

# Research in Action

A bimonthly e-newsletter from the Center for Injury Research and Prevention at The Children's Hospital of Philadelphia

Volume 5, Issue 6, December 2011



## Car Seats Protect Overweight Kids, Too

A new study conducted by the Center for Injury Research and Prevention at CHOP found no association between children's weight and their risk of crash-related injury when seated in an appropriate child safety seat or belt-positioning booster seat. The findings, published online this month in *Pediatrics*, were based on an analysis of nearly 1,000 1- to 8-year-old children involved in crashes and suggest that children, regardless of their weight, are optimally protected in a crash as long as they are restrained according to the most recent recommendations from the [American Academy of Pediatrics \(AAP\)](#).

"Given that nearly 32 percent of children in the United States are categorized as overweight or obese, and motor vehicle crashes are the leading cause of death and injury for all children, we wanted to better understand how these two threats to children's health interact," says lead author Mark Zonfrillo, MD, MSCE, an attending emergency physician at CHOP, an investigator with CIRP's Epidemiology team, and an associate professor of Pediatrics at the Perelman School of Medicine at the University of Pennsylvania.

The paper's results also reinforce the important role pediatricians and family physicians play in making sure their patients are well-protected in vehicles. During each visit where height and weight are evaluated, they should counsel parents to check their child's measurements against their child's safety seat and to refer them to [www.chop.edu/carseat](http://www.chop.edu/carseat) and their local certified child passenger safety technicians for more information and guidance.

[Read the New York Times "Wheels" blog.](#)

[Read the study abstract.](#)

[Visit www.chop.edu/carseat.](http://www.chop.edu/carseat)

## Focus On:

### Student Opportunities at CIRP

Alec McGinley, a junior in the College of Arts and Sciences at the University of Pennsylvania and part of the Center's inaugural [Research Experiences for Undergraduates \(REU\) program](#), recently traveled to Arlington, VA to present his research. One of 73 students chosen to present at the 2011 Conference of REU Student Scholarship, McGinley exemplifies the National Science Foundation-funded REU program's mission to support active research participation by undergraduate students. In addition to McGinley, CIRP's summer 2011 REU program included seven exceptional students from schools around the country who worked side-by-side with researchers. Their injury prevention research projects spanned the fields of engineering, behavioral science, and epidemiology.

McGinley's research project during his time at CIRP was on the Chair's Initiative, *Minds Matter: Improving Pediatric Concussion Management*, a two-year grant from the Department of Pediatrics at CHOP to CIRP. He worked with the team to quantify the state of concussion care at CHOP and elsewhere with the goal of developing evidence-based interventions to improve concussion management within the CHOP Care Network. For the opportunity to attend the Conference of REU Student Scholarship, McGinley and the other CIRP REU students created detailed presentations on their summer research

## Teens with High-functioning

## Autism Spectrum Disorders Want to Drive & Do

A new study conducted by CIRP researchers and funded by the [Center for Child Injury Prevention Studies \(CChIPS\)](#), a National Science Foundation Industry/University Cooperative Research Center at CHOP, found that among a sample of 300 15- to 18-year-olds with a higher functioning autism spectrum disorder (HFASD), all of whom were old enough to drive in their state, two-thirds are currently driving or plan to drive. The study, which will be published in the January issue of the *Journal of Developmental and Behavioral Pediatrics*, surveyed the parents of these teens.

After analyzing their responses, the researchers determined the following predictors for driving among this teen population: age 17 or older; enrollment in full-time regular education; plans to attend college; previous employment; parent who taught another teen to drive; and inclusion of driving-related goals in individualized education plan (IEP).

The findings suggest that parents of teens with HFASDs would benefit from guidance in deciding if driving is the right choice for their individual family. Readiness to drive can be difficult to assess, and parents should be encouraged to seek the help of their child's physician and in some cases, an occupational therapist or driving instructor.

"As a clinician who specializes in children with disabilities, I was interested to find that so many teens with high functioning autism spectrum disorders want to drive and do," says Patty Huang, MD, a developmental and behavioral pediatrician at CHOP and the lead author of the study. "We need to help them. Establishing a few indicators for these teens that will likely have an interest in driving is the first step in developing targeted strategies and interventions to support them and their families."

