2009

ANNUAL REPORT

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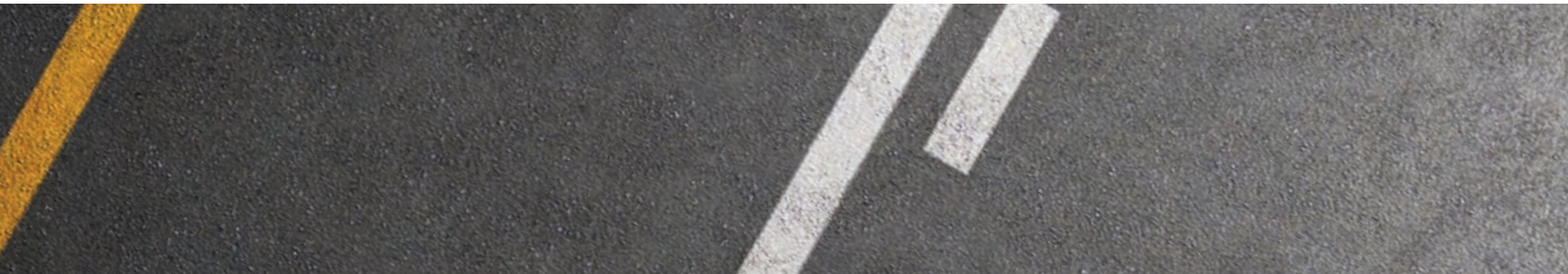


Message From The Director

December 2009

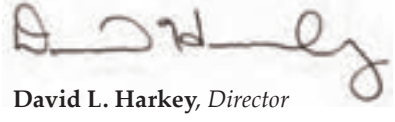
Translating research and knowledge into changes in practices and policies is a critical component of the HSRC mission. During the past year, members of our staff were involved in a number of projects to disseminate road safety information to practitioners, legislators and the general public. The means by which this information is provided ranges greatly, from in-person testimony before legislative bodies to community-based trainings to Web-based tools and products to the development of a university course. Many of the highlights in this year's report reflect our devotion to this part of HSRC's mission.

HSRC also launched a community-based small grant program this past year, a unique way of translating research knowledge into practice. HSRC's Pedestrian and Bicycle Information Center (PBIC) is awarding 15 grants, funded by the National Highway Traffic Safety Administration, for communities to implement strategies that will improve mobility and safety for pedestrians. PBIC staff members will also provide technical support to these communities.

The Center for the Study of Young Drivers (CYSD) was established in 2006 at HSRC with a goal of focusing on the development and implementation of interventions to reduce young driver crashes. CYSD researchers continue to play a vital role in disseminating information on programs and policies to legislative bodies and safety program agencies throughout the U.S. Our feature article in this year's report presents the accomplishments of the center to date and the need to continue focusing on this group of drivers, as motor vehicle crashes are the leading cause of death in the U.S. for those aged 15 to 19.

This past year was also one of international recognition for several of our staff. The Transportation Research Board of The National Academies makes six awards annually for outstanding published research in transportation. HSRC researchers were lead authors on two of these publications this past year. Congratulations to Charlie Zegeer, Scott Masten, Lauren Marchetti, Laura Sandt, Austin Brown, Jane Stutts, Libby Thomas, Raghavan Srinivasan and Forrest Council.

At the end of the day, development of knowledge is only useful if it is disseminated and applied. In the coming year, HSRC researchers will continue to conduct high quality research on a variety of topics to improve safety for all road users and then translate that knowledge into user-friendly products and applications for policymakers and practitioners as well as the general public.



David L. Harkey, *Director*

Overview


START CROSSING
WATCH FOR TURNING VEHICLES
DO NOT START
FINISH CROSSING IF STARTED
DO NOT CROSS
TO CROSS
PUSH BUTTON

Our Mission

The mission of the Highway Safety Research Center (HSRC) at the University of North Carolina is to improve the safety, security, access and efficiency of all surface transportation modes through a balanced, interdisciplinary program of research, evaluation and information dissemination.

For over 40 years, HSRC has been a leading research institute that has helped shape the field of transportation safety.

Year in Review

This year, HSRC continued its efforts to develop and disseminate road safety information that can affect practices and policies that will ultimately reduce harm on our roadways. Key studies completed this past year included a review of the national strategic plan on highway safety and an update of a guidance document for practitioners on road safety interventions.

The quality of the research conducted by HSRC staff was also recognized this past year. HSRC researchers received two of the six awards given by the Transportation Research Board (TRB) for outstanding published research in transportation at the 88th Annual TRB Meeting in Washington, DC. Award winners were selected from approximately 2800 submitted papers from around the world. Charles V. Zegeer, Scott Vincent Masten, Lauren Marchetti, Laura S. Sandt, Austin Brown, Jane Stutts and Libby J. Thomas of HSRC received the 2008 Patricia F. Waller Award for the outstanding paper in the field of safety and system users for Evaluation of the Miami-Dade Pedestrian Safety Demonstration Program. Raghavan Srinivasan and Forrest M. Council of HSRC received the D. Grant Mickle Award for the outstanding paper in the field of operation, safety and maintenance of transportation facilities for Safety-Effectiveness of Selected Treatments at Urban Signalized Intersections.

HSRC continued to provide expert research, training and programmatic support on projects for a wide range of sponsors that include government agencies, foundations and private organizations. Among the list of new sponsors, HSRC began a project with the California Department of Transportation this past year to develop methods for identifying high crash roadway segments and intersections on California roads where potential safety improvements may be implemented and have the greatest safety benefits.

HSRC staff members continued their presence on state and national safety committees, and served as key sources of safety information to transportation professionals, the general public, State legislatures and the media.

Center Highlights

HSRC is consistently working on issues that affect all road users from motorists to pedestrians. Research is ongoing to ensure the most current information is available to decision-makers and the public. The following outlines a few of the highlights that came from HSRC in the past year.

