**Talking to the Media**

Talking to the Media - Why You Should Share Your Research with the Media, What You Need to Do to Get Them Interested, and How to Make the Most of It

Tracy Mehan, Nationwide Children’s Hospital; Lara McKenzie, The Research Institute at Nationwide Children’s Hospital

**Purpose:** Research findings are typically published in reports and academic journals, venues that are rarely accessed by parents who are a primary target group for such research. Because of this, injury researchers are increasingly becoming aware of the need to disseminate and translate their research findings through local and national media - yet most researchers have not been trained on the most effective ways to work with the media. This presentation will teach researchers why it is important to share their research with the media and give them the tools to maximize their efforts.

**Methods/Approach:** Using case studies from our center, we will discuss the ways we have effectively used the media to inform and educate the public about important injury-related public health issues. We will draw on our examples to show the step-by-step process we use to take the research findings from the published article into the media. Results: By the end of the session, participants will be able to: Understand the importance of using the media to disseminate public health messages.

**Authors:** Lara McKenzie, Tracy Mehan

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**Motor Vehicle Policy**

Alcohol Ignition Interlock Installation in New Vehicles as a Primary Prevention Measure to Decrease Alcohol Involved Crash Fatalities and Non-Fatal Injuries

Patrick M. Carter, University of Michigan

**Statement of Purpose:** Alcohol-impaired drivers are responsible for one-third of annual motor vehicle crash (MVC) fatalities and $51 billion in economic costs per year. Alcohol ignition interlock devices (AIID), currently utilized to prevent convicted DUI offenders from drink driving, are under study by federal regulators as a potential primary prevention tool among the general population to decrease alcohol-impaired driving and alcohol related traffic fatalities. This analysis models the number of alcohol-involved fatalities and non-fatal injuries prevented, as well as the associated MVC-related cost savings when AIID are installed in all new US vehicles.

**Methods:** The Fatality Analysis Reporting System (FARS) and National Automotive Sampling System Â General Estimates System (NASS-GES) were used to identify fatal/non-fatal injuries from 2006-2010 associated with drinking drivers of non-bus passenger vehicles. Data were adjusted to account for crashes that would have occurred independent of alcohol consumption. The estimated impact of AIID installation for the first year was derived using the number of preventable alcohol-related injuries associated with vehicles.

**Authors:** Patrick M. Carter, Carol A. Flannagan, C. Raymond Bingham, Rebecca M. Cunningham, Jonathan D. Rupp

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The Impact of State Level Graduated Driver Licensing Policy on Rates of Unlicensed Driving and Passenger Restraint Use - Can Stricter Legislation Foster a Culture of Safety?

Jonathan Fu, Yale University School of Medicine

**Purpose:** Since 1996, states have begun implementing graduated driver licensing (GDL) programs. Increased restrictions could steer new drivers towards driving unlicensed. Unlicensed driving is associated with increased fatal crashes and high-risk behaviors that have been shown to adversely affect passenger safety behaviors like restraint use. The objective of this study was to assess the impact of varying state level GDL programs on rates of unlicensed driving.
driving and on passenger restraint use. Methods: Deidentified data from the National Highway Traffic Safety Administration Fatality Analysis Reporting System from years 1996-2010 was analyzed. Fatal crashes involving drivers (15-24 yrs) and their passengers (15-24 yrs) were included. Using a validated system, each state GDL laws at a given month were rated as poor, marginal, fair, or good. The association between GDL strength and unlicensed driving was analyzed graphically and by chi-square test. Multivariate logistic regression with generalized estimating equations were undertaken to assess the relationship between GDL strength and passenger restraint use.

Results: From January 1996 to December 2010, 26,504 (23.4%) state-months were rated as poor, 21,366 (18.9%) marginal, 33,603 (29.6%) fair, and 31,903 (28.1%) good. Rates of unlicensed driving ranged from 16.4% in state-months rated marginal versus 21.5% in state-months rated good (pSignificance: Our findings suggest that stronger GDL law can serve as an effective countermeasure for mitigating risk in a crash context. Increased state-level GDL programs appears to foster a culture of safety in states that have adopted stronger restrictions, despite significant risk spillover from unlicensed driving and other risk-enhancing factors. As of 2010, states are still rated marginal and 10 fair. Our study provides evidence that stronger legislation in these states may reduce overall risk to young drivers and their passengers

Authors: Jonathan Fu, Craig Anderson, James Dziura, Michael Crowley, Federico Vaca

Political and System Factors Associated with the Advancement of 0.08 g/dL Blood Alcohol Concentration Laws in the United States from 1982 to 2006
Gregory Tung, Colorado School of Public Health

Statement of Purpose: To explore what factors facilitated the advancement of 0.08 g/dL blood alcohol concentration laws among the U.S. states.

Methods/Approach: A longitudinal dataset detailing blood alcohol concentration policy status, a range of state-level political institutional factors, and federal actions was compiled from 1982 to 2006 (the year all states enacted a 0.08 g/dL BAC law) for all 50 states. General estimating equations were utilized to estimate the association between 0.08 g/dL BAC policy adoption and (1) a range of state-level political institutional factors, (2) a federal incentive grant that went into effect in 1998 and (3) the federal government tying 0.08 g/dL BAC policy adoption to federal transportation funds that went into effect in 2004.

Results: State-level measures of political ideology and the various political institutional factors examined did not show a statistically significant association with the adoption of 0.08 g/dL BAC laws. Federal incentive grants also did not demonstrate a statistically significant relationship (OR: 1.07, 95% CI: 0.65 - 1.76) with state-level 0.08 g/dL BAC law adoption. The federal government’s threat to withhold transportation funding, however, was strongly associated with 0.08 g/dL BAC policy adoption (OR: 7.21, 95% CI: 3.65 - 14.25).

Conclusions: In the case of 0.08 g/dL BAC laws, the greater responsiveness of states to the threat from the federal government to withhold federal transportation funding compared to federal incentive grants could potentially be attributed to the magnitude of the funds at stake and the existing dependence of states on federal transportation funding. It maybe that future efforts by the federal government to incentivize the states to adopt evidence-based injury prevention policies should forgo incentive grants and tie state-level policy adoption to federal funding that the states are dependent on.

Significance & Contribution to the Field: As public health research continues to advance our knowledge regarding effective programs and policies, understanding what factors impact the adoption and effective implementation of evidence-based programs and policies is of critical importance. This research compliments the existing focus on advocacy by incorporating an understanding of political and system-level factors into pro-health policy advancement efforts.

Authors: Gregory Tung, Jon Vernick, Daniel Webster, Elizabeth Stuart

Driving Public Opinion for Transportation Safety - Who Supports Injury Prevention Policies and are the Facts Influential?
Andrea Gielen, Johns Hopkins Bloomberg School of Public Health

Statement of Purpose: Motor vehicle crashes continue to be a leading cause of death and disability in the U.S. Widespread adoption of policy interventions often lags behind the science demonstrating their effectiveness. Public support for a policy may speed up this translation
process, but little is known about public opinion for many evidence-based policies. We address this gap by presenting data from a national public opinion poll.

**Methods/Approach:** A nationally representative sample of 2,397 adults rated their opinion (from strongly oppose to strongly support) on four policies: ignition interlocks for first time drunk driving offenders; disabling infotainment systems in vehicles when they are moving; bicycle helmet use for children younger than 16; and installation of red light cameras in school zones. After providing their opinion, respondents were given information about the magnitude of the problem or the effectiveness of the countermeasure and asked to provide their opinion again.

**Results:** Most respondents initially supported all of the policies -- ignition interlock devices (74%), vehicle infotainment controls (61%), bicycle helmets (75%), and red light cameras (58%). When respondents were informed about the science behind the policy, there were some noteworthy reductions in opposition. Of those initially opposed, 48% changed to support vehicle infotainment system controls, 31% supported ignition interlocks, 28% supported bicycle helmet laws, and 26% supported red light cameras. Data analyses are underway to determine the extent to which respondent characteristics (sex, education, political ideology, and geography) help explain these results. Conclusions: The public is generally supportive of these important evidence-based transportation policies, which suggests that the public can be an important ally in our injury prevention policy initiatives. Public opinions are also potentially influenced by the science behind the policy. These findings suggest that providing evidence to support injury prevention policies may garner more public support.

**Significance & Contribution to the Field:** Because so much of injury prevention relies on policy interventions, understanding public opinion is critically important. Without public support, effective policies may never be adopted, or if adopted, may not be effectively implemented. Thus, these results can contribute to future efforts to promote transportation safety.

**Authors:** Kate Smith, Andrea Gielen, Beata Debinski, Jon Vernick, Keshia Pollack, Shannon Frattaroli, Steve Bowman, Alicia Samuels

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**Enhancing Capacity through Program Practice & Workforce Development**

**The North Carolina Injury Free NC Academy - Building Capacity for Injury and Violence Prevention**

**Stephania Sidberry, NC Division of Public Health**

**Statement of Purpose:** The purpose of the Injury Free NC Academy is to provide intensive training to IVP professionals through a practical, guided six month process.

**Methods/Approach:** In 2010 a needs assessment was conducted to determine training needs of IVP professionals in North Carolina. Thirty-two percent of the respondents stated they had no formal training in IVP and 86% indicated a moderate or high need for formal training. As a result, the Injury and Violence Prevention State Advisory Council created the Injury Free NC Academy. Three multi-disciplinary teams were chosen through an application process to participate. The subject matter for this Academy is teen driver safety, with an emphasis on evidence-based practices and primary prevention. There are two (2)-day in-person trainings for teams, in August 2012 and March 2013. In between are four months of intensive coaching by IVP subject matter experts (i.e., guidance, latest research, referrals to other experts in the field). Results A pre and post test was administered to the Academy participants after the first in-person session. On an scale from one to ten where 10 is completely agree, participants increased from 3.92 to 9.07 when asked if they know which teen driving prevention strategies are evidence-based, which are promising practices, and which are ineffective or harmful. Participants increased from 4.69 to 9.20 when asked if they can now write SMART objectives. Participants significantly improved on several other areas as well.

**Conclusion:** The Academy succeeded in increasing the skill and capacity of IVP professionals to address injuries and violence in their communities. Participants will be able to use the skills they learned as a template to address other injury and violence prevention issues in the community. Significance and Contributions to the field: The Academy contributes significantly to the field in that it enhances the knowledge and skills of IVP professionals in North Carolina. Short term benefits are a better prepared IVP workforce. Long term this will mean more effective injury and violence prevention programs. This model can be replicated with very few resources.

**Authors:** Stephania Sidberry
A Natural Fit - Expanding Injury and Violence Prevention Activities through Linkages to Chronic Disease and Other Public Health Prevention Efforts

Suzanne Friesen, Centers for Disease Control and Prevention

Statement of Purpose: Injuries and violence are the leading cause of death for individuals ages 1-44, yet funds specifically directed to injury and violence prevention activities are often limited in tight budget climates. As a result, several state injury programs have worked to leverage resources from other public health programs, such as the Preventive Health and Health Services Block Grant, or have collaborated with programs across state government, such as departments of transportation, to further the reach of injury and violence prevention activities. Newer opportunities, such as the Community Transformation Grants (CTG) have provided additional opportunities for state injury programs to leverage funds and to take advantage of common risk factors and interventions to integrate injury and violence with other public health prevention efforts.

Methods/Approach: This session will highlight how state injury programs have worked within the state health department, across state government and at the community level to integrate injury and violence prevention into new and existing prevention efforts in the public health and related fields. Examples of potential states to be invited include: California for their work with the CTGs and Colorado for their work with their state Department of Transportation.

Results and Conclusions: Discussants will share their experiences in working with partners to integrate injury into the CTG program and/or other activities in their state and lessons learned that participants can take back to their home state.

Significance & Contribution to the Field: As resources for injury and violence prevention are limited, sharing strategies among states to leverage resources for prevention will not only increase the resources available, but will provide new and innovative strategies to address many of the risk factors that are common to injury and violence prevention, chronic disease and other conditions.

Authors: Suzanne Friesen

Increasing Infant Safe Sleep Practices among Massachusetts WIC Participants

Carlene Pavlos, Massachusetts Department of Public Health

Statement of Purpose: There are 40-50 infant sleep deaths annually in Massachusetts. Local child fatality review teams have made numerous recommendations for prevention through policy and education. Further, data from Massachusetts Pregnancy Risk Assessment Monitoring System (PRAMS) reveals disparities in safe sleep practices by race and WIC participation (with WIC participation accounting for 43% of Massachusetts births). To address this disparity, the Massachusetts Department of Public Health’s (MDPH) Division Violence and Injury Prevention (DVIP) and WIC Program have collaborated to develop and disseminate new materials and trainings to reach WIC participants with effective safe sleep messaging.

