is impacted by these events. The good news is that many of these injuries and deaths are preventable.

The purpose of this booklet is to provide factual information on unintentional injuries to help facilitate policy decisions that will protect and save the lives of Arkansans. By incorporating evidence-based information into policy, we can help ensure all Arkansans, including our children, remain healthy and safe.

Sincerely,

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About the Injury Prevention Center

The University of Arkansas Medical Services (UAMS) and Arkansas Children’s Hospital (ACH) have a long history of promoting injury prevention within the state. Formed in 2007 with funding from ACH, the Injury Prevention Center (IPC) is committed to reducing child injury, death, and disability in Arkansas through service, education, innovative research, and advocacy, with the ultimate vision of children leading safe and healthy lives in Arkansas. To learn more about the IPC, visit www.archildrens.org/injury_prevention/.
ALL-TERRAIN VEHICLE SAFETY
An all-terrain vehicle (ATV) is a motorized vehicle with three or four low-pressure tires designed for use on various types of terrain. Commonly used for farming, hunting, and recreation, ATVs have become extremely popular. However, riding an ATV carries a substantial risk of serious injury. From 1997-2006, researchers found a 150 percent increase in hospitalizations due to ATV injuries in children under the age of 18. The most dramatic increases were for 15-17 year olds living in the South and Midwest.1

Arkansas Numbers
From 1982-2008, Arkansas had 252 ATV-related deaths. That’s an average of 10 deaths a year, but the number is likely higher due issues in reporting the deaths as ATV-related.2 In 2009 alone, seven children in Arkansas died in ATV-related crashes. Arkansas Children’s Hospital admits more than one child a week for ATV-related injuries, and many more are treated in emergency departments and clinics statewide.3

Prevention
States with some level of ATV safety legislation, such as mandated helmet use, have fewer deaths than states without ATV safety laws.4 Several professional medical societies have issued policy statements regarding legislation for ATV safety. The following is a list of their recommendations compared with the current Arkansas law.

RecommendaTion
All ATV users should wear a helmet, eye protection, and protective clothing when riding an ATV.5

- ATV use by children and adolescents is high in Arkansas, while use of safety equipment is low. In surveys of Arkansas youth, over 80 percent reported riding an ATV within the last year, but only 10 percent said they always wear a helmet when riding.6
- Helmets decrease the fatality risk by 42 percent and the chance of a head injury by 64 percent.7
- Seven out of 10 children killed in ATV-related crashes were not wearing helmets.8
- Riders not wearing helmets are three times more likely to die during their stay in the hospital.9

Current Law
Arkansas law does not require a helmet or any safety gear when riding an ATV.

Recommendation
Prohibit the use of ATVs by those under the age of 16.5

- In Arkansas from 1998-2008, of all the children admitted to the hospital with ATV-related injuries, 77 percent were under the age of 15 and almost half were 10-14 years old.3
- Children under 16 make up only 14 percent of ATV riders, but they represent 35 percent of ATV-related deaths.10
- In 2005, Nova Scotia banned ATV use for children under 14 anywhere except on a closed course, with parental supervision, and the presence of a person with advanced first-aid training standing by. The ban reduced the child ATV injury rate by half in one year.11

Current Law
Arkansas law now forbids ATV use by children under 12, except under direct supervision of an adult, on parent’s land, or with the permission of the land owner.
RECOMMENDATION
Prohibit passengers from riding ATVs.\textsuperscript{5}
- Multiple-rider situations account for just under half of the children who die in ATV-related crashes.\textsuperscript{8}
- One out of four Arkansas children admitted to the hospital with ATV-related injuries were riding as passengers.\textsuperscript{3}

CURRENT LAW
Arkansas law has no regulation prohibiting passengers.

RECOMMENDATION
Require an automobile license and preferably a certification in ATV use from an approved training course.\textsuperscript{5}
- Drivers with formal, hands-on ATV training have a lower injury risk than drivers with no formal training.\textsuperscript{12}

CURRENT LAW
Arkansas law requires no license or training.

RECOMMENDATION
Prohibit ATV use on public streets and highways. ATVs are not intended for paved surfaces.\textsuperscript{5}
- One out of four ATV-related child deaths occur on paved roads.\textsuperscript{8}
- A study done in Ontario, Canada, showed that almost half of ATV-related fatalities occurred on public roads.\textsuperscript{13}

CURRENT LAW
Arkansas law states that ATVs cannot be operated on public roads, except to go from one field to another or for a direct crossing. For the direct crossing, ATV riders must come to a complete stop, yield the right of way, and cross at approximately a 90-degree angle.