TRAFFIC OPERATIONS AND ROADWAY DESIGN

Guidance for the next AASHTO National Strategic Highway Safety Plan

HSRC researchers have recently completed a national evaluation of highway fatalities for the American Association of State Highway and Transportation Officials (AASHTO), as AASHTO begins to draft a new National Strategic Highway Safety Plan. The report Surface Transportation Safety Investment: Update Since 2004 assesses progress toward AASHTO's goal to reduce traffic fatalities by 1000 per year, in order to cut highway fatalities in half over the next two decades.

Utilizing national and state fatality data from 2004 – 2007, HSRC researchers were able to determine the fatality trends in many of the 22 emphasis areas contained in AASHTO's National Strategic Highway Safety Plan. The study found that the states were able to reduce fatalities in nearly all of the emphasis areas to which they were able to clearly attribute fatal crashes. In an effort to find new ways to experience further declines in highway fatalities, the report offers potential strategies for each emphasis area, highlighting specific interventions, such as the use of alcohol ignition interlocks and shoulder rumble strips, to increase the safety of highway users.

Helping engineers make safety decisions

In early 2008, HSRC researchers completed a project sponsored by the National Cooperative Highway Research Program to develop reliable crash modification factors (CMFs) for traffic engineering and ITS improvements. CMFs provide engineers with an estimate of the impact of safety improvements. They are often used by state and local transportation agencies to quickly determine the level of safety improvement offered by specific treatments and/or to determine the costs and benefits of alternative treatments. Having reliable and accurate CMFs allows for the selection of improvements that will result in the "biggest bang for the buck," which is critical with ever-shrinking budgets available to address road safety issues.

This year, HSRC expanded its work in this area to include information dissemination. The Center was awarded a contract with the Federal Highway Administration to develop and launch the Crash Modification Factors Clearinghouse, an informational Web site that contains a centralized database of CMFs. The Web site will be continuously updated to provide the most recent information available, will include a mechanism for practitioners and researchers to submit CMFs for potential inclusion on the site, and will provide resources on the application of CMFs.

DRIVER BEHAVIOR

Countermeasures That Work

HSRC researchers have revised and updated the fourth edition of Countermeasures That Work, a reference guide to assist State Highway Safety Offices in selecting effective, science-based traffic safety countermeasures for major highway safety problem areas. Researchers who prepared this edition include Arthur H. Goodwin, William L. Hall, J. Craig Raborn, Libby J. Thomas and Mary Ellen Tucker. In this fourth edition, the chapter on seat belts has been expanded to include child passenger safety.

Funded by the National Highway Traffic Safety Administration, the guide contains a chapter for each problem area, including alcohol-impaired driving, seat belt use, aggressive driving and speeding, distracted and fatigued driving, motorcycle safety, young drivers, older drivers, pedestrians and bicyclists. Each chapter begins with a brief overview of the problem area, the main countermeasure strategies, a glossary of key terms and a few general references. Countermeasures That Work is updated on an annual basis.

Evaluating teen cell phone use

Research conducted by the Center for the Study of Young Drivers (CSYD) at HSRC has led to a program that is having an impact on local high school students in North Carolina. In a study that observed nearly 20,000 teenage drivers between 2006 and 2008 in North Carolina, the researchers found that 91 percent of the time, teens are not using their cell phone while driving.

A social norms program, called "9 out of 10," was developed from this study in order to spread this fact among teens, parents, educators, the media and police. By using a social norms approach, the study attempts to debunk the commonly held belief that teens often talk or text while driving. A new Web site, http://www.hsrc.unc.edu/9outof10, shares the study results and is a portal to a series of activities and contests — some using social media — that began in the fall of 2009 to spread knowledge about this simple fact among students in North Carolina.

Guiding Graduated Driver Licensing policy in Kansas

Motor vehicle crashes are the leading cause of death among teenagers in Kansas and throughout the United States. To address this concern, the AAA Kansas Traffic Safety Committee spearheaded the Kansas Teenage Driver Safety Project in 2007. As part of the project, AAA Kansas asked CSYD researchers to gauge parents' and teenagers' attitudes in the state toward teenage driver safety and education, and toward Graduated Driver Licensing (GDL), which was initially assumed to be unpopular among Kansas' rural population.

For the study, CYSD sampled random households using an approach known as stratified sampling, designed to ensure that all regions of the state were appropriately represented. Analysis of interviews and surveys conducted by CYSD indicates that both parents and teens from diverse areas of the state approve of the kinds of protective restrictions that characterize Graduated Driver Licensing systems. AAA Kansas shared the results of the CYSD study with the public, media and legislators. In February 2009, a GDL bill was passed in the Kansas legislature that will go into effect January 1, 2010.

Enhancing state Graduated Driver Licensing systems

In September 2008, HSRC was awarded a contract by the Centers for Disease Control and Prevention (CDC) to provide assistance to states that are interested in upgrading their GDL systems. This new project involves working closely with state coalitions to promote legislation that bolsters the quality of their young driver licensing systems in ways that are known to improve teen driver safety. The process takes stakeholder groups through steps outlined in a GDL Planning Guide, co-developed by HSRC and CDC.

Throughout the process, HSRC researchers offer on-call assistance in tackling the individual issues of each partner state. As states work through the guide, HSRC researchers provide support in a number of areas, including local data collection and analysis, designing surveys of parents, networking with additional state and national experts and explaining GDL to legislators.

As the HSRC team works with each state group, the researchers gather feedback that can be used to assess the GDL Planning Guide and the support process. The intent is to use this information to revise and update the guide before providing it to other states.

PEDESTRIAN AND BICYCLE SAFETY

Innovating methods to improve pedestrian and bicycle safety in Chapel Hill/Carrboro

HSRC is developing methods to improve pedestrian and bicycle safety everywhere, and that includes its home of Chapel Hill and Carrboro, NC, and the University of North Carolina campus. In the study Identifying and Prioritizing Locations for Pedestrian and Bicyclist Safety Improvements in Chapel Hill and Carrboro, North Carolina, prepared for the NC Department of Transportation (NCDOT), researchers at HSRC take an innovative approach to identifying locations in Chapel Hill and Carrboro that would benefit from pedestrian or bicycle safety improvements.

