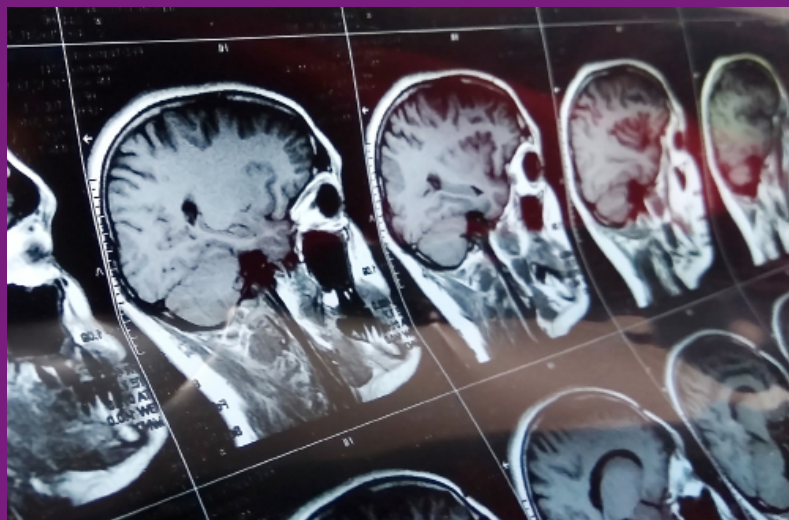


The Impact of Injury Control Research Centers:

Advancing the Field of Injury and Violence Prevention — An Update



**Centers for Disease
Control and Prevention**
National Center for Injury
Prevention and Control

Disclaimer: The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention.

Contents

4	Report Summary and Purpose
5	Section I: A Brief Introduction to the ICRC Program
6	An Overview of the Injury Control Research Centers
11	Section II: Descriptions of Key Achievements of Each ICRC Funded Through the 2012 and 2014 Funding Cycles
12	Columbia University: Columbia Center for Injury Science and Prevention
20	Icahn School of Medicine at Mount Sinai: Mount Sinai Injury Control Research Center
25	Johns Hopkins University: Center for Injury Research and Policy
33	Research Institute at Nationwide Children's Hospital: Center for Injury Research and Policy
41	University of Iowa Injury Prevention Research Center
49	University of Michigan Injury Prevention Center
57	University of North Carolina Injury Prevention Research Center
63	University of Pennsylvania: Penn Injury Science Center
71	University of Rochester Medical Center: Injury Control Research Center for Suicide Prevention
77	West Virginia University: Injury Control Research Center
84	Section III: A List of Core Research Projects for the ICRCs of the 2019 Funding Cycle
85	Core Research Projects of the 2019 Funding Cycle Injury Control Research Centers
87	Appendix A: Research Topic Areas

Report Summary and Purpose

Summary

Injury Control Research Centers (ICRCs) put research into action to prevent injuries and violence. Underlying all other ICRCs' core functions is their ability to bring together multiple stakeholders from disparate disciplines, perspectives, and agencies to tackle critical public health problems. They advance the field of injury and violence prevention through leadership that combines their injury topic and core areas of expertise—research, outreach, and training.

The National Center for Injury Prevention and Control (NCIPC) within the Centers for Disease Control and Prevention (CDC) funded seven ICRCs from 2012–2019 (2012 funding cycle) and three ICRCs from 2014–2019 (2014 funding cycle). These 10 ICRCs had a major impact on the field of injury and violence prevention. They conducted groundbreaking research, contributed to local and state policies, and trained hundreds of future researchers and practitioners. This report describes key achievements from their annual and interim progress reports from 2012–2019.

Purpose

The purpose of this report is to:

- Update the *2016 Impact of Injury Control Research Centers: Advancing the Field of Injury and Violence Prevention* report
- Describe the impact of the ICRC program during the 2012 and 2014 funding cycles
- Discuss key achievements of each ICRC in the core areas of research, outreach, and training
- Highlight the research projects of the 2019 funding cycle

The report is organized into the following sections:

- **Section I:** A brief introduction to the ICRC program, a list of CDC-funded ICRCs from 2012–2024, an overview of the impact of the ICRCs, and a description of the research priority areas for each funding cycle of the ICRCs
- **Section II:** Descriptions of key achievements of each ICRC funded through the 2012 funding cycle and 2014 funding cycle
- **Section III:** A list of core research projects for the ICRCs in the 2019 funding cycle

Section I: A Brief Introduction to the ICRC Program

An Overview of the Injury Control Research Centers

Overview

CDC's National Center for Injury Prevention and Control (NCIPC) funds [Injury Control Research Centers](#) (ICRCs) to study ways to prevent injuries and violence and to work with community partners to put research findings into action. The ICRC program forms a national network of 10 comprehensive academic research centers that focus on three core functions—research, outreach, and training.

ICRCs are more than just the sum of their parts. Underlying their three core functions is their ability to bring together multiple stakeholders from different disciplines, perspectives, and agencies to tackle critical public health problems. They serve as a hub for coordinating networks and facilitating strong partnerships because they have a strong administrative core of staff and resources.

Origin of ICRCs

The ICRC program has grown substantially since its inception. It began with four centers in 1987, with each awarded approximately \$500,000 annually. The program expanded to 10 centers in 2019, with each awarded approximately \$800,000 annually. ICRCs are typically funded for five years through a competitive review process. ICRCs work on NCIPC [research priorities](#) in injury and/or violence prevention and control.

About This Report

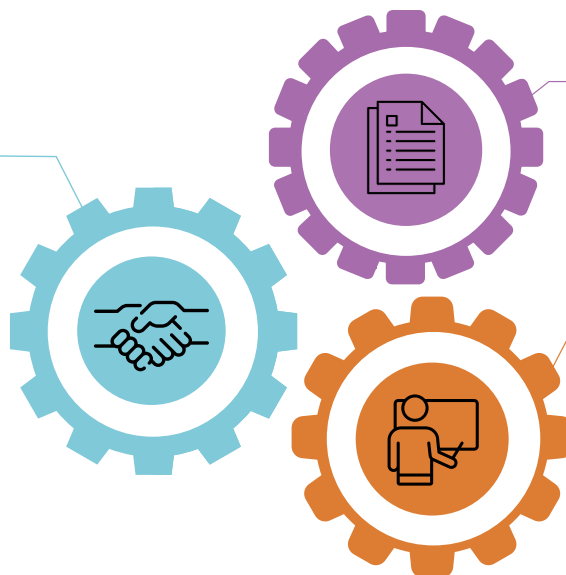
This report highlights selected achievements from two funding cycles of the ICRCs: the 2012 funding cycle (2012–2017 and additional two-year supplemental funding) and the 2014 funding cycle (2014–2019). A total of 10 ICRCs were funded during these two cycles. The ICRCs reported their accomplishments each year through annual progress reports (APRs) and interim progress reports (IPRs). This report presents findings from a review of approximately 100 APRs and IPRs. The findings demonstrate the value and successes of the ICRC program in the field of injury and violence prevention. ICRCs successfully trained hundreds of researchers, developed productive partnerships with practitioners and organizations, and conducted meaningful research that has informed and strengthened prevention efforts.

This report is not intended for direct comparison of ICRCs. Each ICRC has unique research expertise and leadership that continues to advance the field of injury and violence prevention through impactful research, outreach, and training.

CDC-Funded Injury Control Research Centers 2012–2024

ICRCs ARE **MORE** THAN JUST THE SUM OF THEIR PARTS

Conduct **OUTREACH**, technical assistance, and networking to disseminate and translate research findings, which leads to increased awareness and influences action.



Conduct **RESEARCH**, which leads to the identification of solutions.

Conduct **TRAINING**, which leads to skilled practitioners and researchers who can take action to prevent violence and injuries.

2012 Funding Cycle (2012–2019)

[Columbia Center for Injury Science and Prevention](#)

Columbia University

[Mount Sinai Injury Control Research Center](#)

Icahn School of Medicine at Mount Sinai

[Center for Injury Research and Policy](#)

Research Institute at

Nationwide Children's Hospital

[University of Iowa Injury Prevention Research Center](#)

The University of Iowa

[Injury Control Research Center for](#)

Suicide Prevention

University of Rochester

[The University of Michigan Injury Prevention Center](#)

University of Michigan

[Injury Control Research Center](#)

West Virginia University

2014 Funding Cycle (2014–2019)

[Center for Injury Research and Policy](#)

Johns Hopkins University

[Injury Prevention Research Center](#)

University of North Carolina

[Penn Injury Science Center](#)

University of Pennsylvania

2019 Funding Cycle (2019–2024)

[Columbia Center for Injury Science and Prevention](#)

Columbia University

[Injury Prevention Research Center at Emory](#)

Emory University

[Center for Injury Research and Policy](#)

Johns Hopkins University

[Center for Injury Research and Policy](#)

Research Institute at

Nationwide Children's Hospital

[University of Iowa Injury Prevention Research Center](#)

The University of Iowa

[University of Michigan Injury Prevention Center](#)

University of Michigan

[Injury Prevention Research Center](#)

University of North Carolina

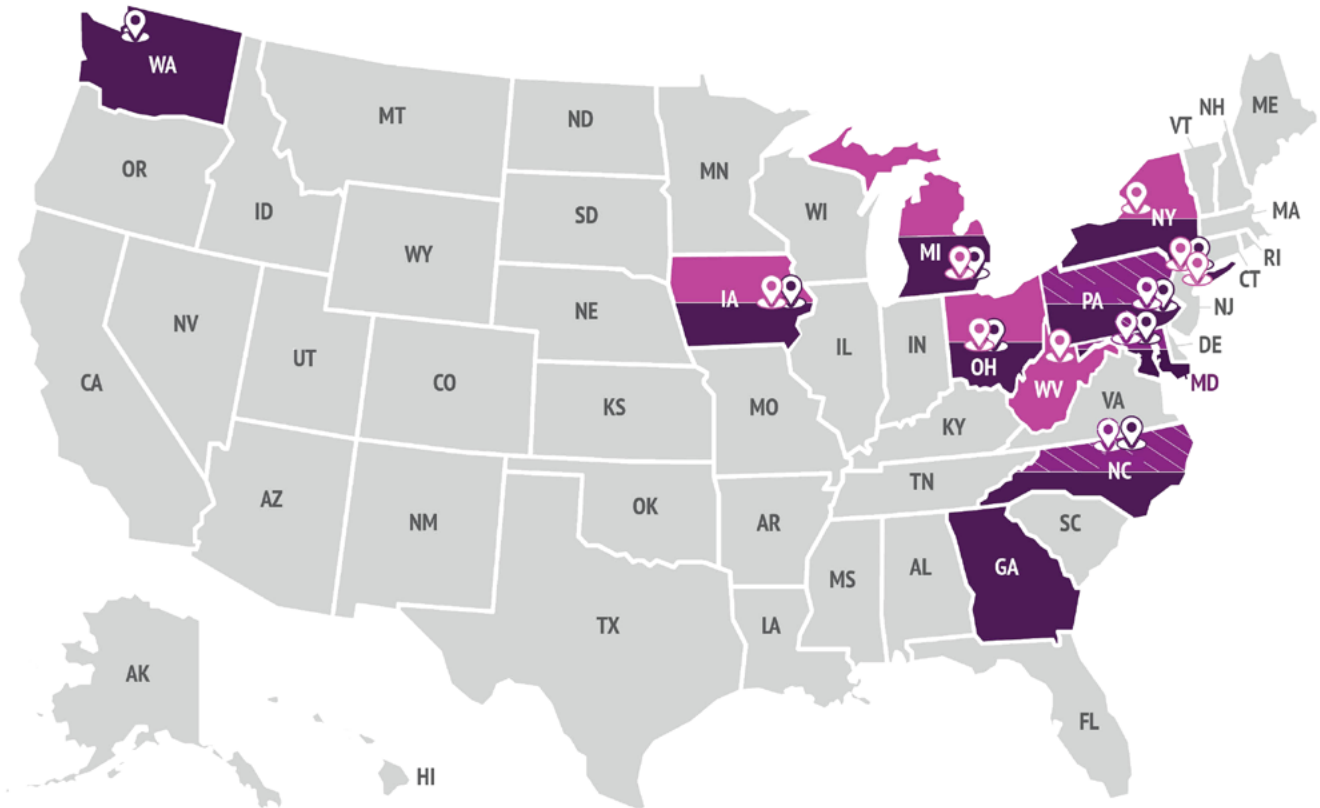
[Penn Injury Science Center](#)

University of Pennsylvania

[Harborview Injury Prevention & Research Center](#)

University of Washington

CDC-Funded Injury Control Research Centers by Funding Cycle, 2012–2024



2012 ICRC Funding Cycle	
Columbia University	University of Michigan
Icahn School of Medicine at Mt. Sinai	University of Rochester Medical Center
The Research Institute at Nationwide Children's Hospital	West Virginia University
University of Iowa	

2014 ICRC Funding Cycle
Johns Hopkins University
University of North Carolina at Chapel Hill
University of Pennsylvania

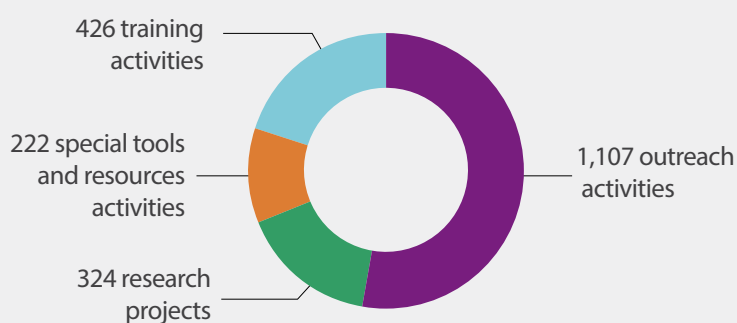
2019 ICRC Funding Cycle	
Columbia University	University of Michigan
Emory University	University of North Carolina at Chapel Hill
Johns Hopkins University	University of Pennsylvania
The Research Institute at Nationwide Children's Hospital	University of Washington/Harborview Medical Center
University of Iowa	

Studying the Impact of the ICRCs

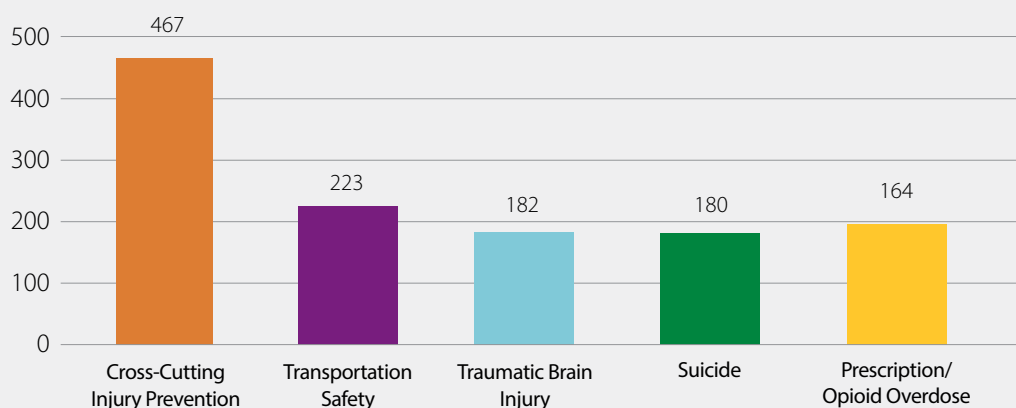


The ICRCs submit IPRs and APRs each year that document progress on core research, outreach, and training activities. This report draws information from over 100 IPRs and APRs from the 2012 and 2014 funding cycle grantees. ICRCs reported over 2,500 accomplishments related to creating partnerships, conducting research, outreach, and training, and developing special tools and resources. These accomplishments were reviewed to remove redundancies. In addition to the [NCIPC research priorities](#), ICRCs worked on several other injury and violence prevention research topic areas. For the purpose of this report, some of the topic areas were grouped into categories. Details of these research categories are presented in [Appendix A](#). The final analysis identified 1,107 outreach activities, 426 training and education activities, 222 special tools and resources activities, and 324 research projects reported by the ICRCs from 2012 to 2019.

**Total Number of Activities by Core Areas
Across all ICRCs from 2012–2019**



**Top Five Research Topics by Number
of Activities Across all ICRCs from 2012–2019**



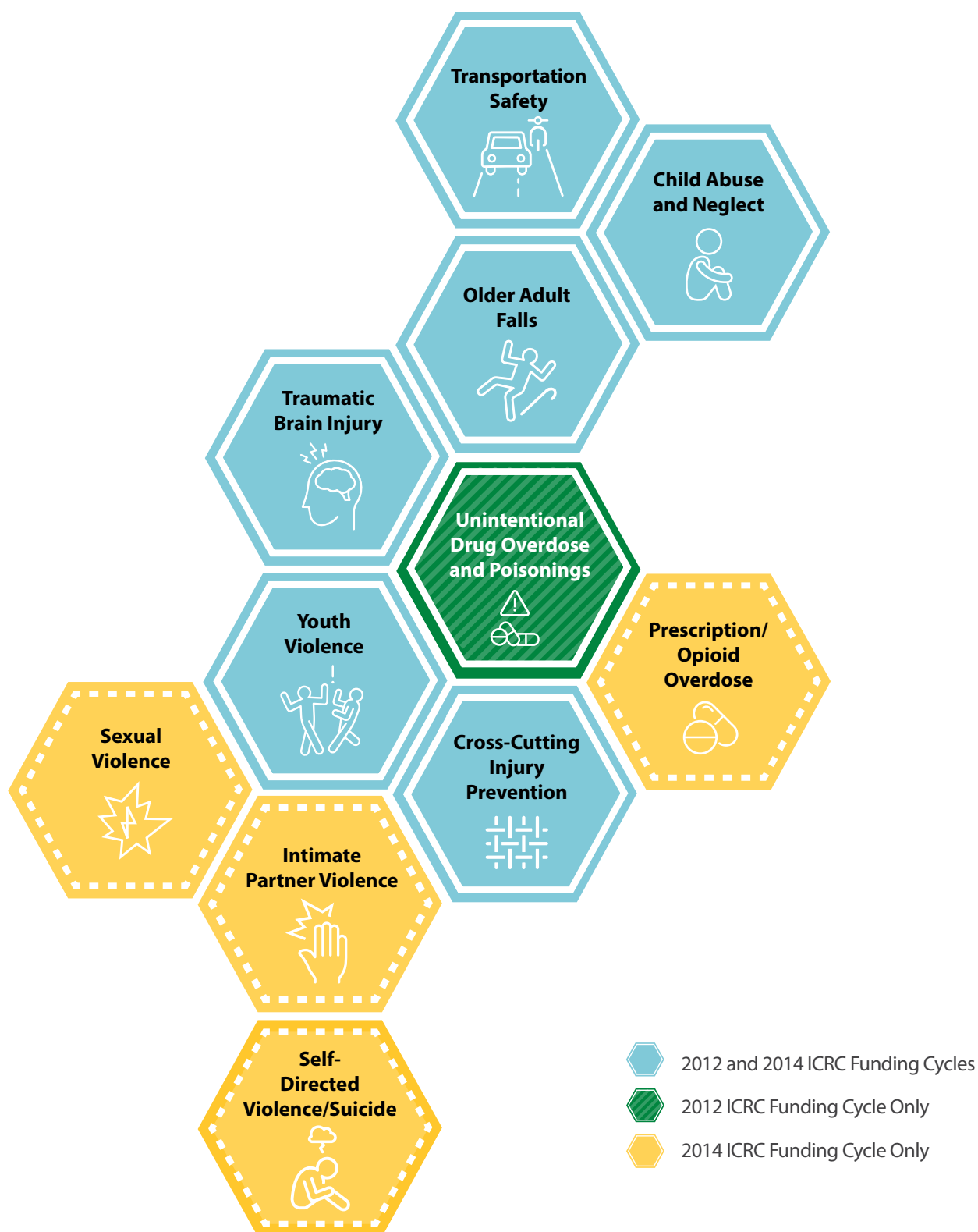
3,200+ Trainees

ICRCs provided training and professional development to over 3,200 undergraduates, masters students, PhD students, postdoctoral fellows, and junior faculty from 2012–2019.

