## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>3</td>
</tr>
<tr>
<td>Arkansas Injury – A Vision for the Future</td>
<td>4</td>
</tr>
<tr>
<td>Mission and Vision</td>
<td>5</td>
</tr>
<tr>
<td>Putting Injury Prevention Into Practice – Service, Education, and Advocacy</td>
<td>6</td>
</tr>
<tr>
<td>Research – Our Foundation</td>
<td>10</td>
</tr>
<tr>
<td>Publications</td>
<td>12</td>
</tr>
<tr>
<td>Funding Support</td>
<td>13</td>
</tr>
</tbody>
</table>
Dear Friends,

It has been yet another exciting year for the Injury Prevention Center (IPC) at Arkansas Children’s Hospital (ACH). This past year, we have seen growth in both our research and education efforts. The combined efforts of our coalitions and community partners have resulted in the creation of new programs and even more research questions to be answered. All of this progress would not be possible without the continued institutional support of Arkansas Children’s Hospital, the University of Arkansas for Medical Sciences, and Arkansas Children’s Hospital Research Institute.

Some of the highlights of this past year include expansion of our safer teen driving efforts, evaluation of our all-terrain vehicle safety education research in South Carolina and Louisiana, growth of our child passenger safety satellite site program, implementation of Safety Baby Showers, expanded distribution of IPC materials, the culmination of a three-year research project to increase booster seat use in rural communities, and awareness building of available bike and pedestrian safety resources.

While we are thrilled with the progress toward injury prevention efforts, we know there is still so much more to be accomplished. According the latest data from the Centers for Disease Control and Prevention, Arkansas continues to have higher unintentional injury fatality rates for children compared to the nation. This data also reports that Arkansas ranks third in the nation, behind Mississippi and South Dakota, for unintentional injury deaths to children ages 1-19.

Even though these statistics seem grim, we know that changes are already occurring in Arkansas that will save lives and improve the health of our children. We are excited about the formation of the Trauma System in Arkansas, the implementation and enforcement of new safety laws, and enhanced partnerships between agencies serving children.

Thank you again to everyone who has supported our mission to reduce child injury, death, and disability in Arkansas. The progress of the IPC would not be possible without you, and we look forward to future injury prevention endeavors. Please contact the IPC to hear more about our goals, activities, and opportunities for involvement.

Sincerely,

Mary E. Aitken, MD, MPH
Director, Injury Prevention Center at Arkansas Children’s Hospital
Professor of Pediatrics, University of Arkansas for Medical Sciences
Chief, Center for Applied Research and Evaluation at UAMS
From 2000-2006, a child died every two days in Arkansas from an unintentional injury (Centers for Disease Control and Prevention). For every child that dies, there are even more who are seriously injured and sustain life-long disabilities.

During that time period, motor vehicle crashes were the leading cause of unintentional injury death to children from birth to 19 years of age in Arkansas. A summary of leading causes of unintentional injury-related death by age group is provided below in Figure 1.

**Figure 1**

**LEADING CAUSES OF UNINTENTIONAL INJURY DEATH AMONG CHILDREN 0-19 YEARS, BY AGE GROUP, ARKANSAS, 1999-2006**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Age Group in Years</th>
<th>Less than 1 (n=117)</th>
<th>1 to 4 (n=217)</th>
<th>5 to 9 (n=135)</th>
<th>10 to 14 (n=177)</th>
<th>15-19 (n=798)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td><strong>Suffocation</strong></td>
<td><strong>MV Traffic</strong></td>
<td><strong>MV Traffic</strong></td>
<td><strong>MV Traffic</strong></td>
<td><strong>MV Traffic</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>57.6%</td>
<td>39.0%</td>
<td>50.5%</td>
<td>56.1%</td>
<td>79.7%</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td><strong>MV Traffic</strong></td>
<td><strong>Fire/Burn</strong></td>
<td><strong>Fire/Burn</strong></td>
<td><strong>Drowning</strong></td>
<td><strong>Drowning</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>25.6%</td>
<td>13.5%</td>
<td>16.9%</td>
<td>13.3%</td>
<td>6%</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td><strong>Drowning</strong></td>
<td><strong>Drowning</strong></td>
<td><strong>Drowning</strong></td>
<td><strong>Fire/Burn</strong></td>
<td><strong>Poisoning</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.8%</td>
<td>17.3%</td>
<td>11.9%</td>
<td>5.2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td><strong>Fire/Burn</strong></td>
<td><strong>Suffocation</strong></td>
<td><strong>Other Land Transport</strong></td>
<td><strong>Other Land Transport</strong></td>
<td><strong>Other Land Transport</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.2%</td>
<td>6.8%</td>
<td>2.5%</td>
<td>6.1%</td>
<td>2.3%</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td><strong>Poisoning</strong></td>
<td><strong>Pedestrian/Other</strong></td>
<td><strong>Natural/Environment</strong></td>
<td><strong>Firearm</strong></td>
<td><strong>Firearm</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4%</td>
<td>5.6%</td>
<td>2.5%</td>
<td>5.6%</td>
<td>2.2%</td>
</tr>
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</table>