To quantify risk areas, the study relies on traditional crash data, recommendations by the two towns through public input and on an innovative survey in which users identified specific intersections or road segments that they perceived to be unsafe for pedestrians or bicyclists. Locations with high crashes and high perceived risk were first selected for further investigation. Other locations were chosen proactively based on a mix of crash incidence, perception of risk and public attitudes gathered through the survey.

The research team proposed specific safety recommendations and countermeasures for consideration by the towns and NCDOT, and emphasizes the need for continued assessment of other locations that did not receive audits. Examples of recommended safety improvements include warning signs, enhanced markings, the addition of pedestrian signals and the addition of lighting. The study is meant to be an integral part of the towns' bicycle and pedestrian safety action plans that include continued monitoring of crashes and other conditions that may affect safety. NCDOT is also using the methods developed in this study to assess road safety in communities across the state as they strive to lower the incidences of pedestrian- and bicycle-motor vehicle crashes.

PBIC launches updated image library

The Pedestrian and Bicycle Information Center (PBIC) at HSRC launched an updated and redesigned pedestrian and bicycle image library at http://www.pedbikeimages.org, in its continued effort to disseminate resources for pedestrian and bicycle safety. The PBIC Image Library is a searchable collection of free, high-quality images relating to walking and bicycling. Visitors to the site may use the images in any non-commercial projects including Web pages, presentations and reports.

The updated site features thousands of fresh images of people, transportation facilities and livable places in the US and in more than 10 other countries. The images can be searched for using keywords, or users can browse by popular search terms. Users can also search for images from specific states or countries, photos taken by a particular photographer, or for a specific format or print quality.

Funding neighborhoods to improve pedestrian safety

The PBIC is providing funding to 15 communities across the United States to perform the steps outlined in the Resident's Guide for Creating Safe and Walkable Communities, published by the Federal Highway Administration, and offering these communities technical support in using the Guide.

The objective in awarding the funding is to provide information, ideas, success stories and resources to help neighborhood residents learn about issues that affect walking conditions. By using the funding and assistance from the PBIC, the community residents are empowered to find ways to address or prevent their unique pedestrian problems and promote pedestrian safety. The Guide also contains fact sheets, worksheets and sample materials that can be distributed or adapted to meet the needs of a community.

Initial funding for this project by the National Highway Traffic Safety Administration (NHTSA) provided $2,000 grants to 10 communities. In response to popular demand, PBIC partnered with the Association of Pedestrian and Bicycle Professionals (APBP) to involve five more neighborhoods. The 15 neighborhoods selected to receive funding and guidance are:

- Swannanoa Community Vision Group, Swannanoa, NC
- Live Healthy Nevada County, Grass Valley, CA
- IONA Senior Services, Washington, DC

- New Visions Community Development Corporation, Fort Lauderdale, FL
- Lower 9th Ward Center for Sustainable Engagement and Development, New Orleans, LA
- Seward Redesign, Minneapolis, MN
- City of Wabasha / Fit City Wabasha, Wabasha, MN
- Old Towne, Columbus, OH
- Collegeville Main Street Program, Collegeville, PA
- South of South Neighborhood Association, Philadelphia, PA
- City of Fargo Planning Department, Fargo, ND
- Flamingo Park Neighborhood Association, Miami Beach, FL
- Heritage Neighborhood Association, Austin, TX
- Pearl District Association, Tulsa, OK
- Coalition for Livable Communities, Memphis, TN

Through this project, the Center is gathering input from the participating communities to assess the usefulness and completeness of the Guide content, and identify necessary improvements to the content as well as additional support tools that may be needed.

2008 Oberstar Safe Routes to School Award

Congressman James L. Oberstar (D-MN) presented the Oberstar Safe Routes to School Award to a delegation from Bear Creek Elementary in Boulder, CO, at the National Bike Summit in Washington, DC. Bear Creek Elementary School's Safe Routes to School program involves 70 percent of its students in walking and bicycling activities throughout the year. The school is one of the first in the country to have walking school buses throughout the school year. 2008 is the second year the award has been given. In 2007 the National Center for Safe Routes to School at HSRC established the award in the name of Congressman Oberstar, chair of the Transportation and Infrastructure Committee, for his dedication to this program.

Students from Bear Creek Elementary School in Boulder, Colo., walk to school in organized walking school buses throughout the year.