RECOMMENDATION
Prohibit the use of an ATV while under the influence of alcohol.\textsuperscript{5}
- The Hatfield McCoy recreation area in West Virginia prohibits the consumption of alcohol. From 2004-2006, only two ATV-related deaths occurred in the area, opposed to 22 deaths outside the area.\textsuperscript{14}

CURRENT LAW
Arkansas law has no current regulation prohibiting alcohol use while operating ATVs.

“It is unfathomable that it is illegal for children to drive automobiles until they are 16 years of age, pass a driver’s training class, and obtain a valid driver’s license, yet we permit even younger children to ride ATVs without helmets, safety gear, formal training, parental supervision, or licenses. ATVs are in fact more dangerous than automobiles since the rider’s body is fully exposed and not protected by the car’s frame and body.”\textsuperscript{15}
REFERENCES
3. Arkansas Trauma Admissions Database.
Children ages 4-8 should ride in booster seats, in the back seat of the car, once they outgrow their car seat. Seat belts are designed to fit an average-sized adult, and booster seats help adapt seat belts to fit children's smaller frames.

**ARKANSAS NUMBERS**
Arkansas law requires children ride in child safety seats only until the age of 6. However, from 2000-2007, 45 children ages 6-8 died in Arkansas as a result of motor vehicle crashes. Fatalities are only the tip of the iceberg – for every death there are an additional 19 hospitalizations and 300 injuries requiring medical attention. Based on those numbers, from 2000-2007, an estimated 855 Arkansas children ages 6-8 were hospitalized and another 13,500 had injuries requiring medical attention.

**PREVENTION**
Many child passenger injuries and deaths are preventable with the proper precautions. Several professional medical societies have issued policy statements regarding legislation for child passenger safety. The following is a list of their recommendations compared with the current Arkansas law.

**RECOMMENDATION**
Require child passenger safety seats (including booster seats) for children until they are at least 4’ 9” tall, 80 pounds, or 8 years old. Most 8 year olds are less than 4’ 9”.
- Children ages 4-8 are 45 percent less likely to sustain injuries if in a booster seat versus a seat belt alone.
- On average, a $35 booster seat generates an estimated $2,500 in benefits to society, including health care and quality of life costs.
- Children ages 4-7 in states with booster seat laws are 39 percent more likely to be appropriately restrained than children in other states without booster seat laws.

**CURRENT LAW**
- Every driver of a motor vehicle who transports a child under 15 years of age shall, while the vehicle is in motion and operated on a public road, street, or highway, properly place, maintain, and secure the child in a child passenger restraint system properly installed in the vehicle and meeting applicable federal motor vehicle safety standards.
- A child who is less than 6 years of age and who weights less than 60 pounds shall be restrained in a child passenger safety seat properly installed in the vehicle.
- If a child is at least 6 years of age or at least 60 pounds in weight, a safety belt properly installed in the vehicle shall be sufficient.

**RECOMMENDATION**
Children should ride in the back seat of motor vehicles until they are at least 13 years old.
- For children 16 and younger, riding in the back seat decreases the risk of injury by 40 percent.
- Putting children in the back seat eliminates the risk of injury from airbags and places children in the safest part of the vehicle in the event of a crash.

**CURRENT LAW**
Arkansas law states no preference for seating position in motor vehicles.
NOTES

REFERENCES


According the latest data from the Centers for Disease Control and Prevention, Arkansas continues to have higher unintentional injury fatality rates for children than the national rate. This data also reports that Arkansas ranks third in the nation, behind Mississippi and South Dakota, for unintentional injury deaths for children ages 1-19.
Concussions are a type of traumatic brain injury (TBI) that happen when a bump, blow, or jolt to the head changes the way the brain normally works. In approximately 9 out of 10 cases, concussions occur without the loss of consciousness. From 2001-2005, more than 500,000 children between the ages of 8 and 19 visited emergency rooms with concussions—about half of these visits were a result of concussions sustained during organized sports. Young athletes are of particular concern because their brains are still developing, making them more vulnerable to the effects of a concussion.

**ARKANSAS NUMBERS**

Concussions account for about nine percent of all high school athletic injuries, with football and girls soccer carrying the highest risk. That percentage means that among Arkansas’ estimated 12,000 high school football players, 90 sustain a concussion each week during the regular season. These students, especially if they suffer repeat concussions, are at risk for headaches, fatigue, behavior or personality changes, forgetfulness, academic failure, depression, and death.