The IPC utilizes injury data to guide our priorities and evaluate our efforts. We have developed a series of goals for the IPC’s efforts and are tracking our progress as data becomes available. Two key measures that we strive toward can be found in Figure 2.
Injury fatality and hospitalization rates for children will only improve with concerted efforts to improve safety behaviors. The IPC utilizes the Centers for Disease Control and Prevention's four-step, public health approach to prevention.

1. **DESCRIBE THE PROBLEM AND PERFORM SURVEILLANCE.**
   The IPC knows the burden injuries place on our children and families and has identified the injury mechanisms which are particularly an issue in Arkansas. We continually review the injury surveillance data and use the existing and emerging issues to guide our efforts.

2. **IDENTIFY CAUSES AND RISK AND PROTECTIVE FACTORS.**
   The IPC analyzes injuries for children to distinguish what puts them at risk and what can be changed to either prevent the injury or improve the outcome. The IPC only promotes evidence-based and best-practice recommendations in our education efforts.

3. **DEVELOP, IMPLEMENT, AND EVALUATE PREVENTION STRATEGIES.**
   Education programs are tracked for proxy measures such as numbers reached and evaluated for increases in participant knowledge. Our research efforts are designed to evaluate novel education strategies to increase safety knowledge and behaviors.

4. **DISSEMINATE AND ENSURE WIDE SPREAD ADOPTION.**
   The IPC works with our community partners to implement evidence-based programs, provide best-practice recommendations, and advocate for impactful legislation.

Our vision of children leading safe and healthy lives in Arkansas will only be accomplished by following this four-step process. Moment by moment, we are monitoring the problem, coordinating with communities, reviewing best practices, evaluating interventions, and offering solutions. It only takes a moment for the unthinkable to happen, but it also only takes a moment to practice safety and prevention.
MOTOR VEHICLE SAFETY EDUCATION

The goal of the IPC’s child passenger safety education (CPSE) program, sponsored by the National Highway Traffic Safety Administration via the Highway Safety Office of the Arkansas State Police, is to educate the public on all aspects of child passenger safety. Education sessions are provided to health care, education, child welfare, and law enforcement personnel, as well as parents and caregivers. Training is provided to certify community members as child passenger safety technicians with instructor assistance from ACH’s Community Outreach Department and other organizations. Due to this outreach and education work, there are currently child passenger safety technician resources available in 43 Arkansas counties.

Satellite Sites are community CPSE resources with access to low income, minority, and/or rural families. Car seats and educational materials are provided. Current sites include churches, police departments, Early Head Starts, AHECs, hospitals, pregnancy resource centers, and Hometown Health Coalitions. In the last year of full reporting (October 2008-September 2009), 17 satellite sites loaned over 650 seats and ensured that 1,000 children were restrained appropriately.

With assistance from the Benton Police Department, the IPC has developed a child passenger safety ticket book insert. The insert is designed to fit inside a law enforcement officer’s ticket book holder and provides an overview of relevant child passenger safety laws as well as the correct seat for the child’s age and weight. These are available to law enforcement agencies upon request. A similar educational tool is being created to aid in the enforcement of the graduated driver licensing law.

Safer teen driving education programs have been provided via partnership with the Youth Accident Prevention Program reaching over 2,500 high school students in Pulaski County each semester. During National Teen Driver Safety Week over 5,000 teens heard messages on safer teen driving through school and public service announcements. The teens received “Ride Like a Friend. Drive Like You Care.” printed materials. These materials were evaluated for use with teens by the the Center for Injury Research and Prevention at The Children’s Hospital of Philadelphia with funding from State Farm Insurance. The week’s events culminated with a competition between North Little Rock and Central High Schools at their football game, with Central High completing the most student surveys and winning the Battle of the Belt trophy.