Methods/Approach: Although tensions have existed between proponents of breastfeeding and those concerned with co-sleeping/suffocation, successful collaborations between WIC and DVIP in other areas have enabled effective work on safe sleep. Three key messages - back to sleep, uncluttered sleep environment, and separate sleep space - were agreed upon and incorporated into new materials using “emotion-based messaging,” a strategy that WIC has successfully used for other public health campaigns. Education of WIC program leadership began in 2011 and training of trainers will be delivered in March 2013. All local WIC staff will be trained by July 2013. A new WIC policy requiring safe sleep counseling for all clients will support implementation. Pre- and post-tests will be used to evaluate the trainings; PRAMS data will be analyzed to assess changes in safe sleep practices among WIC participants. Results: In December 2011, MDPH launched its WIC Safe Sleep Initiative. Since then, new messaging, materials, and a train-the-trainer presentation have been developed and will be implemented in the spring of 2013. An overview of this work, including the facilitating factors and barriers encountered in building this collaborative project, will be discussed. Preliminary evaluation findings will be shared.

Conclusions: MDPH has developed a comprehensive initiative for improving infant safe sleep practices amongst WIC participants throughout Massachusetts. Each stage of the initiative has been designed to anticipate implementation challenges and build buy in.
Session Abstracts

Significance/Contribution to the Field: This presentation shares the steps taken to design, implement and evaluate a collaborative project directed at reducing infant sleep deaths among Massachusetts WIC participants.

Authors: Carlene Pavlos, Lisa McCarthy, Holly Hackman, Sally Fogerty

Acute Care/Trauma

Effects of Urban and Rural Trauma Care on Early Survival after Traffic Crashes

David Clark, Maine Medical Center

Statement of Purpose: Mortality from traffic crashes is higher in rural areas, but it is unclear whether the disparity is due to greater severity, time delays, or Emergency Medical Services (EMS) deficiencies. The purpose of this study was to measure these effects separately using time-to-event analysis.

Methods/Approach: Data for fatal and nonfatal crashes during 2002-2003 were combined from the Fatality Analysis Reporting System (FARS) and an “expanded version” of the National Automotive Sampling System (NASS) Crashworthiness Data System (CDS). Weighted Cox and Weibull models for survival time (SURV) were estimated, with time-varying covariates (TVC) having constant effects for specified time intervals following EMS arrival time and hospital arrival time. The Weibull model was repeated with SURV interval-censored to reflect uncertainty about the exact time of death, using an imputation method to accommodate interval censoring in the presence of TVC. Results: FARS contained records for 92,718 persons with fatal or incapacitating injuries, and NASS/CDS contained 5,517 (weighted to an estimated population of 642,716) with incapacitating injuries. In survival models for the first 4 hours, mortality was associated with increasing age, male sex, belt nonuse, higher speeds, and vehicle rollover. EMS intervention was associated with a moderately beneficial effect for the first 30 minutes, but not thereafter. Hospital intervention was associated with a strongly beneficial effect that increased with time. Rural location was associated with a higher baseline hazard; models predicted that a 50% reduction in rural prehospital time would reduce overall 4-hour mortality by about 7%

Conclusions: Much of the rural/urban disparity in crash mortality is apparently due to differences in injury severity, even after restricting to persons with incapacitating injuries and controlling for identifiable personal and vehicle factors. However, survival models with TVC support clinical intuition of a “golden hour” in EMS care, and the importance of timely transport to a hospital. Significance: Time-to-event methods allow separate analysis of the effects of injury severity, time delays, and EMS/hospital intervention on the rural/urban disparity in crash mortality. With sufficient data, these methods could be applied to evaluation of individual hospitals or EMS systems, and to other injuries or acute conditions.

Authors: David Clark

Does EMS Perceived Anatomic Injury Predict Trauma Center Need for Pediatric Patients?

E. Brooke Lerner, Medical College of Wisconsin

Purpose: To determine the predictive value of the anatomic step of the 2011 Field Triage Guidelines for identifying trauma center need for children.

Methods: EMS providers transporting injured children (<15 years) to tertiary care children’s hospitals in 3 midsized communities were interviewed upon ED arrival. Patients were included regardless of injury severity. Physiologic condition and anatomic injury data were collected. Patients who met the physiologic criteria were excluded. Trauma center need was defined as non-orthopedic surgery within 24 hours, ICU admission, or death prior to hospital discharge. ICD-9 N and E-codes assigned after hospital discharge were also collected. Data were analyzed by calculating descriptive statistics, including positive likelihood ratios (+LR).

Results: 5,610 interviews were conducted. 16 were excluded because of missing outcome. 1,072 met the physiologic step criteria. EMS providers identified 238 cases that met the anatomic criteria, of which 23 (9.7%) needed the resources of a trauma center (16.2% sensitivity, 95.1% specificity, +LR 3.3; CI:2.2 - 4.9). Criteria with a +LR<5 were skull fracture (9.3; CI:2.6 - 33.3) and penetrating injury (6.6; CI:3.8-11.5). The remaining criteria had +LR<2.5: two or more long bone fractures (2.1; CI:0.8-5.6), pelvic fracture (1.5; CI: 0.2-11.4), and crushed or degloved extremity (1.2; CI 0.3 - 4.9). Not enough cases were identified with flail chest, paralysis, or amputation to determine their predictive values. Based on billing
Using Emergency Medical Services Data to Explore Local Population Violence-Related Injury - Implications to Violence Surveillance and Intervention

Amy Knowlton, Johns Hopkins Bloomberg School of Public Health

Purpose: Violence has only recently been recognized as a major challenge to public health. Information systems are needed to improve population surveillance of violence and inform preventive intervention. Emergency medical services (EMS) system data provides a potential for real time, incident-based surveillance of violence. However, little research has been conducted using this data source.

Methods: Baltimore City 9-1-1 call dispatches were linked to Baltimore City Fire Department EMS patient records for a 23 month period 2008-10. We categorized patient health data based on a prior categorization schema and analyzed data on violence-related incidents. We compared number of incidents to prior study reports, and examined correlations of violent incidents to patient demographics, repeat use of EMS, and behavioral (substance use and mental) health problems.

Results: We identified 7,190 violent trauma related EMS encounters in the study period, comprising 57.7% assaults (n=4,149), 13.3% shootings (n=954), 11.8% stabbings (n=846), 2.5% abuse or sexual assaults (n=184), and 14.7% “other” types of violence, which included threatened violence, self-harm and attempted suicide. Compared to the population, young persons were over-represented, and Black individuals were over-represented for all types except “other” violence-related incidents. The modal age group was 15-24 years, with gunshots and stabbings especially clustered in this age group. Males comprised the vast majority of all types of incidents except abusive or sexual assaults and other violence. Compared to police reports in a comparable period, EMS records contained 19.5% fewer shootings and 71.7% fewer rapes. Overall, 20% of persons involved in violent incidents, and 35.2% involved in “other” violence, were repeat users of EMS during the observation period. One-fifth of all persons and 82.3% of persons involved in “other” violence had evidence of substance abuse or mental health problems

Significance/Contribution: Our findings suggest that EMS data may complement existing information systems for violent injury surveillance. While our findings suggest that EMS records under-count violence related incidents, victims of violence identified through EMS had behavioral risks and emergency care recidivism that make them important targets for preventive intervention. Future research should promote the completeness and assess the validity of EMS records on violence-related injury.

Authors: Amy Knowlton, Gerald Cochran, Beata Debinski, Brian Weir, Daniel Webster, Wade Gaasch

Violence & Vulnerable Populations

How to Be an Ally to LGBTQ Youth

Sherry Lehman, North Carolina Division of Public Health

How to be an Ally to LGBTQ Youth” is an overview of the five-hour training designed for school administrators, teachers and staff on how to support to lesbian, gay, bisexual, transgendered and questioning youth in the schools. The training is presented by co-trainers, one lesbian women and one licensed professional counselor. Interactive techniques such as, values clarification, videos, carousel brain storming and scenario reviews addresses multiple bullying and suicide risk factors. They include unrealistic parental expectations, high levels of stress, social isolation/alienation, prior suicide attempts, confusion/conflict about sexual identity and a sense of powerlessness. The training also reflects protective factors such as, family support, positive communication, healthy
adult relationships, a sense of personal control, strong sense of self-worth and a caring school climate. Expected outcomes for participants that attend the training include; improving attitudes towards suicide prevention and being an advocate for LGBTQ youth, increased self-efficacy to recognize suicide signs and symptoms, increased awareness of suicide risk and protective factors among LGBTQ youth, asking at-risk youth about suicide and becoming an ally to LGBTQ youth. One hundred and twenty school staff have participated in the training and been involved with the evaluation. The evaluation included three separate assessments of workshop trainees: immediately before training (pretest), immediately after training (posttest), and three months after training (3-month follow up). Fifteen major constructs were identified as being targeted by the training and thus are reflected in evaluation. Expected outcomes will promote positive school conditions that provide personal and social resources, increase student resiliency and reduce the potential for youth suicide and other high-risk behaviors for LGBTQ youth.

Authors: Sherry Lehman, Ellen Essick

High-Risk and Under-Served - Violence Against Women in Sex Work

Michele Decker, Johns Hopkins Bloomberg School of Public Health

Purpose: Globally, a growing body of evidence suggests that women involved in sex work are uniquely vulnerable to physical and sexual violence, with significant consequences including injury, as well as physical, sexual and mental health issues. To date, little is known concerning the primary perpetrators and nature of such abuse, as well as potential support and intervention strategies. Our study begins to fill these gaps.

Methods: Women ages 18 and over, and working in street-based and venue-based sex work (n=35) in Baltimore, MD participated in an in-depth interview and brief survey in 2012, informed by key informant interviews (n=19) with local service providers. Sex worker participants were recruited through four community-based programs; participants were invited to recruit up to three peers, enabling access to those not receiving services. Interviews were transcribed verbatim and coded in Atlas.ti following a grounded theory approach.

Results: Physical and sexual violence was prevalent, with 43% reporting past-month abuse at the hands of clients, intimate partners or police. Clients were the primary perpetrators of abuse, with physical and sexual violence reported by 15.5% and 20% respectively, followed by intimate partners (12% physical violence; 9% sexual violence) and police (5.7% sexual violence). Client violence was severe and largely described in the context of sexual negotiation; sex work was often a factor in intimate partner violence. Barriers to disclosure and violence-related services included fear of blame and stigma regarding sex work. So too, key informant interviews with violence support service providers revealed little formal training in responding to women in sex work and little confidence in supporting this population. Conclusions: Current evidence of prevalent physical and sexual abuse, largely at the hands of clients as well as intimate partners, emphasizes the need to ensure access to violence support services for women in sex work. Barriers to abuse disclosure, obtaining justice, and violence-related counseling and support services indicate the need for targeted services for women in sex work, particularly in urban areas where sex work is common. Significance Findings provide much-needed guidance to improve the violence support and intervention infrastructure for the high-risk population of women in sex work.

Authors: Michele Decker, Erin Pearson, Samantha Illangasekare, Erin Clark, Susan Sherman

Using Qualitative Methods to Understand the Needs of a Highly Vulnerable Group of Intimate Partner Violence Survivors

Samantha Illangasekare, Johns Hopkins Bloomberg School of Public Health

Statement of Purpose: Intimate partner violence (IPV), substance use and HIV/AIDS are significant and widespread health problems affecting low-income urban women. Because of their intersecting and synergistic presence in women lives, they have been described as connected epidemics making up the SAVA syndemic. However, research on the context in which this syndemic occurs is limited. This study qualitatively examines the context, including risk and mediating factors, through which IPV, HIV/AIDS and substance use intersect as a syndemic for urban women to better understand their health and intervention needs.
Methods/Approach: Women who were over 18, HIV-positive, had experienced physical or sexual IPV as an adult, and had used cocaine or heroin at any time in their lives (n=24) were recruited from community health and HIV primary care clinics. They participated in an in-depth interview covering topics including their experience with drug and alcohol use, HIV infection, and IPV, and depression. Interviews were transcribed and coded in Atlas.ti using principles of thematic content analysis and grounded theory.

Results: Women discussed their experience of IPV, their HIV-positive status, and their drug use as intersecting, with each being risk factors for the others. Additionally, they identified child maltreatment, their partners use of drugs or alcohol, and depressive and other mental health symptoms as being important risk and contextual factors in their experience of the SAVA syndemic. Women also discussed their risk for and experience of IPV, HIV status, and drug use as all being part of a lifestyle. Conclusions. Women in this qualitative sample identified their experience of IPV, their HIV-positive status and their substance use as being interconnected, supporting the syndemic nature of these epidemics and underscoring the importance of treatment and intervention that comprehensively addresses all three. The impact of child abuse, depression, and having a partner who uses drugs or alcohol must be considered when developing interventions for women living with the SAVA syndemic.

Significance & Contribution to the Field: These findings contribute important insight into the context of the SAVA syndemic in order to begin to develop needed interventions for this particularly vulnerable population of low-income urban IPV survivors.

Authors: Samantha Illangasekare, Andrea Gielen, Jessica Burke
Young Driver Distraction

What is the Evidence That Distraction Is An Important Cause of Motor Vehicle Crashes Among Young Drivers?
Bruce Simons-Morton, NICHD

Statement of Purpose: The purpose of this presentation is to review recent empirical evidence linking distraction to MVC, with special emphasis on novice young drivers. Methods/Approach: We provide a selective review of the literature on attention, inattention, and secondary task engagement on driving performance.