[Read the study abstract.](#)

[Read a Letter to the Editor in \*Annals of Emergency Medicine\*.](#)

[Read about Teens With Special Needs and Driving.](#)

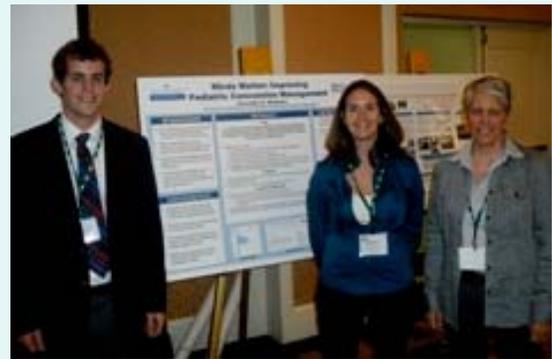
## Greening Up Urban Blight Can Improve Health Outcomes

A significant drop in gun assaults and vandalism occurs when vacant lots are cleared of debris and planted with grass and other greenery, according to a study recently published in the *American Journal of Epidemiology* that looked at 4,436 lots that were "greened" over the past 10 years in Philadelphia.

Residents in certain sections of the city also reported exercising more and feeling less stressed after the lots were reclaimed and beautified. Funded by the [Philadelphia Collaborative Violence](#)

projects. After presenting to the Center's staff, CIRP leadership nominated McGinley to represent CIRP, and he was later selected by the Council on Undergraduate Research to present at its national meeting and to attend the Conference.

McGinley said his experiences at CIRP opened his eyes to the impact of injury research. "My work at CIRP has given me insight into the enormous behind-the-scenes effort involved in creating the policies and interventions that prevent or lessen the impact of injury, something few people get the chance to see. This experience has illuminated pathways to making research and injury prevention a major part of my career. I hope to attend medical school, and my project mentors have introduced me to the possibility of research going hand in hand with clinical practice."



**Pictured left to right are REU student Alec McGinley, Meghan Marsac, PhD, CIRP's director of training, and Carol Murray, MSS, MLSP, CIRP's training coordinator, at the 2011 Conference of REU Student Scholarship.**

## Call for Applications for Summer Internship Program

From January 3-31, 2012, CIRP will be accepting applications for its 2012 Research Experiences for Undergraduates (REU) program. Funded by the National Science Foundation, this 10-week paid summer internship program provides under-represented undergraduate students with mentorship and hands-on research experience in the fields of engineering, behavioral science, and epidemiology as applied to pediatric injury science. In addition to working one-on-one with a CIRP mentor on an assigned project, each REU student attends meetings, speaking

[Prevention Center \(PCVPC\)](#), the study was led by Charles C. Branas, PhD, PCVPC Information Core co-director and associate professor of Epidemiology at the Perelman School of Medicine at the University of Pennsylvania. The research is the first to look at the health effects of transforming vacant lots with greenery.

[Read the Philadelphia Inquirer article.](#)

[Read the press release.](#)

[Read the study abstract.](#)

## National Teen Driver Safety Week: Five Years of Building Awareness

National Teen Driver Safety Week (NTDSW) has gained momentum on a national level in building awareness of teen driver safety. Now in its fifth year, the week increased its impact, with over 675 communities and 41 states participating in activities designed to get people talking about how to prevent teen crashes.

“We’ve been tracking simple benchmarks for National Teen Driver Safety Week since 2007, and we’re impressed by the grassroots movement and continued media support,” says Suzanne Hill, director of Advocacy and Outreach at CIRP. “Large corporations, non-profit groups, hospitals, and federal, state, and local government use NTDSW to engage their local networks and grow the teen driver safety movement.”

Media coverage also grew by 16 percent over 2010 coverage, with more than 4,000 news stories about teen driving safety running during a two-week period (before and during NTDSW). *USA Today*, *Redbook*, *MSN Money* and the *Chicago Tribune* were high impact outlets that specifically promoted NTDSW. Many articles focused on the importance of helping parents to support their teens while they learn to drive and more than two-thirds of the news stories promoted Graduated Driver Licensing (GDL).

[Start planning now for National Teen Driver Safety Week 2012.](#)

[Learn more about the history of National Teen Driver Safety Week.](#)

## CChIPS Continues to Grow

The Center for Child Injury Prevention Studies (CChIPS) at CHOP, a [National Science Foundation Industry/University Cooperative Research Center](#) hosted its biannual Industrial Advisory Board (IAB) meeting October 12th to 14th in Philadelphia. Members of the IAB convened to review progress report presentations for the 2011-2012 research year and to vote on Letters of Intent for next year’s projects. Also in attendance

events, workshops, and social events while being immersed in an interdisciplinary research center.

For more information on the program, including a full project list, eligibility requirements, and other important deadlines, please visit the [Research Experiences for Undergraduates \(REU\) program](#) page. Please share information about this unique opportunity with appropriate students, professors, and parents.

## Zonfrillo Chosen for AAAM Committee



Mark Zonfrillo, MD, MSCE, an attending physician at CHOP and an investigator with CIRP’s Epidemiology team, has been selected to join [the Association for the Advancement of Automotive Medicine Abbreviated Injury Scale \(AIS\) Content Committee](#). The AIS is the internationally accepted tool for ranking injury severity. As part of the committee, Dr. Zonfrillo will be involved in ensuring the proper updating and development of new AIS versions.