The Allstate Foundation has funded the IPC to implement a Drive Smart Challenge for the spring 2010 school semester. Seven local schools are currently competing in the student led challenge. Students complete observation surveys of seat belt and cell phone use both before and after the challenge. Schools with the highest seat belt use, biggest increase in seat belt use, lowest cell phone use, and biggest decrease in cell phone use will win the challenge.

The Building Consensus for Safer Teen Driving Coalition has been assisting IPC staff with safer teen driving by collaborating on education projects including the development of education materials on graduated driver licensing, primary seat belt, and cell phone restriction laws.
HOME SAFETY EDUCATION

Generous support from the Helena Health Foundation and the Olds Foundation has led to the implementation of Safety Baby Showers in Phillips and Clark Counties. High-risk pregnant women are referred to attend the showers where they receive education on motor vehicle safety and home safety. Home safety topics include safe sleep, burn/fire/electrocution prevention, poison prevention, choking/suffocation prevention, and drowning prevention. The moms-to-be leave the showers with a home safety bag including a home safety checklist, bath water thermometer, emergency phone number magnet, smoke detector, outlet covers, door knob covers, and cabinet latches.

Key community partners include the Delta Area Health Education Center and the Clark County Parents as Teachers program. These partners manage the referral process, help host the showers, and complete individual car seat installation and education sessions where moms receive a car seat following the showers. For an eight month period in Phillips County there were approximately 247 births (AR Department of Health). In that same time period, 113 moms attended the Phillips County showers, representing a 45% penetration rate. Moms attending the showers have shown increases in knowledge on motor vehicle and home safety.

The IPC is providing technical assistance to the South Arkansas AHEC in El Dorado who has received funding from the Share Foundation and State Farm to launch the showers in Union County in the spring of 2010.

RECREATIONAL SAFETY EDUCATION

Through funding from the Arkansas State Highway and Transportation Department, the IPC has been working to increase the number of children ages 5-14 safely walking and biking to school through the Safe Routes to School (SRTS) program. This past year, IPC staff provided workshops, promotional school rallies, and distributed a web and paper-based marketing packet and SRTS tool kit statewide. An Arkansas specific SRTS website, www.arsaferoutes.org, has been updated, and a SRTS Newsletter is being distributed as part of the promotional campaign. The primary goal of the project has been to build awareness of SRTS to increase the number and quality of SRTS applications. There was a two-fold increase in applications this past year with 44% of the applications receiving assistance from IPC staff on development of their grants.

All-terrain vehicle safety materials are being distributed to schools and other community partners for general education and also as part of our ongoing ATV safety research efforts. “A Trip Unplanned,” a short educational video on ATV safety targeting youth, is now available via YouTube and the ACH website for viewing.

Fact sheets on water safety, life jackets, and personal water craft safety have been developed and are available for use by community partners.
Arkansas Foundation for Medical Care (AFMC) and the Arkansas Department of Human Services partnered with the IPC this year for their annual quality improvement project. AFMC and IPC staff have tailored education materials on motor vehicle safety, all-terrain vehicle safety, burn prevention, pedestrian safety, bicycle safety, helmet safety, home safety, life jackets, water safety, and personal water craft safety. The materials are available in both English and Spanish for physician offices, hospitals, and school nurses at no cost to the providers, as is an anticipatory guidance checklist. From June-September 2009, over 10,000 pieces of education material were distributed across 35 counties. AFMC staff members were also trained on use of the materials and provided ongoing support to physician offices on its use. Materials will be made available ongoing from the AFMC website for providers.

Education for Current and Future Health and Education Professionals

This past summer IPC staff partnered with the UAMS Area Health Education Centers to provide programs for the Medical Application of Science for Health program (MASH). MASH is a two-week summer program for high school students interested in pursuing health care fields. Presentations on injury prevention, safer teen driving, water safety, and all-terrain vehicle safety were provided to the Lake Village, Nashville, Little Rock, and El Dorado MASH groups.