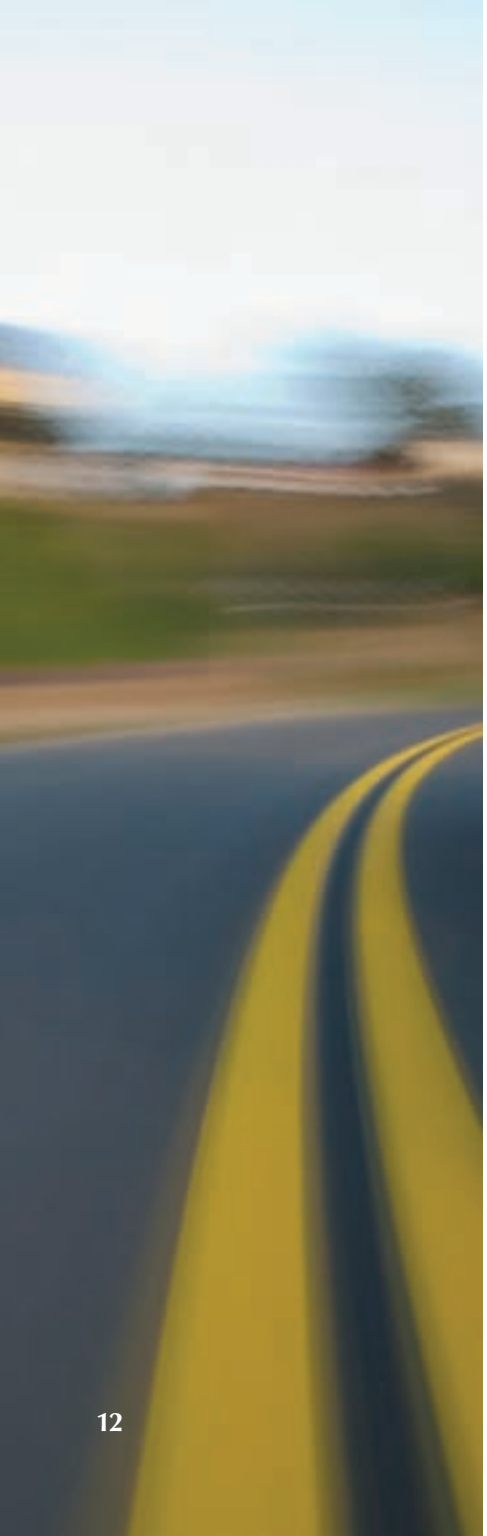
SUPPORTING THE ROAD SAFETY PROFESSION

Second Annual Bill Hall Lifetime Achievement Award for child passenger safety

A legacy award recognizing people that have dedicated their lives to child passenger safety and keeping children safer in motor vehicles was named for and first given in 2008 to Bill Hall, manager of HSRC's Occupant Protection Program. The honor is awarded by the North Carolina Governor's Highway Safety Program and the NC Department of Insurance Office of State Fire Marshall (DIO-OSFM). A researcher at HSRC for over 30 years, Hall has been involved in child passenger safety from the beginning — before laws existed anywhere in the U.S. and before there was an organized effort to protect children from injury related to motor vehicle crashes.

In March 2009, the second annual Bill Hall Lifetime Achievement Award was presented to Larry McMahon. After retiring from the Virginia Highway Patrol, McMahon began a career with the International Association of Police Chiefs, where he was instrumental in expanding the child passenger safety training in Virginia. He then began work for NC DIO-OSFM teaching child passenger safety classes.

Kelly Ransdell presents the Bill Hall Lifetime Achievement Award to Larry McMahon.



Second annual HSRC scholarship awarded

The UNC Highway Safety Research Center awarded its annual scholarship in July to Kathryn Martin, a graduate student at UNC Chapel Hill studying in the School of Public Health. Her dissertation research is on the influence of community resources on North Carolinians' health-related quality of life and functional health status, including accessibility and availability of public transportation for senior citizens in North Carolina.

The $1,000 scholarship was available to a full-time graduate student with an interest in transportation safety enrolled at any of the 16 University of North Carolina system campuses. Candidates were evaluated on academic performance, extracurricular and professional activities, work experience and an essay on a current highway safety issue.

Adding pedestrian and bicycle planning to the curriculum

Integration of pedestrian and bicycle planning into transportation planning is essential in creating sustainable, livable communities. To that end, HSRC has developed an interdisciplinary university course in bicycle and pedestrian planning for graduate students to gain an academic footing in pedestrian and bicycle research issues, and build professional skills that serve them in a wide variety of work environments.

The university course examines the issues and challenges that necessitate bicycle and pedestrian planning and explores the core concepts and strategies related to creating effective and comprehensive plans and programs. The course was initially taught within the UNC Department of City and Regional Planning, with funding from UNC-Chapel Hill and the Federal Highway Administration. Modules and resource materials developed for the course are accessible to university-level instructors to incorporate in classrooms across the country.

Planning students will go on to careers in governmental transportation agencies, research, private consultancies and advocacy groups. As communities grow and transform, students who understand the growing body of research specific to bicycle and pedestrian issues will be instrumental in addressing the particular safety concerns of these modes of travel proactively.

INTERNATIONAL COLLABORATION

Addressing road safety globally

HSRC continues to expand its international presence by hosting international speakers and participating in international projects and conferences. In February 2009, HSRC Director David Harkey was one of 16 invited international speakers at the international conference Trauma Management, Critical Care and Prevention held in Al Ain, United Arab Emirates. Harkey spoke to the international audience about what has worked effectively in the U.S. to increase seat belt usage and decrease crashes involving pedestrians and young drivers.

The Center also hosted two international guests at UNC in 2009. Rob Methorst, a senior advisor with the Dutch Ministry of Transport, presented a lecture titled "Quality for Pedestrians: Pitfalls in Policy Making." The lecture was cosponsored by HSRC, the UNC Injury Prevention Research Center, the Carolina Transportation Program and the Department of City and Regional Planning. Glen Koorey, senior lecturer with the University of Canterbury, presented his current Ph.D. research underway in New Zealand at an HSRC "Lunch 'n Learn" event, a monthly Center-sponsored event for HSRC staff to discuss current highway safety research projects.

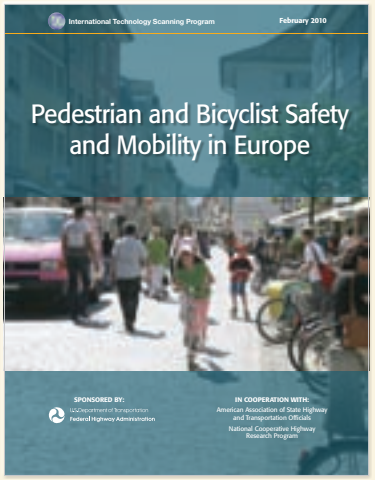
Left to Right: Forrest Council, former director, HSRC; Glen Koorey, senior lecturer, University of Canterbury; Charlie Zegeer, director, Pedestrian and Bicycle Information Center.

International scan of pedestrian and bicycle mobility

In May 2009, HSRC Associate Director Charlie Zegeer participated in an international scan to survey ways to improve walking and bicycling safety and mobility. Zegeer was chosen to be on the 12-member team of U.S. transportation professionals with expertise in bicycling and walking that visited five countries in Europe. The scan tour was sponsored by Federal Highway Administration, American Association of State Highway Transportation Officials and the National Cooperative Highway Research Program.

The purpose of the scan tour was to identify and assess effective approaches to improve pedestrian and bicyclist safety and mobility. The scan team heard presentations from and had informal discussions with many foreign hosts, and participated in guided field visits (by bike as well as by foot) to better understand and experience the design and operation of various walking and bicycling facilities. These field visits were invaluable in documenting the facilities through photos and video, observing traffic behavior and experiencing firsthand how well a design or operational strategy worked.