3,300+ Publications

ICRC staff published over 3,300 publications on injury and violence prevention in peer-reviewed journals from 2012–2019.

Major Research Topic Areas by Funding Cycle



Section II: Descriptions of Key Achievements of Each ICRC Funded Through the 2012 and 2014 Funding Cycles

Columbia University: Columbia Center for Injury Science and Prevention



Director
Guohua Li, DrPH, MD

The Columbia Center for Injury Science and Prevention at Columbia University (CCSIP) aims to create and apply “Science in Service to Safety.” Its mission is to improve population health by reducing morbidity and mortality from unintentional and intentional injuries through knowledge creation, dissemination, and translation of scientific discoveries, development of innovative and multilevel training and education programs, and promotion of best practices and evidence-based interventions. The Center has diverse faculty with expertise in epidemiology, health policy, emergency medicine, psychiatry, surgery, pediatrics, law, economics, education, engineering, and biostatistics. CCSIP collaborates with communities, governments, and nongovernmental organizations to accomplish the following goals:

1. Conduct and disseminate innovative, cutting edge research
2. Streamline the time from discovery to population scale up
3. Increase accessibility to new discoveries and existing best practices with potential to exert real-world impact
4. Train injury prevention researchers and practitioners

Research Expertise



Adverse Childhood Experiences (ACEs)



Older Adult Falls



Transportation Safety



Drug Overdose Prevention

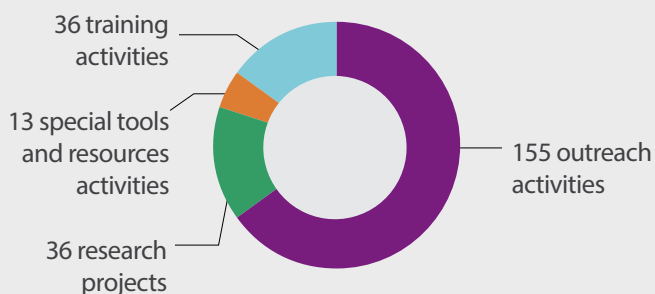


Suicide

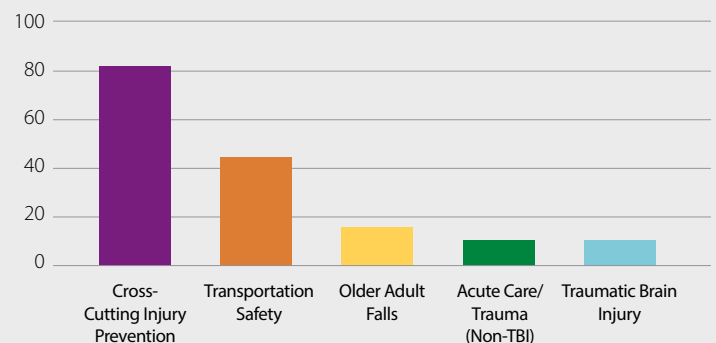


Violence

Total Number of Activities by Core Area by CCISP from 2012–2019



Top Five Research Topics by Number of Activities by CCISP from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,456,282

Funding Cycle: 2012

Contact



www.cuinjuryresearch.org



[www.twitter.com/@columbia_ccisp](https://twitter.com/@columbia_ccisp)



www.facebook.com/cuepidemiology

Adapting Key Questions on a Screening Tool for an Older Driver Cohort Helps Strengthen Falls Prevention Efforts



Principal Investigator:
Thelma Mielenz, PT, PhD, MS

Falls account for the highest proportion of preventable injury among older adults. CDC developed the [Stopping Elderly Accidents, Deaths, and Injuries](#) (STEAR) algorithm to screen older adults for fall risk. Researchers adapted the STEADI algorithm with two levels (at risk and not at risk) to an existing cohort of older adult drivers in this study. The adapted STEADI key questions for fall risk screening yielded fair predictive ability for falls over two years and were strongly associated with future falls for older adult drivers. The adapted STEADI key questions can be applied to existing community-based cohorts to strengthen falls screening and prevention at a population level.

Kannoth, S., Mielenz, T. J., Eby, D. W., Molnar, L. J., Jia, H., Li, G., et al. (2021). Adapted stopping elderly accidents, deaths, and injuries questions for falls risk screening: predictive ability in older drivers. *American Journal of Preventive Medicine*, 61(1), 105–114.

Students Are Safer After the Implementation of Safe Routes to School Program



Principal Investigator:
Charles DiMaggio, PhD

Unsafe road conditions pose safety risks to children who bike and walk to school. This study evaluated the effectiveness of the Safe Routes to Schools (SRTS) program in preventing injuries among school-age children. The SRTS program provided a total of \$1.12 billion to departments of transportation in all 50 states and the District of Columbia to introduce safety improvements that promote safer walking and biking routes to school. This evaluation analyzed crash records for school-age children to assess pedestrian injuries at schools in 18 states that received SRTS funding from 1995 to 2010. Researchers found a nearly 44% decline in pedestrian injuries among school-age children at SRTS schools compared to schools without SRTS improvements. The findings suggest that SRTS is effective in reducing pedestrian injuries among school-age children.

DiMaggio, C., Frangos, S., & Li, G. (2016). National safe routes to school program and risk of school-age pedestrian and bicyclist injury. *Annals of Epidemiology*, 26(6), 412–417.

Prescription Drug Monitoring Programs Did Not Impact the Amount of Opioids Dispensed Across the United States Through 2008



Principal Investigator:
Guohua Li, PhD

The annual number of prescriptions for opioid analgesics in the United States almost tripled, from about 76 million to almost 210 million, from 1991 to 2010. The U.S. federal government developed state prescription drug monitoring programs (PDMPs) in 2002 to help curb and control prescription drug abuse. This study sought to understand the impact of the PDMP on opioid dispensing and overdose mortality. Researchers reviewed PDMP data across the 32 states that implemented a PDMP. PDMPs had no impact on the overall number of dispensed opioids per capita. However, results for individual states varied greatly. Nine states recorded significantly fewer opioids dispensed after implementing their PDMPs, 14 states reported no significant change, and eight states experienced significant increases in dispensed opioids. Implementation of PDMPs did not reduce drug overdose mortality in most states through 2008.

Brady, J. E., Wunsch, H., DiMaggio, C., Lang, B. H., Giglio, J., & Li, G. (2014). Prescription drug monitoring and dispensing of prescription opioids. *Public Health Reports*, 129(2), 139–147.

Transportation Outreach Helps Bring a Falls Behavior Program to Urban Older Adults with Mobility Disability



Principal Investigator:
Thelma Mielenz, PT, PhD, MS

Falls are the leading cause of injury-related death in adults over 65. Every year, one out of every four adults in this age group experiences a fall. A Matter of Balance/Volunteer Lay Leaders (AMOB/VLL) is a program that seeks to reduce falls among older adults through a series of activities, including strength and balance training. In this study, AMOB/VLL tested adding a transportation program to see if providing more comprehensive assistance to seniors improved program delivery for older adults living in an urban, underserved community. This project created a way to reach older adults who were less mobile and did not typically visit settings where they would receive important falls-related information, such as senior centers. Participants reported that the course was rewarding and improved their mobility and confidence. The combination of a transportation program and a behavioral intervention can be scaled and replicated to provide other important health information to older adults.

Mielenz, T. J., Durbin, L., Hertzberg, F., Noble-Hernandez, D., & Sorensen, J. A. (2019). Fall risk reduction program paired with a transportation program in an underserved, urban minority community: a qualitative evaluation. *Journal of Aging Research*, 1–8.

Study on Rear Seat Belt Use in Teens Helps Inform New Legislation



Principal Investigator:
Joyce Pressley, PhD, MPH

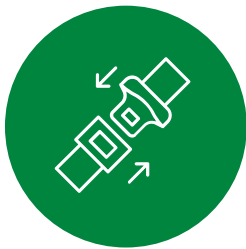
Until 2020, New York State had a notable gap in its rear seat belt use for motor vehicles. Teens traveling with fully licensed drivers could ride unbelted when in the rear seat of a vehicle. Researchers used data from the Fatal Analysis Reporting System to investigate factors linked with teen use of seat belts in rear seats. Researchers also looked at injuries associated with belted and unbelted rear-seated teens traveling in a car. This study found that most rear-seated teens who died in motor vehicle accidents were unrestrained. The presence of an enforced rear-seat belt law was associated with significantly higher belt use. Researchers also found that complementary laws in secondary law states—such as graduated driver licensing laws (GDL) with primary enforcement for restraint of all passengers—increased rear-seated teen belt wearing to the level of states with primary laws. However, once teens aged out of the GDL age range, seat belt wearing returned to prior levels observed in states without primary law states. These findings were included in testimony to the New York State Assembly before the passage of a law that closed this gap.

Pressley, J. C., Gatollari, H. J., & Liu, C. (2016). Rear-seat seatbelt laws and restraint use in rear-seated teen passengers traveling in passenger vehicles involved in a fatal collision on a U.S. roadway. *The Journal of Trauma and Acute Care Surgery*, 81(4 Suppl 1), S36–S43.

44%
reduction in
injuries

Supporting Regulations for Better Pedestrian Safety: Evaluation of the Safe Routes to School Program

Ensuring the safety of children as they walk to and from school was formally recognized as a national priority in 2005 with federal funding of the SRTS program. New York City implemented the first program in the United States eight years earlier, followed shortly by many other cities. Little was known about SRTS's impact on pedestrian injuries until recently. CCISP developed a well-designed evaluation that documented a 44 percent reduction in injuries among children walking to school. CCISP's research, outreach, and training have supported policy changes, including the enactment of a city-wide 25 mile-per-hour speed limit around schools and the adoption of New York City regulations for better pedestrian safety. [Read how this project prevented motor vehicle deaths.](#)



Preventing Motor Vehicle Injury: Educating New York State Legislators on Traffic Safety

For over a decade, legislators in New York State failed to pass motor vehicle legislation to upgrade restraint laws to national best practice standards. The large gaps in restraint laws left several age groups at risk. For example, toddlers aged 1-2 years were not required to be in a rear-facing seat, teens and adults aged 16 years and older could ride unrestrained while in the back seat, and passengers in the back seats of taxis and vehicles-for-hire were exempt from wearing a seat belt. CCISP conducted research using national and state-specific data for each of these populations, presented findings in outreach meetings in Albany, New York, and laid a scientific foundation for what would eventually become successful incremental strengthening of New York State restraint laws. CCISP educated legislators about research findings associated with two restraint bills and provided written testimony. [Read how this project informed new legislation.](#)



Preventing Child Injury: Injury Free Coalition for Kids

CCISP houses the National Program Office of the Injury Free Coalition for Kids. The coalition includes more than 42 sites located in level one trauma centers. The coalition's [website](#) contains information about a wide variety of injury prevention efforts taking place at member sites and offers resources that include safety tips, fact sheets, PowerPoint presentations, and videos demonstrating best practices in injury prevention. The website also shares information about member sites, their contacts, and a speaker's bureau that notes experts by region. The website includes information about National Injury Prevention Day, a day designed to raise awareness about the burden of injury and ways to address it. CCISP coordinates the coalition's national injury prevention conference that brings together medical providers, social workers, injury prevention coordinators, community outreach staff, and public health researchers to share injury prevention's latest techniques and most recent research. [Read how this project is preventing child injuries.](#)



Reducing Infant and Child Burn Injuries: Legislation Banning the Sale of Novelty Cigarette Lighters

CCISP researchers raised awareness of the dangers of novelty cigarette lighters, which contribute to child burn injuries and residential fires across the country. New York State was the major manufacturing and distribution hub of novelty lighters for national and international markets. CCISP engaged with partners at a CDC-funded Core State Violence and Injury Prevention Program statewide meeting to address the risks posed by novelty cigarette lighters. CCISP gathered data and partnered with state hospitals, the American Academy of Pediatrics, Safe Kids, the Injury Free Coalition for Kids, and others on a collaborative education campaign. The campaign targeted both members of the public and New York State legislators. CCISP's work helped inform legislation that banned both the sale and manufacturing of novelty cigarette lighters in New York State.

Curriculum Development and Implementation



- Developed the **Epidemiology and Public Health Summer Institute Program** to provide foundational knowledge and applied skills for advancing population health research through intensive short courses.
- Created the evidence-based **A Matter of Balance/Volunteer Lay Leaders (AMOB/VLL)** program to train community leaders on older adult fall prevention strategies. Fifty coaches have been trained in the program.
- Hosted an **Injury Seminar Series** to collaborate with local and state injury prevention practitioners on work in progress and provide practicum opportunities for students.

Mentorship of Researchers



- Mentored **137 students and postdoctoral fellows** over the 7-year funding period.
- Established an **exploratory research program** in the Center for Injury Epidemiology and Prevention that funded 29 short-term, preliminary research projects conducted by new researchers entering the field of injury control and experienced injury researchers taking novel approaches to existing research problems.
- Recognized two graduating students with an **injury epidemiology award** for their innovative research.

App



Prosthetic Use for Mobility Prognoses/ Tips for Injury Prevention Strategies

Developed Prosthetic Use for Mobility Prognoses, a health screening app for patients with lower limb loss to access and receive recommendations for fall prevention using Tips for Injury Prevention Strategies.

Database



New York State County-Level Transportation Injury and Enforcement Database for Alcohol-Related Hospital and Emergency Department Motor Vehicle Injury

Built a database for counties in upstate New York and Long Island containing county-level rates of total motor vehicle injury, death, and alcohol-related motor vehicle injuries treated in the emergency department and/or hospital. See [Select Outreach Highlights](#) to read about the contributions of CCISP to New York's rear-seat belt law.

Tools



Longitudinal Research on Older Adult Drivers Assessment Tools

Developed both self-report and administered assessment tools for [Longitudinal Research on Older Adult Drivers](#). Tools were designed to assess cognition, driving, health behavior, and mental, social, and physical health, including performance-based motor skills and perception. A five-year cohort study consisting of 2,990 older adult drivers was launched in 2017.

Interactive Pedestrian Injury Mapper

Developed an interactive mapping tool to 1) document the location where an individual was hit by an automobile, 2) trace the route the individual walked in the time preceding the hit, and 3) allow individuals to provide basic demographic data and data about the collision.

Approaches to Small Area Spatial Analysis of Injury Data Using Nested Laplace Approximations

Developed a set of online materials consisting of step-by-step code and descriptions of the analyses of New York City pedestrian data. These materials form the basis for surveillance techniques proposed to the City of New York Department of Transportation as part of a surveillance plan for the city's [Vision Zero efforts](#). Vision Zero is New York City's citywide initiative to eliminate death and serious injuries from traffic incidents.

Website



National Academy of Sciences, Engineering, and Medicine, Transportation Research Board, Occupant Protection Committee Website

Developed a website to stimulate and disseminate transportation occupant safety research and review and identify related research needs. CCISP convened meetings on related topics for experts from government, academia, and auto safety engineers.

Icahn School of Medicine at Mount Sinai: Mount Sinai Injury Control Research Center



Director

Wayne A. Gordon, PhD

The Mount Sinai Injury Control Research Center (MS-ICRC) was housed within the Brain Injury Research Center of Mount Sinai, Department of Rehabilitation Medicine of the Icahn School of Medicine at Mount Sinai. The mission of the MS-ICRC was to reduce the impact of traumatic brain injuries (TBIs), to improve quality of life after injury, and to prevent violence in high-risk populations (with TBIs or not). The MS-ICRC focused on three areas:

1. Building the knowledge base
2. Developing and evaluating interventions
3. Supporting the expansion of systematic screening to identify individuals with “hidden” TBIs

Individuals with hidden TBIs are often unaware that the long-term symptoms they are experiencing are probably due to one or more TBIs. Consequently, they may not understand the importance of seeking appropriate treatment or help, which exacerbates their injury-related problems and symptoms. MS-ICRC also works to improve quality of life after a TBI, extend the life span of people injured after age 40, and reduce violence and criminal behavior among youth who are at high risk of injury.

Research Expertise

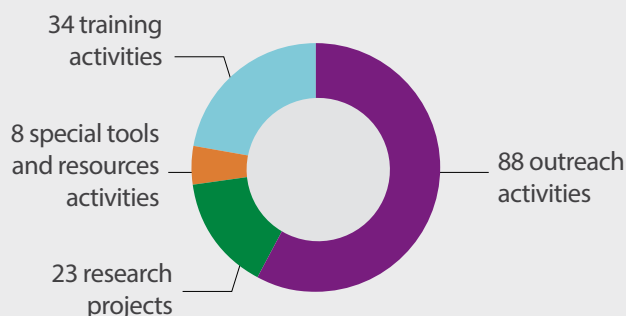


Traumatic Brain Injury (TBI)

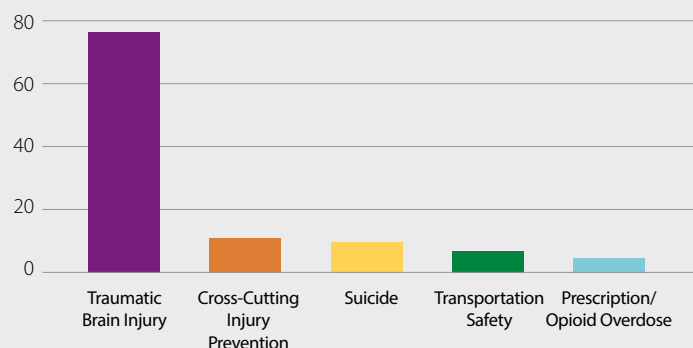


Youth Violence

**Total Number of Activities by
Core Area by MS-ICRC from 2012–2019**



**Top Five Research Topics by Number
of Activities by MS-ICRC from 2012–2019**



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,571,151

Funding Cycle: 2012

Contact



www.twitter.com/IcahnMountSinai



www.facebook.com/IcahnMountSinai

Young Adults in the Correctional Programs Are Likely to Report a History of TBI



Principal Investigator:
Wayne Gordon, PhD

MS-ICRC researchers analyzed the data from the Texas Traumatic Brain Injury Juvenile Justice Pilot Screening Program to understand the impact of TBIs on criminal behavior in young adults. This project was a collaboration with the Texas Office of Acquired Brain Injury. Over 4,000 young adults (age 22 and younger) were screened using the Brain Injury Screening Questionnaire at the Texas Juvenile Justice Department. This study is the first to examine TBI data from young offenders in correctional programs. MS-ICRC found that TBIs were common in young offenders, with 40% of the sample of young adults reporting one or more blows to the head. Of these young adults, 44% met the criteria for mild-TBI and 23% for moderate-severe TBI. Researchers suggested that earlier identification of TBIs in children could help prevent criminal behavior.

Gordon, W. A., Spielman, L. A., Hahn-Ketter, A. E., and Sy, K. (2017). The relationship between traumatic brain injury and criminality in juvenile offenders. *The Journal of Head Trauma Rehabilitation*, 32(6), 393–403.

Concussions Impact Student-Athletes On and Off the Field



Principal Investigator:
Kristen Dams-O'Connor, PhD

There is a lack of research on the impact of sports concussions on female athletes and athletes in sports other than American football. MS-ICRC led a study to research the history of concussions before and during college among male and female student-athletes at St. John's University in New York City. Researchers examined participants yearly, from 2009 to 2016, to identify the consequences of concussions on academic performance, postcollege employment, alcohol and substance use, and mood. Researchers created a web-based protocol that other colleges can use to create their College Athlete Concussion Registry. This registry is used to explore the long-term impacts of sports concussions. Data from this tool may advance research on TBI and inform safer concussion policies.