Visit Us On 

You can now access a variety of our evidence-based video resources on YouTube. The Center has three channels: **ChildPassengerSafety**, with a lineup of important child passenger safety (CPS) videos, including a podcast explaining the American Academy of Pediatrics’ new CPS recommendations and our popular crash simulations, **teendriversource**, with a wide array of teen driver safety-related segments, including a series for parents called “Communicating With Your Teen About Driving,” and **AfterTheInjury**, with videos supporting content found on

were the Site Director John Bolte, associate professor of Mechanical Engineering and Anatomy, and members of the second academic site for CChIPS at The Ohio State University. Sponsoring industry members continue to play an integral role in setting the research agenda for CChIPS. Minnesota HealthSolutions, a small business affiliate, was welcomed as the newest CChIPS Industrial Advisory Board Member.

CChIPS was also selected by the National Science Foundation (NSF) to participate in its "Behind the Scenes, Behind the Science" video series. On November 1st, CChIPS directors and students, along with industry members, traveled to NSF headquarters in Arlington, VA to film a panel discussion highlighting the value of CChIPS in front of a live audience. The conversation centered on the strong collaboration between academia and industry, as well as the importance of training future injury research scientists.

[Learn more about The Center for Child Injury Prevention Studies \(CChIPS\).](#)



On October 25th two members of the CHOP team were honored to be invited to witness the signing of Lacey's Law by Pennsylvania Governor Tom Corbett, along with sponsors, victims' families, and teen driver safety stakeholders that all contributed years of effort to educate and support policymakers in their deliberations. Lacey's Law restricts the number of passengers for teens with provisional driver licenses, makes teens riding in teen-driven vehicles without seat belts a primary offense, and adds 15 hours to the current 50 hours of pre-test supervised driving practice required to obtain a junior license. Pictured above seated left to right are: State Rep. Kathy Watson (R-144th Dist.), Governor Tom Corbett, and State Senator John Wozniak (D-35th Dist). Standing left to right are: Austin Laudenslager, Pennsylvania SADD Student of the Year, Felicity DeBacco-Erni of the PA DUI Association, Kent McElhattan, of the National Safety Council, Suzanne Hill of CHOP, Joe Ucciferro of the National Safety Council, Richard

AfterTheInjury.org, the award-winning website to help children recover after an injury. Video content on all three channels is updated regularly. Be sure to check back frequently.

[Subscribe to the ChildPassengerSafety channel.](#)

[Subscribe to the teendriversource channel.](#)

[Subscribe to the AfterTheInjury channel.](#)

## Support Our Center

The dedicated doctors, researchers, and outreach professionals at the Center for Injury Research and Prevention at CHOP are fighting to save the lives of children of all ages. But we need your help. To make a secure, on-line donation, please visit [The Children's Hospital of Philadelphia Foundation Donation Page](#) and select "Center for Injury Research and Prevention" in the drop-down menu. You also may telephone the CHOP Foundation at 267-426-6500. For more information on our research and programs, please visit [www.chop.edu/injury](http://www.chop.edu/injury).

## The Center's Websites

The Center for Injury Research and Prevention ([www.chop.edu/injury](http://www.chop.edu/injury))

Keeping Kids Safe in Crashes – English language ([www.chop.edu/carseat](http://www.chop.edu/carseat))

Cómo Mantener a los Niños Fuera de Peligro Durante los Choques – Spanish language ([www.chop.edu/asientos\\_infantiles](http://www.chop.edu/asientos_infantiles))

Philadelphia Collaborative Violence Prevention Center (PCVPC) ([www.phillyviolenceprevention.org](http://www.phillyviolenceprevention.org))

After The Injury: Helping Parents Help Their Kids Recover ([www.AfterTheInjury.org](http://www.AfterTheInjury.org))

Ride Like A Friend ([www.ridelikeafriend.org](http://www.ridelikeafriend.org))

teendriversource.org ([www.teendriversource.org](http://www.teendriversource.org))

Gmerek, of Gmerek Government Relations Inc., and Flaura Koplín Winston, MD, PhD of CHOP.

## Recent Center Publications

Blume HK, Vavilala MS, Jaffe KM, Koepsell TD, Wange J, Temkin N, Durbin DR, Dorsch A, and Rivara FP. Headache After Pediatric Traumatic Brain Injury: A Cohort Study. *Pediatrics*. December 5, 2011 (online).

Branas CC, Cheney RA, Macdonald JM, Tam VW, Jackson TD. [A Difference-in-Differences Analysis of Health, Safety, and Greening Vacant Urban Space](#). *American Journal of Epidemiology*. November 2011.