The scan team identified numerous possible approaches to improving pedestrian and bicyclist safety and mobility in the U.S. The scan team also prepared a list of implementation items for those approaches that should be pursued in the U.S.

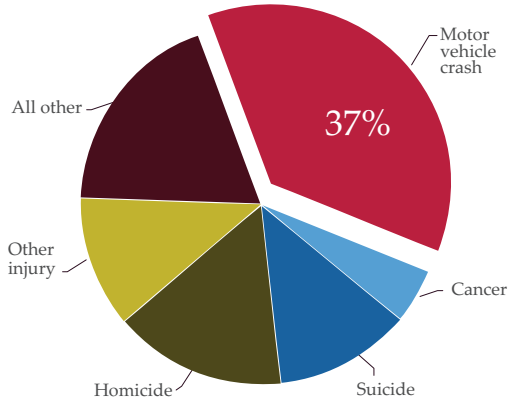


Addressing Young Driver Crashes

Motor-vehicle crashes are the leading cause of death among teenagers, resulting in more than 4,500 teen deaths on U.S. roadways each year. A combination of inexperience and the natural impulsiveness of the adolescent years contribute to this increased risk of being involved in a fatal crash. Understanding the multitude of factors that contribute to the high crash rate among young drivers is critical for the development of effective policies and programs to reduce travel-related deaths and injuries among teens.

Background on the problem

- In 2008, more than 4,500 teenagers (ages 15 – 19) were killed, as drivers or passengers, in motor vehicle crashes in the U.S.
- Young drivers are more likely than any other age group to crash and they carry more passengers than other age groups, magnifying the health consequences of crashes by exposing more persons to injury when a crash occurs.
- Young drivers are a hazard to other road users as well. One third of persons killed in crashes involving teen drivers are occupants of other vehicles, pedestrians or bicyclists.
- The economic cost of crashes involving the youngest drivers (ages 15 – 17) in the U.S. amounts to more than $34 billion dollars each year.



Causes of Death Among Persons Ages 15-19 in U.S.

Need for further research

During the past 25 years, substantial effort has been devoted to protecting infants, toddlers and older children from injury, through promotion of child safety seats, booster seats and safety belt use. Yet the greatest danger to children occurs not while they are young and riding with a parent, but when they begin driving themselves and riding with teenage drivers.

Despite the huge health and economic burden resulting from teenage driver crashes, there is little federal, state or private foundation support in the U.S. for the scientific research necessary to understand the nature of teenage driving behavior and to find solutions to the young driver crash problem.

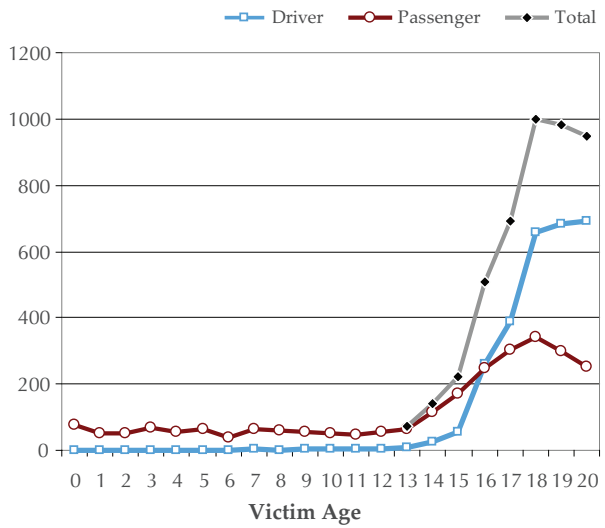
HSRC's history in young driver research

With more than four decades of experience focusing directly on traffic safety, the UNC Highway Safety Research Center has been instrumental in shaping highway safety policies and programs. North Carolina's graduated licensing system, which was developed at HSRC, has become a national model. Since its adoption more than a decade ago, the graduated licensing system has decreased 16- and 17-year-old driver crashes by 38% and 20% respectively. Among many other benefits, this has saved several hundred lives in North Carolina alone.

Committed to exploring this important issue, the University of North Carolina provided the initial funding to establish the Center for the Study of Young Drivers (CSYD) in 2006 within HSRC. Since that time, Center researchers have collaborated with colleagues and students from several UNC departments to conduct a variety of studies of novice drivers and their parents.

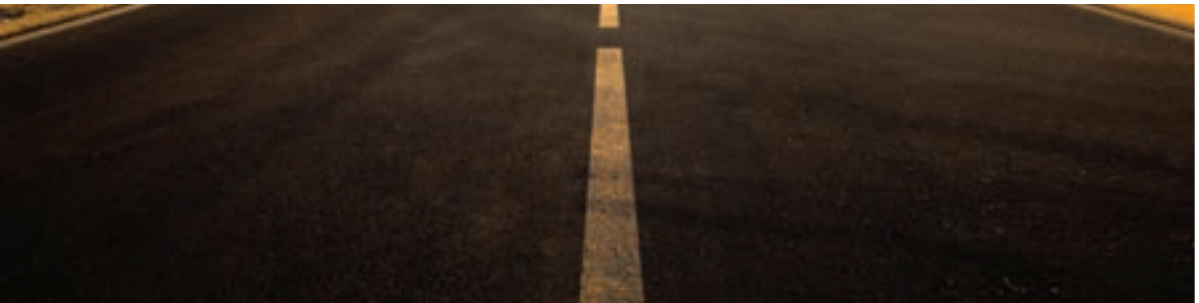
CSYD researchers have also helped establish a Transportation Research Board subcommittee on Young Drivers to promote more extensive, scientifically sophisticated, multi-disciplinary research on the issue. This group, which includes many of the world's leading young driver researchers, has produced a document laying out the most critical research questions. Answers to these questions will help provide guidance for reducing crashes in the future.