**PREVENTION**

Many concussion-related injuries and deaths are preventable with the proper precautions. In August 2010, the Arkansas Activities Association adopted the following guidelines under the direction of the National Federation of State and High School Associations, but Arkansas currently has no laws regarding youth sports and concussions.

**RECOMMENDATION**

No athlete should return to play or practice on the same day of a concussion.

- In Washington state, Zachary Lystedt suffered a concussion during a middle school football game. He was returned to the game, sustained a second blow to the head, and now has permanent disabilities. In 2009, Washington enacted the Zachery Lystedt Law, which prohibits an athlete being returned to a game or practice if they are suspected of having a concussion.

**RECOMMENDATION**

Any athlete suspected of having a concussion should be evaluated by an appropriate health-care professional that day (MD, DO, Nurse Practitioner, Certified Athletic Trainer, or Physician Assistant).

- An evaluation reduces the risk of second-impact syndrome (SIS). SIS may occur if a concussed player returns to play before fully healed and experiences another injury. SIS often results in coma and, in some cases, death.

**RECOMMENDATION**

Any athlete with a concussion should be medically cleared by an appropriate health-care professional prior to resuming participation in any practice or competition.

- Oregon passed Max’s Law in 2010, requiring a student to refrain from playing until all concussion-related symptoms are resolved, at least one day has lapsed since the injury, and a medical release has been obtained. The law is named for Max Conradt, a quarterback who sustained a concussion and returned to play in the next game without medical clearance. He now lives in a group home for individuals with brain injuries.
RECOMMENDATION
After medical clearance, return to play should follow a step-wise protocol with provisions for delayed return to play based upon the return of any signs or symptoms.6

ADDITIONAL INFORMATION
At least seven states have enacted concussion policies for youth athletes. All have education requirements and return to play guidelines. In addition, Oklahoma, New Mexico, and Massachusetts require student athletes along with their parent/guardian to receive yearly education on concussion and to obtain signed consent forms before they are allowed to participate in youth sports.

NOTES

REFERENCES
Arkansas made great public health progress in the 2009 Arkansas General Assembly with passage of the primary seat belt law, graduated driver license, texting ban for all drivers, cell phone ban for young drivers, and funding for a statewide trauma system.
Using a seat belt is the single most effective behavior in reducing deaths from motor vehicle crashes.\textsuperscript{1} In 2009, Arkansas passed a Primary Seat Belt Law requiring drivers and passengers in motor vehicles to buckle up. Law enforcement officers may stop and ticket someone when they see a violation of the seat belt law. No other violation needs to occur first before taking action, and both drivers and passengers may be issued a traffic citation for not wearing a seat belt. States that have primary seat belt laws have higher seat belt use and lower fatality rates.\textsuperscript{1} Passage of a primary seat belt law typically results in a 10 percent increase in seat belt use.\textsuperscript{1}

**PREVENTION**

According to the National Highway Traffic Safety Administration, seat belts and child safety seats help prevent injuries in five different ways:

- Prevent ejection.
- Shift crash forces to the strongest parts of the body.
- Spread forces over a wide area of the body.
- Allow the body to slow down gradually.
- Protect the head and spinal cord.

**ARKANSAS LAW**

- Individuals 15 years of age and older must wear a seat belt when riding in the front seat of a motor vehicle.
- Children must be in a child passenger seat until they are 6 years and 60 pounds.

**ARKANSAS NUMBERS**

- Motor vehicle crashes are the leading cause of death for individuals ages 1-34 in Arkansas.\textsuperscript{2}
- In 2008, seven out of every ten persons killed in a motor vehicle crash in Arkansas were unrestrained.\textsuperscript{3}
- In 2010, Arkansas’ seat belt use was 78 percent compared to the national average of 85 percent.\textsuperscript{4,5,6}
- Since the Arkansas Primary Seat Belt law was passed in 2009, the state has seen the seat belt use rate increase from 70.4 percent in 2008 to 78 percent in 2010.\textsuperscript{5,6}
- Arkansas saw fatal crashes decrease by 2.5 percent from 2008 to 2009.\textsuperscript{5}

\textsuperscript{1} Advocates for Highway and Auto Safety. The 2010 Roadmap to State Highway Safety Laws.
\textsuperscript{2} Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System.
\textsuperscript{3} Arkansas State Police Highway Safety Office. Arkansas 2008 Traffic Crash Statistics.
\textsuperscript{5} Arkansas State Police Highway Safety Office. FY 2011 Performance Plan and Highway Safety Plan.
\textsuperscript{6} National Highway Traffic Safety Administration.
In Arkansas teens die in car crashes at a rate two times that of the United States.\(^1\) The Graduated Driver Licensing (GDL) law follows a system designed to delay full licensure while allowing new drivers to obtain initial driving experience in lower-risk conditions. Effective July 31, 2009, the GDL applies to all young Arkansas drivers and includes restrictions on cell phone use, passengers, and nighttime driving.

