Innovative collaborations to reduce rural roadway crashes

Learning Objectives
Understand how innovative partnerships can have impact on reducing the burden of injury
Learn a case example of how practice informed research and research informed practice
Describe the prevalence, risk and protective factors, and prevention approaches to improve rural roadway safety

Statement of Purpose
Transportation is the leading mechanism for agricultural-related fatality and injury, and rural roadways have disproportionately high crash rates. Crashes with farm equipment contribute significantly. This presentation will provide a case study of how innovative collaborations can help reduce these crashes.

Methods
Studies to identify incidence; risk and protective factors; and geospatial distributions of farm equipment crashes involved partners from public health, engineering, urban planning and nine state Departments of Transportation. New technologies to video-capture vehicle interactions with farm equipment, in which farm equipment was enabled with a GPS/video device, included partners from public health, engineering, computer science and a range of farm communities. Intervention activities have included public service announcements in partnership with the Farm Bureau and a national radio station; an evaluation of state policies; and, currently a community campaign working with researchers in communication, behavioral interventions, and with two local communities. These components will be presented to demonstrate how research can inform practice and how practitioners and researchers can collaborate for innovative solutions.

Results
Each year in the Midwest, more than 1,000 crashes between farm equipment and other vehicles are reported. Crashes were more likely to be the fault of the non-farm equipment driver, and the non-farm equipment driver was 5.2 times (95% CI 4.1 – 6.5) more likely to be injured than the farm equipment driver. Urban/rural interface areas, such as suburban towns, were at highest risk for crashes. State policies that require strong lighting and marking of farm equipment had 16% lower rates of crashes. Video-capture of vehicle behavior identified speeding, passing, and following too closely as common errors around farm equipment. Intercept surveys of individuals in the community chosen for the community campaign found that top road safety concerns were distracted driving (60.7%), road conditions (58.4%), and inappropriate driving behaviors (e.g., speeding; 52.8%). Safety materials created through a participatory process with the community will be shared, as will the study design and early results of the campaign impact.

Conclusions
All US states have rural roadways and agricultural activities, and thus experience farm equipment crashes. Our community-engaged activities build a solid evidence base for the translation of policy, behavioral, and community-level intervention approaches.

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Corinne Peek-Asa is the Associate Dean for Research of the University of Iowa, College of Public Health and Professor of Occupational and Environmental Health. She is the Director of the CDC-funded Injury Prevention Research Center and also directs an NIH-funded International Trauma and Violence Research Training program. Dr. Peek-Asa is an injury epidemiologist and her work focuses on the implementation and evaluation of programs and policies to prevent acute traumatic injuries and violence. She teaches courses in injury and violence prevention and public health policy. She is an appointed committee member of the Transportation Research Board, a member of the National Academies of Science Global Violence Forum, and she served as the President of the Society for the Advancement of Violence and Injury Research. She was named a ResearchAmerica Public Health Hero in 2010.
Implementation and Evaluation of a Distracted Driving Prevention Program among High School Teenagers and Parents in Dallas, Texas

Learning Objectives
Describe the design, implementation and evaluation of a strategy to reduce distracted driving behavior among teens and parents of teens.
Explain some of the implementation barriers when working with teens and parents at the schools.
Describe some project implementation recommendations.

Statement of Purpose
Every day in the U.S., more than nine people are killed and more than 1,100 are injured in motor vehicle collisions involving a distracted driver. In 2016, 15-19 year olds were the largest proportion of drivers involved in fatal crashes due to distracted driving.

Methods
The Injury Prevention Center of Greater Dallas partnered with Dallas high schools to develop and implement a culturally-competent, community-based project to decrease distracted driving behaviors among teens. The program emphasized reducing cell phone manipulation such as sending text messages, emails, and making phone calls while driving. Three project schools participated, and three schools that did not receive the intervention served as comparison schools.

Project schools recruited both teens and parents to receive the intervention strategy, which included: 1) Distracted driving presentations, 2) Booster sessions, 3) Fact sheets, 4) Safe driving agreements, and 5) Walk-around education by law enforcement. Building strong partnerships with community stakeholders (law enforcement, school staff, and other community health educators) was part of the intervention strategy.

Observational surveys of distracted drivers were conducted in the pre- and post-intervention periods to determine whether there was a change in cell phone use among drivers following the implementation of the project. Observational surveys were conducted at both the project and comparison sites.

Results
Observational surveys demonstrated that teen cell phone manipulation in the project schools decreased from 7.3% during the pre-intervention period to 1.7% in the post-intervention period. At the comparison schools, there was a slight increase (.2%) during the same time period. Among parents at the target schools, cell phone use dropped from 6.8% at the pre-intervention time period to .5% at the post-intervention time period. There was slight increase (.8%) at comparison schools during the same period.

Conclusions
Cell phone manipulation decreased at the project schools for both teens and parents and was statistically significant (P<0.001). Our results suggest that our intervention strategy was the reason for the change and it could potentially be tailored and implemented in other communities to reduce distracted driving behavior among teens.
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Marissa Rodriguez is a Health Educator for the Injury Prevention Center of Greater Dallas (IPC) at Parkland Health & Hospital System, where she is responsible for project planning, implementation and evaluation of community-based injury prevention programs. Marissa is a certified Child Passenger Safety (CPS) Technician Instructor as well as an Instructor in the Safe Transportation of Children with special healthcare needs.

Marissa has worked in injury prevention for over 11 years with a primary focus on child occupant safety, older adult falls, pedestrian safety, and traffic safety specifically among teens.

Marissa is a graduate from the University of Texas at El Paso where she obtained her Bachelor of Science degree in Health Promotion with a minor in Community Health. She is also a member of the Hospital Injury Prevention Special Interest Group (HIP-SIG) led by the Safe States Alliance and is a strategic team member of the Texas Injury Prevention Leadership Collaborative.
Engaging Public Health and Traffic Safety Leaders: Recommendations for Applying a Shared Risk and Protective Factors Approach to Driver Behavior Change Strategies in Communities

Learning Objectives
Session participants will:

- Understand the process of engaging public health and traffic safety leaders to develop recommendations that provide guidance on using a shared risk and protective factors approach to reduce risky driving behaviors and promote driver safety
- Recognize the benefits of a multi-disciplinary collaboration between IVP public health practitioners, traffic safety professionals, and researchers to develop recommendations for use by state and local level public health and traffic safety professionals
- Explore how a shared risk and protective factors approach can be used to support the implementation of strategies that address driver behavior change on the population level

Statement of Purpose
Given the scarcity of resources and competing issues in the public health injury prevention and traffic safety communities, practitioners can have the biggest impact by collaboratively applying evidence-based strategies to traffic safety challenges that also address shared risk or protective factors. Safe States convened a Behavioral Health Workgroup comprised of key subject matter experts from federal, state, and local agencies, national organizations, and the research community. The Workgroup contributed to the development of recommendations for applying a shared risk and protective factors approach to reduce risky driving behavior, identifying interventions that can address risk and protective factors to prevent motor vehicle-related injuries and fatalities, and utilizing data resources to measure the impact of strategies.

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Ina Robinson is a Program Manager at the Safe States Alliance. Prior to joining Safe States in 2013, Ina worked for several years as a Health Scientist at the Centers for Disease Control and Prevention. Ina has over fifteen years of public health-related experience with a background in behavioral science research methods, injury and violence prevention, public health program development and management, data analysis, federal government budget and performance measurement processes, and program evaluation methods. Ina earned her Bachelor of Arts in Sociology from Hampton University and her Master of Public Health degree with a concentration in Behavioral and Community Health Sciences from the University of Pittsburgh.