Motor Vehicle Occupant Fatalities in U.S. , 2008, by age and position



Young driver research highlights

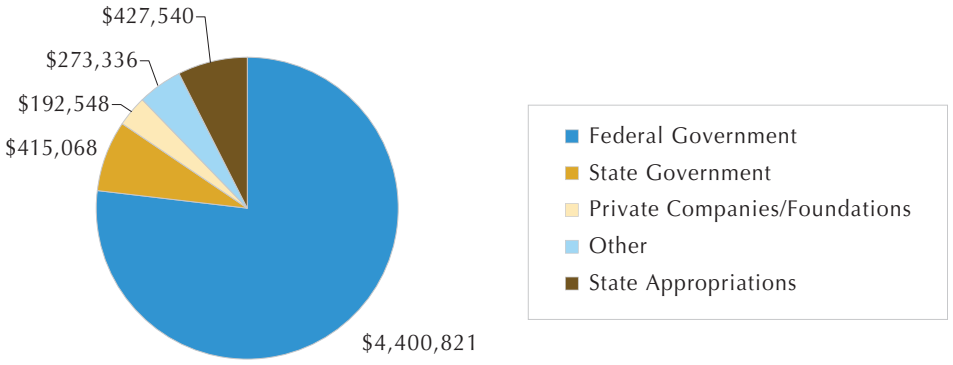
- CSYD scientists have been studying the various effects of Graduated Driver Licensing for over a decade. Previous studies have confirmed its benefits and have stimulated alterations to the system. Current work is examining the long-term effects of graduated licensing.
- CSYD researchers have written two comprehensive guides to support implementation of the AASHTO Strategic Highway Safety Program. These address 2 of the 22 identified high priority areas: young driver crashes and crashes involving alcohol.
- Studies currently under way or recently completed examine:
  - How and when effectively parents supervise beginning drivers.
  - The effects of requiring parents to spend a particular number of hours supervising teens as they first begin driving.
  - A novel approach to translating proven effective adolescent health policies — in this case a well-designed young driver licensing system — into practice, by working directly with state coalitions.
  - Cell phone use by high school age drivers and evaluation of policy and program interventions to reduce the prevalence of this behavior.
  - The effect of delaying high school start times (from 7:30 to 8:30 a.m. or later) on motor vehicle crashes among 16- and 17-year-old drivers in North Carolina and Kentucky.
  - How passengers, both peers and siblings, affect the driving of newly licensed teenagers.
  - How much newly licensed teenagers drive, how this 'driving exposure' can most validly be measured and whether better measurements are more useful than the traditional measure — time since licensing.
  - Effectiveness of a high visibility law enforcement intervention to reduce underage drinking in communities in Nebraska and North Carolina.



For each dollar appropriated to the center by the State of NC, HSRC staff generated $12 in research and program funding.

Financial Report

The total revenues for the past fiscal year, FY09, were $5.7 million. The majority (77%) of the revenues received were from contracts, grants and cooperative agreements with Federal Government agencies. State government and private-sector contracts comprise an additional 10% of the revenues.



Current and Previous Funding Agencies

U.S. and International Government Sponsors

- U.S. Department of Transportation
- Federal Highway Administration
- National Highway Traffic Safety Administration
- Transportation Research Board of the National Academies
- U.S. Centers for Disease Control and Prevention
- National Institutes of Health
- National Institute on Alcohol Abuse and Alcoholism
- National Institute of Child Health and Human Development
- U.S. Environmental Protection Agency
- University of North Carolina at Chapel Hill
- North Carolina Department of Transportation
- North Carolina Governor's Highway Safety Program
- California Department of Transportation
- Florida Department of Transportation
- New York Department of Transportation
- Kansas Bureau of Traffic Safety
- Kansas Turnpike Authority
- Land Transport New Zealand/The Beca Group
- Traffic Injury Research Foundation of Canada
- British Columbia Ministry of Transportation

Corporate and Foundation Sponsors

- Robert Wood Johnson Foundation
- AAA Foundation for Traffic Safety
- Insurance Institute for Highway Safety
- General Motors
- AAA Kansas
- Motorcycle Safety Foundation
- Society for the Advancement of Violence and Injury Research
- State Farm Insurance Company

Making It Happen: the people of HSRC

The people of HSRC are truly the foundation of the Center. Only through their creativity, passion, energy and expertise has the Center been able to achieve the success that it has.

Business Services

Dianne Blake
Senior Accounting Specialist

Patrick Fogarty
Technical Support Analyst

Matthew Glassman
Technical Support Analyst

Daniel Harper
Contract Specialist

Harvey Hou
Computer Systems Manager

Peggy James
Human Resources Manager

Jean Justice
Office Assistant

Paulette McKoy
Senior Contracts Specialist

Jeana Nickerson
Business Officer

Beverly Thomson
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Post-Doctoral Research Engineer

Pamela Barth, M.R.P.
Project Manager

Jennifer Bonchak
Public Relations Coordinator

Austin Brown, M.P.H., M.R.P.
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Tyler Currin
Data Collector

Michael Daul
Graphic Designer

Ryan Downs
Data Specialist, NCSRTS

Rob Foss, Ph.D.
Senior Research Scientist and Director, Center for the Study of Young Drivers

Dan Gelinne
Research Assistant

Zoe Gillenwater
Design Services Manager

Arthur Goodwin, M.A.
Senior Research Associate

Bill Hall, M.A.
Manager, Occupant Protection Program

Charles Hamlett
Research Assistant

David Harkey, M.S.C.E.
Director

Bill Hunter, M.C.E.
Senior Research Scientist

Katy Jones
Manager, Research Information and Education Programs

Rich Lytle
Web Applications Programmer

Lauren Marchetti
Director, National Center for Safe Routes to School

Carol Martell
Senior Applications Specialist

Natalie O'Brien, M.S.
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Jeremy Pinkham
Communications Coordinator

Nancy Pullen-Seufert, M.P.H.
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Craig Raborn
PBIC Technical Manager

Lewis Randall
Data Collector

Raquel Rivas
NCSRTS Communications and Marketing Manager

Eric Rodgman, M.P.H.
Senior Database Analyst

Laura Sandt, M.R.P.
Research Associate and PBIC Program Manager

Margaret Scully, M.R.P.
Special Projects Manager

Sarah Smith
Engineering Research Assistant

Raghavan Srinivasan, Ph.D.
Senior Transportation Research Engineer

Carl Sundstrom, M.S.C.E
PBIC Program Specialist

Donna Suttles
Research Assistant

Libby Thomas, M.S.
Research Associate

Mary Ellen Tucker, M.L.S.
Librarian

Carolyn Williams
Programmer Analyst

Charlie Zegeer, M.S.
Associate Director for Engineering and Planning, and PBIC Director

Working within the University

Being a part of a world-class university has brought opportunity for HSRC to coordinate a number of inter-institutional collaborations to further educate the University community on the Center's research.

