

SUMMER 2012

THE UNIVERSITY OF NORTH CAROLINA
HIGHWAY SAFETY RESEARCH CENTER

DIRECTIONS



NATIONAL BIKE MONTH

HSRC celebrates May with National
Bike to School Day, other events

Also in this issue:

- Teen cell phone use unaffected by restrictions, according to study
- Shared-lane markings keep cyclists safer in Miami Beach

Teen driver cell phone use unaffected by restrictions, despite awareness

In December 2006, North Carolina made it illegal for drivers under the age of 18 to use a cell phone – or any technology associated with a cell phone – while a vehicle is in motion. However, a study by the UNC Highway Safety Research Center’s (HSRC) Center for the Study of Young Drivers has found this restriction had no long-term effect on the behavior of teenage drivers. The study also found many teenage drivers may be shifting from talking on a cell phone to texting.

“The findings are discouraging on two fronts,” said HSRC senior research associate Arthur Goodwin. “Not only has the cell phone restriction been ineffective, but young drivers seem to be exchanging one potentially dangerous behavior – talking on a cell phone while driving – with something substantially more dangerous.”

Between 2006 and 2008, the researchers conducted observations of more than 18,000 teen drivers in North Carolina as well as South Carolina, which did not have a statewide cell phone restriction. In both states, there was a general decrease in cell phone use with no significant differences between the two states. Observers in North Carolina also tracked how teens were using their cell phone. Over that time period, there was a 24 percent decrease in teens talking on a phone while driving and a 39 percent increase in teens operating a cell phone manually (e.g., texting) while driving.



CENTER FOR THE STUDY OF Young Drivers

ONLINE

The full study, “Effect of North Carolina’s restriction on teenage driver cell phone use two years after implementation,” is available at bit.ly/CSYDstudy. A link to the previous article, as well as other research, can be found at www.csyd.unc.edu/about/published_research.html.

“...young drivers seem to be exchanging one potentially dangerous behavior – talking on a cell phone while driving – with something substantially more dangerous.”

Arthur Goodwin

HSRC senior research associate

A previous study conducted by HSRC in North Carolina four months after the cell phone restriction was enacted also showed no effect of the cell phone ban. However, in that study the lack of change

observed was not surprising since awareness of the restriction among teens was still growing. Now, thanks to information about the law being shared through driver education courses, the North Carolina Drivers Handbook, Department of Motor Vehicle licensing offices and other channels, awareness for the law is higher.

“This increase in awareness of the law is significant because it shows that teens are not following the restriction despite knowing about it,” said Goodwin. “Obviously something more than just passing laws banning cell phone use will be needed if we want to alter this behavior.”

The study’s researchers believe that perceived lack of enforcement may be one factor contributing to the ineffectiveness of the state’s cell phone restriction. They note that further research is needed on the effect of teenage driver cell phone restrictions in other states where there has been a more comprehensive effort to obtain compliance.

The study “Effect of North Carolina’s restriction on teenage driver cell phone use two years after implementation” was recently published in *Accident Analysis & Prevention*.



PHOTO BY JONATHON WEISENFELD

HSRC staffers gather at the Bolin Creek Trail to participate in Bike to Work Day on May 17.

HSRC celebrates National Bike Month

The UNC Highway Safety Research Center (HSRC) participated in many National Bike Month activities through its various centers, programs and activities.

Bike to Work Day

Twenty HSRC staffers participated in Bike to Work Day on May 17, meeting at nearby University Mall and riding approximately three miles to work along the Bolin Creek Trail. After the ride, the group gathered for breakfast before starting the work day.

Bike to School Day

On May 9, the first-ever National Bike to School Day exceeded expectations with 951 events in 49 states across the country. From Alaska to Florida, kids bicycled and walked to school to promote safer routes to school, cleaner air, healthier habits and to have an all-around good time. The national event was coordinated by the National Center for Safe Routes to School, in conjunction with the League of American Bicyclists' National Bike Month. Bike to School Day builds on the success of Walk to School Day, which is celebrated every October in all 50 states and more than 40 countries around the world.