Classroom lectures on injury prevention were conducted at University of Central Arkansas (UCA) and the UAMS College of Public Health. Students preparing for careers in public health and health care are frequent contributors to the IPC. Health Sciences students from UCA and University of Arkansas at Little Rock (UALR) completed undergraduate internships totaling over 750 hours in teen driving safety education and research. A pre-med student from University of Arkansas (UA) also assisted the teen driving study team through the Arkansas Children's Hospital Research Institute (ACHRI) Summer Science Program. A doctoral student at the UAMS College of Public Health is working to improve access to resources for persons with traumatic brain injury. Two ACH nurses completing their undergraduate training in nursing at UALR RN-BSN completed projects, including an assessment of child passenger safety programs that will guide future directions for community events.

Medical students receive injury prevention education in each year of their studies, including an extended lecture to approximately 125 students during their junior year. A pediatric medicine resident completed an elective with the IPC where she furthered her understanding and interest in child maltreatment. Pediatric residents receive child passenger safety anticipatory guidance during their continuity clinic experience. Nurse practitioners review pediatric injury prevention and family education options.

Informed Choices—Injury Prevention is an annual event where school nurses, health teachers, public health educators, and coaches receive education credits while also receiving resources for use in their schools and communities. This year, over 70 participants learned new methods for preventing teen dating violence, addressing gang violence issues, implementing sports injury prevention strategies, and educating others on the impact of new injury prevention laws.
THE MOMENT, MEDIA, OUTREACH, AND UPCOMING PROJECTS

The IPC produces a bi-monthly newsletter titled The Moment, which is distributed throughout the state. It contains the latest research and resources on injury prevention both locally and nationally. IPC staff members monitor media for both injury incidents and prevention stories to identify and rectify any inaccurate information and also track national and local initiatives.

The Centers for Disease Control and Prevention and Ogilvy Public Relations conducted a pilot campaign targeting parents titled “Parents Are the Key” in Little Rock and Columbus, Ohio, to educate parents on their role in preventing teen crashes. The IPC and its Building Consensus for Safer Teen Driving coalition were key local partners in the campaign, providing support for distribution of materials and interviews for print and radio media. The CDC is currently incorporating results of the campaign analysis for a nationwide launch.

Future projects from the IPC include the ACH Safety Kiosk and an Arkansas-specific child passenger safety website. Families can access the kiosk survey at ACH and via the web. They will complete a simple survey about their family’s home, recreational, and motor vehicle safety practices and will receive personalized education materials. The car seat website will guide families to local resources in their community and provide general education.

ADVOCACY RECOGNITION

Emergency Medical Services for Children (EMSC) honors individuals each year who have displayed tremendous commitment to children’s emergency health issues with their National Hero Awards. Governor Mike Beebe received the Emergency Medical Services for Children Policy Leader of Distinction 2009 for his leadership in the 2009 Arkansas General Assembly which led to a number of important injury prevention policies and the funding for a trauma system. Peggy and Wayne Hackett have been active members of the Building Consensus for Safer Teen Driving Coalition and powerful advocates for safer teen driving and seat belt use since they suffered the loss of their 17-year old daughter Hannah in a car crash in 2006. The Hacketts and family were honored with EMSC’s National Heroes Family Volunteer of the Year Award.

Dr. James Graham, John Nixon, Dr. Mary Aitken, Wayne Hackett, Peggy Hackett, and Hope Mullins at the EMSC National Hero Award ceremony.
Our ATV safety research entered its final year of funding from the Health Resources and Services Administration, EMSC. The overall goal of this research is to reduce the number of deaths and injuries caused by ATV-related crashes through high-impact educational interventions. Initial work of the project included focus groups with adults and children to determine ATV messaging preferences which led to the production of “A Trip Unplanned.” “A Trip Unplanned” is a short education video targeting youth that was developed in collaboration with the Arkansas Game and Fish Commission and UAMS. The video was test-piloted by hunter safety educators around Arkansas who provided feedback on additional education materials to accompany the video.