THE UNIVERSITY *of* NORTH CAROLINA *at* CHAPEL HILL

Research Fellows

The following University of North Carolina affiliated researchers work with the HSRC on projects in the area of transportation safety and motor vehicle injury prevention.

Mary Altpeter
UNC Institute on Aging, UNC-Chapel Hill

Mike Bowling
Health Behavior/Health Education, UNC-Chapel Hill

Carolyn Crump
Health Behavior/Health Education, UNC-Chapel Hill

James Drennan
School of Government, UNC-Chapel Hill

James Emery
Health Behavior/Health Education, UNC-Chapel Hill

Kelly Evenson
Epidemiology, UNC-Chapel Hill

Herb Garrison
Brody School of Medicine, East Carolina University

Johnny Graham
Civil Engineering, UNC-Charlotte

Edd Hauser
Center for Transportation Policy Studies, UNC-Charlotte

Joseph Hummer
Civil Engineering, NC State University

Martin Kane
Civil Engineering, UNC-Charlotte

Laura Linnan
Health Behavior/Health Education, UNC-Chapel Hill

Lewis Margolis
Maternal & Child Health, UNC-Chapel Hill

Steve Marshall
Epidemiology, UNC-Chapel Hill

Noreen McDonald
City & Regional Planning, UNC-Chapel Hill

Greg Mears
Emergency Medicine, UNC-Chapel Hill

Daniel Rodriguez
City & Regional Planning, UNC-Chapel Hill

Nagui Rouphail
Institute for Transportation Research & Education, NC State University

John Stone
Civil Engineering, NC State University

Jeff Tsai
Institute for Transportation Research & Education, NC State University

Deborah Underwood
Transportation Institute, NC A&T State University

Anna Waller
Emergency Medicine, UNC-Chapel Hill

Dianne Ward
Nutrition, UNC-Chapel Hill

Advisory Board

The HSRC Advisory Board consists of the following group of distinguished professionals, and serves to assist in the identification of strategies and program direction for the UNC Highway Safety Research Center.

Dr. Herb Garrison — Chair
Director, Eastern Carolina Injury Prevention Program, Greenville

Dr. Alice Ammerman
Director, Center for Health Promotion & Disease Prevention, UNC-Chapel Hill

Dr. Jo Anne Earp
Professor, Health Behavior/Health Education, UNC-Chapel Hill

Dr. Edd Hauser, P.E.
Director, Transportation Policy Studies, UNC-Charlotte

Dr. Richard F. Pain
Transportation Safety Coordinator, Transportation Research Board

Dr. Nagui Rouphail
Director, Institute for Transportation Research & Education, N.C. State University

Dr. Carol W. Runyan
Director, Injury Prevention Research Center, UNC-Chapel Hill

Mr. John F. Sullivan III
Division Administrator, Federal Highway Administration

Dr. C. Michael Walton
Chairman, Department of Civil Engineering, University of Texas at Austin

Ex Officio Members

Dr. Tony Waldrop
Vice Chancellor for Research & Economic Development, UNC-Chapel Hill

Mr. David Harkey, P.E.
Director, UNC Highway Safety Research Center

2008–2009 Publications

This listing includes publications from fiscal year 2009 (July 1, 2008 to June 30, 2009)

2008

Baek, J. and Hummer, J.E. (2008). Collision models for multilane highway segments to examine safety of curbs. Transportation Research Record No. 2083, 128 – 136.

Council, F.M., Harwood, D.W., Potts, I.B., et al. (2008). Guidance for Implementation of the AASHTO Strategic Highway Safety Plan. NCHRP Report No. 500. Volume 21: Safety data and analysis in developing area emphasis plans. Washington, D.C.: Transportation Research Board.

Hunter, W.W. and Hunter, R.H. (2008). Walk wise, drive smart: a senior pedestrian safety program in Hendersonville, NC. Washington, DC: National Highway Traffic Safety Administration.

Hunter, W.W., Srinivasan, R., and Martell, C.A. (2008). Evaluation of a green bike lane weaving area in St. Petersburg, Florida. Tallahassee, FL: Florida Department of Transportation.

Lyon, C., Persaud, B.N., Lefler, N.X., Carter, D.L., Eccles, K.A. (2008). Safety evaluation of installing center two-way left-turn lanes on two-lane roads. Transportation Research Record 2075, 34 – 41.

National Center for Safe Routes to School. (2008). Assessing walking and bicycling routes: a selection of tools. Chapel Hill, NC: Author.

National Center for Safe Routes to School. (2008). Safe routes to school talking points. (in English and in Spanish). Chapel Hill, NC: Author.

National Center for Safe Routes to School. (2008). Three year program report. Chapel Hill, NC: Author.

National Center for Safe Routes to School. (2008). Tips for creating walking and/or bicycling maps. Chapel Hill, NC: Author

Pullen-Seufert, N.C., Hall, W.L. (2008). The art of appropriate evaluation: a guide for highway safety program managers. (Report Number HS-811 061). Washington, DC: National Highway Traffic Safety Administration.

Sandt, L.S., Gelinne, D., and Zegeer, C.V. (2008). Developing and implementing a pedestrian safety action plan. progress report: September 2004 – December 2007. Washington, DC: Federal Highway Administration.

Sandt, L.S., Schneider, R.J., Nabors, D., Thomas, L.J., Mitchell, C., Eldridge, R. J. (2008). A resident's guide for creating safe and walkable communities. (Report Number FHWA-SA-07-016). Washington, DC: Federal Highway Administration.