Durbin DR, Curry A, Myers RK. [Development of a US Child-focused Motor Vehicle Crash Surveillance System: A Pilot Study](#). *Annual Proceedings of the Association for the Advancement of Automotive Medicine*. 2011.

Huang P, Kao T, Curry AE, and Durbin D. [Factors Associated With Driving in Teens With Autism Spectrum Disorders](#). *Developmental and Behavioral Pediatrics*. December 2011 (online).

Kent RW, Lopez-Valdes FJ, Dennis NJ, Lessley D, Forman J, Higuchi K, Tanji H, Ato T, Kameyoshi H, and Arbogast KB. Assessment of a Three-Point Restraint System with a Pre-tensioned Lap Belt and an Inflatable, Force-limited Shoulder Belt. *Stapp Car Crash Journal*. Volume 55, November 2011.

Seacrist, T, Arbogast KB, Maltese MR, Garci-Espana JF, Lopez-Valdes FJ, Kent RW, Tanji H, Higuchi K, and Balasubramanian S. [Kinetics of the Cervical Spine in Pediatric and Adult Volunteers During Low Speed Frontal Impacts](#). *Journal of Biomechanics*. November 2011.

Zonfrillo MR, Elliott MR, Flannagan CA, Durbin DR. [Association Between Weight and Risk of Crash-related Injury for Children in Child Restraints](#). *Pediatrics*. November 28, 2011.

## Recent Center Presentations

Clawson K, Kassam-Adams N, March S, Kenardy J, Kohser K, Hildenbrand AK, Winston FK, and Marsac ML. Coping with Acute Trauma: Pilot Data Assessing the Acceptability and Functionality of a Web-based Preventive Intervention Tool (Poster Presentation). International Society for Traumatic Stress Studies Annual Meeting. Baltimore, MD. November 5, 2011.

Kassam-Adams N, Kenardy J, Delahanty DPalmieri P, Rork K, Kohser K, Nixon R, Meiser-Stedman R, Marsac M, Le Brocque R, Landolt M, and Bui E. Early Predictors of Traumatic Stress in Children Exposed to Acute Trauma: Findings from the PACT

Archive (Poster Presentation). Annual Meeting of the International Society for Traumatic Stress Studies. Baltimore, MD, November 5, 2011.

Marsac ML, Hildenbrand AK, Kohser K, Jackson L, Barakat L, Vinsel A, and Alderfer MA. Promoting Adjustment to Pediatric Cancer: Initial Development of An Innovative, Developmentally Sensitive Tool. Traumatic Stress, Coping, and Health Outcomes in Children Facing Medical Events Symposium at the International Society for Traumatic Stress Studies Annual Meeting. Baltimore, MD. November 5, 2011.

Matthews E. Comparison of Head and Neck Kinematics and Electromyography Response for Low-Speed Frontal Impacts with Pediatric and Adult Volunteers. 39th International Workshop on Human Subjects for Biomechanical Research. Dearborn, MI. November 6, 2011.

McDonald C, Tanenbaum JB, Lee YC, and Winston FK. Measuring Young Novice Driver Performance in a Simulator: A Pathway to Prevention of Motor Vehicle Crashes. American Public Health Association Annual Meeting and Exposition. Washington, DC. October 31, 2011.

McDonald C and Guerra T. Participatory Action Research. University of Pennsylvania School of Nursing. Philadelphia, PA. November 2, 2011.

Nance ML. Stop the Madness. CHOP Grand Rounds/Core Lecture Series. November 17, 2011.

Vaughn NA, Jacoby S, Williams T, Guerra T, Thomas NA, and Richmond T. Valuing Youth Voices: Digital Animation as a Novel Translation of Violence Prevention Research Findings to Effectively Communicate with Youth Audiences. American Public Health Association Annual Meeting and Exposition. Washington, DC. October 31, 2011.

Williams TA, Thomas NA, Vaughn N, and Fein J. Developing of Communication Strategies in a Community-based Participatory Research (CBPR) Framework to Increase Community Awareness and Engagement in Youth Violence Prevention Research (Poster Presentation). American Public Health Association Annual Meeting and Exposition. Washington, DC. October 31, 2011.

Winston FK. The Impact of Cloud Computing and Online Solutions on mHealth. mHealth Summit. Washington, DC. December 5, 2011.

Winston FK. Evidence-based "e-medicine": A WISER Approach. University City Science Center. Philadelphia, PA. October 24, 2011.

Zonfrillo MR, Winston FK. Current Experiences of Pennsylvania Child Fatality Review Teams (Platform Presentation). American Public Health Association Annual Meeting. San Francisco, CA. October 27, 2011.