**ACCOMPLISHMENTS OF THE PAST YEAR INCLUDE:**
- Design and evaluation of an ATV Safety Tool Kit which includes posters, brochures, and a discussion guide to accompany “A Trip Unplanned.” The tool kit was disseminated to the South Carolina Game and Fish Commission’s Hunter Safety Educators, Arkansas school nurses and health teachers, and a Louisiana Parish school district for evaluation. The IPC has conducted focus groups in South Carolina and Louisiana and has engaged in debriefing with Arkansas school teachers on usefulness of the tool kit. The tool kit will be modified based on evaluation results and will be available for distribution by the fall of 2010.
- Evaluation of running an ATV safety public service announcement in a movie theatre was completed in Monticello.
- The IPC provided technical assistance to the northeast region of the Child Safety Network as seven states increased their injury prevention efforts to rural children, particularly in the area of ATV safety. A presentation was made to community representatives in Baton Rouge, Louisiana, who were starting an ATV safety coalition.

**RESULTS OF THE ATV SAFETY RESEARCH WERE REPORTED AT THE FOLLOWING PROFESSIONAL AND SCIENTIFIC CONFERENCES:**
- **Oral Presentations**
  - Aitken ME, Klumpp M. Children and ATVs. 8th Annual Iowa Child and Youth Injury Prevention Conference, Blank Children’s Hospital, Des Moines, Iowa, September 15, 2009.

- **Poster Presentations**

**STRIKE OUT CHILD PASSENGER INJURY**

This CDC-funded multi-state study evaluated using a community sports program to increase the use of booster seats in children ages 4-7 living in rural communities. The project concluded this past year and included sites in Arkansas, Alabama, Illinois, and Indiana. Preliminary results show that the project was effective in increasing appropriate restraint for rural children in the targeted age range. A meeting was held in October at ACH with representatives from each state. An implementation guide for communities based on the study results is currently being completed.

**RESULTS OF THE STRIKE OUT CHILD PASSENGER SAFETY RESEARCH WERE REPORTED AT THE FOLLOWING PROFESSIONAL AND SCIENTIFIC CONFERENCES:**

**BUILDING CONSENSUS FOR SAFER TEEN DRIVING**

This project was originally supported by the Allstate Foundation, but is currently funded through an ACHRI Intramural Grant. The goal of the project is to increase awareness of safety issues for novice teen drivers via the completion of a parent-teen driving contract. Families in the study learn about the risk factors for teen drivers and the principles of graduated driver license laws. They also receive social development training for completion of their in-home parent-teen driving contract. Follow up surveys are completed at three, six, and 12 months with families.

The Building Consensus for Safer Teen Driving coalition was formed at the beginning of this project in 2007 with initial funding from Allstate. The coalition is still very active with members providing education to the public on safer teen driving concerns.

**A COMPREHENSIVE COMMUNITY CAMPAIGN TO INCREASE PARENTAL RESPONSIBILITY IN TEEN DRIVING**

The IPC received the only National Highway Traffic Safety Administration Cooperative Agreement award this past year. The goal of the project is to prevent motor vehicle related deaths and injuries for teens by focusing on access to alcohol, graduated driver licensing, and seat belt use. The project will evaluate use of media, education, and outreach activities targeting the general public, law enforcement, and parents of teen drivers. The aims of the project are to raise public awareness of strategies to reduce risk of serious injury or death among teen drivers, increase the effective use of rules and monitoring within families on issues impacting teen drivers, and increase law enforcement involvement with teen driver motor vehicle laws.
RECENTLY PUBLISHED RESEARCH


PROFESSIONAL REPORTS

THE INJURY PREVENTION CENTER GRATEFULLY ACKNOWLEDGES SUPPORT FROM THE FOLLOWING SPONSORS:

- Arkansas Children’s Hospital
- Arkansas Children’s Hospital Foundation
- Arkansas Children’s Hospital Research Institute
- University of Arkansas for Medical Sciences

SPONSORED RESEARCH AND PROGRAMS

- Allstate Foundation, Southern Region
- Arkansas Commission on Child Abuse, Rape, and Domestic Violence
- Arkansas Children’s Hospital Research Institute CUMG Research Development Fund
- Centers for Disease Control and Prevention, grant #5 R49 CE000975
- Grand Masonic Lodge of Arkansas
- Health Resources and Services Administration, Emergency Medical Services for Children Targeted Issues, grant #6 H34MC08514
- Helena Health Foundation
- National Highway Traffic Safety Administration Cooperative Agreement, grant #DTN H22-09-R-00203
- National Highway Traffic Safety Administration via the Arkansas Highway Transportation Department
- National Highway Traffic Safety Administration via the Highway Safety Office of the Arkansas State Police
- Olds Foundation