The Short-Term Executive Plus Intervention Proves to be Successful Among Young Adults



Principal Investigator:
Wayne Gordon, PhD

Researchers are evaluating the impact of a behavioral intervention to reduce criminal offenses and violent crimes among 350 young adults with and without TBI on parole at the El Paso Juvenile Justice Center in Texas. This study translates an intervention that the MS-ICRC developed for an adult TBI population called STEP (Short-Term Executive Plus) for use with young adults at risk for criminal behavior. The study, called Youth STEP (Y-STEP), has proven effective in reducing rates of crime among young adults. Interim analysis indicates that youth participating in Y-STEP had a 44% reduction in recidivism (relapse into criminal behavior).

Cantor, J., Ashman, T., Dams-O'Connor, K., Dijkers, M. P., Gordon, W. A., Spielman, L. et al. (2014). Evaluation of the short-term executive plus intervention for executive dysfunction after traumatic brain injury: a randomized controlled trial with minimization. *Archives of Physical Medicine and Rehabilitation*, 95(1): 1–9.

1,200+
subscribers

Disseminating Information about TBI: Quarterly e-newsletter

MS-ICRC launched a quarterly e-newsletter in April 2014 to deliver information to people affected by TBI. Readers include people who have sustained TBIs, their caregivers, healthcare professionals, researchers, and students. They provide information on available resources, news articles, and educational materials about TBI. Additionally, the e-newsletter highlights published and ongoing research in the field, translating research findings into brief fact sheets that all audiences can easily understand. The e-newsletter is distributed quarterly to over 1,200 subscribers. [Read about the newsletters.](#)



Providing Resources for People with Brain Injuries: TBI-Related Resources on the MS-ICRC Website

The MS-ICRC [website](#) provides resources for people with brain injuries, their loved ones, and professionals in the TBI community. These resources include answers to frequently asked questions about brain injury, information about students with TBI, and professional tools for documenting and treating TBI.

Specific resources include:

- Treatment manuals for professionals
- Screening and assessment tools for professionals
- Resources for kids with TBI
- Informational videos
- Brain injury FAQs

6
recommendations
for policy change

Addressing TBIs in Youth: Recommendations for Revising the Current NYS Concussion Management and Awareness Act

MS-ICRC worked with the Brain Injury Association of New York State (NYS) to develop recommendations for revising the current NYS Concussion Management and Awareness Act. The group proposed six recommendations to the NYS legislature for action, such as 1) expanding the act to include non-public schools and all NYS competitive/travel youth sports, 2) mandating concussion teams in all school districts, and 3) requiring annual education in concussion management for medical directors of each school district.



Gathering Better Information about Deceased TBI Patients: Verbal Autopsy

MS-ICRC used a verbal autopsy research method to gather health information about TBI patients who survive their injuries and then die. Verbal autopsy involves talking to the patient's family about the patient's health in the year before the patient died. MS-ICRC worked with the TBI Model System Centers to implement the verbal autopsy research method. This method improved the Centers' clinicians' and researchers' understanding of the importance of monitoring post-TBI health, and they are learning more about post-TBI health challenges. [Read about the project.](#)

Select Training and Education Highlights

Icahn School of Medicine at Mount Sinai:
Mount Sinai Injury Control Research Center

Curriculum Development and Implementation



- Developed a **training program for high school and college volunteers** to teach them about research. Volunteers have opportunities to participate as research assistants and learn a variety of approaches to studying TBI.
- Launched **PlaySafe, a comprehensive pediatric injury prevention program** that focuses on primary prevention and treatment of sports injury and concussion in youth in the New York City area. Over 100 physicians attended a continuing medical education course on concussion management.
- Developed a **training program for medical students and early career health care providers**. The program includes didactic education on TBI for medical school students, a residency program in physical medicine and rehabilitation, a pre-doctoral internship for clinical psychology students, and a postdoctoral fellowship in TBI rehabilitation research and clinical neuropsychology.

Mentorship of Researchers



- Mentored **23 doctoral and postdoctoral fellows** over the 7-year funding period.
- Developed a **predoctoral externship program** on brain injury rehabilitation research.
- Mentored fellows who have **contributed to 33 peer-reviewed papers** in the TBI rehabilitation field since graduation from the program.
- Supported **six clinical research coordinators** working in TBI to conduct their own studies and participate in other research.

Select Special Tools and Resources Highlights

Icahn School of Medicine at Mount Sinai:
Mount Sinai Injury Control Research Center

Database



TBI Model Systems Database

Analyzed the TBI Model Systems (TBIMS) national database to determine injury-related predictors and identify risk factors of both anxiety and suicidality in TBI survivors. The TBIMS sites play a pivotal role in building the national capacity for high-quality treatment and research for persons with TBI, their families, and the communities in which they reside.

Needs Assessment



Interview for Community Assessment of Need

Developed a unique needs assessment that documents an individual's needs from a person-centered perspective, based on individual preferences and priorities for living in the community. The Interview for Community Assessment of Need asks respondents to rate the importance of and desire for change in 27 life areas, then asks about specific desired changes in priority areas.

Questionnaire



Brain Injury Screening Questionnaire

Developed a questionnaire to address the issue of unidentified, or hidden, TBI. Unidentified TBI occurs when a patient is unaware of a causal link between one or more blows to the head and the symptoms/challenges that persist as a result of injury, such as changed mental status. It could be a head injury that occurred recently or long ago. The questionnaire is used to determine TBI history, symptoms, and the likelihood that the two are related. The Brain Injury Screening Questionnaire seeks to reduce the consequences of undiagnosed or untreated TBI.

Training



Short-Term Executive Plus Training Manual

Developed a free training manual to support providers who serve people with brain injuries. The training includes modules that focus on problem-solving and emotional regulation. Developed five training videos to ensure sustainability and facilitate the adoption of the program by clinicians.

Johns Hopkins University: Center for Injury Research and Policy



Director

Andrea C. Gielen, ScD, ScM

The theme of the Johns Hopkins Center for Injury Research and Policy (JHCIRP) is “Closing the Gap between Research and Practice to Reduce the Burden of Injury.” Within this overarching theme, JHCIRP’s mission is to:

- Conduct high-quality research vital to the development, implementation, evaluation, and sustainability of policies and programs that improve the prevention and treatment of injuries;
- Ensure that research is translated into practice and that practice informs research by collaborating with a diverse array of health care providers, community-based organizations, government agencies, and institutions, including other academic injury centers; and
- Integrate research and practice into the training and education of injury prevention and control scholars, practitioners, other stakeholders, and the public.

JHCIRP is an academic organization that comprehensively addresses all phases of injury control, from primary prevention to acute care and rehabilitation, of both unintentional and intentional injuries. To effectively address injuries across the lifespan, JHCIRP has integrated the disciplines of epidemiology, biostatistics, medicine, law, health policy, health services research, criminal justice, health communication, and behavioral sciences. JHCIRP is committed to ensuring that quality research is translated into programs and policies that make a difference.

Research Expertise



Cross-Cutting
Injury Prevention



Prescription/
Opioid Overdose

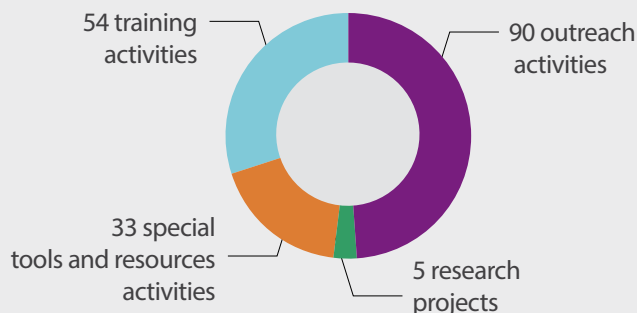


Transportation
Safety

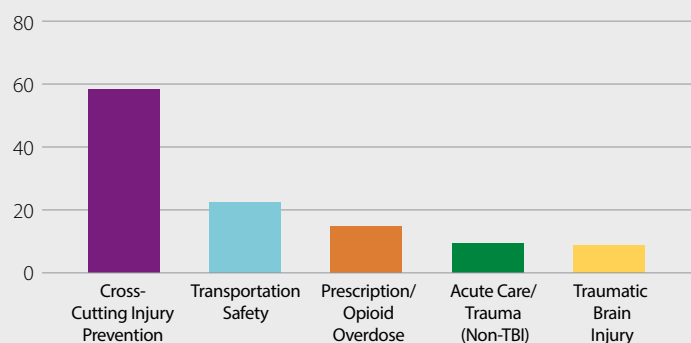


Violence

Total Number of Activities by
Core Area by JHCIRP from 2014–2019



Top Five Research Topics by Number
of Activities by JHCIRP from 2014–2019



Funding

Years Funded: 2014–2019

Total Funding Amount: \$3,947,477

Funding Cycle: 2014

Contact



[www.jhsph.edu/research/centers-and-institutes/
johns-hopkins-center-for-injury-research-and-policy](http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-injury-research-and-policy)



[www.twitter.com/johnshpkinscirp](https://twitter.com/johnshpkinscirp)



www.facebook.com/JohnsHopkinsCIRP

Bicycle Riders Generally Support Universal Helmet Laws but Question Their Enforceability



Principal Investigator:
Keshia Pollack Porter, PhD, MPH

Bicycle helmet policies and their effects on helmet use and ridership are not well understood. Researchers explored attitudes and beliefs about bicycle helmet laws. They surveyed a group of adult bicycle riders to ask their opinion on the impact of helmet laws, including whether these laws were successful in preventing head injuries among bicycle riders who did not wear helmets. Then they analyzed and categorized existing local bicycle helmet policies in the United States and identified cases for an in-depth examination. Finally, they investigated facilitators, barriers, and impacts associated with implementing universal bicycle helmet policies. Researchers found some support for universal helmet laws among the set of respondents. However, riders had mixed opinions on whether the laws could be enforced. To determine what works best for their communities, policymakers considering all-rider laws can learn about the range of options for ordinances.

Merrill-Francis, M., Vernick, J. S., & Porter, K. (2019). Local all-age bicycle helmet ordinances in the United States: a review and analysis. *The Journal of Law, Medicine & Ethics*, 47(2), 283–291.

LIVE-LiFE Program Has Varying Impacts on Older Adult Falls

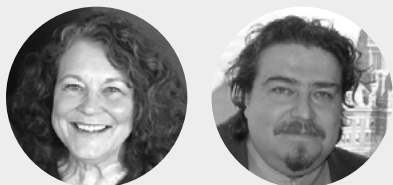


Principal Investigator:
Sarah Szanton, PhD

Falls are the leading cause of injury-related deaths among older adults and a significant health burden to individuals and society. LIVE-LiFE was adapted from Lifestyle-Intervention Functional Exercise (LiFE) program. It integrates strength and balance training into daily habits in eight visits over 12 weeks. It was developed to improve balance and mobility among older adults at risk of falling. LIVE-LiFE provides each participant with \$500 in home safety changes, vision contrast screening and referral, and medication recommendations. Researchers evaluated the impact of LIVE-LiFE on reducing home hazards and other fall-related metrics after delivering the program. Each outcome improved in the intervention group, leading the researchers to conclude that simultaneously addressing preventable fall risks is feasible. Larger trials and dissemination of the intervention have occurred since this initial research project.

Szanton, S. L., Clemson, L., Liu, M., Gitlin, L. N., Hladek, M. D., LaFave, S. E., Roth, D. L., Marx, K. A., Felix, C., Okoye, S. M., Zhang, X., Bautista, S., & Granbom, M. (2021). Pilot outcomes of a multicomponent fall risk program integrated into daily lives of community-dwelling older adults. *Journal of Applied Gerontology*, 40(3), 320–327.

Patient Education on Opioids Makes Patients Feel More Informed About Using Prescription Opioids



Principal Investigators:
Andrea Gielen, ScD, ScM &
Renan Castillo, PhD

Prescription drug misuse and overdose is a public health crisis in America. This study used mobile health, or mHealth technology, to develop and pilot test a new patient education intervention. The intervention included a patient decision aid for use in the emergency department prior to the clinician visit and tailored education and reminder text messages on safe use, storage, and disposal of prescription pain relievers for those discharged with a prescription. The patients with pain-related chief complaints who participated in this small, randomized trial felt that they were more informed and less conflicted about their pain treatment options. There was no impact on actual clinician prescribing practices, and the small sample sizes precluded assessing the tool's impact on medication use, storage, and disposal practices. The investigators concluded that mHealth might be a viable tool for future use to continue to address prescription pain medication problems and that future iterations need to consider additional clinician engagement with the tool, such as emergency medical records and clinical decision tools.

Omaki, E., Castillo, R., McDonald, E., Eden, K., Davis, S., Frattaroli, S., et al. (2021). A patient decision aid for prescribing pain medication: Results from a pilot test in two emergency departments. *Patient Education and Counseling*, 104(6), 1304-1311.

The Use of Ignition Interlock Laws for All Drunk Driving Offenders Reduced Fatal Crashes



Principal Investigators:
Jon S. Vernick, JD, MPH &
Shannon Frattaroli, PhD, MPH

Problematic alcohol use remains a risk factor for many different types of injury, including injuries related to motor vehicle crashes. State laws either permit or mandate ignition interlocks as part of sentencing for drivers convicted of driving under the influence as a strategy to prevent future alcohol-related motor vehicle crashes. This study evaluated the association between state laws mandating alcohol ignition interlocks for drunk drivers and fatal alcohol-involved crashes. The study also sought to understand factors associated with the effective implementation of these laws. Researchers found that state laws mandating ignition interlock use for all people convicted of driving under the influence of alcohol, as opposed to just some offenders, reduced fatal alcohol-involved crashes. Additional findings provide insight into how the implementation of these laws is occurring and strategies for improving implementation. These findings provide input for policymakers and implementers interested in maximizing the impact of ignition interlock laws.

McGinty, E. E., Tung, G., Shulman-Laniel, J., Hardy, R., Rutkow, L., Frattaroli, S., & Vernick, J. S. (2017). Ignition interlock laws: Effects on fatal motor vehicle crashes, 1982–2013. *American Journal Of Preventive Medicine*, 52(4), 417-423.



Reducing Motor Vehicle Crash Deaths: Autonomous Vehicle Collaborations In The United States

JHCIRP sponsored two high-visibility symposia to launch a new initiative focused on the safe and equitable deployment of autonomous vehicle technology. These symposia are archived online: *The Road to Zero: Research, Policy, and Practice*, and *The Future of Personal Transportation*. The Future of Personal Transportation seminar was conducted in partnership with Sweden's KTH Royal Institute of Technology and was the first-of-its-kind gathering in the United States. JHCIRP presented preliminary findings from the new research projects on autonomous vehicles to policymakers, industry groups, and safety regulators. [Read how this project addressed motor vehicle crash deaths.](#)



Addressing The Opioid Crisis: Evidence-Based Recommendations For Taking Action

JHCIRP collaborated with the Clinton Foundation to publish [The Prescription Opioid Epidemic: An Evidence-Based Approach](#) and later [The Opioid Epidemic: From Evidence to Impact](#). National experts reviewed what is known about the epidemic, identified strategies for reversing the trends, and made recommendations for action that fall within 10 categories of high-priority need, including optimizing prescription drug monitoring programs, treating opioid use disorders, reducing stigma, advancing harm reduction strategies, and educating communities. Maryland, West Virginia, Michigan, and Iowa used this report to inform their approaches to opioid use disorder, misuse, and overdose.



Preventing Injuries Among American Indian Populations: Partnering with the Johns Hopkins Center for American Indian Health

Injuries are the leading cause of death for American Indian people under age 44 and the third leading cause of death overall. JHCIRP is working on a variety of projects to reduce injuries in American Indian communities in partnership with Johns Hopkins Center for American Indian Health. Examples of collaborative work with the Center for American Indian Health include:

- Conducting an injury prevention needs assessment for the White Mountain Apache Tribe,
- Providing technical assistance to the Center for American Indian Health on the injury prevention content in its Family Spirit® home visiting program, and
- Offering a Winter Institute course at the Johns Hopkins Bloomberg School of Public Health called "Prevention of Unintentional Injuries in American Indian Communities."

Select Outreach Highlights

Johns Hopkins University: Center for Injury
Research and Policy

100,000+
clients

Preventing Injuries To Children: Pioneering Children's Safety Centers

JHCIRP created a model Children's Safety Center to support families in their efforts to prevent child injuries by providing personalized safety education and low-cost safety products. Researchers found that general advice from pediatricians was insufficient for helping families implement child injury prevention practices, in part because they faced many barriers to obtaining needed products. JHCIRP faculty worked with pediatricians to build the first-of-its-kind, onsite Children's Safety Center in the hospital. They also partnered with the Baltimore City Fire Department to create a Mobile Safety Center that traveled to neighborhoods. Their safety health educators have reached more than 100,000 families, providing lifesaving education and distributing thousands of safety products over more than two decades of running safety centers in Baltimore.



Curriculum Development and Implementation



- Held **four 8-week injury seminars** that included guest presenters from various academic, industry, and governmental organizations. Topics included opioid overdose, occupational injury, transportation safety, and violence. These seminars happened every year from 2014 to 2019.
- Delivered a **bi-annual course** on the principles and practices of injury prevention for Native American Communities in partnership with the Johns Hopkins Center for American Indian Health and the Indian Health Services.
- Delivered **18 injury-related courses** annually and offered a total of 79 practicum and capstone experiences.

Mentorship of Researchers



- Mentored **326 students and postdoctoral fellows** over the 5-year funding period.
- Worked with 118 students who completed the **Basic and Advanced Summer Institutes**. They obtained expert advice and resources and contributed to their professional growth and development.
- Mentored undergraduate and graduate students and clinical trainees to work on **children's safety center projects** and many faculty research projects.
- Mentored research scholars on **training grants** in the schools of public health, nursing, and medicine as well as doctoral students completing National Research Services awards.

App



Electronic Logbook for Teenage Supervised Practice Driving

Developed an app called The Driving App ([iOS](#) and [Android](#) versions) that serves as an electronic logbook to simplify the documentation of teenage-supervised practice driving hours. The app provides an objective account of accumulated practice and may encourage adolescents to consistently document their practice driving.

Database



State Interlock Laws

Developed a 50-state dataset of state interlock laws that can be used to analyze laws or include as a covariate in other alcohol-related research. This tool is the first of its kind to include the effective dates for the initial enactment of any interlock law and enactment of a mandatory interlock law. This dataset is a versatile tool for evaluating many different alcohol-specific interventions.

Guides



Violence and Injury Prevention: A Resource Guide for Decision Makers

Developed and disseminated a resource guide for Maryland policymakers that presents data on the scope and cost of injury at the state level. Each topic in the guide has information about how that injury issue affects the United States and Maryland, recommendations for addressing the injury issues, and state-specific resources to highlight efforts to address each injury issue. JHCIRP adapted these guides for each region in collaboration with member states of the Great Lakes and Mid-Atlantic Regional Network. The regional networks work with public health offices and injury and violence prevention programs to build awareness of risk factors, prevention strategies, and best practices. This experience and process are described in a [peer-reviewed paper](#).

State Health Department Employees, Policy Advocacy, and Political Campaigns: Protections and Limits Under the Law

Wrote an article that examined the laws and agency rules for how state health department employees can inform policy development outside of their official capacity. The article provides guidance for state health department employees who are interested in engaging in policy advocacy but unsure if the terms of their employment permit such activity or how to assure they are acting within the boundaries of permissible behavior. The article dispels a widespread myth among government employees working in public health—that they are prohibited from participating in policy processes on their own time because of their employment.

Smoke Alarms: Don't Be Without Them!

Developed and distributed a curriculum designed for third and fifth-grade students to learn about home fire safety in partnership with Seattle Fire Department and Seattle Public Schools. The curriculum was packaged as a 40-minute lesson plan that teachers could deliver, plus take-home handouts for students to share with their parents about how to obtain smoke alarms.

Tools



Safe Sleep for Urban Mothers: An Interactive Dialogue

Developed a safe sleep intervention that provides culturally relevant information and evidence that provides and explains the rationale behind key American Academy of Pediatrics recommendations. The tool facilitates an exploration of barriers that may limit a mother's ability to follow a particular recommendation.

mHealth Opioid Decision Aid

Created the mHealth Opioid Decision Aid to cover multiple facets of the prescribing process using tablet and smartphone technology. The tool uses a personal experience risk assessment and an environmental risk assessment to provide tailored education about the risks and benefits of prescription opioids, along with alternative treatments. The tool provides information and suggestions to empower the patient to have a meaningful discussion with the provider about their pain treatment options.