Srinivasan, R., Council, F.M., Lyon, C. Gross, F., Lefler, N., and Persaud. B. (2008). Safety effectiveness of selected treatments at urban signalized intersections. Transportation Research Record 2056, 70 – 76.

Srinivasan, R., Carter, D.L., Eccles, K.A., Persaud, B.N., Lefler N.X., Lyon C., and Amjadi, R. (2008). Safety evaluation of flashing beacons at STOP-controlled intersections.(Report no. FHWA-HRT-08-044). Washington, DC: Federal Highway Administration.

Srinivasan, R., Carter, D.L., Persaud, B.N., Eccles, K.A., Lyon. C. (2008). Safety evaluation of flashing beacons at stop-controlled intersections. Transportation Research Record 2056, 77 – 86.

Staplin, L., Lococo, K.H., Gish, K.W., and Martell, C. (2008). A pilot study to test multiple medication usage and driving functioning. (Report No. DOT HS 810 980). Washington, DC: National Highway Traffic Safety Administration.

Thomas, L.J., Srinivasan, R., Decina, L.E., and Staplin, L. (2008). Safety effects of automated speed enforcement programs: a critical review of international literature. Transportation Research Record 2078, 118 – 126.

Zegeer, C.V., Blomberg, R., Henderson, D., Masten, S., Marchetti, L., Levy, M.M., Sandt, L., Brown, A., Stutts, J., and Thomas L.J. (2008). Evaluation of Miami-Dade pedestrian safety demonstration project. Transportation Research Record No. 2073, 1 – 10.

Zegeer, C.V., Henderson, D., Blomberg, R., Marchetti, L., Masten, S., Fan,Y., Sandt, L., Brown, A., Stutts, J., and Thomas, L.J. (2008). Evaluation of the Miami-Dade pedestrian safety demonstration project. (Report no. HS 810 964). Washington, D.C.: National Highway Traffic Safety Administration.

2009

Committee on Research Priorities and Coordination in Highway Infrastructure and Operations Safety. (2009). Safety research on highway infrastructure and operations. improving priorities, coordination, and quality. special report 292. (F. M. Council, Chair). Washington, DC: Transportation Research Board.

Committee for the Strategic Highway Research Program 2. Implementation. (2009). Implementing the results of the second strategic highway research program. special report 296. (F.M. Council, Committee member).Washington, D.C.: Transportation Research Board.

Fischer, E.L., Rousseau, G.K., Turner, S.M., Blais, E.J., Engelhart, C.L., Henderson, D.R., Kaplan, J.A., Keller, V.M., Mackay, J.D., Tobias, P.A., Wigle, D.E., and Zegeer, C.V. (2009). The international technology scanning program summary report on pedestrian and bicyclist safety and mobility. (In-press). Washington, DC: Federal Highway Administration.

Foss, R.D., Goodwin, A.H., McCartt, A.T., Hellinga, L.A. (2009). Short-term effects of a teenage driver cell phone restriction. Accident Analysis & Prevention, (41)3, 419 – 424.

Goodwin, A.H. Hall, W.L., Raborn, J.C., Thomas, L.J. and Tucker, M.E. (2009). Countermeasures that work, fourth edition. (Report no. HS 811 081). Washington, D.C.: National Highway Traffic Safety Administration.

National Center for Safe Routes to School. (2009). Quarterly tracking report on federal SRTS program. Chapel Hill, NC: Author.

National Center for Safe Routes to School. (2009). Tips for engaging middle school students in safe routes to schools programs. Chapel Hill, NC: Author.

National Center for Safe Routes to School. (2009). Walk to school report 2008. Chapel Hill, NC: Author.

Ullman, G.L., Finley, M.D., Bryden, J.E., Srinivasan, R., and Council F.M. (2009). Traffic safety evaluation of nighttime and daytime work zones. NCHRP Report 627. Washington, DC: Transportation Research Board.

Zegeer, C.V, Sandt, L.S, Scully, M., Ronkin, M., Cynecki, M., Lagerwey, P. (2009) How to develop a pedestrian safety action plan (revised). (Report Number FHWA-SA-05-12). Washington, DC: Federal Highway Administration.

Please visit HSRC's Online Research Library to view full text articles and ordering information at http://www.hsrc.unc.edu/research_library.

Web Sites

HSRC maintains nearly 20 Web sites for various highway-safety related projects and tools. For a complete list of Center Web sites, please visit www.hsrc.unc.edu/websites. The majority of projects and information discussed within the HSRC Annual Report can be found within these Web sites.

Pedestrian and Bicycle Information Center

www.walkinginfo.org
www.bicyclinginfo.org
www.pedbikeimages.org

National clearinghouse of pedestrian and bicycle information about health and safety, engineering, advocacy, education, enforcement and access and mobility.

Highway Safety Information System

www.hsisinfo.org

Multi-state database that contains crash, roadway inventory and traffic volume data for a select group of states and urban centers.

National Center for Safe Routes to School

www.saferoutesinfo.org

Includes steps on starting a Safe Routes program, frequently asked questions, helpful links and a list of sample programs currently in place across the country.

Center for the Study of Young Drivers

www.csyd.unc.edu

Provides insight into why motor-vehicle crashes are the leading cause of death among teenagers and information on the research being conducted at the Center to investigate this issue.

NC Crash Data Query

www.hsrc.unc.edu/crash

A data analysis tool to create tables reflecting crash, vehicle and person information for crashes in North Carolina.

North Carolina Alcohol Facts

www.hsrc.unc.edu/ncaf

Provides statewide and county-specific data for North Carolina regarding DWI arrests and convictions as well as alcohol involvement in crashes.

North Carolina Child Passenger Safety Resource Center

www.buckleupnc.org

Information about North Carolina occupant restraint laws as well as tips for choosing and using child occupant protection.

National Child Passenger Safety Board

www.cpsboard.org

Provides program direction and technical guidance to states, communities and organizations as a means to maintain a credible, standardized child passenger training and certification program.

U.S. Walk to School

www.walktoschool.org

Information about Walk to School events in the USA, how to get involved and resources to help plan a walk in your community.

International Walk to School

www.iwalktoschool.org

Information about International Walk to School Month, recognized in October across the globe.

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