Results: Safe driving depends on observing and responding to changes in the road environment. Driver inattention can be caused by physical distraction (not looking) or cognitive distraction (looking but not seeing). In simulation, test track, and naturalistic driving studies, novice teen drivers were less likely than experienced adult drivers to look at and react to potential road hazards. In test track research novice teenage drivers given a cell phone task when approaching a signalized intersection were more likely than adult drivers to run the red light. Novices in the Naturalistic Teenage Driving Study were more likely to have a crash or near crash when dialing (OR=7.8), texting (OR=4.3), and reaching for a cell phone or other object (OR=7.9), eating (OR = 3.3), or staring at a roadside object (OR= 3.8). The only secondary task that increased risk for adults in the 100 Car study was dialing (OR=2.5); talking on a phone did not increase risk for novices or adults. The 100 Car Naturalistic Study found that crash risk doubled when the driver’s eyes were off the forward roadway for 2 seconds. Other research indicates that teenage passengers increase crash risk, possibly by interfering with driver attention.

Conclusions: Evidence from many sources indicates that inattention, primarily due to secondary task engagement, increases crash risk. Inexperienced drivers appear less capable than experienced adults in managing secondary tasks.

Significance & Contribution to the Field: Safe driving requires attention to the forward roadway. Secondary tasks, particularly those that take drivers eyes off the road, but also cognitive distractions such as the presence of passengers, divert driver attention. Research is needed on the prevalence and effect of various secondary tasks and cognitive demands on driver performance.

Authors: Bruce Simons-Morton, Sheila Klauer, Feng Guo, Marie-Claude Ouimet

Peer Passenger Influences on Teen Drivers Visual Behavior
Anuj Pradhan, NICHD

Statement of Purpose: Teen passengers have been identified as a risk factor for teenage drivers, with higher fatalities or crashes in vehicles driven by a teen driver with teen passengers. The purpose of this study was to better understand distraction or inattention as a risk factor in such situations.

Methods/Approach: Sixty licensed male teenagers were randomly assigned to drive in a simulator alone and with a confederate affecting either a risk-accepting or a risk-averse persona (order of drive was counter balanced).

Results: Analyses were conducted separately for driving simulator measures and for eye glance measures. For the former, there was a significant main effect of passenger presence and a significant interaction between passenger type and presence indicating greater driving risk in the risk-accepting than the risk-averse passenger condition. For eye movements, there was a significant passenger presence effect with a reduction in horizontal and vertical dispersal of eye gaze when driving with a peer passenger. On testing the passenger presence effect within risk-averse and risk-accepting groups separately, the presence of a passenger significantly reduced horizontal dispersal in risk-averse group, and reduced vertical and horizontal dispersal in the risk-accepting group.

Conclusions: Teenagers took more risks when (1) driving
with a peer passenger than when driving alone; and (2) when driving with a risk-accepting peer passenger than with a risk-averse one. In the presence of a peer passenger the spread of visual scanning significantly narrowed for teen drivers compared to driving alone. Potentially, teen passenger presence increases cognitive load, which is known to narrowing visual scanning, and thus has the potential of disrupting situational awareness and reducing attention allocation to the overall driving task.

Significance & Contribution: Peer passengers potentially influence teen drivers not only through social means but also via impact on cognitive load and attention. These results contribute to a broader understanding of multiple mechanisms of peer passengers’ influence on teen drivers and provide support for policy limits on teenage passengers among novice teenage drivers.

Authors: Anuj Pradhan, Bruce Simons-Morton, C. Raymond Bingham, Marie-Claude Ouimet, Jean Shope, Kaigang Li

The Effect of Cell Phone Bans on Young Drivers Self-Reported Cell Phone Use While Driving

Johnathon Ehsani, NICHD

Statement of Purpose: The purpose of this study was to determine the effect of cell phone laws on self-reported cell phone use while driving among newly-licensed teenage drivers.

Methods/Approach: A nationally representative sample of 11th grade students (N=2,439) from the second annual wave of the NEXT Generation Health study, incorporating 22 states, completed questionnaires. Analyses were restricted to participants who reported being licensed for independent, unsupervised driving (n=881). Cell phone use while driving was measured by four items combined into talking (making and receiving calls) and texting (reading and sending text messages). The presence of driving laws was determined using the Public Health Law Research Distracted Driving Law database. Laws were coded as applying to teens only versus applying to drivers of all ages. Laws were further classified as applied to texting or any use of cell phones. Of the 22 states, 16 had at least one cell phone law in effect during the study period.

Results: The majority of teens reported using cell phones for talking (80.0%) or texting (72.0%) while driving. The number of days driven each month and ethnicity were significantly associated with cell phone-related distracted driving. Laws restricting texting for teenagers and all drivers were associated with a lower prevalence of self-reported texting while driving. In states where all cell phone use was restricted while driving, there was a trend towards greater self-reported talking while driving among teenagers.

Conclusions: Among newly licensed novice drivers, cell phone related distracted driving is highly prevalent. Texting laws are associated with a reduced likelihood of self-reported texting while driving among teenage drivers. Total restrictions on cell phone use may be associated with greater talking while driving.

Significance & Contribution to the Field: This is the first study to examine the effect of cell phone laws on newly licensed drivers self-reported cell phone use while driving. Texting laws and total restrictions on cell phone use while driving may have differential effects and possible unintended consequences.

Authors: Johnathon Ehsani, Jessamyn Perlus, Kaigang Li, Bruce Simons-Morton

Normative Social Influences on Teens’ Engagement in Distracted Behaviors While Driving

C. Raymond Bingham, NICHD

Purpose: This study examined descriptive and injunctive normative influences on teen’s engagement in distracted behaviors while driving using the Theory of Normative Social Behavior (Rimal, Real, 2005).

Methods: The study sample included 403 (53% male), mostly white (94%), 16- to 18-year-old teen drivers, participating with their parents in the nationwide Teen Driver Distraction Survey. Distracted behavior was measured as the average of the teens’ self-reported frequency of engaging in sixteen distracted behaviors that took their hands off the steering wheel and/or eyes off the roadway while driving (e.g., texting, dealing with passengers, changing vehicle controls, eating/drinking, adjusting portable music players, looking for something in the vehicle). Multiple linear regression models were estimated to predict teens’ distracted behaviors, adjusting first for individual influences (i.e., age, race, education, income, sex, length of licensure, vehicle ownership/control, driving exposure, sensation seeking), then for descriptive norms (i.e., teens’ reports of their parents’ distracted behaviors, friends’ distracted behaviors, how
many teen passengers they typically drove with), and finally for injunctive norms (i.e., teens’ perceptions of their friends’ approval of the teen’s distracted behaviors).

**Results:** After adjusting for individual influences, teens reporting higher household income, greater sensation seeking, more frequent distracted behaviors by parents and friends, and driving with more teen passengers engaged in higher numbers of distracted behaviors while driving (R-square=0.35). When injunctive norms were added to the model, teen’s sensation seeking, parents’ and friends’ distracted behaviors, and driving with more teen passengers remained significant along with teens’ perceptions of their friends approval of their distracted behaviors (R-square=0.38).

**Conclusions:** Descriptive and injunctive norms were significant predictors of teens’ engagement in distracted behaviors while driving, including parents’ and friends’ engagement in distracted behaviors, the number of teen passengers carried by teens, and teens’ perceptions of their friends approval of their distracted behaviors.

**Significance & Contribution:** These findings suggest that parent and peer influences have a strong impact on teens’ engagement in distracted behavior while driving. Interventions should focus on changing attitudes toward distracted behavior by teen drivers and encouraging parents to provide a positive role model for their teenage drivers.

**Authors:** C. Raymond Bingham, Jennifer Zakrajsek, Jean Shope, Tina Sayer

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**Preventing Injuries to Older Adults**

**Implementing Evidence-Based Fall Prevention Programs: How Are We Doing?**

*Ann Christiansen, Medical College of Wisconsin*

**Statement of Purpose:** Wisconsin has among the highest rates of deaths from falls among those aged 65 and over. The purpose of this presentation is to describe the impact of the dissemination of the CDC Fall Prevention Compendium on the uptake of evidence-based fall prevention programs in Wisconsin.

**Methods:** The Wisconsin Department of Health Services and the Injury Research Center at the Medical College of Wisconsin developed the Fall Prevention Survey to determine the: 1) breadth and scope of local fall prevention activities across the state; 2) degree to which these programs are evidence-based; and 3) trends in fall prevention activities over time. The survey was conducted in spring 2009, summer 2010, and summer 2011. Respondents worked in health departments, hospitals/clinics, senior centers, aging agencies, ambulance services, and academic institutions. They provided detailed information about participation in the 14 CDC-identified fall prevention interventions.

**Results:** Survey results indicate that almost three-quarters of respondents reported that their agency led, coordinated, or participated in fall prevention activities over the previous 12 months. Stepping On was the fall prevention program from the Compendium most likely to be implemented by respondents. From 2009-2011 those indicating that their agency participated in Stepping On went from 44% to 54% of respondents. In 2009, the only other multifactorial program from the Compendium reported as being implemented was the NoFalls Intervention, but by 2011 at least four other evidence-based programs were being implemented. Overall, one-third of respondents indicated that their agencies were implementing other multifactorial and exercise-based interventions not included in the Compendium. Almost three-fourths of respondents said that they were implementing home modification programs not included in the Compendium.

**Conclusions:** Fall prevention activities throughout the state of Wisconsin demonstrated considerable interest in addressing this serious issue. While the Stepping On program is one evidence-based program being implemented in the state, the Fall Prevention Survey demonstrates that there are still many fall prevention programs being implemented that are either not evidence-based or are not listed in the CDC Compendium.

**Significance:** Efforts to increase the implementation of evidence-based fall prevention programs should continue to synthesize and translate programs for practice.

**Authors:** Ann Christiansen, Donna Peterson, Rebecca Turpin, Clare Guse, Peter Layde
A Qualitative Study of Physician Discussions with Older Drivers - “I Wish We Could Normalize Driving Health”

Marian Betz, University of Colorado School of Medicine

Statement of Purpose: Driving for older adults is a matter of balancing independence, safety and mobility, and premature driving cessation can negatively impact morbidity and mortality. Discussions about “when to hang up the keys” are difficult for clinicians, drivers, and family members and therefore are often avoided or delayed. “Advance Driving Directives” (ADDs) may facilitate conversations focused on prevention and advance planning for driving cessation. We therefore sought to use qualitative methods to examine clinician and older driver perspectives on ADDs and driving discussions.

Methods/Approach: This was a qualitative study using iterative, semi-structured focus groups and interviews with (1) 8 practicing internal medicine physicians, physician assistants or nurse practitioners working at 3 university-affiliated clinics; and (2) 33 community-dwelling current drivers aged 65 years. We used general inductive techniques in the thematic analysis of the focus groups and interview transcripts to explore clinician and driver perspectives and to identify barriers and facilitators to conversations between older drivers and their healthcare providers about driving and health.

Results: Five dominant themes emerged: (1) clinicians are usually the ones to initiate conversations about driving, but typically not until there are “red flags;” (2) drivers are open to conversations, especially if focused on prevention rather than interventions; (3) family input influences clinicians and drivers; (4) clinical setting factors like short appointments affect conversations; and (5) both clinicians and drivers thought ADDs could be useful in some situations and recommended making general questions about driving part of routine care.

Conclusions: Clinicians and older drivers often wait to discuss driving until there are specific “red flags,” but both groups supported incorporating routine questioning about driving status into general appointments as a way to “normalize driving health.” ADDs were seen as a tool that could facilitate advance planning conversations and, in the future, decision-making about driving.

Significance & Contribution to the Field: “Anticipatory guidance” for older drivers could help older adults plan for eventual driving cessation and perhaps avoid some of the emotional, logistical and financial stresses associated with abrupt changes in mobility.

Authors: Marian Betz, Jacqueline Jones, Emma Petroff, Robert Schwartz

Understanding Falls in New York City - A Pilot Survey of Older Adults

Kacie Seil, New York City Department of Health and Mental Hygiene

Statement of Purpose: Falls are a leading cause of morbidity and mortality among New Yorkers 65 years and older. Little is known about specific risk factors for falls among older adults in an urban population. This project aims to augment existing injury surveillance systems with greater detail on the circumstances of falls.