Research Institute at Nationwide Children's Hospital: Center for Injury Research and Policy



Director

Gary A. Smith, MD, DrPH

The Center for Injury Research and Policy (CIRP) of The Research Institute at Nationwide Children's Hospital is the only CDC-funded ICRC whose sole focus is on research and prevention of injuries to children and adolescents. CIRP works to continually improve scientific understanding of the epidemiology, biomechanics, prevention, acute treatment, and rehabilitation of injuries affecting children. CIRP researches all three core phases of injury control (prevention, acute care, and rehabilitation) and serves as an academic training center for students from high school through postgraduate and visiting international scholars. Transdisciplinary research conducted at CIRP includes the fields of medicine, public health, epidemiology, law and criminal justice, behavioral and social sciences, biostatistics, biomechanics, ergonomics, and economics. CIRP also serves as a pioneer by translating cutting-edge injury research into education, advocacy, and advances in clinical care.

Research Expertise



Cross-Cutting Injury Prevention



Transportation Safety



Unintended Injuries

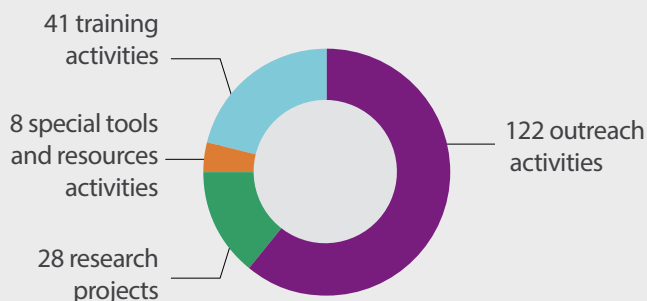


Prescription/Opioid Overdose

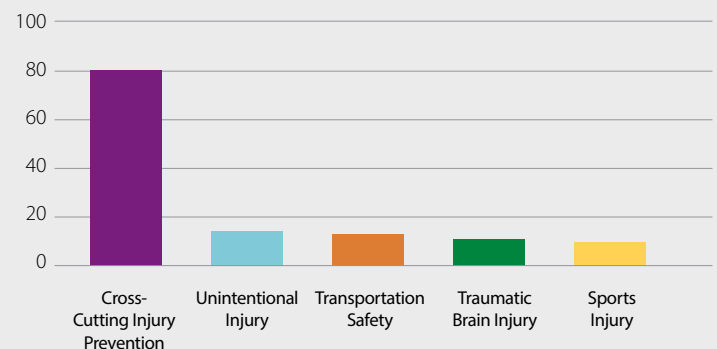


Traumatic Brain Injury (TBI)

Total Number of Activities by Core Area by CIRP from 2012–2019



Top Five Research Topics by Number of Activities by CIRP from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,488,071

Funding Cycle: 2012

Contact



www.nationwidechildrens.org/injury-research-and-policy



[www.twitter.com/CIRPatNCH](https://twitter.com/CIRPatNCH)



www.facebook.com/NationwideChildrensHospital

Optimizing Smoke Alarm Signals for Sleeping Children and Other Older Household Members



Principal Investigator:
Gary A. Smith, MD, DrPH

High-frequency tone alarms commonly used in homes can awaken most adults, but they are not effective in awakening children. CIRP researchers demonstrated that 96% of children 5–12 years old awoke, and 83% performed an escape procedure in response to an alarm using their mother's voice. They then embarked on a series of six studies to determine which characteristics of the alarm signal were critical for its effectiveness among 5- to 12-year-old children. They showed that maternal voice alarms performed better than tone alarms. Personalizing the voice alarm signal with the child's first name did not increase alarm effectiveness. Additionally, the research showed that alarms using a male voice, female voice, or a combination of a female voice and a low-frequency tone were each significantly more effective than a high-frequency tone alarm but that there were no significant pairwise differences in effectiveness when those three alarms were compared with each other. Finally, the study demonstrated that the alarm signals effective among children were also effective among adults and older adults.

Smith, G. A., Chounthirath, T., & Splaingard, M. (2019). Effectiveness of a voice smoke alarm using the child's name for sleeping children: A randomized trial. *The Journal of Pediatrics*, 205, 250–256.

Concussion-Related Medical Visits in Youth Impacted by Ohio's Concussion Law



Principal Investigator:
Jingzhen Yang, PhD, MPH

Concussions are the only injuries that currently require medical clearance before returning to activity. Researchers used electronic health records and health care claims data to assess the impact of Ohio's concussion law on concussion-related medical visits among youth in the state. Ohio's concussion law prohibits young athletes from returning to play on the same day that they are removed from activity if they exhibit signs and symptoms of a concussion. Researchers found that rates of emergency department visits and primary care doctor visits for youth concussions increased significantly after the implementation of Ohio's concussion law. A higher proportion of concussion-related medical visits were non-sports-related than sports-related among children insured by Medicaid. The study also observed significantly higher rates of medically treated concussions among children living in rural areas than urban areas.

Newton, A., Yang, J., Shi, J., Sullivan, L., Huang, L., Singichetti, B., et al. (2020). Sports and non-sports-related concussions among Medicaid-insured children: health care utilization before and after Ohio's concussion law. *Injury Epidemiology*, 7(1), 1–9.

Child Injury Should Be More Accessible for Parents to Understand



Principal Investigators:

Lara McKenzie, PhD, MA &
Jennifer Manganello, PhD, MPH
(not pictured)

Parents with young children face difficulties accessing research findings published in reports and academic journals, even though they are the primary beneficiary of the information. This study evaluated how parents with young children access and understand research on child injury. Researchers conducted an online survey and focus groups with mothers of children younger than six years old to explore how they learn about and understand child injury. The online survey showed that 18% of the mothers with children younger than six years old had low health literacy, meaning they had difficulty finding, understanding, and using information for their children's health. These mothers were more likely to list friends and family and media as sources for information on car seats and bicycle helmets instead of the Internet. CIRP highlighted the importance of framing messages to ensure they are easy to understand for parents with young children.

Manganello, J. A., Falisi, A. L., Roberts, K. J., Smith, K. C., & McKenzie, L. B. (2016). Pediatric injury information seeking for mothers with young children: the role of health literacy and ehealth literacy. *Journal of Communication in Healthcare*, 9(3), 223–231.

Social Media Can Help to Promote Injury Prevention When Text and Visuals Match



Principal Investigator:

Lara McKenzie, PhD, MA

There is a lack of research on the effectiveness of social media on injury prevention, including the impact of social media on parents with young children. When parents were exposed to real-world social media posts, they spent more time on posts where safety recommendation text and imagery were concordant (image showing the correct behavior) compared with mismatched text-image posts (image showing the incorrect behavior). Each second of viewing time on the concordant posts was associated with a 2.8% increase in the correct response in the safety information knowledge score, after accounting for frequency of social media use and health literacy. Concordant text and visuals on social media posts were associated with significantly higher visual attention and improved safety knowledge.

Klein, E. G., Roberts, K., Manganello, J., Mcadams, R., & McKenzie, L. (2020). When social media images and messages don't match: Attention to text versus imagery to effectively convey safety information on social media. *Journal of Health Communication*, 25(11), 879–884.

Adolescent and Young Adult Intentional Drug Overdose in Ohio is High



Principal Investigator:
Huiyun Xiang, MD, MPH, PhD

Drug overdoses are the leading cause of injury death in Ohio. Researchers used data from national databases and Ohio poison control centers to study drug overdoses among young adults 10-29 years old in Ohio. The study included the drugs used, the trends in deaths per year, and the counties with the highest prevalence of drug overdoses. This study revealed that young adults 18-24 years old have the highest rates of intentional drug overdose. Women have a much higher rate than men of suspected suicide by drug overdose. In addition, pain relievers were the most common drug used in overdoses among all age groups.

Caupp, S., Steffan, J., Shi, J., Wheeler, K. K., Spiller, H. A., Casavant, M. J., & Xiang, H. (2018). Opioid drug poisonings in Ohio adolescents and young adults, 2002–2014. *Clinical Toxicology*, 56(8), 765–772.

Concussion Data Useful to Influence Concussion Policies

Principal Investigator:
Dawn Comstock, PhD
(not pictured)

Concussions are a leading cause of injury in high school sports. This study evaluated the effectiveness and outcomes of state-level concussion policies using data from the National High School Sports-Related Injury Surveillance Study (High School RIO). High School RIO captured a total of 10,726 concussions from 2008 through 2015. CIRP researchers used these data to analyze the patterns and trends of high school sports-related concussive injuries. The study also reported that the National Federation of State High School Associations used data from High School RIO to develop recommendations limiting full-contact drills during football practices. Findings from concussion data captured during this project were presented at the U.S. House of Representatives and the White House. Analyses of data captured in this project indicate that state concussion legislation influenced concussion rates over time.

Arakkal, A. T., Barón, A. E., Lamb, M. M., Fields, S. K., & Comstock, R. D. (2020). Evaluating the effectiveness of traumatic brain injury state laws among high school athletes. *Injury Epidemiology*, 7(1), 12.



Preventing Unintentional Poisonings: Changing Safety Standards for Laundry Detergent Packets

In 2014, CIRP and the Central Ohio Poison Center conducted a study to quantify the risks associated with laundry detergent packets. The research showed that from 2012 through 2013, U.S. poison control centers received reports of more than 17,000 children younger than six years of age who swallowed, inhaled, or were exposed to laundry detergent packets—nearly one child every hour on average. This study led to the Detergent Poisoning and Child Safety Act of 2015, which set mandatory safety standards for liquid laundry detergent packets. In addition, some manufacturers changed the container of their laundry detergent packets from clear to opaque and made them more difficult for children to open. [Read how the project helped prevent unintentional poisonings.](#)

45%
less likely
to be injured

Decreasing Motor Vehicle Injuries Among Children: Ohio's Booster Seat Law

Ohio expanded its Child Passenger Safety Law in 2009 after researchers from CIRP and other groups advocated for a booster seat provision. Research shows that children who use booster seats are 45% less likely to be injured in a motor vehicle crash than those using seat belts alone. The state's [Child Passenger Safety Law](#) now includes these requirements:

- Infants and young children must ride in a child safety seat until they are four years old and weigh at least 40 pounds.
- Every child 4–8 years old, who is no longer in a car seat, must use a booster seat until reaching 4'9" tall.
- Children and teenagers 8–15 years old, who are not in booster seats, must use adult seat belts.



Preparing Public Health Professionals to Speak about their Work: Media Trainings

CIRP has hosted multiple workshops on media training for public health professionals. The workshop presenters have been featured in media outlets worldwide and have created local and national outreach campaigns. Their expertise includes behind-the-scenes media planning, on-air interviews, working with reporters, and using social media for public health. [Read how the trainings are preparing public health professionals.](#)

60,000
helmets
distributed to
Columbus youth

Leading Bicycle Safety Efforts: Partnerships and Outreach to Columbus Youth

CIRP has a long history of advocating for bicycle safety in Ohio. In 2008, CIRP partnered with members of Columbus City Council to advocate for the passage of a helmet ordinance requiring Columbus children 1 to 18 years old to wear a helmet when they ride bicycles, non-motorized scooters, skateboards, roller skates, and in-line skates. CIRP also has a longstanding partnership with the foundation of the local NHL team, the Columbus Blue Jackets. The foundation provides CIRP with a yearly grant to purchase bicycle helmets for Columbus youth. CIRP distributes these helmets in partnership with the mayor's Neighborhood Pride Program and at local events like the Emergency Medical Services Day at the Columbus Center of Science and Industry. CIRP has helped provide more than 60,000 bicycle helmets to Columbus youth.

Curriculum Development and Implementation



- Developed and implemented **undergraduate and graduate-level courses** on the principles and epidemiology of injury and violence prevention and control, in partnership with The Ohio State University College of Public Health.
- Developed and implemented the **Lead, Serve, Inspire Injury Prevention Curriculum** for medical students at The Ohio State University. The program prepares future physicians to provide high-caliber health care to diverse populations. The course is taught three times per year with approximately 60 medical students per session.
- Developed and implemented a **summer institute about working with the media** to promote injury prevention. The institute is designed for injury and other professionals and teaches attendees how to work with traditional and social media to promote injury prevention.

Mentorship of Researchers



- Mentored **141 students and postdoctoral fellows** over the 7-year funding period.
- Developed the **National Student Injury Research Training Program** that allows students from across the United States to spend two months with CIRP investigators. Students complete research projects and serve as first author on manuscripts based on their research findings.
- Implemented the **Visiting Global Scholars Program**, through which CIRP faculty provide mentorship to injury research scholars from low- and middle-income countries. Thirteen visiting professors have participated in the program and have published 29 peer-reviewed articles based on this collaboration.
- Served as **faculty advisors and members of thesis and dissertation committees of graduate students** in several masters and PhD programs within colleges at The Ohio State University.

Select Special Tools and Resources Highlights

Research Institute at Nationwide Children's
Hospital: Center for Injury Research and Policy

App



Make Safe Happen App

Developed the Make Safe Happen app to address the difficulties parents and caregivers face when trying to keep their homes safe for their children. The app provides parents and caregivers with room-by-room, age-specific safety checklists and links to purchase recommended safety products. The app has been downloaded more than 67,000 times.

Database



High School Reporting Information Online

Created an internet-based [data collection tool](#) to capture athletic exposure and injury event data weekly throughout the academic year using certified athletic trainers as data reporters. These data describe rates, patterns, and trends of high school sports-related injuries. This leading national high school sports surveillance system continues to collect data to the present and has been the basis for more than 100 publications by researchers across the United States.

Tools



Various Tools for Research Translation and Outreach Education

Developed a variety of high-quality, evidence-based injury prevention materials for research translation and outreach education. CIRP continues to produce materials in a variety of formats to reach diverse audiences, including websites, fact sheets, informational video series, research reports, expert testimonies, education and training opportunities, internships, webinars, and countless appearances in television, radio, print, online, and social media that have reached audiences numbering tens of millions.

Website



Prevent Child Injury Coalition

In 2012, implemented the [Prevent Child Injury Coalition](#) in partnership with the Child Injury Prevention Alliance, NCIPC, and more than 150 other national injury organizations and leaders. The coalition promotes coordination of child and teenage injury prevention messaging. Developed and disseminated more than 30 toolkits on various child injury topics.

University of Iowa Injury Prevention Research Center



Director

Corinne Peek-Asa, PhD

The University of Iowa Injury Prevention Research Center (UI IPRC) was established in 1990. UI IPRC aims to prevent, control, and optimize recovery from injuries and violence. Their vision is to create knowledge to keep people and communities safe. UI IPRC has grown to include 66 researchers from 23 departments in five colleges, as well as a wide network of community and government collaborators since 1990.

UI IPRC brings together academic, practice, and policy communities to reduce the burden of traumatic injuries and violence. UI IPRC has active programs locally, nationally, and internationally that address populations in different settings and prioritize injury prevention in rural populations. UI IPRC seeks to conduct activities that advance its reputation as a national leader in violence and injury policy, in addition to core goals in research, training, education, and outreach.

Research Expertise



Acute Care/Trauma
(Non-Traumatic
Brain Injury)



Cross-Cutting Injury
Prevention

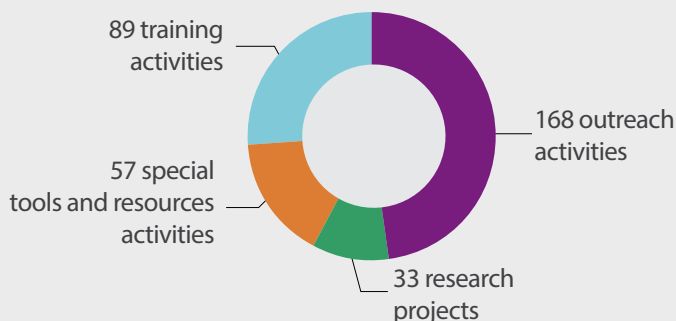


Intimate Partner
Violence

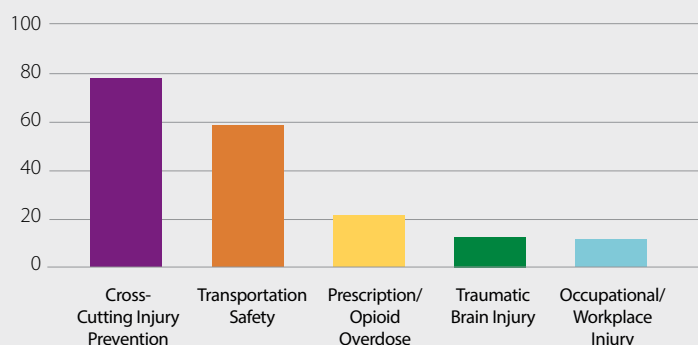


Transportation
Safety

Total Number of Activities by
Core Area by UI IPRC from 2012–2019



Top Five Research Topics by Number
of Activities by UI IPRC from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,638,067

Funding Cycle: 2012

Contact



www.iprc.public-health.uiowa.edu



[www.twitter.com/UIIPRC](https://twitter.com/UIIPRC)



www.facebook.com/UIIPRC

Prescription Monitoring Program Impacted the Rate at Which Opioids Were Prescribed in Iowa



Principal Investigators:

Ryan Carnahan, PharmD, MS &
Carri Casteel, PhD, MPH

Prescription opioid deaths quadrupled and heroin overdose death rates increased more than nine-fold over the past 20 years in Iowa. This study investigated the relationship between specific diagnoses and opioid use and the effect of prescribing patterns, including using a prescription monitoring program (PMP), on the risk of opioid abuse or dependence in Iowa. Researchers found that fewer prescription opioids were written after the implementation of the PMP. The rate of opioid prescription increased more slowly than before the PMP, and the length of time (or days' supply) of prescription opioids increased in the same time period.

Ranapurwala, S. I., Carnahan, R. M., Brown, G., Hinman, J., & Casteel, C. (2019). Impact of Iowa's prescription monitoring program on opioid pain reliever prescribing patterns: an interrupted time series study 2003–2014. *Pain Medicine*, 20(2), 290–300.

Iowa's Anti-Bullying Laws Have Little Impact on Bullying in Schools



Principal Investigator:

Marizen Ramirez, PhD, MPH

Bullying is the most common form of youth aggression. UI IPRC researchers surveyed students in middle and high school before and after implementing anti-bullying legislation to understand the effect of the law on reported aggression. The study also measured whether teacher response to bullying improved. They found that documented bullying increased immediately after Iowa's anti-bullying law was passed, which may have been influenced by improved reporting of incidents. Documented bullying decreased during the next three years after the law was passed, but reported intervention by teachers didn't improve after the passage of the law.

Ramirez, M., Ten Eyck, P., Peek-Asa, C., Onwuachi-Willig, A., & Cavanaugh, J. E. (2016). Evaluation of Iowa's anti-bullying law. *Injury Epidemiology*, 3(1), 1–8.

New Analysis Sheds Light on Impact of Legislation on Teen Dating Violence



Principal Investigator:
Karisa Harland PhD, MPH

Approximately 10% of teens report experiencing sexual dating violence or physical dating violence, collectively known as teen dating violence (TDV). This study investigated whether TDV laws had an impact on the rate of TDV. Researchers estimated TDV using data from the 2015 Youth Risk Behavioral Surveillance Survey, conducted statistical modeling and found that the presence of a law incorporating TDV education in schools was not associated with reducing TDV. The results did not differ across the length of time the policies were in effect. The study emphasizes the importance of continued research on effective TDV prevention efforts.

Harland, K. K., Vakkalanka, J. P., Peek-Asa, C., & Saftlas, A. F. (2020). State-level teen dating violence education laws and teen dating violence victimisation in the USA: a cross-sectional analysis of 36 states. *Injury Prevention*, 27(3), 257–263.