### Prevention
Teen drivers are at higher risk than more experienced drivers. The GDL addresses the following factors:

- **Inexperience** – The crash rate per mile driven for a 16-year-old is twice that of those ages 18-19.\(^2\)
- **Passengers** – For teenage drivers, just one passenger increases the risk of a crash by 40 percent. Two passengers double that risk, and three passengers quadruple the risk.\(^3\)
- **Nighttime driving** – 58 percent of fatal nighttime crashes occur in the three-hour period before midnight.\(^4\)
- **Cell phones** – The crash risk is four times higher when cell phones are in use.\(^5\)

The Arkansas GDL policy enacted in 2009 received a “good” rating by the Insurance Institute for Highway Safety. States with a “good” rating typically show decreases in fatal crashes by 19 percent for drivers ages 15-17.

### Arkansas Law

#### Learner’s License
- **Age and testing** – Must be 14 years old and pass vision and knowledge test.
- **Supervision** – Driver must be accompanied by a licensed driver at least 21 years of age at all times.
- **Seat belt** – Use required.
- **Cell phone** – No cell phone or other interactive wireless communication devise used for talking, texting, or e-mailing while driving (emergency use only).

#### Intermediate License
- **Age and testing** – Must be at least 16 years old and already have a Learner’s License or have successfully completed vision and knowledge tests.
- **Supervision** – Licensed adult supervision is required for the first six months if 16 years old when applying for first licensure.
- **Seat belt** – Use required.
- **Cell phone** – No cell phone or other interactive wireless communication devise used for talking, texting, or e-mailing while driving (emergency use only).
- **Passengers** – No more than one unrelated minor passenger (under 21) allowed unless a licensed driver 21 years of age or older is in the front passenger seat.
- **Nighttime driving** – No driving from 11 p.m.-4 a.m. unless there is a licensed driver 21 years of age or older in the vehicle, or driving to or from a school activity, church activity, job, or in case of an emergency.

#### Unrestricted License
- **Age and testing** – Must be 18 years old and already have an Intermediate License or have successfully completed vision and knowledge tests.
- **Seat belt** – Use required.
- **Cell phone** – Hands-free cell phone use allowed for those ages 18-21. No texting allowed (emergency use only).
Hardship License

- Same seat belt, cell phone, passenger, and nighttime rules apply as for those with an Intermediate License.
- Limited unsupervised driving allowed based on hardship qualifications.

VIOLATIONS

- If any restrictions are violated, penalties could include a citation and suspension of license for up to six months.
- No serious crash or traffic violations for at least six months prior to application for Learner’s, Hardship, or Intermediate License.
- No serious violations for at least 12 months prior to application for Unrestricted License.

Cell Phone Restrictions

PREVENTION

• The risk of crashing is four times higher when cell phones are in use.¹
• About 22 percent of all crashes in 2008 were due to phoning while driving.²

ARKANSAS LAW

Young drivers and cell phones

• Drivers under the age of 18 are not allowed to use handheld cell phones for talking, texting, e-mailing, or surfing the internet while driving. They may only use cell phones in emergencies.
• Drivers ages 18-21 are not allowed to use a handheld cell phone for talking, texting, e-mailing, or surfing the internet while driving. They may use hands-free wireless telephones or devices while driving. They may use handheld devices only in emergencies.

Drivers over the age of 21

• Drivers may no longer use a handheld wireless telephone for text messaging, e-mailing, or surfing the internet while driving. They may text, e-mail, or use internet only in case of an emergency.

PREVENTION
Injury is the number one killer of Arkansans ages 1-44. In 2006, more than 17,900 Arkansans were hospitalized for injuries, leading to a total cost of $412 million in hospital charges. Trauma systems and designated trauma centers are critical to reducing injury-related hospitalizations, deaths, and associated costs. When fully developed, the statewide trauma system is expected to save $193 million and 168 deaths in just one year.

COMPONENTS OF ARKANSAS TRAUMA SYSTEM
• Emergency medical services (pre-hospital).
• Designated trauma centers.
• Trauma registry.
• Rehabilitation facilities.
• Trained and available physician trauma specialists and nurses.
• Injury prevention and control programs.