Methods: A cross-sectional survey consisting of a face-to-face questionnaire was pilot-tested to collect data on falls and falls risk factors. Ambulatory, English-speaking, older adults were selected by convenience sample from one senior center in Brooklyn. Data were collected on demographics, environmental and health-related risk factors (e.g., clutter in the home, stairs, diabetes), and recent falls. Frequencies, means, and percentages were calculated to describe the population and the circumstances surrounding falls. Results: A total of 65 older adults completed the pilot questionnaire. The majority of participants were female (80%, n=52), white (94%, n=61), and non-Hispanic (97%, n=63). Participants’ mean age was 80 years (SD ± 8 years); nearly half (45%, n=29) reported owning their home. Over one third (35%, n=23) reported falling at least once in the past year. Approximately 70% (n=16) of falls occurred in the home: bedroom (n=7), living room or hallway (n=4), kitchen (n=3), and bathroom (n=2). About 22% (n=5) fell at locations outside including sidewalks, streets, and subway stations. Over half of falls (52%, n=12) were caused by slips and trips on rugs and carpeting, wet surfaces, and sidewalks. Approximately 43% (n=10) saw a health care provider as a result of the fall, yet less than 10% (n=4) of respondents indicated their provider had ever talked to them about falls prevention.

Conclusions: These preliminary findings describe falls risk factors for an urban older adult population. There is also a need for health care provider outreach to improve fall-related anticipatory guidance in medical practices. The survey is being administered at another NYC senior center in January 2013 to extend pilot results to a more diverse sample.
**Differences in Motor Vehicle Crash Outcomes Between Younger and Older Occupants**

*Larry Cook, University of Utah*

**Statement of Purpose:** To examine differences in injury patterns between younger (ages 21-64) and older (65+) occupants in motor vehicle crashes.

**Methods/Approach:** Probabilistically linked crash and hospital data from years 2005-2008 were collected from eleven states in the CODES Network. State data were mapped onto common elements and submitted for combined analysis. State and year specific multiple imputation models were developed to fill in missing data. AIS, MAIS, ISS, Barrel Matrix nature of injury, and body region were calculated from ICD-9-CM codes. Means, medians, and percentages are used to describe differences between older and younger occupants.

**Results:** There were 7,131,628 persons aged 21 years or older available for analysis. The majority (90%) were under 65 years-of-age. More than 54,000 persons were over age 85. Safety restraint use was positively correlated with age. Nearly 97% of those 85+ were using safety restraints whereas 90% of those 21-64 were restrained. Injury severity and the percent of persons treated at the hospital or dying increased with age. 13% of hospital treated persons 21-64 incurred an MAIS 2+ injury compared to 30% of occupants 85+. While more than half of 21-64 year-olds killed were not restrained three-quarters of 85+ occupants were restrained. Over of hospitalized 85+ occupants were discharged dead, to rehab, or long term care, while 98% of those 21-64 were discharged home. Cervical vertebral column injuries decreased from 27% in 21-64 year-old hospital treated occupants to 9% in those 85+. Conversely, chest injuries account for 6% of injuries in those 21-64 but increase to 20% for those 85+ and older. Fractures increased from 8% of all injuries in 21-64 year-olds to almost 25% in those 85+. Internal injuries became more prevalent as age increased.

**Conclusions:** Despite having higher safety restraint usage rates, older occupants sustain more severe injuries and are more likely to suffer fractures, internal, and chest injuries.

**Significance & Contribution to the Field:** This study demonstrates that safety restraints may not have the same protective impact on older drivers as they do on younger drivers. Results of this study can be used to improve trauma care for older occupants.

*Authors: Larry Cook, Andrea Thomas*

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**Evaluation of Violence Prevention Programs**

**Dynamic Simulation of Crime Perpetration and Reporting to Examine Community Intervention Strategies**

*Michael Yonas, University of Pittsburgh*

**Statement of Purpose:** While consistent reductions in community crime and violence have been documented over the past decade, juvenile crime and violent crime continue to be critical issues of concern in public safety and health of communities. Our objective is to cultivate through a participatory research process a computational agent-based model (ABM) for exploring the community-wide versus spatially focused crime reporting interventions to reduce community crime perpetrated by youth.

**Methods:** Agents represent individual residents and interact on a two-dimensional grid representing a synthetic community using demographic data from Pittsburgh, PA. Juvenile agents are assigned initial random probabilities of perpetrating a crime and adults are assigned random probabilities of witnessing and reporting crimes. The agents’ behavioral probabilities modify depending upon exposure to other agents’ crime perpetration and crime responses. Analysis of variance (ANOVA), paired t-tests and cost-benefit ratios assessed the impact of activating different percentages of adults to increase reporting and reduce community crime activity. Community-wide interventions were compared with spatially focused interventions, in which activated adults were focused in areas of highest crime prevalence.

**Results:** The ABM suggests that both community-wide and spatially focused interventions were effective in reducing overall offenses. While spatially focused intervention yielded localized reductions in crimes, such interventions were shown to defer crime to nearby communities. A dose-response relationship was observed between the number of activated adults in the community and the total...
number of offenses: if at least 1% of adults are activated, there is a statistically significant decrease in offenses. Comparing the two intervention regimes, community-wide interventions yield a larger decrease in offenses than spatially focused interventions when at least 4% of the adults are activated.

**Conclusion:** The ABM demonstrates that community-wide and spatially focused crime strategies produce unique intervention dynamics influencing juvenile crime behaviors through the decisions and actions of community adults. It shows how such models might be used to investigate community-supported crime intervention programs by integrating community input and expertise and provides a simulated setting for assessing dimensions of cost comparison and intervention effect sustainability.

**Significance:** ABM illustrates how intervention models might be used to investigate community-supported crime intervention programs.

**Authors:** Michael Yonas, Jessica Burke, Andrew Topp, Richard Garland, Donald Burke, John Greffenstette

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**How Much Does it Cost to Prevent Youth Violence? Cost Analysis of a Brief Intervention to Prevent Violence in Adolescents**

*Rebecca Cunningham, University of Michigan Department of Emergency Medicine*

**Statement of Purpose:** Violence is a leading cause of death among adolescents. The lack of information about the cost of youth violence interventions inhibits policy decisions. Our goal was to assess the cost of preventing youth violence if a the “SafERteens” Emergency Department (ED) intervention was fully implemented.

**Methods:** Cost information was obtained to implement a brief motivational interviewing (MI) intervention “SafERteens” found to be efficacious in a urban ED. Using published results of a intervention at 3 and 12 month follow-up, the number of violent events averted and the cost was calculated using the decrease in violence consequences, victimization and severe aggression as well as the cost of the intervention delivery. Sensitivity analyses were performed based on the prevalence of violence (25%-85%), ED volume (1261-5000), and variations in intervention effectiveness (95% CI of RR/OR).

**Results:** It costs approximately $17,945 per year to implement and maintain a brief MI therapist intervention. In our urban ED seeing 1261 adolescents per year, we estimate 673 (230-1,027 95% CI) violent events at 3 months and 1,016 (314-1,668 95% CI) at 12 months would be averted. It would cost $26.66 ($17.48-$77.99 95% CI) to avert violence within 3 months and $17.67 ($10.76-$57.22) to avert violence within 12 months. Using an average annual adolescent ED volume of 5,000 we estimate 2,669 (912-4,070 95% CI) violent events would be averted within 3 months and 4,027 (1,244-6,615 95% CI) within 12 months, and we predict it would costs $6.72 ($4.41-19.67 95% CI) to prevent violence within 3 months, and $4.41 ($2.71-$14.43 95% CI) to avert a violent event within 12 months. Our sensitivity analysis demonstrates that due to high fixed costs and negligible marginal costs the number of adolescents seen annually in an ED will significantly impact expected costs.

**Conclusion:** A brief MI intervention to reduce youth violence directed at adolescents using alcohol is cost effective. EDs with volume of 5000 adolescents should cost of $4.41 to avert a violent event within 12 months.

**Contribution to the Field:** Compared to other health care interventions, cost should not inhibit the implementation of brief interventions to prevent violence.

**Authors:** Rebecca Cunningham, Adam Sharp, Lisa Prosser, Maureen Walton

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**Planting the Seeds of Change - Rooting Sexual Violence Prevention in Collaborative Networks**

*Jessica Hamel, Michigan Public Health Institute*

This abstract, Planting the Seeds of Change: Rooting Sexual Violence Prevention in Collaborative Networks, relates to the conference theme, Safe Today, Safer Tomorrow, by demonstrating a successful, data-driven approach to strategically plan and implement sexual violence prevention strategies to empower local communities for a healthier future. The Michigan Rape Prevention and Education (RPE) Program utilizes empowerment evaluation to guide its mixed method approach to build program capacity and support quality improvement. Empowerment evaluation provides practitioners with the knowledge, skills, and tools to use evaluation results to improve program implementation and outcomes. In addition, this method enables organizations to integrate evaluation into program infrastructure, so evaluation tools are routinely used to analyze programming and develop
Session Abstracts

Quality improvement strategies. A critical component of the RPE Program is to foster collaborative environments within local communities by engaging stakeholders, enabling the development of local partnerships through Local Prevention Councils (LPC). The RPE Program uses social network analysis as an empowerment tool to provide both implementation and outcome information to local programs in a way that is practical, accessible, and useful. Evaluating LPCs is critical to understanding how collaborative relationships and networks influence primary prevention strategies to prevent sexual violence. Each year, LPCs use evaluation data to identify partnership gaps, critical elements that can support growth, and methods to bolster prevention efforts by increasing community buy-in. The growth of local programs evaluation capacity benefits not only local agencies; it also supports statewide evaluation data collection efforts in identifying strengths, gaps, and collaborative solutions. During Fiscal Years 2011 and 2012, over 80% of LPCs reported successfully reaching objectives, diversifying stakeholders, exchanging critical information, sharing resources, and identifying and completing action items. The most frequently cited outcome during both fiscal years was increased and/or improved sexual and intimate partner violence prevention education and services. These collaborative relationships have not only increased stakeholder buy-in, they have also enabled access to hard to reach target populations. Utilizing a data-driven approach allows RPE-funded LPCs to build upon prevention-related successes, foster team building, identify gaps in stakeholder membership, and focus annual strategic planning efforts to specific and achievable action items.

Authors: Jessica Hamel, Jessica Grzywacz, Julia Heany

Occupational Injuries

Occupational Injuries: Characteristics of Occupational Injuries among US Workers with and without Disabilities
Huiyun Xiang, The Research Institute at Nationwide Children’s Hospital

Statement of Purpose: To describe the characteristics of occupational injuries sustained by US workers with disabilities, including causes of injury, type of injury and most injured body regions.

Methods/Approach: We analyzed 15 years data from the 1997-2011 National Health Interview Survey (NHIS). We classified workers (18 years old) into two categories: workers with disabilities (limitations were the result of chronic conditions) and workers without any disabilities. We calculated national estimated numbers, weighted proportions (%), and 95% confidence intervals of injuries by demographic and other injury characteristics for workers with and without disabilities.

Results: Among the 604,134 workers without disabilities, 3,757 medically treated occupational injuries, with a three month incidence of 0.62 per 100 workers, while among the 29,576 workers with disabilities, 446 occupational injuries, with a three month incidence of 1.51 per 100 workers. Overexertion/strenuous movements and falls were the two leading causes of work-related injuries for US workers, they accounted for 56.7% of all work-related injuries sustained by US workers with disabilities. Among workers without disabilities these two causes of injuries accounted for 45.6%. Workers with disabilities tended to be injured in lower extremities (32.3% versus 26.6%) and torso (22.9% versus 16.9%) compared to workers without disabilities. Although the most common injuries for the two groups all were sprains and strains, workers with disabilities had more unspecified injuries (13.5% versus 7.9%) and less open wound injuries (15.7% versus 24.2%) than their un-disabled counterparts.

Conclusions: US workers with disabilities have unique work-related injury patterns. Workers with disabilities sustained more overexertion and fall related injuries at working place. Lower extremities and torso were the body parts that were often injured.

Significance & Contribution to the Field: Due the nature of disability, workers with disabilities have unique work-related injury patterns, this justifies work safety measures or engineering measures be modified or re-designed to accommodate the safety needs of US workers with disabilities for the purpose of reducing work-related injuries among them.

Authors: Junxin Shi, Krista Wheeler, Huiyun Xiang

The Association of Aerobic Capacity with Injuries in the Fire Service
Gerald Poplin, University of Arizona

Statement of Purpose: The objectives of this study are to
Session Abstracts

understand the risk of injury in relation to one’s fitness status in a five year retrospective occupational cohort of a medium-sized metropolitan fire department.

**Methods:** Annual medical evaluations and injury surveillance data were linked for the years 2005-2009, enabling a comparison of injured to non-injured employees. Baseline cohort and repeated measure analyses were conducted to determine associations between levels of fitness and the likelihood of injury. Aerobic capacity (VO₂ max) was the primary measure of fitness, while other measures (muscular strength, endurance, flexibility and body composition) were also assessed. Individual outcomes evaluated included all injury, exercise-related injuries, and sprains/strains. Statistical analyses focused primarily on time-to-event and Cox Proportional Hazards modeling.