New Program Shows Promising Results in Reducing Intimate Partner Violence Among High-Risk Men



Principal Investigator:
Amie Zarling, PhD

Prior research indicated that court-mandated batterer's education programs are not effective in changing behavior or reducing recidivism of men accused or convicted of intimate partner violence. Pilot studies showed that using the Achieving Change through Value-Based Behavior (ACTV) intervention could be more effective in changing behavior and reducing repeat intimate partner violence offenders. This project evaluated the effectiveness of an ACTV model compared to a court-mandated program. UI IPRC researchers found that men who participated in ACTV had significantly fewer domestic violence charges at one-year post-intervention than men who participated in the court-mandated program. ACTV participants also had significantly fewer domestic assault charges, violent charges, and violations of no-contact orders than men in the comparison group.

Zarling, A., Bannon, S., Berta, M., & Russell, D. (2020). Acceptance and commitment therapy for individuals convicted of domestic violence: 5-year follow-up and time to reoffense. *Psychology of Violence*, 10(6), 667–675.

Zarling, A., Bannon, S., & Berta, M. (2019). Evaluation of acceptance and commitment therapy for domestic violence offenders. *Psychology of Violence*, 9(3), 257–266.

Implementing a Parent Guide for Teen Drivers as Part of Workplace Wellness Shows Promising Results



Principal Investigator:
Karisa Harland PhD, MPH

Increasing safe teen driving is a priority to decrease death and injuries among youth. The Steering Teens Safe (STS) program is an evidence-based and theory-informed intervention that helps parents improve their communication skills while teaching safe driving to their teens. This study evaluated the implementation of STS as part of a workplace wellness program. Researchers found that parent-teen communication about driving improved following the STS implementation in the workplace.

Harland, K. K., Yang, J. G., & Peek-Asa, C. (2021). Steering Teens Safe: translation to a workplace wellness program in the USA. *Health Promotion International*, 36(1), 67–77.

New Toolkit Shared in a Community Setting Helps Spread Falls Prevention Information



Principal Investigators:
Carri Casteel, PhD, MPH &
Sato Ashida, PhD

Falls are a threat to the health of older adults and can reduce their ability to remain independent. This study builds on a previous pilot study that evaluated the impact of the Remembering When program. Remembering When uses fire safety personnel to deliver falls prevention and fire safety information to older adults. The current project continued to work with fire service personnel and a network of community-based organizations in Iowa to improve older adult referrals to evidence-based fall prevention programming and other resources in their community. Researchers developed a toolkit to help implement a community-engaged approach, which involved a streamlined referral network to encourage older adults to participate in evidence-based falls prevention programs in their communities.

Casteel, C., Ashida, S., Bruening, R., Carson, M., & Berard-Reed, K. (2020). Evaluation of a falls and fire safety program for community dwelling older adults. *Journal of Community Health*, 45(4), 717–727.



Preventing Opioid-Related Overdoses in Iowa: Opioid Policy Change Initiatives

UI IPRC convened 38 stakeholders across Iowa to identify priorities for addressing the prescription opioid crisis in the state. UI IPRC wrote a report that described stakeholder priorities and presented the report to a state legislative committee tasked to make recommendations about opioids to the Iowa Governor. The UI IPRC PI also participated in an ICRC panel during a congressional briefing on opioids in Washington, DC, attended by over 100 state legislators/staff. Soon after, the Iowa governor signed the “Opioid Bill” that required practitioners to register and use the state’s prescription monitoring program and receive continuing education on CDC prescribing guidelines. Both of these strategies were included as priorities in UI IPRC’s report to the state legislative committee.



Collaborating Across ICRCs: Workshops to Share Strategies for Advocacy

UI IPRC made a reciprocal visit to the Center for Injury Research and Policy (CIRP) at Nationwide Children’s Hospital in 2019. UI IPRC staff provided workshop sessions to CIRP faculty, staff, students, medical residents, and community partners focused on partnerships in advocacy. The UI IPRC team also shared a policy toolkit and highlighted the role that academics and medical practitioners can play in advocating to reduce injuries and violence. The UI IPRC delivered a hands-on workshop to community members that showcased materials such as policy briefs that partners and stakeholders can use to engage policymakers.



Protecting Workers: The Annual Occupational Health & Safety Research Conference

UI IPRC organized the Annual Occupational Health and Safety Research Conference. This yearly event provides an opportunity for UI College of Public Health students, faculty, and collaborators across campus to learn about the research in occupational health and safety and allows students to share their research. The half-day conference featured 12 three-minute thesis presentations by students and postdoctoral fellows to showcase their research and challenge them to articulate their work clearly and concisely.

15%
**reduction in motor
vehicle injury-
related fatalities**

Keeping Young Drivers Safe: Legislation to Strengthen Iowa's Graduated Drivers' License System

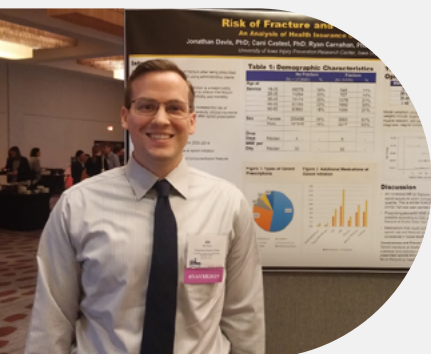
UI IPRC has played a crucial role in enhancing Iowa's graduated drivers' license (GDL) system for young drivers. UI IPRC participated in a coalition led by Blank Children's Hospital to urge the Iowa legislature to enhance Iowa's GDL system. The governor signed legislation that strengthens the Iowa GDL system by increasing the minimum time for having a learner's permit from six to 12 months and instituting a teen passenger restriction for the first six months of licensure. The state's new GDL law has contributed to an estimated 15% reduction in motor vehicle injury-related fatalities.

Curriculum Development and Implementation



- Developed a new course, “**Global Road Traffic Safety**,” that explains the magnitude of the road safety problem, data sources used to define the burden, research methods used in the field, and how intervention and prevention programs are developed and evaluated.
- Integrated injury and violence content and modules into more than a dozen University of Iowa General Education courses, which reached nearly **32,000 undergraduate students**.
- Hosted the **Iowa Youth Injury Prevention Conference**, which offered Continuing Education credits for nursing, counseling, emergency medical services, and education in partnership with the Blank Children’s Hospital.

Mentorship of Researchers



- Mentored **253 students and postdoctoral fellows** over the seven-year funding period.
- Provided a **skills-based seminar series** on topics including:
 - mentoring and the mentor/mentee relationship,
 - delivering effective scientific presentations,
 - networking to enhance professional goals,
 - developing a professional application for an academic career, and
 - communicating effectively with the media.
- Mentored a group of undergraduate students in the global health program who were working with CDC on preparing **disaster training materials** for hospital employees in Haiti.
- Actively involved students from public health, medicine, communication studies, urban planning, engineering, and computer science in **UI IPRC studies**.

Programs



Steering Teens Safe

Created a parent-focused program designed to improve communication between parents and teens during driving supervision. The program's goal is to motivate teens to choose safe driving behaviors when they are driving unsupervised.

Prep Kids

Designed a seven-step disaster preparedness program for rural families with children with special needs. The program includes information on developing preparedness plans, assembling kits, maintaining supplies, and practicing and discussing plans.

Link for Injured Kids Program

Constructed a program framework for the psychosocial support that a child needs after suffering a traumatic injury. The Link for Injured Kids Program uses a patient-centered approach, focusing on 1) building motivational interviewing skills for parents to connect with the injured child and 2) creating linkages between the injured child and other resources such as family members, friends, and community providers.

Tools



Hazard Assessment Checklist

Designed a tool to identify hazards on farms in partnership with experts in industrial hygiene, ergonomics, and injury prevention. The tool will benefit farm operators, insurance agents, and others seeking to prioritize and ultimately mitigate risks on farms.

Pedal Portal

Developed Pedal Portal, a naturalistic bicycling instrumentation and data coding system, to capture and code first-hand bicycling data. The system can capture exposure information, examine risk exposure and risky behaviors, and calculate corresponding safety-relevant event rates.

Translational Research to Refer Older Adults to Evidence-Based Falls Prevention Programs

Developed a toolkit that describes a community-engaged approach to bring together stakeholders who are already working with older adults in communities. The toolkit enables stakeholders to build a streamlined referral network that fits within existing service provision infrastructure to encourage older adults to participate in evidence-based falls prevention programs in their communities.

Website



MyCarDoesWhat.org

Created [MyCarDoesWhat.org](https://mycardoeswhat.org), a national campaign to help educate drivers on new vehicle safety technologies designed to help prevent crashes. These technologies range from increasing the stability and control of cars to providing warnings about crash threats to automatically intervening to avoid or reduce the severity of a crash.

University of Michigan Injury Prevention Center



Director

Rebecca Cunningham, MD

The University of Michigan Injury Prevention Center (U-M IPC) is a comprehensive ICRC that integrates injury prevention across the spectrum of age groups. The mission of U-M IPC is to conduct, translate, and accelerate injury prevention research into practice and policy to reduce the burden of injuries across the Great Lakes region and the United States. The U-M IPC is supplemented by the University of Michigan's vast educational, research, outreach, and policy resources. The center has more than a decade of experience in conducting injury research, outreach, and translation, and educating the next generation of injury scientists and practitioners. Researchers at U-M IPC have contributed to studies on injury prevention topics such as developing a prescription drug overdose intervention, designing a parent guide for supervising teen drivers, evaluating a drivers' licensing policy evaluation, and translating proven youth violence prevention programs into practice. The U-M IPC also focuses on teaching and mentoring undergraduate, graduate, and postdoctoral students. U-M IPC staff mentor junior faculty across disciplines such as medicine, public health, behavioral and social sciences, biostatistics, biomechanics, epidemiology, and policy. They have also developed a massive open online course on injury prevention among children and teens to educate practitioners, students, and researchers.

Research Expertise



Older Adult Falls



Suicide



Traumatic Brain Injury (TBI)



Prescription/Opioid Overdose

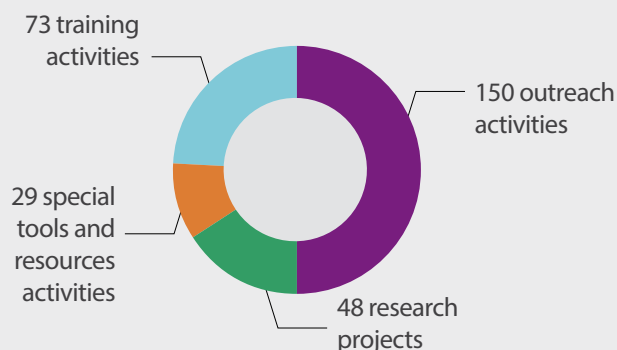


Transportation Safety

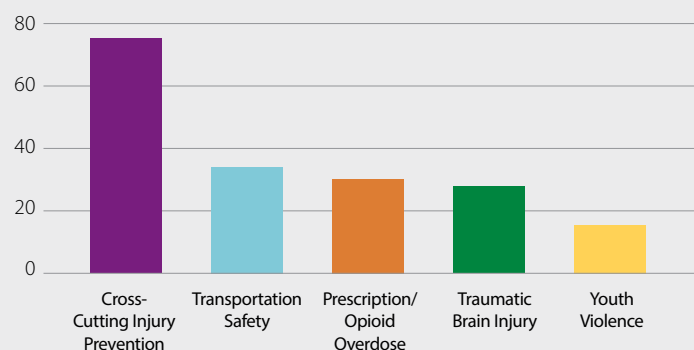


Youth Violence

Total Number of Activities by Core Area by U-M IPC from 2012–2019



Top Five Research Topics by Number of Activities by U-M IPC from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,637,757

Funding Cycle: 2012

Contact



www.injurycenter.umich.edu



[www.twitter.com/uminjurycenter](https://twitter.com/uminjurycenter)



www.facebook.com/UMInjurycenter

Brief Intervention Reduced Opioid Overdose Risk in Emergency Department Patients



Principal Investigator:
Amy Bohnert, PhD

Prescription opioid overdose is a significant public health problem, and interventions to prevent overdose risk behaviors among high-risk patients are lacking. This study tested a 30-minute brief intervention for adults seeking care at an urban emergency department who were at high risk of unintentional prescription opioid overdose. The patient-centered intervention included education for patients on treating overdoses and motivational counseling to support self-efficacy for behavior change, aligned with each individual's goals and priorities. The intervention reduced overdose risk behavior and non-medical opioid use among participants, compared to giving patients an educational pamphlet. This study supports using a motivational interviewing approach to reduce overdose risk behavior with high-risk individuals.

Bohnert, A. S., Bonar, E. E., Cunningham, R., Greenwald, M. K., Thomas, L., Chermack, S., et al. (2016). A pilot randomized clinical trial of an intervention to reduce overdose risk behaviors among emergency department patients at risk for prescription opioid overdose. *Drug and Alcohol Dependence*, 163, 40–47.

Prescription Drug Coverage of Benzodiazepines May Increase Both Falls and Overdose Among Some Older Adults



Principal Investigators:
Donovan Maust, PhD &
Amy Bohnert, PhD

Medicare Part D did not originally cover benzodiazepine prescriptions. Population-level injury trends in older adults after Medicare Part D expanded to include benzodiazepine coverage have not been studied. Researchers hypothesized that the expanded coverage of benzodiazepines by Medicare Part D would be associated with increases in fall-related injuries and unintentional overdoses rates. Researchers analyzed claims data on Medicare Advantage enrollees from 2010–2015. There were small increases in both the fall and overdose rate among those over 80 years old, and a small increase in overdose rate among adults aged 65–69 years as compared to commercially-insured adults (not subject to the benzodiazepine coverage policy change). However, no increases were associated in either outcome for adults aged 70–79 years. This work may inform future research on the effect of Part D policy changes on health outcomes.

Maust, D. T., Lin, L. A., Goldstick, J. E., Haffajee, R. L., Brownlee, R., & Bohnert, A. S. (2020). Association of Medicare Part D benzodiazepine coverage expansion with changes in fall-related injuries and overdoses among Medicare advantage beneficiaries. *JAMA Network Open*, 3(4), e202051–e202051.

Graduated Drivers Licenses Led to Differing Levels of Reduced Motor Vehicle Crashes In Different Areas



Principal Investigator:
Jason Goldstick, PhD

Motor vehicle crashes (MVCs) are a leading cause of death among young Americans. This study focused on the area-level risks for MVCs involving at least one teen driver, whether graduated drivers' licenses (GDLs) impacted crash risk among teen drivers, and whether the change following GDL implementation varied across the state. Researchers analyzed data from the Michigan State Police, the U.S. Census Bureau, the Center for Educational Performance and Information, and Infogroup on establishments in Michigan such as alcohol outlets and movie theatres. Alcohol outlet density, proximity to schools and movie theaters, and socioeconomic disadvantage were associated with teen crash risk. Crash risk decreased 34% across the state following the implementation of GDL, and the reductions were larger in areas with a greater number of alcohol outlets and smaller in areas near schools. Larger reductions were seen near movie theatres but only when analyzing crashes occurring at night.

Goldstick, J. E., Carter, P. M., Almani, F., Brines, S. J., & Shope, J. T. (2019). Spatial variation in teens' crash rate reduction following the implementation of a graduated driver licensing program in Michigan. *Accident Analysis & Prevention*, 125, 20–28.

An Evidence-Based Coaching Guide Helped Parents of Teen Drivers Communicate Safety Tips



Principal Investigator:
Jean Shope, PhD

Although many GDL programs require teens to complete driving hours under parental supervision, limited guidance is available for parents to follow during those driving hours to promote subsequent independent safe driving. Many GDL programs require teens to complete driving hours under parental supervision. Researchers developed an evidence-based tool called the Parent Guide to foster safe, independent teen drivers. The Parent Guide includes guidelines and information to help parents guide their teens during diverse types of supervised driving. A pre- and post-test evaluation compared the Parent Guide to a parent booklet developed by the State of Michigan. Parents preferred the Parent Guide content over that of the state-developed booklet and used it more often. There was no significant difference in self-reported risky driving behavior between teens with parents who received the Parent Guide compared to teens whose parents received the state-developed booklet. Researchers continue pursuing how best to deliver guidance about safe driving to parents of novice teen drivers.

Buckley, L., Shope, J. T., Zakrajsek, J. S., & Goldstick, J. E. (2018). Design and implementation of a parent guide for coaching teen drivers. *Journal of Safety Research*, 66, 71–79.

Implementing an Evidence-Based Youth Violence Prevention Intervention in Emergency Departments



Principal Investigator:
Maureen Walton, PhD

Youth violence is a critical public health problem. SafERteens is an efficacious, single-session violence prevention intervention delivered during an emergency department (ED) visit. This study refined and packaged intervention and training materials for delivery by on-site ED staff or by a remote therapist. The web-based implementation package harnesses technology to facilitate delivery of the session (and optional booster text messages) with attention to program standardization and seamless integration into clinical care. The implementation program package was tested during the effectiveness and implementation phases. Participants who received the remote SafERteens intervention showed reduced violent behavior compared to those who did not receive the intervention. This study fills a gap between science and practice by providing a flexible system to integrate an evidence-based, low-cost violence prevention intervention as part of standard care for youth in the emergency department.

Carter, P.M., Cunningham, R.M., Eisman, A.B., Resnicow, K., Roche, J.S., Tang Cole, J., Goldstick, J., Kilbourne, A.M., & Walton, M.A. (2021). Translating Violence Prevention Programs from Research to Practice: SafERteens Implementation In an Urban Emergency Department. *Journal of Emergency Medicine*, 62(1), 109–124.

SafERteens Intervention Program Implemented in the Primary Care Setting Shows Promising Results



Principal Investigator:
Maureen Walton, PhD

Violence screening and interventions are not systematically offered in primary care settings, despite the rates of youth violence. SafERteens is an evidence-based brief intervention program designed to reduce violent behavior among adolescents ages 14–18. The program was developed for youth being seen in the emergency department, and this study examined program translation to primary care settings, including offering flexible delivery options (in-person or by telephone). The single session (with optional booster text messages) incorporates motivational interviewing and focuses on bolstering self-efficacy and skills to reduce violence involvement. SafERteens reduced severe peer aggression among youth receiving the program (compared to youth not receiving the program) and received positive feedback from clinic staff and patients.

Kotov, M., Tzilos, G., Eisman, A., Sigel, E., Bourque, C., Carter, P., Cunningham, R., & Walton, M. (2020). 140 A pilot implementation study of saferteens-pc: a violence intervention for adolescent primary care patients. *Injury Prevention*, 26(Suppl 1), A20.

Naloxone Distribution and Online Toolkit Intervention Tested to Reduce Opioid Overdose Risk Behaviors at Community Agencies



Principal Investigators:

Amy Bohnert, PhD &
Erin Bonar, PhD

Prescription opioid overdose is a public health crisis. This project combined naloxone distribution practices with a brief behavioral intervention housed in an online toolkit. Researchers provided program staff at community agencies with evidence-based strategies to prevent opioid-related overdose. Staff used the toolkit to deliver the combined interventions to people at risk of experiencing or witnessing an overdose. People who received the brief intervention had lower overdose risk behavior scores and opioid misuse scores at follow-up than historical controls; the differences were not statistically significant potentially because of the small sample size lacking statistical power. The results of the pilot may inform the development of a future implementation trial.

Thomas, L., Bonar, E., Hwa, C., Coffin, P., & Bohnert, A. (2020). 95 Development of an evidence-based online toolkit to improve opioid safety." (2020). *Injury Prevention*, 26(Suppl 1), A11–A12.