BikeAbility

Just a few days before National Bike Month, HSRC staff took part in the Chapel Hill Parks and Recreation Department's BikeAbility event. The event offered children and adults with disabilities a chance to try adapted bicycles and practice safety skills. HSRC provided bike helmets and instructed many participants on how to correctly fit and adjust a helmet.



PHOTO BY CAROLINE DICKSON

The first National Bike to School Day, held May 9, promoted safer routes to school.



PHOTO BY PATTY HARRISON

HSRC provided helmets and instructed participants at Chapel Hill Parks and Recreation's BikeAbility event.

HSRC team improves safety for cyclists using shared-lane markings

When members of the Miami-Dade Metropolitan Planning Organization (MPO) examined bicycle-motor vehicle crashes along Washington Avenue, the main arterial traffic corridor near Miami Beach, they discovered a large number of bicycle “dooring” crashes – in which the door of a parked car is suddenly opened into the path of a bicyclist who is riding too close to the parking lane. In fact, between 2000 and 2009 (the latest data available from the MPO), 52 bicycle crashes were reported along the one mile stretch of Washington Avenue between 12th Street and Dade Blvd. Twenty one percent of those crashes involved a bicyclist striking the open car door of a parked vehicle. Often these situations cause injury to the bicyclist when he or she is struck by the vehicle door or, if the bicyclist swerves into the travel lane, when he or she is struck by a passing vehicle.

“In the absence of bicycle lanes, motorists often neglect to safely share the roadway with bicyclists, which can compel bicyclists to ride closer to parked motor vehicles,” said Bill Hunter, the principal investigator of the Highway Safety Research Center (HSRC) study. “Both ‘dooring’ situations and cyclists veering into traffic can be incredibly dangerous.”

To address this situation, the City of Miami Beach placed shared lane markings on a two-mile stretch of Washington



Shared-lane markings can help to prevent “dooring,” seen here.

ONLINE

For the full report, go to the Florida Department of Transportation’s website at bit.ly/sharedlane.

Avenue. Specifically, “bike and chevron” markings were placed in the center of the outside lane, approximately 13.5 feet from the curb to allow bicyclists tracking over the markings to be safely outside the parked vehicle door zone, but where they could also take control of the lane. HSRC researchers, including Hunter’s coauthors, Raghavan Srinivasan and Carol A. Martell, teamed up with the city to collect video data of bicycles and motor vehicles traveling along Washington Avenue before and after the installation of the shared lane

markings.

“The research shows that the shared lane markings improved safety by directing cyclists to move further away from parked cars outside of the car door zone,” said Hunter. “The markings also helped to remind drivers and cyclists that the roadways need to be shared.”

According to the HSRC team’s report, “Evaluation of Shared Lane Markings in Miami Beach, Florida,” the percentage of bicyclists positioned near parked vehicles decreased from 71 to 55 percent after the shared lane markings were installed. Finally, there was an increase of about 10.5 inches between bicycles and parked motor vehicles after the introduction of the shared lane markings – allowing bicyclists to ride outside of the “door zone.”

HSRC publications and presentations

HSRC researchers and staff regularly present and publish findings via transportation, safety, research, public health and other trade conferences and venues.

HSRC IN THE NEWS

The following is a highlight of recent media articles that include information and research from HSRC.

Road Worrier: Wrong-way drivers defy easy solutions
The News & Observer, July 17, 2012

Researchers say alcohol to blame for many wrong-way driving accidents
News 14 Carolina, July 16, 2012

The vexing issue of teens and cells
The Jacksonville Daily News, July 14, 2012

Bicyclists ride in memory of NC Mental Health Director
News 14 Carolina, July 11, 2012

Study: Teen drivers who text are more persistent, harder to catch
The News & Observer, July 11, 2012

VAMS director Ron Hughes to retire
ITRE Newsletter, June 13, 2012

Drivers, take note: It's trauma season
Wilmington StarNews, June 9, 2012

Scooter death brings questions about safety
WCTI, June 4, 2012

Safety firm preaches practice
Autonet.ca, March 30, 2012

Reading a print version? Find links at www.hsrc.unc.edu/news_room.