**Results:** Data included 799 individuals with a mean age of 39.2 years. Injuries of any type were experienced by 357 firefighters, whereas 174 and 294 individuals specifically sustained at least one exercise or sprain/strain injury, respectively, with median times to injury of 2.5, 3.2 and 2.8 years. Three levels of fitness for VO₂ max were established. The risk of injury increased with decreased fitness. Individuals in the lowest fitness level (VO₂ max 48 mL/kg/min), adjusting for age and gender. Those with a VO₂ max between 43 and 48 (mid-level) were 1.38 times (95%CI: 1.06 - 1.78) more likely to sustain any injury. Hazard ratios were found to be greater when the event was restricted to sprains/strains. Results also suggest that improving aerobic capacity by 1 MET (3.5 mL/kg/min) reduces the risk for any injury by 14%. Conclusions Fitness, as defined by aerobic capacity, is associated with injury risk. Specifically, fire service employees with increased aerobic capacity had a decreased risk of injury.

**Significance & Contribution to the Field:** Findings from this research illustrate the importance of fitness for injury risk in a physically-demanding occupation such as the fire service, and support the growing need of providing dedicated resources toward maintaining fit-for-duty status and promoting the advancement of injury prevention strategies.

**Authors:** Gerald Poplin, Denise Roe, Wayne Peate, Robin Harris, Jefferey Burgess

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**Type II Violence in Six US Hospital Emergency Departments**

*Ashley Schoenfisch, Duke University Medical Center*

**Statement of Purpose:** To describe patient/visitor-perpetrated violence against health care workers (type II) in hospital emergency departments (ED).

**Methods/Approach:** Anonymous, cross-sectional survey data were collected from 282 ED workers across six hospitals to characterize the magnitude of and circumstances surrounding type II violent events. Focus groups and key informant interviews with 55 workers provided additional contextual details.

**Results:** Three-quarters (74.8%, n=211) of hospital ED workers indicated they experienced at least one type II violent event in the previous 12 months, with 26.2% who experienced physical assault, 47.2% physical threat and 73.8% verbal abuse. Among events that participants deemed the most serious, the perpetrator was more often a patient (80.6%) rather than visitor. Perceived contributing factors included patients’ behavioral issues (46.5%), drunk/on drugs (44.7%) and unhappy with care (34.1%), as well as visitors’ long wait (56.1%), concern about patient (41.5%) and unmet expectations of care (39.0%). Workers perceived an expectation to place “customer satisfaction” above their own safety. Existing visitor policies were rarely and inconsistently enforced, and staff efforts to encourage policy adherence were not always supported. Participants highlighted the need for training on how to respond to aggressive patients (particularly those with psychiatric illness), and expressed uncertainty about the role of security personnel in managing and preventing violence. Procedures and policies to handle and report type II violent events, if existing, were not well-known to ED workers. Conclusions The burden of type II violence in hospital EDs is high. These findings suggest clear workplace violence prevention policies and training - supported by management and diffused widely to staff - are needed. Efforts should address workers’ perceptions that type II violence is “part of the job” and expectations to maintain patients’ and visitors’ satisfaction, even at the cost of workers’ well-being.

**Significance & Contribution to the Field:** This research supports the need for an effective workplace violence prevention program in hospital EDs that establishes clear policies, defines expectations of workgroups involved in violence prevention and mitigation, demonstrates
management commitment to workers’ physical and emotional well-being, and provides workers with violence prevention training specific to particular patient subgroups (e.g., psychiatric).

**Authors:** Ashley Schoenfisch, Lisa Pompeii, John Dement, Mudita Upadhyaya, Tiffany Jones, Claudia Smith, Hester Lipscomb

**Recommended Elements of a Hospital-Based Workplace Violence Surveillance System**

*Lisa Pompeii, The University of Texas Health Science Center at Houston*

**Statement of Purpose:** To describe the development of a workplace violence surveillance system aimed at capturing incident cases of violence perpetrated by patients or visitors towards hospital workers (type II).

**Methods/Approach:** A mixed methods approach was employed in 6 U.S. hospitals to collect data pertaining to workers experiences with type II violence. Data sources included existing surveillance systems, cross-sectional survey data (n=2,908), telephone interviews (n=107), and semi-structured focus groups/key informant interviews (n=55). Type II violent event details were used to develop recommendations for specific data fields to be included in an enhanced surveillance system. We examined factors that influenced event reporting and current reporting methods used.

**Results:** Type II violent events, particularly those that did not result in a physical injury, were not fully captured through existing surveillance systems. For events captured, few circumstantial details were available. Survey participants indicated only 26% (n=756) of events were reported through a formal system. In contrast to data gathered through the surveillance systems, survey data indicated that a large proportion of the 2,908 events involved verbal abuse (62.0%) and physical threats (18.7%), in addition to physical assault (19.3%). Workers described uncertainty in knowing when and where to report an event. They indicated that a short, online form would foster reporting. An online surveillance system was designed to capture type II violence sub-types (verbal assault, threat of assault physical assault); perpetrator (patient, visitor); perpetrator factors (e.g., patient in pain); behavioral warning signs (e.g., anxious); event location (e.g., exam room); weapons used; wait time; perpetrator conflict with provider; preventive/de-escalation interventions used by staff; involvement of co-workers and security; and event description.

**Conclusions:** These findings support the need for surveillance efforts by hospitals to understand the scope of type II violence in their institutions and to inform prevention strategies. Workers uncertainty about reporting indicates that workplace reporting policies are needed in conjunction with surveillance efforts.

**Significance & Contribution to the Field:** Surveillance of type II violence aims to improve our understanding of the risk factors associated with these events, as well as to inform the development and evaluation of the effectiveness of evidence-based prevention efforts.

**Authors:** Lisa Pompeii, Ashley Schoenfisch, John Dement, Claudia Smith, Hester Lipscomb, Mudita Upadhyaya, Tiffany Jones

**Store Compliance to Workplace Violence Prevention Ordinance Measures - A Tale of Two Cities**

*Cammie Chaumont Menendez, National Institute for Occupational Safety and Health*

**Statement of Purpose:** Evaluate compliance of convenience stores to a municipal ordinance designed to reduce workplace violence among convenience store workers.

**Methods:** Two survey instruments, a Store Evaluation and a Store Manager Questionnaire, were administered to 594 randomly selected convenience stores within Dallas, TX (n=289) and Houston, TX (n=305). Store managers were interviewed and store ordinance requirements were evaluated from August-November, 2011. The Store Evaluation collected data on implemented safety measures and neighborhood and property characteristics relevant to the occurrence of robberies. The Store Manager Questionnaire collected manager and employee characteristics, circumstances and timing of implemented safety measures required by the ordinances, benefits to compliance and workplace violence outcomes. Descriptive statistics were calculated on level of compliance to the ordinances and compliance to specific measures. Logistical models were constructed to describe factors for compliance.

**Results:** After the ordinance went into effect 34% of stores implemented a training policy, 25% implemented
required signage (no loitering, employee cannot open drop safe, alarms and cameras in use, and height strips), 41% implemented a policy for a clear view through the doors and windows, 10% added an alarm system with panic buttons at the register, and 46% installed a drop safe. Additionally, 32% of stores began a cash limit policy, 37% installed surveillance cameras, and 9% were fully compliant with all ordinance requirements. Preliminary logistic models reveal store compliance before the ordinances went into effect were stores where the manager was born in the United States (OR=2.54; 95% CI 1.67, 5.83) and stores located in a strip mall (OR=2.49; 95% CI 1.08, 5.76). Stores that became compliant after the ordinances went into effect were more likely to not be open 24 hours (OR=4.55; 95% CI 2.32, 9.09), located in Houston (OR=2.80; 95% CI 2.80, 14.22), and not situated on an expressway (OR=2.17; 95% CI 1.06, 4.46).

Conclusions: The data suggest the ordinances increase compliance to well-established safety measures in use by the industry. Interventions can target those stores less likely to be expected to be compliant based on logistic regression models.

Significance & Contribution to the Field: This is one of the first studies to evaluate the compliance of convenience stores to ordinances mandating safety measures and its findings can be used to help increase compliance

Authors: Cammie Chaumont Menendez, Harlan Amandus, Scott Hendricks, Nan Wu

Can Students Learn to Cross Streets in a Virtual Pedestrian Environment?

David Schwebel, University of Alabama at Birmingham

Statement of Purpose: Over 4000 American pedestrians are killed and 215,000 others injured annually. About 1/3 of injured pedestrians are children (NCIPC, 2012). Existing programs to train children in safe pedestrian behavior are either moderately ineffective (e.g., video-based instruction) or highly laborious (e.g., one-on-one streetside training). This randomized controlled trial (RCT) considered whether training in a virtual pedestrian environment might be a worthy alternative.

Methods/Approach: In an RCT, 240 seven- and eight-year-old children were randomly assigned to learn street-crossing in one of three conditions - a previously-validated virtual pedestrian environment (Schwebel, Gaines, & Severson, 2007), individualized streetside training, or commercially-available videos/websites - or to a no-contact control group. Training comprised six 30-minute training sessions over a three-week period. Thorough evaluations of pedestrian knowledge/behavior were conducted pre-intervention, post-intervention, and at a six-month follow-up. The present study uses preliminary data, from measures of hits or close calls.

Authors: David Schwebel, Leslie McClure

Can Student Perpetrated College Crime be Predicted Based on Pre-College Misconduct?

Carol Runyan, Colorado School of Public Health

Statement of Purpose: Many colleges assess criminal histories during the admissions process, in part to address violence on campus. This study sought to examine the utility of screening as a means of reducing violence. Methods: Using cohort and case-control analyses, we identified college misconduct through college records and self-reports on a confidential survey of graduating seniors and examined pre-college behavior as indicated on admissions records, a survey, and criminal background checks.

Results: One hundred twenty students met our case definition of college misconduct, with an estimated odds ratio of 5.28 (95% CI 1.92-14.48) associated with pre-college misconduct revealed on the college application. However, only 3.3% (95% CI 1.0, 8.0) of college seniors engaging in college misconduct had reported pre-college criminal behaviors on their applications and 8.5% (95% CI 2.4, 20.4) of applicants with a criminal history engaged in misconduct during college.

Conclusion: Though pre-college behavior is a risk factor for college misconduct, screening questions on the application are not adequate to detect which students will engage in college misconduct. This pilot work would benefit from replication to determine the utility of criminal background investigations as part of admissions.

Significance: This is the first study to examine the role of pre-college screening on identifying students who are likely to engage in misconduct during college. It examines data from one large institution and raises questions about the
utility and appropriateness of screening.

Authors: Carol Runyan, Matthew Pierce, Viswanathan Shankar, Shrikant Bangdiwala

The Use of Criminal History Information in College Admissions Decisions

Matthew Pierce, American University Washington College of Law; Carol Runyan, Colorado School of Public Health

Statement of Purpose: To examine postsecondary institutions’ reasons for collecting or not collecting applicants’ criminal justice information and potential effects of this practice.

Methods: We asked heads of admissions from 300 randomly sampled postsecondary institutions to complete an online survey and linked the survey data to publicly available institutional data.

Results: Sixty-one percent of institutions collected criminal justice information on some undergraduate applicants. Respondents cited many reasons for obtaining this information; reducing violence was most frequently cited as “very important.” Thirty-five percent of institutions denied admission or enrollment in fall 2010 to at least one individual based on criminal history. Institutions that collected criminal history information expressed greater reluctance to admit applicants with criminal histories and were more likely than other institutions to have denied applicants admission based on criminal history.

Conclusions: Institutions’ collection of criminal justice information may impede individuals with criminal histories from obtaining a college degree.

Significance & Contributions to the Field: There is evidence that a growing number of colleges are collecting criminal history information to screen applicants. Preventing violence appears to be the main objective of this practice, but the practice has not yet been evaluated. Moreover, to the extent that a college education reduces recidivism, it is possible that criminal screening actually exacerbates already high recidivism rates and increases overall crime, including violent crime. Our survey was only the second national survey to focus on colleges’ use of criminal screening and provides the highest response rate of any such study, allowing us to generalize from our findings with greater confidence than was previously possible.
Injury Prevention Policy for Children

The Network for Public Health Law - The Law and the Future of Injury Prevention for Children

Kerri Lowrey, Network for Public Health Law, Eastern Region.; Cristina Meneses, Network for Public Health Law, Eastern Region

A panel will discuss the Network’s role in providing technical assistance and producing resources on law and injury prevention, focusing on legal issues related to children. Our proposal is not research in nature and does not fit within the designated format. Youth concussion laws Many states have passed laws designed to improve awareness, prevention, and treatment of concussions in youth sports via uniform and compulsory standards. Evaluation of the effectiveness of these laws will depend on an understanding of how the various laws were implemented and enforced. The Network has compiled these laws and initiated a survey of state officials and organizational leaders charged with implementation. Law and policy to prevent bullying Preventing bullying in schools is urgently needed; this is particularly true with respect to LGBT youth. Federal and state anti-bullying statutes offer relief but many do not protect LGBT students adequately, nor offer prevention. LGBT students often suffer egregious physical harm before they can seek legal protection. We will discuss the unique characteristics of LGBT bullying and legislative/policy changes that address LGBT bullying as a public health issue. “Stockpiling” Epinephrine Students with allergies are particularly susceptible to anaphylaxis in school, where other children or staff may expose them to allergens. The Network has compiled a list of state laws related to the use of epinephrine pens in schools. An analysis of these laws reveals that states need to do more to address the needs of students with undiagnosed allergies and those who fail to bring their pen to school; one approach is allowing schools to maintain a supply of epinephrine for use in emergencies. Children and emergencies Children suffer disproportionately in public health emergencies. State and local governments can be better prepared to assist children by adopting laws/policies that address concerns, such as educating school and child care staff on basic emergency response; mandating that schools and child care facilities adopt written emergency response plans; providing first responders with equipment designed for children; and allowing the provision of medical care without parental consent. Implementing laws that address these concerns reduces the risk of harm to children during emergencies.