Reducing Opioid Overdoses and Deaths with Real Time Data: The System for Opioid Overdose Surveillance

In 2016, the U-M IPC partnered with the Michigan High Intensity Drug Trafficking Areas with support from the Michigan Department of Health and Human Services to develop the System for Opioid Overdose Surveillance (SOS). The system tracks opioid overdoses in near real-time, providing data within one day of an overdose incident. As of May 2020, approximately 250 SOS authorized stakeholders covering 57 (70%) Michigan counties had logged into the system. Before SOS, these data were not widely shared. This new system provides live dashboard information that can be viewed by geography or population. [Read how this project helped track opioid overdoses.](#)

140%
website traffic
increase

Preventing Sexual Violence: Campaign to Raise Awareness on Campus Sexual Assault

The U-M IPC partnered with the Sexual Assault Prevention and Awareness Center and the University's Global Communications Office to create a campus-wide campaign. This campaign raised awareness on sexual assault and consent; encouraged reporting by victims; and encouraged compassion and support from friends, faculty, staff, and first responders. During the campaign, website traffic to sexual assault-related content increased, including a 140 percent traffic increase for the program's "What is consent?" content and a 111 percent increase for the "What you may be feeling if you are a survivor/common reaction" content. [Read how this project raised awareness of sexual violence.](#)



Supporting Safer Teen Driving: Partnership with Kohl's

The U-M IPC partnered with Kohl's to create a website that provides information and tools to help teens recognize and prevent the dangers of distracted driving, urges parents to model safe driving behavior, and teaches passengers to limit distractions. The website aims to provide information that can reduce distracted driving behavior and provide tools to bridge communication between young drivers, their parents, providers, and educators on strategies for change. The U-M IPC provided content expertise for website development and implementation ideas. The website includes a distracted driving toolkit with tips and information and interactive exercises that pose questions to teens about distracted driving. More information is available at www.kohlsdrivesmart.org.

Curriculum Development and Implementation



- Developed two **massive open online courses (MOOCs)** to provide free evidence-based, comprehensive injury prevention curricula to students, researchers, and practitioners, Injury Prevention for Children and Teens and Impacting the Opioid Crisis: Prevention, Education, and Practice for Non-Prescribing Providers. Over 13,000 learners have taken these two MOOCs.
- Developed a **four-course Certificate in Injury Science** for University of Michigan graduate students. The Certificate includes classes on injury prevention and research methods and an internship experience—the first of its kind at the institution.
- Added an **interpersonal violence course** to the Clinical Foundations of Medicine curriculum, which engaged 170 medical students in lectures, panels, and discussions.

Mentorship of Researchers



- Mentored **525 students and postdoctoral fellows** over the 5-year funding period.
- Provided injury prevention research and practice immersion **internship opportunities** to Master of Public Health students.
- Participated in the **Undergraduate Research Opportunity Program** to place freshman and sophomore students in biomedical, social science, and other research placements to gain research experience.
- Established a **dedicated postdoctoral fellowship in injury science** as part of a Postdoctoral Translational Scholars Program.

App



Substance Abuse Research Assistant

Developed an app called Substance Abuse Research Assistant (SARA) for youth and emerging adults at risk for substance use. This app was developed by a U-M computer scientist and tested with IPC funding. The goal is to capture substance use data for extended periods of time to inform future substance use interventions. SARA's key innovation is the multitude of different rewards it provides to keep youth engaged in data collection.

Guides



Regional Policy Resource Guide

Compiled injury data for 12 states across five injury topics as part of a collaborative effort to create a resource guide for legislators. The resource guide describes the size and scope of injury and violence programs in the region and highlights readily available, evidence-based resources to address these problems.

Parents in the Passenger Seat: A Coaching Guide for Supervising Teens Learning to Drive

Developed and implemented the Parent Guide for Coaching Teen Drivers to assist parents in coaching and training their teens in safe driving practices and skills while they are supervising their early driving.

Tools



Dynamics of Interpersonal Coercion among College Students

Developed an evidence-based interactive tool to display categories of power and control for college relationships. The tool has the potential to inform education, primary prevention, and resource allocation for secondary and tertiary prevention related to intimate partner violence, sexual violence, and stalking.

Opt-In Online Toolkit

Developed an online toolkit designed to translate evidence-based opioid overdose intervention into practice. The package includes trainings, tools, and intervention materials.

Websites



Saferteens

Developed an evidence-based brief intervention designed to prevent violence and alcohol-related consequences among youth. The [website](#) includes training materials and implementation support for hospitals and clinics seeking to deliver the intervention.

Checkpoints

Developed an evidence-based [website](#) to assist parents in helping newly independent teen drivers drive safely.

University of North Carolina Injury Prevention Research Center



Director

Stephen W. Marshall, PhD

The University of North Carolina Injury Prevention Research Center (UNC IPRC) has transformed and advanced the field of injury control for more than a quarter-century. Established in 1986, UNC IPRC has conducted high-quality research that has radically advanced a diverse range of injury and violence topics. The mission of UNC IPRC is to build the field of injury and violence prevention and control through a combination of interdisciplinary scholarly approaches to research, intervention, and evaluation and through training the next generation of researchers and practitioners. Its vision is a world in which injury and violence prevention professionals work collaboratively with local and global communities to implement effective solutions that reduce the occurrence and impact of injury and violence. UNC IPRC has trained and educated over 1000 practitioners, advocates, and junior scientists. Its policy impacts include state laws addressing transportation safety, fire safety, and concussions and position statements that set the standard for clinical practice.

Research Expertise



Child Abuse and Neglect



Older Adult Falls



Transportation Safety



Intimate Partner Violence

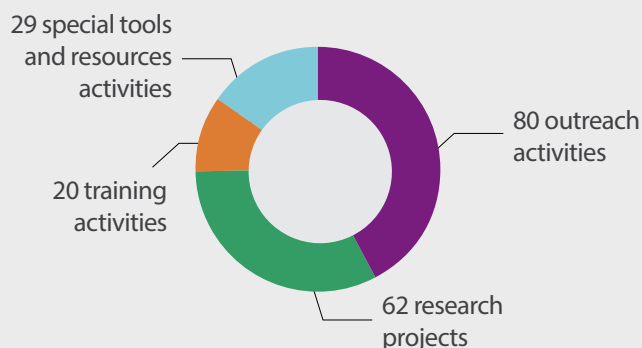


Prescription/Opioid Overdose

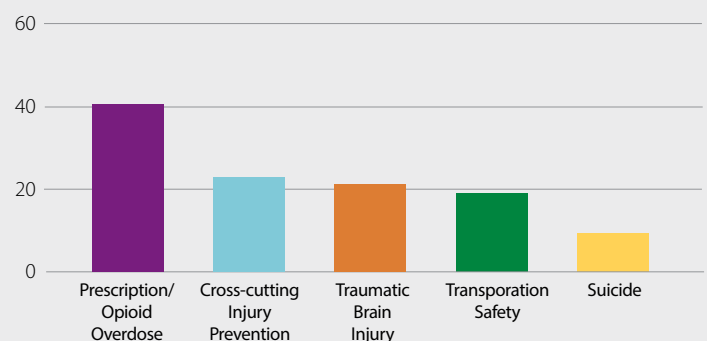


Traumatic Brain Injury (TBI)

Total Number of Activities by Core Area by UNC IPRC from 2014–2019



Top Five Research Topics by Number of Activities by UNC IPRC from 2014–2019



Funding

Years Funded: 2014–2019

Total Funding Amount: \$3,944,921

Funding Cycle: 2014

Contact



www.iprc.unc.edu



[www.twitter.com/UNC_IPRC](https://twitter.com/UNC_IPRC)



www.facebook.com/UNC.IPRC

Falls Prevention Program Engages Beauty Salons and Barbershops in Community-Based Health Education



Principal Investigator:
Laura Linnan, PhD

Falls are the leading cause of injury-related death and emergency department visits among older adults. The UNC IPRC implemented the “BEAUTY is a Balancing Act” study to raise awareness about falls prevention in a nontraditional environment: beauty salons. Researchers engaged salon owners, beauty stylists, older adults, and falls prevention partners to help develop the intervention. Study participants received screenings for fall risks and referrals to falls prevention programs in their communities. While researchers did not find any changes in falls outcomes among study participants, the study showed that falls prevention information is of high interest to beauty salon customers of all ages. The UNC IPRC will continue to explore opportunities to engage beauty salons and barbershops in community-based health education interventions.

Arandia, G., Hargrove, J. L., Shubert, T. E., Bangdiwala, S. I., & Linnan, L. A. (2017). Feasibility of assessing falls risk and promoting falls prevention in beauty salons. *The Journal Of Primary Prevention*, 38(6), 567–581.

Mentor-Led Education Program Reduces Odds of High-Risk Head Impacts Among High School Football Athletes



Principal Investigator:
Kevin Guskiewicz, PhD

Mild traumatic brain injuries (mTBI) and concussions from sports-related injuries have no proven prevention interventions. This study investigated ways to reduce the risk of sport-related mTBI in high school football athletes. Researchers developed an education program implemented by mentors to educate players on techniques that reduced the magnitude and location of impact forces to the head. Study participants wore an in-helmet accelerometer to measure impact after receiving the mentoring intervention. Researchers found that the intervention did reduce the odds of impact to a high-risk location and the odds of high-energy impact in both practices and games, while the number of head impacts was not reduced. Wide-spread implementation of this intervention may help reduce mTBI more broadly among youth football athletes.

Driver Licensing Policies and Young People in North Carolina Have Unintended Consequences on Racial/Ethnic Minority Populations



Principal Investigators:

Yudan Wang, PhD,
Arthur Goodwin, MA, &
Robert Foss, PhD

Motor vehicle crashes (MVCs) are one of the leading causes of death among young Americans. MVCs involving high school age drivers have decreased dramatically, mainly due to the implementation of graduated driver licensing (GDL) systems throughout the United States in the last 15 years. This study examined how GDL systems in North Carolina influenced the path to licensing and the prevalence of unlicensed driving among minority populations 15 to 19 years of age, as well as the rate of MVCs and crash-related injuries. Researchers found that the effects of the NC GDL program on MVCs were largely consistent across races, but the GDL did not impact crash rates among young drivers.

Wang, Y. C., Foss, R. D., and Goodwin, A. H. [Under review]. Unlicensed driving among young drivers in North Carolina: a quasi-induced-exposure analysis.

How the North Carolina Medical Board's Investigative Program Affected Provider Prescribing of Opioids



Principal Investigator:

Shabbar I. Ranapurwala, PhD

Prescription drug misuse and overdose are public health crises in the United States. In March 2016, the Centers for Disease Control and Prevention issued opioid prescribing guidelines for chronic non-cancer pain. The following month, the North Carolina Medical Board notified all prescribers that it was launching a comprehensive investigative review of opioid prescribing, with the goal of mitigating opioid overprescribing. This study examined the effects of that program on opioid prescribing using a controlled interrupted time series design. The researchers found the medical board's investigative program was associated with an immediate decline in overall opioid prescribing. However, it was also associated with unintended consequences, such as discontinuations and rapid tapering of opioids among patients on high-dose, long-term opioid therapy. Better communication and education for opioid prescribers may help mitigate unintended consequences of these programs on patients with legitimate pain control needs.

Ranapurwala, S. I., Ringwalt, C. L., Pence, B. W., Schiro, S., Fulcher, N., McCort, A., DiPrete, B. L., & Marshall, S. W. (2021). State medical board policy and opioid prescribing: A controlled interrupted time series. *American Journal of Preventive Medicine*, 60(3), 343–351.

1.68
million youth

Addressing Teen Dating Violence Before It Begins: Safe Dates

In 2015, one of every 10 U.S. high school students reported being sexually or physically victimized during a date in the last year. To address this issue, researchers at the University of North Carolina Injury Prevention Research Center (UNC IPRC) designed Safe Dates, a teen dating violence prevention program for middle and high school students. Safe Dates has become one of the most extensively used and endorsed teen dating violence programs across the world. Safe Dates has been adopted in more than 20,000 locations and has reached more than 1.68 million youth in the United States, Canada, Chile, Greece, Iceland, Ireland, Japan, the Netherlands, Switzerland, Taiwan, Thailand, and the United Kingdom. [Read how this project is addressing teen dating violence.](#)

600
attendees

Building Momentum for Change: the North Carolina Opioid Misuse and Overdose Prevention Summit

The UNC IPRC engaged 600 students, researchers, practitioners, advocates, policymakers, and other key stakeholders in the North Carolina Opioid Misuse and Overdose Prevention Summit in 2017 and 2019. The summit helped build momentum behind state and local efforts that focus on social determinants, health care, harm reduction, criminal justice, and community strategies around opioid misuse, use disorder, and overdose death.



Preventing Traumatic Brain Injuries: Demonstrating the Value of a Universal Helmet Law

North Carolina has a universal helmet law that requires all riders to wear a helmet while on a motorcycle. The UNC IPRC conducted a study to estimate the economic losses that would result from a potential repeal of the law. The study found that the law prevented more than \$30 million in hospital charges. A legislative committee discussed the study when considering a bill to repeal the universal motorcycle helmet law in North Carolina, but this bill did not proceed beyond the committee.

Curriculum Development and Implementation



- Implemented **two injury-related courses** at the UNC Gillings School of Global Public Health that focused on the science of injury, violence prevention, and unintentional injury. These courses are open to students in diverse programs, which helps introduce a broad range of public health practitioners to core concepts of injury prevention.
- Provided **eight seminars per academic year** on diverse topics, including opioids, sex-based violence, and traumatic brain injury. Over 350 attendees participated in the seminars.

Mentorship of Researchers

- Contributed to the training of a total of **175 graduate students**, many of whom now hold leadership positions in research universities and institutes. These graduate students came from diverse academic departments, including Epidemiology, Health Behavior, and Exercise and Sports Science.
- Delivered the **Injury & Violence Prevention Campus Seminar Series** on a variety of injury and violence prevention topics including transportation safety, gun violence, and motor vehicle injury. Over 140 people attended the seminars.

Dashboards



Recommendations for the North Carolina Prescription Drug Monitoring Program

Collaborated with North Carolina's prescription drug monitoring program to improve the Controlled Substance Reporting System user interface and integration with electronic health records.

Opioid Data Dashboard

Developed an opioid data dashboard in collaboration with the Division of Public Health. The UNC IPRC reviewed existing opioid metric designs, vetted and discussed these in the governor's offices, conducted a nationwide search for other opioid dashboards, and identified the pros and cons of other state platforms.

Form



Inventory Form for Agencies Serving Adolescents at High Risk Designed an inventory form for researchers to collect data on agencies that provide services to high-risk adolescents and young men, including foster homes, substance abuse treatment centers, and magnet schools for high school children with behavioral issues. It was developed for the evaluation of Wise Guys: The Next Level rape prevention education program.

Training Materials



Training Materials for Clinicians Treating mTBI

Developed educational training materials for two therapeutic strategies to manage sports-related concussion: enhanced graded exertion and multidimensional rehabilitation.

Websites



Injury-Free NC

Developed a [website](#) that provides community-based practitioners and policymakers with readily accessible information about evidence-based approaches to injury and violence prevention.

Naloxone Saves

Created a [website](#) that informs pharmacists, community-based practitioners, and patients about North Carolina law regarding standing orders for naloxone.

University of Pennsylvania: Penn Injury Science Center



Director

Douglas Wiebe, PhD

The Penn Injury Science Center (PISC) at the University of Pennsylvania focuses on reducing violence and injuries through the highest caliber of science, education, and outreach to address the intersecting impacts of risk and protective exposures across space and time. The program's slogan is "Stop It, Fix It, Live On," which communicates three levels of prevention efforts: 1) primary (stop the event), 2) secondary (fix the causes of the event), and 3) tertiary (live on in a context of safety rather than risk) injury and violence prevention. A multidisciplinary group of scientists, trainees, and staff are centrally located on the University of Pennsylvania campus in Philadelphia, representing six Penn schools, 12 other Penn institutes and centers, two level 1 trauma centers, and two research laboratories. PISC takes advantage of a robust and highly diverse group of scientists from epidemiology, biostatistics, nursing, criminology, communications, anthropology, demography, city planning, public health, engineering, pediatrics, emergency medicine, surgery, and global health. Their collective training and outreach serve a wide range of students, postdoctoral fellows, junior and senior faculty, professional staff, and community citizen-scientists.

Research Expertise



Adverse Childhood Experiences (ACEs)



Prescription/Opioid Overdose



Traumatic Brain Injury (TBI)



Older Adult Falls

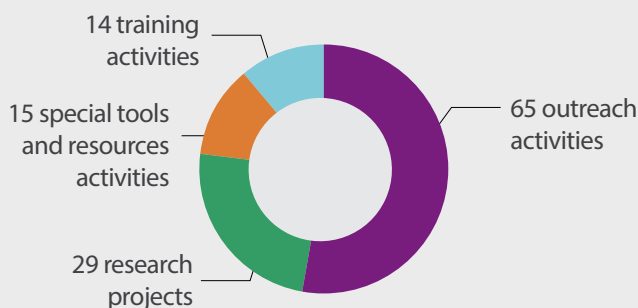


Transportation Safety

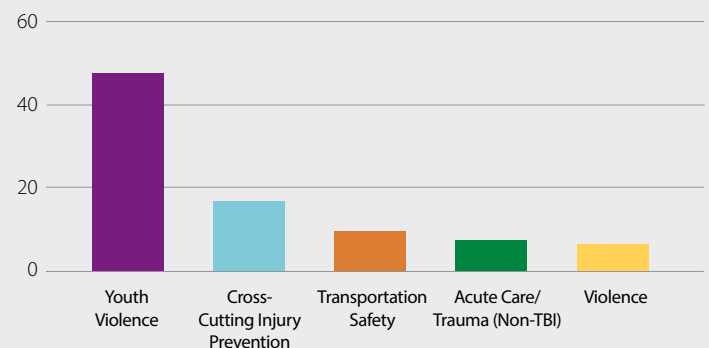


Youth Violence

Total Number of Activities by Core Area by PISC from 2014–2019



Top Five Research Topics by Number of Activities by PISC from 2014–2019



Funding

Years Funded: 2014–2019

Total Funding Amount: \$2,214,090

Funding Cycle: 2014

Contact



www.penninjuryscience.org



www.twitter.com/penninjury



www.facebook.com/UnivPennsylvania

Remediating Vacant Lots Leads to Reduced Violence in Philadelphia



Principal Investigator:
John MacDonald, PhD

Vacant and blighted land in U.S. cities is often concentrated in neighborhoods at greatest risk for firearm violence. Philadelphia, like other older deindustrialized cities, has many vacant lots and neighborhoods with high rates of concentrated poverty. This study randomly assigned hundreds of vacant lots across Philadelphia to one of three interventions: vacant lot stabilization (an intensive greening intervention), trash cleanup only, and a no-intervention control. Researchers found significantly reduced shootings in the vacant lot stabilization and trash cleanup zones during the trial period. The findings suggest that other cities can also experiment with remediating vacant land with inexpensive, scalable methods—including mowing and trash cleanup—to help reduce firearm violence.

Moyer, R., MacDonald, J. M., Ridgeway, G., & Branas, C. C. (2019). Effect of remediating blighted vacant land on shootings: a citywide cluster randomized trial. *American Journal of Public Health, 109*(1), 140–144.

More Than Half of Surveyed Pennsylvania School Nurses Reported Having Access to Naloxone in Their School Building



Principal Investigator:
Catherine McDonald, PhD

Pennsylvania has a higher rate of opioid-related overdose deaths than the national average. Researchers conducted a study with school nurses in Pennsylvania to better understand access to naloxone in schools. Over half of the nurses surveyed reported having naloxone in their school building. The most reported reason for not having access to naloxone in school was lack of administrative support and the belief that naloxone was not needed in their school. Understanding these barriers may help develop strategies to help nurses obtain naloxone for their school buildings.

McDonald, C. C., Pinto-Martin, J., Compton, P., Parikh, M., & Meisel, Z. F. (2020). School nurse reported supply and administration of naloxone in schools. *Public Health Nursing, 37*(3), 347–352.