Recent conference presentations:

Foss, R.D. (2012). *Building Partnerships to Promote & Strengthen Graduated Driver Licensing*. 2012 Joint Annual Meeting of the Safe States Alliance and CDC Core Violence and Injury Prevention Program (May).

Foss, R.D. (2012). *Thinking Clearly About Graduated Driver Licensing: Is Your State's Teenage Driver Licensing System Stellar or Porous?* 2012 Joint Annual Meeting of the Safe States Alliance and CDC Core Violence and Injury Prevention Program (May)

Foss, R.D., Kirley, B., Goodwin, A., O'Brien, N., Harrell, S. (2012). *Investigating a Unique Motorcycle Crash Cluster and Planning Evidence-based Interventions*. 2012 Joint Annual Meeting of the Safe States Alliance and CDC Core Violence and Injury Prevention Program (May)

Articles published/accepted:

Goodwin, A.H., O'Brien, N.P. and Foss, R.D. (2012). Effect of North Carolina's Restriction on Teenage Driver Cell Phone Use Two Years After Implementation. *Accident Analysis & Prevention*, 48, 363–367. <http://dx.doi.org/10.1016/j.aap.2012.02.006>

Lan, B., Persaud N.B. (in press). Evaluation of Multivariate Poisson Log Normal Fully Bayesian Methods for Before-After Treatment Effect Analysis, *Journal of Transportation Safety & Security*.

O'Brien, N.P., Foss, R.D., Goodwin, A.H. and Masten, S.V. (2012). Supervised hours requirements in graduated driver licensing: Effectiveness and parental awareness. *Accident Analysis & Prevention (in press)*. <http://dx.doi.org/10.1016/j.aap.2012.05.007>

Sandt, L., Pullen-Seufert, N., LaJeunesse, S. and Gelinne, D. (2012). Leveraging the Health Benefits of Active Transportation: Creating an Actionable Agenda for Transportation Professionals. *TR News*. 280, 18-21.

To learn more about current and past research publications of HSRC, browse www.hsrc.unc.edu/research_library.

CMF Clearinghouse seeks volunteers for focus groups

The Federal Highway Administration's Crash Modification Factors (CMF) Clearinghouse team is currently seeking volunteers to discuss CMFs, how they are used in road safety and design decisions, and the CMF Clearinghouse website, www.cmfclearinghouse.com.

Crash Modification Factors are used to estimate how crashes will be affected by changes in the road environment and the CMF Clearinghouse is designed to help transportation engineers and other safety professionals easily search for CMFs and supporting documentation to identify the most appropriate countermeasure for their safety needs. Even if you've never used



the CMF Clearinghouse before, we need your valuable insight into how you use CMFs – or would like to use CMFs in the future. The goal for these sessions is to help identify potential improvements to the CMF Clearinghouse and supporting database.

How can you help?

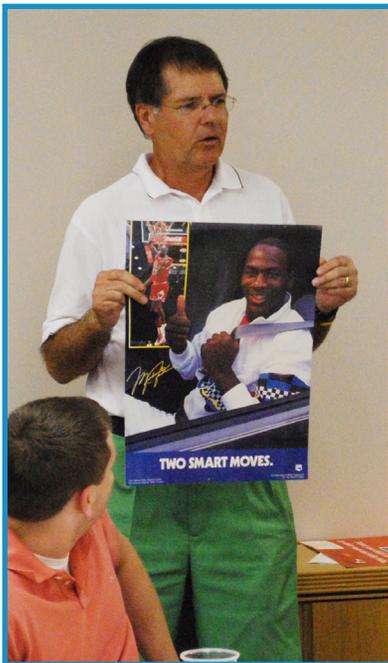
Participants are being recruited for each of the following hour-long discussion groups (All sessions will be held from