Authors: Kerri Lowrey, Cristina Meneses, Mat Swinburne, Lainie Rutkow

Prescription Drugs & Opioids: Trends, Practices & Partnerships

Trends in the Distribution of Selected Opioids by State, US 1999-2011

Christopher Jones, Injury Center at the Centers for Disease Control and Prevention

Statement of Purpose: Previous work has examined the rise in the number of prescriptions as well as the distribution of selected opioids nationally (Kenan, et al 2012; Paulozzi, et al 2011; Paulozzi, et al 2012). The current analysis documents state level changes in the distribution of hydrocodone, methadone, and oxycodone between 1999 and 2011. These three drugs in particular were chosen for their contribution to trends in prescription volume and overdoses.

Methods: The Automation of Reports and Consolidated Orders System (ARCOS) is a mandatory reporting system the Drug Enforcement Administration uses to monitor controlled substances from the point of manufacture to the point of sale. ARCOS tallies the cumulative sale of certain licit controlled substances in grams and reflects the amount of drug legitimately distributed. Our analyses were restricted to distribution of hydrocodone, methadone, and oxycodone from 1999 - 2011. Distribution is reported below in grams per 10,000 population nationally and at
the state level by year. These analyses and the general use of ARCOS data will be discussed. Results Hydrocodone sales nationally increased from 434g per 10,000 persons to 1336g per 10,000 persons between 1999 and 2011. At the state level, peak distribution occurred in 2009 in Tennessee (TN) with 3761g per 10,000 persons. Sales nationally of methadone increased from 35g per 10,000 persons to 218g per 10,000 persons between 1999 and 2011. Louisiana had the highest peak at 678g per 10,000 persons in 2007, though distribution dropped rapidly to 224g by 2011. Oxycodone sales nationally increased from 348g per 10,000 persons to 2040g per 10,000 persons between 1999 and 2011. Florida (6533g 2010) and Delaware (6123g 2011) had the highest distribution per 10,000 persons after 2006. Percent change in distribution among states was substantial between 1999 and 2011. All states had increased distribution of all three drugs.

Conclusions: The rising trends in opioid use portend increasing rates of drug overdoses. The data available to states to track prescription drug sales and overdoses vary widely across the nation, but ARCOS data are consistent across states, and as such could be used to track distribution and compare states. ARCOS data, as well as data from state prescription drug monitoring programs and insurance claims, can be used to identify and address opioid misuse and abuse by patients, as well as inappropriate prescribing by providers. These data can also be used to track the impact of various state-level interventions such as pill mill laws, state prescribing rules or guidelines, and educational campaigns.

Significant & Contribution to the Field: An accounting of the distribution of particular opioids within a state can assist in the development of strategies to assure distribution is appropriate and diversion is reduced.

Authors: Karin Mack, Chris Jones

The Relationship between Physicians’ Primary Specialties and Their Opioid Prescribing Practices among Patients with Chronic Non-Cancer Pain

Chris Ringwalt, University of North Carolina at Chapel Hill Injury Prevention Research Center

Statement of Purpose: Examine the relationship between physicians’ primary specialties and their opioid prescribing practices among patients with chronic non-cancer pain (CNCP).

Methods: This was a retrospective examination of North Carolina Medicaid claims data for a 12 month period. We enrolled 365 NC Medicaid patients aged 18-64 with chronic non-cancer pain at any point during the study period. We examined prescriptions for opioids filled by CNCP patients, and prescriptions for a second opioid within 23 days. We used chi-square statistics to examine bivariate differences in prescribing practices by specialty. For multivariable analyses, we used maximum likelihood logistic regression models to examine the effect of specialty on prescribing practices, controlling for demographic characteristics.

Results: Of prescriptions filled by patients with CNCP, 12.0% were for opioids. For every specialty, men were more likely to receive opioids than women. General practitioners/family medicine physicians (GP/FM) and internists were least likely to prescribe opioids; orthopedists were most likely. In multivariate analysis, all specialties except internal medicine and OB/GYN had higher odds of prescribing an opioid than GP/FMs: OR=6.9 for orthopedists, OR=3.3 for dentists, and OR=2.7 for emergency medicine physicians. In contrast, emergency medicine physicians had lower odds than GP/FMs of prescribing a second opioid, whereas orthopedists continued to have greater odds.

Conclusions: Ultimately, we found that significant differences in opioid prescribing practices exist among prescriber specialties. Male patients received a greater proportion of prescriptions for opioids, almost uniformly across specialties. Orthopedists appear to have the highest rates of prescribing opioids, particularly second opioids.

Significance: Educational and outreach efforts to clinicians regarding treatment of chronic pain and prescribing of opioids are proliferating in response to the epidemic of opioid related overdose. These findings can help optimize those efforts.

Authors: Christopher Ringwalt, Ashley Skinner, Mariana Garrettson

Leveraging Multidisciplinary Partnerships to Address Prescription Drug Overdose

Lindsey Myers, Colorado Department of Public Health and Environment

Statement of Purpose: The number of deaths in Colorado related to commonly abused prescription drugs nearly doubled from 228 in 2000 to 414 in 2010. As a result, the
Colorado Department of Public Health and Environment (CDPHE) selected prescription drug overdose (PDO) as a priority area in 2012. This presentation will describe how the Colorado Injury Prevention Program (IPP) partnered with the governor office, environmental health programs, human services, law enforcement, and the National Governor Association (NGA) to leverage funding and expertise to create a state PDO strategic plan.

**Methods/Approach:** The IPP used data and information from an expert panel of external advisors, surveillance data, and the evidence on effective PDO prevention strategies to develop a logic model and SMART objectives to address the issue. Simultaneously, Colorado governor was elected to co-chair the NGA Prescription Drug Abuse Reduction Policy Academy—a yearlong exercise in strategic planning aimed at reducing prescription drug abuse. The IPP collaborated to align and advance the work. Using a public health approach, injury staff led efforts to convene subject matter experts and policy makers, compiled and shared data, identified evidence-based strategies, and facilitated a consensus and prioritization process prior to the NGA strategic planning session.

**Results:** The IPP successfully identified and developed new partnerships with key PDO partners. Colorado was one of seven states to participate in the NGA prescription drug abuse initiative. The IPP gained representation on the governor task force and leveraged funding to host a roundtable event in March 2013 to gather input from 80 subject matter experts grouped by broad topics, including: prescriber education, public awareness, data, prescription drug monitoring program, and safe disposal. The state strategic plan was finalized in May 2013.

**Conclusions:** CDPHE was suited to inform both the process and outcome of this effort. The IPP was successful in engaging partners across different disciplines to address PDO from the public health perspective.

**Significance & Contribution to the Field:** Colorado experience working with multidisciplinary stakeholders and the resulting state PDO strategic plan can be a model for other states working to reduce PDO.

**Authors:** Lindsey Myers, Shannon Breitzman, Barbara Gabella

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**Evaluation of the North Carolina Prescription Drug Monitoring System: Impacts on Identification and Referral of Misusers and Abusers of Controlled Substances.**

*Mariana Garrettson, University of North Carolina at Chapel Hill*

**Statement of Purpose:** This study examines the extent of utilization of North Carolina’s Controlled Substances Reporting System (CSRS) and assesses the extent to which it fulfills its objectives regarding the:

1) identification of misusers/abusers of controlled substance
2) their referral to substance abuse treatment while
3) not impeding appropriate prescribing.

**Methods:** We obtained three years of CSRS data (2009-2011) and analyzed trends in 6 month blocks. Variables analyzed included: providers’ registration with and utilization of the CSRS, patients’ utilization of multiple providers and prescribers, and prescriptions for medications designed to treat opioid dependence. We used two definitions for patients’ utilization of providers: patients with 10+ prescribers and 10+ pharmacists in 6 months (clear drug seeking behavior); patients with 4 prescribers and 4 pharmacists in 6 months (increased risk of overdose).

**Results:** In 2011 there were 1.8 times as many providers registered with the CSRS, 2.3 times as many providers who queried the system, and providers who used the system queried it 2.4 times as often as in 2009. The number of patients with clear drug seeking behaviors decreased by 47%. There was no decrease in the number of patients at increased risk of overdose, but the number of prescriptions they obtained in 6 months decreased by 6%. These high risk patients whose prescribers consistently consulted the CSRS were over five times as likely to receive a prescription for opioid dependence as those whose providers never used the CSRS. The number of prescriptions overall and the number of prescriptions for opioids increased steadily over the three years (5% and 12% respectively). The average number of controlled substance prescriptions dispensed per patient increased by 6%.

**Conclusions:** Over three years more providers registered for the CSRS and used it more often without any decrease in overall prescribing behaviors. The CSRS may help reduce the numbers of patients with clear drug seeking behaviors and may be instrumental in decreasing the number of...
prescriptions received by high risk patients. Consistent utilization of the CSRS by providers is associated with the likelihood that their high risk patients receive treatment for opioid dependence. Significance: As federal agencies recommend increased use of state prescription monitoring programs this study contributes an important example of the impact of such a system.

Authors: Mariana Garrettson, Christopher Ringwalt

Geocoding/Spatial Analysis

Policy and System Change by Mapping Injury Data, Community Collaboration, and Action Planning

Stewart Williams, Dell Children’s Medical Center or Central Texas

Statement of Purpose: To assist injury programs understand the strength of GIS enhanced collaboration and action to influence policy and system change.

Methods/ Approach: Dell Children’s Medical Center (DCMC) used a GIS mapping utility to map 2008-2009 injury data from the trauma registry and 2007-2009 Austin, TX police crash (vehicles, bicycles, pedestrian) data to identify high crash locations, patient residence clusters, citation clusters, and community resources/programs logistics. Upon completion, community action began. A community report detailed the maps and included action recommendations to address “hot spot” injury locations. A symposium was held engaging community stakeholders. Media was invited. Public response and media coverage caused city council to pass resolutions assisting the effort. Council required a collaborative team of stakeholders to convene. DCMC leading this coalition divided it into several workgroups: Community Education and Interventions, Engineering and the Built Environment, Enforcement, Data Collection, Sharing and Use, and Public Policy. Workgroups relate to each section of the action plan. Workgroups will develop three year goals, objectives, and measurable action steps to address barriers and gaps. This project is ongoing.

Results: To date, two resolutions passed Council. The first, requires the city manager to convene a committee of community stakeholders to create a plan of action addressing pediatric occupant protection, bicycling, and pedestrian injuries within the city. The resolution provides momentum to address these issues in the community. The second resolution is in response to the enforcement workgroup seeking to increase the capacity of child passenger safety technician resources in the region. It requires officials to identify funding to generate and support child passenger safety services. Additionally, a regional transportation summit was hosted by the city transportation department and utilized identical process DCMC used to capture stakeholder feedback. The regional summit involved five counties bordering Austin. Feedback from stakeholders initiated development of a regional transportation plan consisting of all modes of transportation and system users. Lastly, a follow up project is underway of 2010-2012 injury and crash data to determine changes from the initial work.

Conclusions: GIS injury mapping is crucial in community collaboration and advocating for policy change. Local organizations do not have access to injury data for planning. Hospital injury data in with police crash data is powerful. Mapping can identify where problem areas are, help to facilitate discussions and action plans. The DCMC lead coalition has unearthed several barriers and gaps in this process.

Significance & Contribution to the Field: This project reinforces that injury prevention programs can benefit from GIS mapping but more importantly turn those efforts into community supported action for policy change.

Authors: Stewart Williams

New Methods for Studying Pedestrian Injury - A Social-Ecological Systems Perspective

Mary Ann Kozak, Indiana University

Statement of Purpose: Walking is the most common form of physical activity particularly among adults and is a low-cost, partial solution to the obesity epidemic. Concomitant with the increase in walking, a 4% increase in pedestrian deaths in 2010 in the U.S.
was realized. Essential factors basic to the structure of every U.S. community are central to studying the rise in pedestrian injury. These factors combine to form a holistic perspective, the social-ecological framework of the community, incorporating social and physical dimensions (socioeconomic conditions and the built environment). Using this perspective as well as emerging multi-disciplinary strategies, new interventions for studying this problem can be pinpointed. By identifying non-linear relationships captured by the topology of the urban landscape and using multivariate spatial analysis and geographic information science, hotspots and features of the social and physical environment contributing to the increase in pedestrian injury will be evident.