Commercially Available Breathalyzers Greatly Vary In Accuracy



Principal Investigator:
Kit Delgado, MD

Alcohol breathalyzers for smartphones are widely available, but their accuracy is not well established. In this study, adults consumed enough alcohol to achieve a target blood alcohol concentration (BAC) of 0.100%, as measured by a blood draw. Then, researchers tested BAC levels every 20 minutes with six commercially available smartphone breathalyzers and a police-grade breathalyzer. Results from the comparison found the accuracy of the commercial breath-testing devices varied widely. Some devices were as accurate as the police-grade device, while others underestimated or did not detect BAC levels. These findings validate the use of select devices for clinical and research purposes.

Delgado, M. K., Shofer, F., Wetherill, R., Curtis, B., Hemmons, J., Spencer, E., et al. (2021). Accuracy of consumer-marketed smartphone-paired alcohol breath testing devices: A laboratory validation study. *Alcoholism: Clinical and Experimental Research*, 45(5), 1091–1099.

While Police Transport May Improve Quick Access to Trauma Care, Researchers Emphasize Importance of Ensuring Access and Safety



Principal Investigator:
Sara Jacoby, PhD, MPH

By 2015, over 50% of patients with penetrating injuries such as gunshot or stab wounds arrived at one of Philadelphia's eight trauma centers in a police vehicle rather than by emergency medical services (EMS). Philadelphia has the highest rate of police transport to hospitals of any U.S. city. This study looks at the practice, context, and social perception of police transport in Philadelphia. Researchers reviewed the data from all adults who came to trauma centers in Philadelphia with penetrating injuries from 2006-2015 to identify how the odds of being brought in by police or EMS varied by demographic characteristics. Researchers also interviewed patients, police, and doctors. The findings show that police transport may improve quick access to life-saving trauma care. However, the interviewees identified concerns about the impact of police transport on the health and safety of patients, police, and the trauma clinicians who receive injured people in the hospital.

Jacoby, S. F., Branas, C. C., Holena, D. N., & Kaufman, E. J. (2020). Beyond survival: the broader consequences of prehospital transport by police for penetrating trauma. *Trauma Surgery & Acute Care Open*, 5(1), e000541.

Youth Without Concussions Show Higher Than Expected Abnormality of the Vestibular and Oculomotor Exam



Principal Investigator:
Daniel J. Corwin, MD

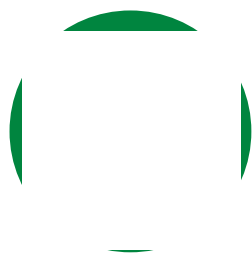
One of the leading tools to diagnose concussions is the vestibular and oculomotor (VOM) examination. Researchers have little information about how youth without concussions perform on the VOM, which makes it hard to interpret findings from the exam. Researchers performed nine parts of the VOM exam on 295 patients between the ages of 6 and 18 who did not have concussions and were neurologically normal. Researchers were interested in seeing how many of these children showed an abnormality on a component of the VOM. About one-quarter of the participants had at least one abnormality on the VOM exam. Of these participants, almost one-half only had one abnormality. Researchers concluded that it is helpful for providers to be aware that some children who are not concussed may fail a part of the VOM. They also suggested that providers who use the VOM to assess for pediatric concussion take a careful history and consider symptoms when making a diagnosis.

Corwin, D. J., Zonfrillo, M. R., Wiebe, D. J., Master, C. L., Grady, M. F., & Arbogast, K. B. (2018). Vestibular and oculomotor findings in neurologically-normal, non-concussed children. *Brain Injury*, 32(6), 794–799.

2,000+
concussion cases
studied

Preventing Sports-Related Traumatic Brain Injury: Varsity Athlete Concussion Surveillance System

Since 2012, PISC has collaborated with multiple institutions in the Big Ten and Ivy League sports conferences to collect concussion data on varsity athletes in a surveillance system. The study collects information in real-time from students playing all types of sports. In 2017, PISC partnered with the Big Ten–Ivy League Traumatic Brain Injury Research Collaboration to lead the surveillance system and conduct analyses for the study. The Research Collaboration’s work is already showing the difference interventions can make. The Ivy League conference averaged six concussions per season during kickoff plays from 2012–2015. In 2016, new kickoff return rules were put in place and athletes suffered zero concussions on kickoff plays that year. [Read how the project is preventing sports-related TBI.](#)



Addressing Statewide Gun Violence: Code Red PA Conference

PISC partnered with the new division on violence prevention at the City of Philadelphia to address gun violence. They hosted Code Red PA, a day-long conference to educate stakeholders about gun violence and create a network of health care providers committed to policy solutions. Since the conference, the network has formed different policy workgroups. PISC leads the research group and collaborates with the policy group to bring research into policy solutions for gun violence.

125
transportation
safety researcher
attendees

Reducing Cell Phone Use While Driving: The Harnessing Science, Tech, and Innovation to Combat Distracted Driving Symposium

PISC partnered with the Travelers Institute, the BeSAFIR Lab, and the Center for Health Incentives and Behavioral Economics on a half-day public research symposium entitled: Harnessing Science, Tech, and Innovation to Combat Distracted Driving. This symposium featured important research insights from behavioral economics on the reduction of cell phone use while driving. This symposium directly impacted the partnered research and outreach that Penn did with the Travelers Institute on distracted driving and aimed to inspire future innovative research collaborations. Results from partnered research will be integrated into real-life practices with the overall goal to reduce distracted driving from cell phone use, particularly among adolescents.



Collaborating to Prevent Overdoses: Overdose Prevention Sites Evaluation Working Group

In partnership with the Center for Public Health Initiative, PISC convened an interdisciplinary working group to identify fundamental criteria in determining where to open an overdose prevention site. The group used a mixed-methods approach that combined geographic analyses and qualitative research methods. They asked various populations for their thoughts about what features would make a location either well suited or not well suited for operating a site. The group then classified city blocks in Philadelphia according to the presence or absence of assets, barriers, or indicators identified by interviewees. The group geocoded these location features, assigned a weight to each to represent its relative importance, and summed the values into a score. Finally, they produced a map of Philadelphia that identified five locations that appeared to be most well suited for operating an overdose prevention site. [Read how the project is addressing overdose.](#)

Curriculum Development and Implementation



- Developed a course called **Geographic Information Systems (GIS) and Public Health: Applying GIS to Public Health Research, Practice, and Public Policy**. The course aims to help students 1) understand a broad range of ways that GIS can be applied to public health research, practice, and public policy; 2) critically analyze maps and research results developed using GIS; 3) learn how to create and analyze thematic maps, geocode addresses, and conduct basic queries; 4) implement a variety of field data collection methods used in GIS such as handheld GPS technology; and 5) develop individual research agendas that incorporate GIS methods.
- Developed **custom course content modules** on place-based interventions in the prevention of injury and violence. These modules were included in three courses: Crowdsourcing and Human Computation, Measurements of Health, and Geography and Health.

Mentorship of Researchers



- Mentored **151 students and postdoctoral fellows** over the 5-year funding period.
- Provided **support and guidance** for several Summer Undergraduate Minority Research and Penn Undergraduate Research Mentoring students in health services research.
- Served as mentors and taught **seminars on violence prevention** for Bridging the Gaps' Community Health Internship Program. Bridging the Gaps helps members of under-resourced communities receive training for health and social service professions.
- Created the **Injury Student Learning Lab**, which provides a venue for undergraduate, graduate, and postgraduate trainees to train further and engage more in injury work.

Select Special Tools and Resources Highlights

University of Pennsylvania:
Penn Injury Science Center

App



Recoups Application

Developed an [app](#) and data linkage system to capture real-time symptoms, physical activity data, and cognitive data from pediatric and adult concussion patients during the days and weeks after being injured. This application provides data back to physicians to tailor treatment recommendations.

Programs



Cartographic Modeling Lab

Developed the Cartographic Modeling Lab, which specializes in applying geographic information systems software and hardware to digitally link data and geography. The lab generates spatial databases, maps, spatial statistical analyses, and mapping applications. These can be used to visualize geographic relationships that affect health outcomes, public health risks, disease transmission, access to health care, and other public health concerns.

Urban Health Lab

Created the [Urban Health Lab](#) to produce scientific evidence for the effective design and implementation of health and safety programs. The lab uses methods such as randomized controlled trials, mobile biosensing, space-time metrics, field observation, and community engagement.

Improvements to ACHIEVEability System

Updated the ACHIEVEability's system to embed a health status screen of clients, including parents and children. Providers will screen clients at intake and every six months. ACHIEVEability is a nonprofit working to address the generational cycle of poverty among low-income, single-parent, and homeless families.

Tool



Trauma Center Hospital Mapping Tool

Developed the Trauma Center Hospital Mapping Tool to encourage medical personnel, policymakers, planners, researchers, and the public to learn more about their geographic access to trauma centers. Access to trauma center hospitals is a major component of the U.S. emergency care safety net.

Website



The Stand Your Ground Project

Developed a new [website](#) for the Stand Your Ground Project, a collection of research led by scientists at the University of Oxford, the University of Pennsylvania, and the London School of Hygiene and Tropical Medicine. The research is examining the impact of changes to self-defense laws on physical injury, violence, and crime in states enacting these laws since 2000. This website will support stakeholders in making policy-informed decisions.

University of Rochester Medical Center: Injury Control Research Center for Suicide Prevention



Director
Eric D. Caine, MD

The Injury Control Research Center for Suicide Prevention (ICRC-S) promotes public health approaches to reduce the mortality and morbidity associated with suicide and attempted suicide. The ICRC-S focused on a diverse array of suicide risks that influence the life trajectories of people, families, and communities and served as an engine for research, outreach and dissemination, and education. The ICRC-S sought to transform the field of suicide prevention by drawing it fully into the domain of public health and injury prevention while actively linking it to complementary mental health approaches, facilitating new prevention initiatives at state, regional, and national levels. The unifying theme of the ICRC-S involved “bridging the gaps,” focusing on 1) enhancing data access—essential for planning prevention initiatives, 2) defining and confronting the challenges posed by preventing suicide and attempted suicide among men and women in the middle years of life, and 3) increasing understanding of intimate partner violence as one of several areas that coalesce individual and family problems, substance misuse, and financial and economic distress as contextual contributions to suicidal behaviors and deaths. The ICRC-S was instrumental in the development of the Colorado National Collaborative, which is now a recipient of CDC funding for comprehensive community suicide prevention.

Research Priority Areas

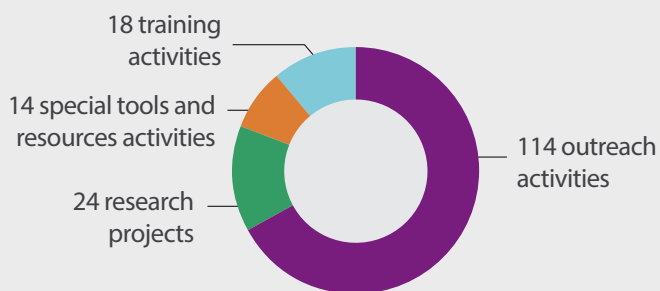


Intimate Partner Violence

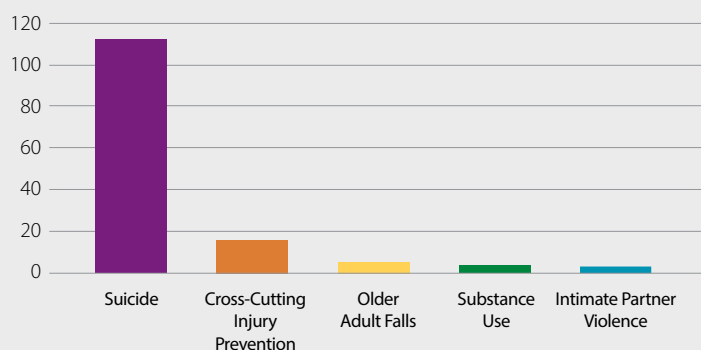


Suicide

Total Number of Activities by Core Area by ICRC-S from 2012–2019



Top Five Research Topics by Number of Activities by ICRC-S from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,638,070

Funding Cycle: 2012

Suicide Prevention Training Shifts Culture Among Intimate Partner Violence Hotline Workers



Principal Investigator:
Catherine Cerulli, JD, PhD

Depression is the leading comorbid disease and is often untreated among IPV victims. This project created suicide prevention training for IPV hotline counselors at the National Domestic Violence Hotline to improve IPV hotline workers' ability to listen for suicidal thoughts and behaviors and refer IPV victims for mental health care. Attendees reported increased knowledge of suicide risk and a shift in agency culture to include suicide prevention after implementing the training. The resulting curriculum is being distributed nationally free-of-charge by "TRANSFORM," which is based at the Mt. Hope Family Center at the University of Rochester and funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Cross, W. F., Crean, H. F., Gould, M. S., Campbell, J., Amezcua, N., ... Cerulli, C. (2017). Development and initial evaluation of a suicide prevention curriculum for domestic violence hotline workers. *Journal of Family Violence*, 32(8), 775–785.

Personalized Outreach May Help Increase Rates of Online Training for Suicide Prevention and Intimate Partner Violence Hotline Workers



Principal Investigators:
Catherine Cerulli, JD, PhD &
Wendi Cross, PhD

This study investigated conditions that may promote uptake of an online intimate partner violence (IPV)-Suicide Prevention training among IPV hotline workers. Researchers gave one group of hotline workers the standard level of communication, which included one email about their access to IPV training. The intervention group of hotline workers received enhanced communication, which included four points of outreach about the training. Results suggest that personalizing communications for training participants can improve access and uptake of training information and materials for IPV hotline staff.

Cerulli, C., Missell, R., Harrington, D., Thurston, S. W., Quinlan, K., Jones, K. R., & Cross, W. F. [Under review]. A randomized control trial to test dissemination of an online suicide prevention training for intimate partner violence hotline workers.

Stakeholders Develop Models for County-Level Suicide Prevention



Principal Investigator:
AnnMarie White, EdD

There are no known approaches to suicide prevention at the county level. This project focused on developing knowledge and tools for communities to work collaboratively in suicide prevention. ICRC-S researchers brought together stakeholders, including subject matter experts and community members, to create and pilot new suicide prevention strategies. Participants identified patterns in county suicide rates and potential protective factors. This work can inform future projects on implementing suicide prevention systems at the county level.

White, A. M. & Lich, K. H. (2018). Learning about shared risk and protective factors to promote comprehensive and collaborative approaches to prevent suicide and other forms of premature death by injury. Record of the 36th International Conference of the System Dynamics Society. Curran Associates, Inc. for the System Dynamics Society.

Suicide Rates May Be Impacted by Factors on the Individual and Community Levels



Principal Investigator:

Robert Bossarte, PhD

This study sought to understand the variability in suicide rates across ages, sexes, and socioeconomic statuses. Researchers used statistical analyses to investigate many aspects of suicide rates, including risk and protective factors at the levels of society, the community, and the individual. This study found statistically significant links between female suicide rates and individual and community level factors, including incest victimization and crime rates.

Technology May Help People Who Experience Intimate Partner Violence Better Share Their Needs with Medical Providers



Principal Investigator:

Catherine Cerulli, JD, PhD

This project examined strategies to improve the identification of intimate partner violence (IPV) and suicidal thoughts and behaviors. The study assessed whether patients who have experienced IPV and suicidal thoughts and behaviors share their needs with their medical providers more easily through a computer survey than by talking face-to-face. The results of this study informed opportunities to integrate computer-assisted data collection for patient education and injury prevention.

A Decades-Long Study Highlights Long Term Impacts of Exposure to Violence as a Teenager

Principal Investigator:

Lydia O'Donnell, EdD
(not pictured)

The ICRC-S initiated a long-term study in the late 1990s to better understand the impact of risk behaviors in early teen years and exposure to violence on adult health and wellbeing. Researchers tracked minority youth from economically distressed areas in New York City over decades to evaluate their life outcomes, including parenting, exposure to violence, and suicidality. Most study participants are raising children. Participants reported they would feel “okay” or “proud” to get help if they had an emotional problem. About 8% reported seriously considering suicide in the past 12 months, with almost the same proportion saying they have told someone else they were thinking of suicide, and 2% reporting an attempt. This study reported that risk factors related to reports of suicide attempts are being female, being Hispanic, and depression; family closeness is a strong resiliency factor.

O'Donnell, L., O'Donnell, C., Wardlaw, D. M., & Stueve, A. (2004). Risk and resiliency factors influencing suicidality among urban African American and Latino youth. *American Journal of Community Psychology*, 33(1-2), 37–49.



Working with Partners to Prevent Suicide: The Colorado National Collaborative

ICRC-S, the Colorado Department of Public Health and Environment, and local and national stakeholders formed the [Colorado National Collaborative for Suicide Prevention](#) to develop a system-based suicide prevention approach. This approach includes working with local stakeholders to implement evidence-based prevention strategies for at-risk youth, veterans, older adults, and middle-aged men. The collaborative plans to evaluate this comprehensive approach to determine if it can serve as a model for other states. [Read how this project is working to prevent suicide.](#)

1,000+
people reached

Raising Awareness of Suicide Prevention Topics: Webinar Series

ICRC-S produced a six-part webinar series on suicide prevention. Topics included preventing suicide by promoting connectedness in American Indian and Alaska Native communities through culture, exploring systems approaches and connectedness in communities, and promoting connectedness for youth through social networks and sources of strength, among others. ICRC-S reached more than 1,000 people through the webinar series.



Providing Support to Suicide Prevention Researchers and Practitioners: Technical Assistance

ICRC-S responded to a range of technical assistance needs for participants of their Research Training Institute. For example, ICRC-S provided suicide prevention researchers and practitioners with examples of legislation that requires mental health professionals to have suicide prevention training before being granted licensure. Other technical assistance requests included information about suicide risk among farmers and examples of suicide risk assessment tools for clinicians.

1,000+
listeners

Discussing Suicide Prevention Research Methods and Strategies: Podcast Series

ICRC-S released multiple podcasts discussing suicide prevention. The podcasts cover suicide prevention research topics, including qualitative methodologies and evaluation plans, as well as a systems-level approach to suicide prevention in health and behavioral healthcare settings. For example, ICRC-S released a podcast to introduce listeners to Zero Suicide, a comprehensive framework that promotes a systems approach for suicide prevention in health and behavioral health care settings. ICRC-S reached more than 1,000 people through the podcast series.

Curriculum Development and Implementation



- Created and tested a **suicide prevention curriculum** for workers of the National Domestic Violence Hotline.
- Developed several **webinars** aimed at training public health professionals and researchers who are interested or engaged in suicide prevention research and practice. Webinar topics included the association of geographic residence on individual-level risk factors and the impact of misclassification of drug deaths on understanding and preventing suicide.
- Conducted a **bi-annual training** to promote the study of public health approaches to suicide prevention. The 4-day Research Training Institute (RTI) equipped injury and violence prevention professionals and researchers across the nation with information on suicide prevention science and research methods. The resulting curriculum is now being distributed nationally free of charge by the NICHD-funded center, "TRANSFORM," which is based at the Mt. Hope Family Center at the University of Rochester.

Mentorship of Researchers



- Mentored **31 doctoral and postdoctoral fellows** during the 7-year funding period.
- Supported nine **multidisciplinary teams for the Research Training Institute (RTI)**. Each team had a violence and injury prevention professional and a collaborating researcher.
- Conducted **48 calls** between RTI research teams and ICRC-S mentors to discuss progress, challenges, and next steps.
- Supported the National Research Service Award, a collaborative, multi-disciplinary **postdoctoral training program** in suicide prevention research.

Database



Integrated Injury Data Archive

Developed a data archive to inform suicide prevention programs in collaboration with New York State's Department of Health and Office for Mental Health. The archive includes information from violence and injury prevention programs, criminal justice, and inpatient and community-based mental health services, among other sources. Extended this work to a collaborative archive with CDC's National Death Index to conduct a program evaluation for the Division of Violence Prevention related to sexual violence.

Evaluation



Collaboration with Trevor Project Personnel

Designed projects to review Trevor Project text and chat data to identify emerging themes in collaboration with Trevor Project personnel. The analysis will inform a web-based suicide prevention intervention that can be tailored to sexual minority clients.