2-3 Eastern on the date specified.):

- **Group 3** – Tuesday, Aug. 7 (Participants: Design engineers who do not routinely use the CMF Clearinghouse)
- **Group 4** – Tuesday, Aug. 21 (Participants: Local agency staff who do not routinely use the CMF Clearinghouse)

The discussions will be conducted via conference call and webinar software. All participants will be offered free admission to CMFs training courses from the National Highway Institute. To learn more about this effort and to volunteer, please contact Daniel Carter at daniel_carter@unc.edu or 919-962-8720.

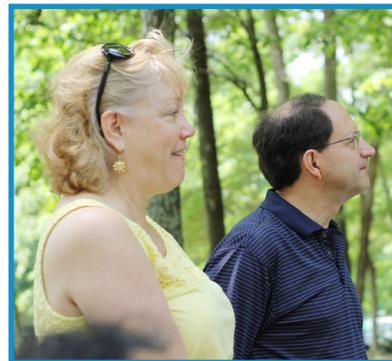
HSRC staff milestones



Bill Hunter shows off the Center's work with Michael Jordan during his retirement lunch in June.

Retirement

After four decades, Bill Hunter said his goodbyes to the Highway Safety Research Center (HSRC) staff at a retirement lunch in June 2012. Bill's journey with HSRC began in 1972, focusing on roadway and roadside safety. For a period of time, Bill served as the Center's associate director. Most recently, Bill's research has concentrated on evaluating the effectiveness of bicycle facilities to improve safety for bicyclists and motorists. Recent treatments evaluated include "blue bicycle lanes" used at intersections in Oregon and shared lane markings applied in several cities throughout the nation. Congratulations Bill, and thank you for your service to HSRC!



Celebrating 25 years

Two long-time HSRC staff members recently celebrated 25 years as staff at the University of North Carolina (UNC). Charlie Zegeer and Jean Justice celebrated this accomplishment with colleagues at the HSRC staff picnic in May. Thank you, Charlie and Jean, for your hard work and dedication to HSRC, UNC and the entire state!

Remembering Mary Ellen Tucker

Mary Ellen Tucker, a much-loved member of the UNC Highway Safety Research Center (HSRC) family passed away in April. Many colleagues joined Mary Ellen's friends and family at her funeral in Albemarle, N.C. The following is an abbreviated version of a eulogy given by HSRC director David Harkey.

"I am honored to be of service to the Highway Safety Research Center." Those were Mary Ellen's written words to me this past year and it sums up her dedication to her work and to her colleagues. Mary Ellen took pride in our library and was always willing to show new staff and visitors the array of available resources. I think her greatest joy as a librarian, though, was providing service to our staff or to visiting students and faculty. It was not uncommon to walk by her office and see a student sitting in an old blue chair beside her desk and the two of them engaged in a conversation about their research or library needs.

In addition to all of her professional responsibilities, Mary Ellen was a vital part of life at our center. First, she was our resident gardener. She was also a big part of any social event we would host at the Center. She never hesitated to volunteer and never missed an opportunity to contribute. Mary Ellen also enjoyed her life away from the office – a lesson that many of us need to learn. She was active with her friends and family, home gardening, pets, and her martial arts.

Mary Ellen – life at the center



Mary Ellen joined the HSRC staff in dressing in costume for a 2011 special event.



Mary Ellen never missed an opportunity to contribute to Center events, including the HSRC Chili Cook-Off.

will not be the same without you. We will miss all that you contributed both personally and professionally to each of our lives. We will always remember your kindness and friendship, and your dedication to the center, the university and staff, faculty and students. And we will hold onto those memories of your smile,

your laughter and your constant good cheer. We love you and, in the words of one of our staff, "may your spirit be forever in bloom."

If you are interested in a reading the full version of the eulogy, please contact HSRC communications coordinator Patty Harrison at harrison@hsrc.unc.edu.



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