**Methods:** The location of the study was a large urban area in the Midwest during the period July 1, 2009 to December 31, 2011. Pedestrian injury locations were identified using ambulance run reports and police reports. The Indiana Network for Patient Care (INPC) was used to determine the course of medical treatment, i.e., treated at an emergency department and released, hospitalized, or died. Using the Empirical Bayes Method, we estimated the relative risk of pedestrian injury using block groups as the cross sectional unit of analysis.

**Results:** During the 2 year study period, for every pedestrian death there were nearly 5.5 hospitalizations and 12 emergency department visits. There was 1 injury for every 10 miles of roadway. The socio-ecological framework predicted locations for emerging areas of pedestrian injury using injury epidemiology and dynamic systems theory. Conclusion: The epidemiology of pedestrian injury can be modeled using spatial analysis and geographic information science techniques to illustrate the increase in pedestrian injury.

**Significance and Contribution to the Field:** By combining the disciplines of emergency medicine, geography, systems theory and medical informatics, a new perspective for studying the increase in pedestrian injury in large, urban areas can direct injury prevention policy and practice in the future.

**Authors:** Mary Ann Kozak, Aniruddha Banerjee
Session Abstracts

Significance & Contribution to the Field: The inclusion of drug possession and trafficking arrests, using two different sources of data, as a proxy for drug markets is a relatively novel addition to research attempting to disentangle spatial relationships between alcohol outlets and violence. Such an approach may help in more effective intervention efforts.

Authors: Robert Lipton, Jason Goldstick, Xiaowen Yang, Anthony Braga

Spatial dynamics of Alcohol Misuse - Do Community Features Characterize Likelihood of Alcohol Misuse Independent of Individual Risk Factors and Neighborhood Demographics in an Inner City Youth Population?

Manya Newton, University of Michigan

Statement of Purpose: To examine how individual level factors and community demographics interact with spatial neighborhood features to characterize an individual propensity for alcohol misuse.

Methods/Approach: Youth ages 14-24 presenting to an inner city ED were surveyed using validated measures of demographics and alcohol misuse (AM). AM was defined by quantity*frequency of alcohol use using AUDIT-C measure. Individuals 18 years with QF4; those younger than 18 years with a QF3 were considered to misuse alcohol. Neighborhood level demographics, alcohol outlet concentration, and crime data were obtained from public sources. Nested models were compared using likelihood ratios (LR). A sequential model was built: Model 1 included individual level variables only. Model 2 added neighborhood-level demographics. Model 3 included spatial neighborhood features of alcohol outlets and crime occurrence and interactions between variables.

Results: Of the 837 youth in the analysis 11.9% misused alcohol. (59% male, mean age 20.75). Individual level variables (age, sex, race, finished high school, lives with parent) entered as a block significantly improved model fit predicting AM over solely the home location of the individual (chi2=27.70, p).

Authors: Manya Newton, Jason Goldstick, Rob Lipton, Sarah Stoddard, Marc Zimmerman, Maureen Walton, Rebecca Cunningham

Innovative Approaches to Preventing Violence

Building Coordinated, Multi-System Public Health Approaches to Violence Prevention at the Community and State Levels - Lessons from Illinois

Barbara Shaw, The Riverbend Group

Statement of Purpose: The purpose of this presentation is to familiarize attendees with the major approaches and strategies used by the Illinois Violence Prevention Authority over the last 15 years to build coordinated, multi-system, public health approaches to violence prevention at the state and community level.

Methods/Approach: The Illinois Violence Prevention Authority (IVPA) was created in statute in 1995 to plan, fund and evaluate violence prevention efforts in Illinois using a combined public health and public safety approach. The Authority, co-chaired by the Illinois Attorney General and the Director of the Illinois Department of Public Health, administered over $160 million in grants over the past 15 years to support statewide and local violence prevention initiatives. The Authority worked state and local level multi-disciplinary, public and private agencies including health providers, schools, law enforcement, community organizations, researchers and public health agencies to build community capacity to conduct effective prevention initiatives that address interpersonal violence. Several major grant programs implemented by IVPA illustrate the types of programming, funding methods and coordinated approaches used by IVPA to prevent violence and build community capacity.

Results: Many communities in Illinois, especially those with high levels of poverty and violence, have learned about and have implemented or are currently implementing violence prevention strategies that take a
public health approach. State agencies and statewide organizations have worked collaboratively to coordinate efforts, provide technical assistance and support and evaluate these programs. New systems and infrastructures have been put in place at the state and local level to accomplish violence prevention strategies.

Conclusions: Effective, coordinated, state and community initiatives using a public health approach can be successfully created and maintained through state level infrastructure and resources. State level functions and strategies utilized by IVPA can help inform other states as they develop violence prevention plans and strategies.

Significance and Contribution to the Field: The Illinois Violence Prevention Authority, the only state agency of its kind in the country, serves as a unique example of what can be achieved when state infrastructure and resources are directed toward a public health approach to violence prevention.

Authors: Barbara Shaw

UNITY - Advancing a Public Health Framework to Prevent Violence Affecting Youth

Rachel Davis, Prevention Institute

Statement of Purpose: Violence is the second leading cause of death for 15-24 year olds; the leading cause of death for African Americans aged 10-24, the second leading cause among Latinos and the third leading cause among American Indians and Alaskan Natives. Designed for local government agencies and community practitioners, this session describes UNITY, a CDC funded initiative that advances a public health approach to prevent youth violence. Complementing the national perspective, innovative examples from Baltimore will also be presented.

Methods/Approach: UNITY is a practice based framework that supports the 22 cities of the UNITY City Network to implement effective public health strategies to prevent youth violence. The UNITY RoadMap, a framework that helps cities understand the current status of their efforts, the core elements necessary to prevent violence before it occurs, and provides information, resources and examples to support cities in planning, implementation and evaluation, guides the cities efforts. The framework encourages UNITY Cities to develop violence prevention plans that conform to local contexts.

Results: While UNITY provides very specific guidance on the critical elements of an effective public health framework to prevent youth violence, the local conditions have resulted in a diversity of processes and structures. Critical elements to a successful robust local initiative to prevent youth violence include: high level leadership, strong collaborations and partnerships, the use of effective strategies and programs, and the development of comprehensive city-wide plans.

Conclusions: Factors impacting the local structures include: Leadership buy-in, the ecology of prevention (governmental and non-governmental service providers), robustness of partnerships, and the depth of understanding of a public health approach to preventing youth violence. Each city, depending on its political/social/ecological context, has developed distinct initiatives that are heavily shaped by local conditions.

Significance & Contribution to the Field: UNITY is helping to build a body of evidence to show the context-specific structures and processes of public health violence prevention efforts, the prevention scaffolding required to enable local efforts, and the resulting effectiveness of these efforts. This session continues the dialogue regarding a public health strategy based approach to prevent violence affecting youth.

Authors: Rachel Davis, Benita Tsao

The Raising of America: Early Childhood and the Future of Our Nation-A Multi-Media and Public Engagement Initiative

Marilyn Metzler, Centers for Disease Control and Prevention

Statement of Purpose: The health literature is consis-
tently clear: early childhood conditions impact health across the life-course. For example, the Adverse Childhood Experiences (ACE) Study, one of the largest investigations ever conducted to assess associations between childhood maltreatment and later-life health, has shown a persistent gradient pattern between the number of ACEs and multiple health risks, diseases, and life expectancy: Nearly 60% of adults reported at least one ACE; those with 6+ ACEs died, on average, 20 years earlier than those with 0-1 ACE.

Methods/Approach: Given the significant magnitude and burden of child maltreatment, the Centers for Disease Control and Prevention’s Division of Violence Prevention has identified safe, stable, nurturing relationships and environments for children and families as the strategic direction for primary prevention of child maltreatment. A major initiative in this strategic direction includes supporting the development of The Raising of America: Early Childhood and the Future of our Nation.

Results: Raising of America is a multimedia and dissemination project that explores how a strong start for all children can lead to a healthier, stronger, and more equitable America. It is being developed by California Newsreel, producer of the highly acclaimed series, Unnatural Causes: Is Inequality Making Us Sick? This new initiative aims to change the national conversation on early child health and development by deepening understanding on the importance of this critical life period among the public, community leaders, and decision-makers. This presentation will include an overview of: 1) Raising of America products, including clips from the upcoming documentary; and 2) key partners and strategies in the national, state, and local public engagement campaign.

Conclusions: Raising of America will present a compelling new story that translates recent scientific research to highlight the broader social ecology that impacts health and well-being across the life-course, including the prevention of all forms of violence. Significance & Contribution to the Field: This initiative will provide resources and strategies that can be used by public health practitioners, communities, and others to assure the conditions in which all children can be healthy and safe.

Authors: Metzler Marilyn, Reidy Clare

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Using Communication & Social Marketing to Prevent Injuries

Effective Messaging and Program Implementation to Prevent Child Hyperthermia among Infants

Abigail Iffrig, Child Health Advocacy & Outreach, St. Louis Children’s Hospital

Statement of Purpose: The purpose of this abstract is to explain program messages, tools and approaches that are most effective for child hyperthermia programs during a one-on-one safety consultation for parents.

Methods: This child hyperthermia prevention program was created by a pediatrician to decrease the probability of unintentional hyperthermia deaths among infants by promoting infant safety and by raising parent awareness about the dangers of leaving their child in a vehicle unattended. The program is implemented at a safety store within a nationally recognized pediatric hospital. Program participants hear Sophie’s story and receive educational materials during a hands-on presentation by certified passenger safety technicians. Those who participated in the program from January 2010 to July 2011 completed a ten question multiple choice and open-ended question survey. The multiple choice questions were designed to capture which program material (slap bracelet or tips card) was most helpful, the participants’ ability to remember educational components, and the degree to which they shared the information with others. A combined 34% response rate was obtained from electronic and phone surveys.

Results: Results indicate that Sophie’s story and the educational materials changed the perceived risk of leaving a child in the car unintentionally for 59% of participants. More than 90% of survey respondents demonstrated knowledge gain on awareness of the
dangers of leaving their child in the car unattended, especially in extreme weather. 90% of participants shared their knowledge with family members, friends, co-workers, and their child care provider. SPSS paired t-test and Pearson correlation bi-variate test confirmed a correlation between participants who rarely or never use the wristband and low perceived risk of leaving a child in the car prior to hearing Sophie’s story (0.180 correlation, 1.909 standard deviation, 0.157 standard error mean).

Conclusion: This analysis shows that Sophie’s story and the TIPS Card changed the perceived risk of leaving a child in the car unintentionally. The message, “not even for a minute” was effective and easy for parents to remember. Sophie’s KISS (Keeping Infants Safe and Secure) is an effective, low-cost child injury prevention program for hyperthermia.

Authors: Anyah Land, Nicole Kozma, Catherine Rains

The Emory Center for Injury Control - Strategies for Promoting Injury Prevention Messages Using Social and Major Media Outlets
Natasha Southworth, Emory Center for Injury Control, Emory University School of Medicine

Statement of Purpose: The Emory Center for Injury Control’s (ECIC) mission is to build the field of injury prevention and reduce injuries in Georgia. The ECIC’s approach to injury prevention focuses on translational research, training and outreach to local partners, and has a particular research focus on vulnerable and underserved communities. Since 2010, the Center has made efforts to promote injury prevention messages by increasing its online presence through the use of social media and major media sources.

Methods/Approach: The ECIC’s interdisciplinary consortium includes leaders from nine public and private colleges and universities, several community-based organizations, and state agencies working to strengthen the bridge between science and practice in order to reduce injuries. Connected to its outreach functions, the Center has been engaged in increasing capacity to educate the public directly on injury prevention strategies. Such creative methods include: developing and implementing a targeted social media approach; having faculty members participate in a national fellowship which teaches them how to write for major media outlets; and hosting a Social Media Lecture Series aimed at injury practitioners, researchers, and students.

Results: The ECIC has seen a measured growth in its interaction in the public sphere as a result of strategic participation in social media outlets, including Facebook, Twitter, and LinkedIn, as well as several OpEds published by ECIC faculty in outlets such as CNN, Chronicle of Higher Education, and the Huffington Post. Further, the Social Media Lecture Series has generated overwhelming interest from local injury prevention practitioners, researchers, and students.

Conclusions: The ECIC’s media and marketing efforts have proven successful thus far, and the Center plans to use social media to improve public visibility around the problem of violence and unintentional injury and to highlight the importance of prevention.

Significance & Contributions to the Field: Injury prevention professionals must stay up-to-date on current findings, resources, and effective approaches to prevention. Engaging in social media can be used as an effective strategy to showcase the achievements of the field of injury prevention, and ultimately increase the safety of our communities in the United States and worldwide.

Authors: Debra Houry, Sheryl Heron, Shakiyla Smith, Natasha Southworth

Lessons from a Statewide Suicide Prevention Social Marketing Campaign
Anara Guard, EDC, Inc.

Statement of Purpose: To describe a statewide paid marketing campaign to improve knowledge and change attitudes and behaviors around suicide prevention.