Program



Substance Use Prevention Program, Partnership for Drug Free Kids

Developed a substance use prevention program that addresses the developmental needs of rising 9th graders in collaboration with the Partnership for Drug Free Kids.

Tools



Promoting Firearm Safety for Suicide Prevention in Primary Care

Disseminated tools promoting firearm safety for suicide prevention in primary care in partnership with the Oregon Health Authority. The tools included a brochure to encourage firearm owners to limit access to firearms for those at risk of suicide.

Suicide Prevention Training Tools for Domestic Violence Hotlines

Developed an online suicide prevention program for individuals and agencies working with intimate partner violence and a suicide prevention training tool for domestic violence hotlines. The one-hour, six-module training is self-directed and available online for free. The tool includes a suicide risk assessment and a handout with talking points to begin the discussion with callers.

TwayderGUN

Developed TwayderGUN, a method of using Twitter and related social media tools to define a marginalized group potentially bearing a high risk for suicide. ICRC-S developed this tool to understand the risk and burden of suicide among sexual minority adults.

Training



Commitment to Living for Primary Care

Developed Committing to Living for Primary Care, a 48-minute, six-module suicide prevention training program for primary care providers.

West Virginia University Injury Control Research Center



Director

Robert Bossarte, PhD

The mission of the West Virginia University Injury Control Research Center (WVU ICRC) is to advance the science and practice of injury prevention and control through research, education, outreach, and service. The long-term goal of WVU ICRC is to reduce the societal burden imposed by injury. WVU ICRC aspires to prevent injury-related mortality and morbidity and reduce the adverse health and economic consequences associated with injury. WVU ICRC addresses national priorities for injury control while simultaneously emphasizing topics that are most relevant to West Virginia and the surrounding Appalachian region. This region is economically depressed and exhibits disproportionately high injury rates. WVU ICRC also focuses on expanding its educational programs and establishing a variety of innovative training opportunities for students in collaboration with external partners throughout the Appalachian region. Finally, WVU ICRC is maximizing its impact by actively disseminating research findings, promoting enhanced regional collaborations, and supporting community-based injury control practitioners and policymakers.

Research Priority Areas



Adverse Childhood Experiences (ACEs)

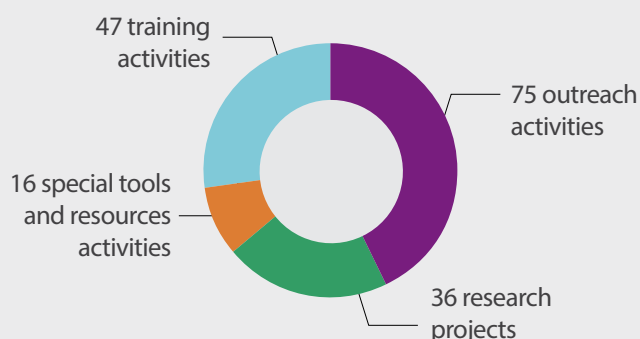


Prescription/Opioid Overdos

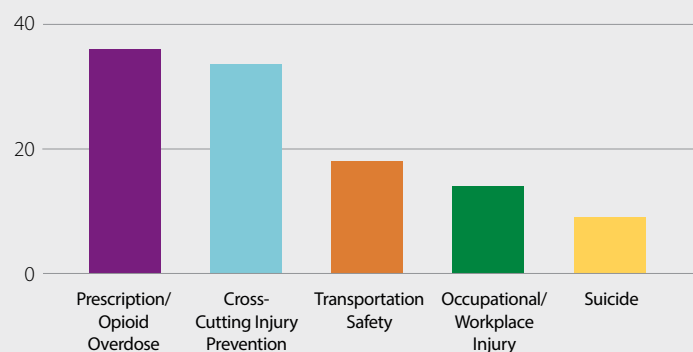


Suicide

Total Number of Activities by Core Area by WVU ICRC from 2012–2019



Top Five Research Topics by Number of Activities by WVU ICRC from 2012–2019



Funding

Years Funded: 2012–2019

Total Funding Amount: \$5,707,206

Funding Cycle: 2012

Contact



www.health.wvu.edu/injury-control-research-center



[www.twitter.com/icrc_wvu](https://twitter.com/icrc_wvu)



www.facebook.com/WVUICRC

Distracted Driving Laws Prove Difficult to Enforce



Principal Investigator:
Toni Marie Rudisill, MS, PhD

Cell phone use while driving is dangerous and leads to numerous preventable injuries and deaths. States have passed numerous pieces of legislation since 2001 to combat cell phone use while driving. However, these laws cannot be enforced by the police. Researchers conducted focus groups with officers from five different police departments to determine the barriers to enforcing cell phone use while driving. They identified these barriers: cultural norms, the prevalence of cell phones in society, different laws between states, the need for a general distracted driving law, and unclear legislation. Most officers reported it would be helpful to educate drivers about specific aspects of the laws and technological advancements implemented by cell phone manufacturers. The findings of this study can inform policy efforts to combat cell phone-related distracted driving.

Rudisill, T. M., Baus, A. D., & Jarrett, T. (2019). Challenges of enforcing cell phone use while driving laws among police: a qualitative study. *Injury Prevention*, 25(6), 494–500.

Study Shows Low Likelihood of Involvement of Other Drugs in Opioid-Related Deaths



Principal Investigators:
Marie Abate, PharmD &
Marcella Sorg, PhD

West Virginia has the highest per capita rate of drug-related deaths in the United States. Researchers from WVU ICRC collaborated with states including Maine, New Hampshire, and Vermont to compile drug-related death information into a database to study the connections between opioids and other drugs or alcohol in opioid-related deaths from 2008 to 2011. This study found that other drugs were not strongly associated with opioid-related deaths. Alcohol was associated with significantly low use of opioids; antidepressants were associated with significantly low use of fentanyl and oxycodone; and the generic drug for Benadryl was associated with significantly low uses of hydrocodone. Drug-related deaths involving the generic drug for Benadryl were found to be more common in women than men. The study findings suggest a need for further research on the co-occurrence of specific opioids and other co-intoxicants in opioid-related deaths.

Fields, M. D., Abate, M. A., Hu, L., Long, D. L., Blommel, M. L., Haikal, N. A., et al. (2015). Parent and metabolite opioid drug concentrations in unintentional deaths involving opioid and benzodiazepine combinations. *Journal of Forensic Sciences*, 60(4), 950–956.

Mindfulness-Based Relapse Prevention Can Be Used to Help Patients with Opioid Use Disorder



Principal Investigator:
Keith Zullig, PhD, MSPH,
FASHA, FAAHB

Many patients with opioid use disorder also struggle with anxiety and depression. The Mindfulness-Based Relapse Prevention (MBRP) intervention is effective at improving mental and physical health, reducing drug cravings, and decreasing anxiety and depression. This study aimed to explore the effectiveness of MBRP with individuals receiving medication for opioid use disorder (MOUD) in a naturalistic, open-ended outpatient group treatment setting. Findings of this showed significant differences in sex, education level, insurance status, relationship status, or employment status were detected at baseline between groups. The current study results suggest MBRP can be implemented as outpatient therapy for individuals in MOUD.

Zullig, K. J., Lander, L. R., Tuscano, M., Hobbs, G. R., & Faulkenberry, L. (2018). Incorporating mindfulness-based relapse prevention into outpatient therapy for treatment of opioid use disorder with medication-assisted treatment. *Annals of Community Medicine & Practice*, 4(1), 1032.

Analyzing Suicide Notes May Help Improve Prevention Efforts



Principal Investigator:
Ian R.H. Rockett, PhD, MA, MPH

Suicide rates in the United States have increased over the years but numbers of suicide are still undercounted. The lack of data about suicide creates challenges for designing prevention efforts. Researchers analyzed databases of suicide notes to understand whether notes could assist with identifying the suicide method. This study also aimed to predict the likelihood that suicide will be accompanied by a note. The project yielded useful information for policymakers and public health professionals focusing on suicide prevention.

Rockett, I. R., Caine, E. D., Connery, H. S., D'Onofrio, G., Gunnell, D. J., Miller, T., et al. (2018). Discerning suicide in drug intoxication deaths: paucity and primacy of suicide notes and psychiatric history. *PLoS One*, 13(1), e0190200.

Fall Prevention Program Can Be Successfully Implemented via Telehealth and in Churches



Principal Investigator:
Dina L. Jones, PT, PhD

Older adult falls are a leading cause of death in West Virginia, and there is a lack of fall prevention programs in rural areas. The Tai Ji Quan: Moving for Better Balance (TJQMBB) program is a CDC-approved fall-prevention intervention for older adults. There was a need to test TJQMBB in rural areas of West Virginia where instructors are less available. In one study, researchers implemented TJQMBB among 240 older adults in 20 churches in rural West Virginia. Overall, the feedback from the West Virginia churches was positive, and eight church leaders continued to offer TJQMBB after the intervention ended. In another study, WVU ICRC will implement tele-TJQMBB classes for older adults via the computer and television. Future plans include comparing tele-TJQMBB to the traditional, in-person TJQMBB program.

Jones, D. L., Starcher, R. W., Eicher, J. L., & Wilcox, S. (2016). Adoption of a Tai Chi intervention, Tai Ji Quan: moving for better balance, for fall prevention by rural faith-based organizations, 2013-2014. *Preventing Chronic Disease*, 13, E92.



Educating Stakeholders about the Opioid Overdose Epidemic: Take-Home Naloxone Program in Rural Areas

WVU ICRC supported the implementation of take-home naloxone programs in substance use disorder treatment centers, law enforcement agencies, and treatment programs around the state. The WVU ICRC conducted research that demonstrated the effectiveness of naloxone programs in rural areas and disseminated findings to key stakeholders and policymakers. WVU ICRC is also training and equipping law enforcement agencies around the state to carry and administer take-home naloxone. WVU ICRC recorded at least 25 overdose reversals in the first nine months after the program was implemented in 16 counties. [Read how the project is educating stakeholders.](#)

8,250+
naloxone kits

Putting Research into Action to Prevent Opioid Overdose: Statewide Naloxone Distribution Program

WVU ICRC collaborated with the state's Bureau of Behavioral Health and Health Facilities to plan, conduct, and evaluate a statewide naloxone distribution program. The WVU ICRC delivered more than 8,250 kits and created 65 new naloxone programs across the state. New program locations included fire and police departments, health departments, day report centers, recovery programs, and West Virginia Department of Corrections sites, among many others.



Collaborating with Community Partners to Prevent Injury: Mountain Safe Initiative

Mountain Safe is the community-focused outreach arm of the WVU ICRC. This initiative is tasked with translating research into practice in local communities. Mountain Safe works with community partners to identify injury-related challenges, provide evidence-based strategies to address these challenges, facilitate implementation, and support sustainability. Mountain Safe collaborates with various community partners such as statewide groups, grassroots coalitions, local organizations, researchers, practitioners, and other stakeholders to develop and implement projects that make a difference.

image source: www.facebook.com/mountainsafewv

Curriculum Development and Implementation



- Partnered with the West Virginia School of Medicine to develop a plan to provide WVU police officers with **overdose recognition and response training**, including administration of naloxone.
- Delivered a **series of lectures on violence and injuries** to medical students and residents. Topics included domestic violence, prescription drug overdose, trauma, and traumatic brain injuries.
- Developed a **course in prescription drug misuse** for students in the health sciences.

Mentorship of Researchers



- Mentored **297 students and postdoctoral fellows** over the 7-year funding period.
- Provided students from diverse disciplines with **graduate research assistantships** on projects related to topics such as falls, suicide, prescription drug overdose, and occupational safety.
- Engaged students in **multiple research projects** that offered critical research experience. Research topics included fall prevention, intimate partner violence, occupational safety, opioid overdose prevention, suicide, and traffic safety.
- Maintained a strong **mentorship program** facilitating local, regional, and national learning experiences for students. Student experiences included work with the Substance Abuse and Mental Health Services Administration and the U.S. Department of Veterans Affairs, as well as local partners.

Form



Naloxone Standing Order Form and Treatment Protocol

Established a naloxone standing order form and treatment protocol for the WVU Monongalia County Law Enforcement Naloxone Program. The standing order authorizes pharmacists to dispense naloxone to law enforcement officers and other eligible individuals without a prescription. The protocol contains a step-by-step instruction sheet for recognizing an overdose and administering naloxone.

Program



CInDI

Developed a childhood injury prevention program called CInDi. The program provides tools developed for parents and children to stress “common sense” injury prevention.

Tools



Instrument to Assess the Quality of Researcher-Practitioner Partnerships

Developed a tool to evaluate the quality of WVU ICRC partnerships with state violence and injury prevention programs and other organizations.

Business Case Developer Tool

Created the Business Case tool, which provides decision-makers with a structured method to justify a proposed intervention or solution. The tool estimates the proposed project’s impact on employee health and risk management.

Law Enforcement Naloxone Initiative

Developed a toolkit to assist West Virginia law enforcement agencies with planning, launching, and managing naloxone programs. The toolkit is a step-by-step, checklist-style product that includes adaptable versions of the practice tools.

Screening Tool for Assessing the Risk of Suicide

Developed a guiding framework for gathering information about a person’s suicidal state to support decision-making about safety planning and risk assessment.

School Climate Measure

Designed the School Climate Measure, a multidimensional measure of social, emotional, and physical school environments. The School Climate Measure assesses eight areas: student-teacher relationships, school connectedness, academic support, order and discipline, school physical environment, school social environment, perceived exclusion/privilege, and academic satisfaction.

Section III: A List of Core Research Projects for the ICRCs of the 2019 Funding Cycle

Core Research Projects of the 2019 Funding Cycle

Injury Control Research Centers



In 2019, nine academic research centers were awarded approximately \$833,000 of funding per center each year for five years. These nine ICRCs are conducting core research projects that focus on motor vehicle crashes, suicide, adverse childhood experiences (ACEs), opioid overdose, sexual violence, falls among older adults, and traumatic brain injury (TBI).

Columbia University: Columbia Center for Injury Science and Prevention

ACEs: School Violence Exposure as an Adverse Childhood Experience: A Nationwide Study of K-12 School Responses to Violence and Their Impact on Youth Mental Health and Educational Outcomes

Motor Vehicle Crashes: Impacts of Ridesharing on Motor Vehicle Crashes, Alcohol-Related Morbidity, and Assault

Opioid Overdose: Interventions to Reduce Opioid Overdose: Transportability of Evidence-Based Approaches Through Agent-Based Modeling

Suicide: Adolescent Depression and Suicidality Are Increasing in the US: What is the Role of Social Media? Investigation in Three National Samples of Adolescents

Emory University: Injury Prevention Research Center at Emory

ACEs and Suicide: ACEs and Suicidal Behavior in African Americans: Assessment and Prevention

ACEs: Addressing ACEs Among Hispanic Caregivers in A Pediatric Primary Care Population to Improve Child Health and Decrease Early Adversity

Opioid Overdose: Small Area Estimation for Opioid Abuse Prevention and Response

Violence and Injury: Organizational Readiness of the Georgia Trauma System to Implement the Cardiff Model

Johns Hopkins University: Center for Injury Research and Policy

ACEs and Sexual Violence: Evaluating Child Sexual Abuse Prevention Strategies Within Youth Serving Organizations

Motor Vehicle Crashes and Opioid Overdose: Effects of State Opioid Prescribing Laws on Fatal Motor Vehicle Crashes

Motor Vehicle Crashes: Promoting the Use of Existing Technologies to Reduce Teenage Drivers' Crashes

Opioid Overdose: Implementation, Evaluation, And Replication of An Indian Health Service Medication Storage and Disposal Initiative for Older Adults in Tribal Communities

Nationwide Children's Hospital: Center for Injury Research and Policy

ACEs and Opioid Overdose: Opioid Overdoses and Child Abuse and Neglect

Motor Vehicle Crashes: A Hybrid Effectiveness-Implementation Trial to Improve Safe Driving Among Teen Drivers with Traffic Violations

Motor Vehicle Crashes: Behind the Wheel Smartphone Application: Utilizing Technology to Quantify Driving Behaviors and Promote Safe Driving in Adolescents

Suicide: Targeting Adolescent Insomnia to Lessen Overall Risk of Suicidal Behavior

Core Research Projects of the 2019 Funding Cycle

Injury Control Research Centers

University of Iowa Injury Prevention Research Center

ACEs: Childhood Stressors and Cardiovascular Disease Risk in Adulthood: A Longitudinal Investigation of Divergent Explanatory Models

Motor Vehicle Crashes: Impact of State Driver Licensing Policies on Older Driver Crash Involvement Rates

Opioid Overdose and Falls: Implementation of An Opioid Medication Care Plan to Reduce Fall Injuries Among Rural Older Adults

Sexual Violence: Translation of An Evidence-Based Teen Dating Violence Prevention Program into Rural Community-Based Prevention Networks

University of Michigan Injury Prevention Center

Opioid Overdose and Falls: Overdose and Fall Risk Concentration Among Benzodiazepine Users

Opioid Overdose and Suicide: Association Between State-Level Prescription Opioid Limitation Laws and Suicide Outcomes

Opioid Overdose: Examining Opioid Overdose Risk in The Context of Changing Patterns of Opioid Prescribing and Overdose

Suicide: Translation of a Military/Veterans Crisis Line (MVCL) For Suicide Prevention Using Crisis Line Facilitation

University of North Carolina Injury Prevention Research Center

Opioid Overdose: Development of an Emergency Department Patient-Centered Intervention for the Primary Prevention of Long-Term Opioid Use

Opioid Overdose: Medicaid Expansion and Deaths Due to Opioid Overdose, Suicides, and Homicides Among Formerly Incarcerated Persons

Sexual Violence: Adaptation of the “Moms and Teens for Safe Dates” Program for Web-Based Delivery

Sexual Violence: Patterns of Intimate Partner Violence from Adolescence into Adulthood Among Sexual Minorities and Heterosexuals

University of Pennsylvania: Penn Injury Science Center

ACEs: The Contribution of ACEs and Neighborhood Exposures to Health Outcomes Experienced by Seriously Injured Black Men

Falls: Using Innovative Technology to Facilitate Fall Prevention for Older Adults with Mild Cognitive Impairment

Motor Vehicle Crashes: Space-Time Characteristics of Adolescents’ Cell Phone Use While Driving

Opioid Overdose: Towards Making “Warm Handoff” Pathways to Treatment the Default Option for Patients with Opioid Use Disorder Presenting in the Emergency Departments

University of Washington: Harborview Injury Prevention and Research Center

Falls: Development and Testing of a Toolkit to Prevent Falls in Long Term Care Facilities (LTCF)

Opioid Overdose: Collaborative Opioid Taper After Trauma: Preventing Opioid Misuse and Opioid Use Disorder

Suicide: Evaluation of Suicide Prevention Training for Healthcare Professionals: A Natural Experiment

TBI: Return to Learn Implementation Bundle for Schools (RISE) After Concussion

Appendix A: Research Topic Areas

Cross-Cutting Injury Prevention

Cross-cutting Injury Prevention includes ICRC research, outreach, and training activities focused on multiple injury topic areas and a specific primary topic area was not specified during reporting.

Motor Vehicle Injury

Motor Vehicle Injury category includes the following research topics: child passenger safety, teen driving safety, traffic safety, all-terrain vehicle safety, motor vehicle safety, and transportation

Unintentional Injury

Unintentional Injury category includes the following research topics: accidental poisoning, adverse medical events, back injury, child safety, drowning/submersion, heat-related injury, pediatric injury, perioperative injury, poisoning, and surgical injury

Unintentional Opioid Overdose and Poisoning

Unintentional opioid overdose and poisoning category is defined as when a person dies because of a drug overdose, the medical examiner or coroner records on the death certificate whether the overdose was intentional (purposely self-inflicted, as in cases of suicide) or unintentional (accidental). Unintentional drug poisoning deaths include cases where a drug was taken accidentally; too much of a drug was taken accidentally; the wrong drug was given or taken in error; or an accident occurred in the use of a drug(s) in medical and surgical procedures.