Methods/Approach: Know the Signs is a statewide social marketing campaign that launched in No-
November 2012 with the overall goal to prepare more Californians to prevent suicide by knowing the warning signs, finding the words to talk with someone in crisis, and reach out to local resources. Campaign development included interviews with stakeholders in every county, a random digit dial knowledge, attitudes and behavior survey, a literature review, and creation of a catalog of existing campaigns. This background research resulted in the development of a behavior change messaging logic model and a comprehensive framework for the campaign. The campaign is integrated with other statewide projects to strengthen the network of crisis centers, expand suicide prevention training, and decrease stigma around mental illness.

**Results:** The first wave of the campaign consisted of print ads in popular magazines, billboards, TV ads in each media market, online and mobile ads, and ads on Facebook, all driving traffic to two websites (in English and in Spanish). The ads feature individuals representative of two high-risk populations: older white men and young Latinas. The second wave of the campaign provided posters and brochures to each county for local dissemination and customization, and technical assistance to implement the campaign strategically. Press releases, link exchanges, and press events also drew attention to the campaign and website.

**Conclusion:** During the first eight weeks of the campaign, the English language website was visited more than 149,000 times while the Spanish site received more than 14,000 views. The presentation will provide current numbers on website usage as well as increased volume of calls to state crisis centers. Anecdotal responses to the campaign will also be shared.

**Significance and Contribution to the Field:** This is the largest statewide suicide prevention marketing campaign in the U.S to date. Unlike most campaigns that rely on donated airtime or ad space, Know the Signs has had the resources to develop a media strategy and to purchase placement designed to reach higher risk populations.

**Authors:** Anara Guard, Jana Szersputowski, Richelle Brown
**Conclusions:** Social marketing through churches successfully reached half of each church’s older adult members, on average, most of whom correctly recalled our principal marketing messages. Church members were reached most often through church bulletins, newsletters, pulpit announcements, and conversations with other members. Further studies should test the social marketing program’s effectiveness in other settings and whether other injury prevention messages can be effectively disseminated through churches.

**Significance & Contribution to the Field:** The implementation of a social marketing program through churches is an effective approach for reaching older adults with fall prevention messages. Such messages can be effectively disseminated through low cost modalities that are easily implemented in most churches.

**Authors:** DiGuiseppi Carolyn, Thoreson Sallie, Goss Cynthia, Currie Dustin, Lezotte Dennis, Marosits Mark, Clark Lauren
Poisoning Surveillance: Applications & Uses of ISW7 Recommendations

Poisoning by Race, Gender, and Intent in Kansas
Dan Dao, Kansas Department of Health and Environment

Statement of Purpose: Poisonings have gained lots of national and local attention due to significant media coverage and increasing numbers of deaths and injuries. This report looks at the poisoning rates in Kansas by race, gender, and intent.

Methods: Hospital discharges, hospital stays of 24 or more hours, were defined based on first valid code criteria defined by the CDC’s Instructions for Preparing State Injury Indicators Report 2007-2009. This first valid code is scanned using the ISW7 matrix for ICD9 CM codes. Secondary fields are not included in this analysis. 2005-2009 Hospital Discharge database was used for this analysis. The database does not include information from all hospitals in Kansas.

Results: All hospital discharge rates are from 2005-2009 and age-adjusted. All differences are statistically significant. The overall poisoning related HD rate was 90.8 per 100,000 population. The overall poisoning related HD rate was higher in females than males (105.4 vs. 76.5, per 100,000 population). The suicide poisoning related HD rate was higher than the unintentional poisoning rate, (52.5 vs. 30.8, per 100,000 population). In 2009, the suicide poisoning related HD rate was higher in females then males. African-Americans had the highest poisoning related HD rate compared to all other races. Females had higher suicide poisoning related HD rates compared to males for all gender-race groups examined (African-American, Asian / Non-Hawaiian and other Pacific Islander (NHOPI), White). Whites were the only group with higher suicide poisoning related HD rate than unintentional poisoning rates.

Conclusions: Just looking at the poisoning rates among race or gender groups alone is not enough to describe poisonings in Kansas. It is necessary to look at how these HD rates are influenced by gender, intent, and race of the poisoning.

Significance and Contribution to the Field: By being able to pinpoint differences between many groups the problem of poisoning can be better described. If poisoning prevention efforts are to be successful in Kansas it is important to address how gender, intent and race interact and to develop strategies that can address these different types of population groups.

Authors: Dan Dao

Improving the Surveillance of Drug Poisoning Mortality and Morbidity - A Collaborative Effort
Scott Proescholdbell, North Carolina Division of Public Health

Statement of Purpose: With the release in May 2012 of the Injury Surveillance Workgroup (ISW7) Consensus Recommendations for National and State Poisoning Surveillance, states and local jurisdictions have begun the process of translating the recommendations into public health practice. Two key groups, the Council of State and Territorial Epidemiologist (CSTE) Drug Overdose Subcommittee and the CDC Core VIPP states funded to conduct Surveillance Quality Improvement (SQI), are discussing, examining and testing the ISW7 recommendations. This panel will share lessons learned from these efforts and present practical implications for injury programs.

Methods: The CSTE subcommittee has focused on the ISW7 definitions for drug poisoning mortality. Several states and local jurisdictions are testing the ISW7 definitions based on the types of information available to them, from basic reporting using underlying cause of death data to more advanced reporting using coroner/medical examiner reports and toxicology results. Standardized table shells have been developed to compare results across states. The
SQI workgroup has focused on the ISW7 definitions for drug poisoning morbidity. The workgroup has developed and tested a protocol to assess the accuracy and specificity of ICD-9 CM coding for poisoning in emergency department and hospital discharge records.

**Results:** For mortality data, table shells, how-to instructions, and a special emphasis report (with a standardized template for basic reporting) are in development and will be shared. For morbidity data, the tested protocol will be shared. State examples and analyses will be presented.

**Conclusions:** While poisonings are now the leading cause of injury death in the US, public health surveillance has lagged due to challenges in standardized reporting. The ISW7 consensus recommendations provided definitions and a standard framework. With further testing and refinement, states will soon have the tools they need for analysis and reporting to monitor this emerging public health problem.

**Significance & Contribution to the Field:** With the data available, every jurisdiction should be able to produce a standardized report on drug poisoning mortality and morbidity. This panel will discuss recent work and provide tools and guidance to facilitate state and local drug poisoning surveillance efforts.

**Authors:** Scott Proescholdbell, Terry Bunn, Catherine Groseclose, Holly Hackman, Barbara Gabella, Denise Paone, Margaret Warner, Renee Johnson

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Poisoning Surveillance in North Carolina: A Comparison of Three Case Definitions Used to Identify Drug Overdoses and Other Poisonings among Emergency Department Data

**Katherine J. Harmon, UNC Chapel Hill**

**BACKGROUND:** The North Carolina mortality rate for poisoning increased threefold between 1999 and 2010 due to an increase in the rate of opioid analgesic fatalities. The number of deaths is exceeded by the number of hospitalizations, emergency department (ED) or outpatient clinic visits, and the number of poisonings that resolve without medical attention. Assessing morbidity using hospital discharge and ED visit data provides a better representation of the burden of poisonings in NC. The quality of surveillance data depends on the definition used to identify poisoning cases. NC has used the definition of poisoning suggested by the CDC, however, it is unclear if this definition accurately captures the true number of ED visits due to poisoning. For comparative purposes, we applied the poisoning definition suggested by the Safe States Injury Surveillance Workgroup-7 (ISW-7), as well as a drug overdose definition developed by injury prevention partners in NC.

**METHODS/APPROACH:** Summary statistics were generated for all 2011 ED visits captured through the NC Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) which met the coding criteria of a poisoning based on at least one of three definitions. Summary statistics were generated for all poisoning-related ED visits.

**RESULTS:** Using the standard CDC definition based on the first-listed E-code, there were 17,576 poisonings, of which 8,430 were unintentional drug overdoses. When this definition was expanded to include poisoning diagnosis codes in addition to E-codes, there were 35,193 poisonings, of which 13,720 were drug-related. The definition suggested by injury prevention partners yielded 14,566 drug-related ED visits based on the first-listed diagnosis code or E-code. Employing the code created by ISW-7, the number of total poisonings increased to 178,706. An increase in the number of observed cases was related to the inclusion of substance abuse codes.

**SIGNIFICANCE AND CONTRIBUTION TO THE FIELD:** The U.S. is in the midst of an escalating poisoning epidemic. Quality surveillance data is valuable for the purposes of developing informed strategies and prevention programs.

**Authors:** Katherine J. Harmon, Scott K. Proescholdbell, Anna Waller, Steve Marshall, Alan Dellapenna

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Design & Engineering

Development of a Child-Resistant Spray-Bottle for Household Cleaning Products

**Kristin Roberts, The Research Institute at Nationwide Children’s Hospital**

**Statement of Purpose:** Existing spray-bottles for household cleaning products are not child-resistant. In a 2010 study, McKenzie et al. reported that an estimated 267,269 children <6 years of age, were treated in US emergency departments for household cleaning product-related injuries between 1990 and 2006; spray-bottles were the...
most common source of exposure (40.1%). We aimed to
develop a child-resistant spray-bottle to reduce household
cleaning product-related injuries to young children.

Methods/Approach: We partnered with engineer and
design experts to investigate how children and parents
use, operate, and store spray-bottles by conducting home
observations with 25 families and videotaping parents and
children, <6 years of age, attempting to operate spray-
bottles. Information collected yielded multiple concept
designs, three-dimensional models, and Computer Aided
Design (CAD) models for the development of a two-stage
trigger mechanism for a child-resistant spray-bottle. The
final prototype was tested with children from 11 families.

Results: In the home, spray-bottles accounted for 36% of
all cleaning product containers and 75% of the nozzles
on the spray-bottles were stored unlocked. When asked
to operate the spray-bottles, children could activate the
trigger and often pointed the nozzle toward their face.
Observations led to the prototype development of a two-
stage trigger mechanism that automatically reverts to the
locked position when not in use. Children were observed
and video-taped using the spray-bottle prototype. Most
children tested were not able to operate the spray-bottle
prototype in the time allotted.

Conclusions: Spray-bottles are found in virtually every
home and are a common source of household cleaning
product-related injuries to young children. This system
has the potential to reduce a common source of child
poisoning from household cleaning products.

Significance and Contribution to the Field: This two-stage
trigger system, child-resistant spray-bottle could reduce
the number of household cleaning product-related injuries
to young children by providing an automatic re-locking
feature that would meet US Consumer Product Safety
Commission standards for child-resistant products.

Authors: Kristin Roberts, Lara McKenzie

If You Build it...do it Safely! Maximizing Injury Prevention
in Activity-Promoting Built Environments

Keshia Pollock, Johns Hopkins Bloomberg School of Public
Health

Statement of Purpose: Around the world built
environments are being modified to promote daily activity
during work, travel, and play. However, links between
safety and active design are often overlooked when
changes to the built environment occur. The purpose of
this presentation is to provide urban and building design
professionals with evidenced-based recommendations
on how to build in safety while promoting active
environments.

Methods/Approach: In 2010, several New York City
agencies collaborated to create the Active Design
Guidelines (ADG) (www.nyc/adg), which described urban
and building design strategies for creating environments
that promote daily physical activity. With CDC support, we
developed a supplement to the ADG, Promoting Safety,
which provides information on the links between safe
design and active design strategies. A systematic review
of the existing literature was conducted to identify injury
prevention strategies applicable to the ADG objectives.
Injury prevention strategies were rated as strong,
emerging, or best practice, according to the strength
of the supporting research evidence. The supplement
was developed for print and online dissemination, and
was peer-reviewed by injury prevention, design and
transportation experts, and by key stakeholders.

Results: We identified 18 urban design strategies and 9
building design strategies that promote safety. Evidence
was strong for 8/18 urban design strategies and 5/9
building design strategies. Best practices were those
interventions which were consistent with effective injury
countermeasure (e.g., separating people from hazards),
but for which there was no evidence of the impact on
injury, and included interventions such as street closures
for creating safe play areas.

Conclusions: By partnering with architects and planners,
injury prevention and public health professionals can
contribute to ensuring that new and renovated spaces
maximize both active living and safety. The ADG Promoting
Safety Supplement is the first resource of its kind to meet
that goal.

Significance & Contribution to the Field: This research
is significant for the field because it highlights the
importance of interdisciplinary collaborations to foster
the creation of safe environments. It also emphasizes
the critical role that injury prevention professionals have
in ensuring safety is incorporated when interventions to
promote activity are being developed in the future.

Authors: Keshia Pollock, Maryanne Bailey, Andrea Gielen,
Elaine Auld, Sarah Wolf, Karen Lee
Motorcyclist Head Injuries in Association with Helmet Use and Design

Laura Blanar, University of Washington

Statement of Purpose: This pilot study examined data from fatal motorcycle crashes to establish patterns of helmet types and damage associated with head injury.

Methods/Approach: The King County Medical Examiner’s Office (Seattle, WA) identified all fatal motorcycle crashes between 2006-2011. Police reports, crash investigations and autopsies provided data. AIS generated injury severity by body region. Photographs showed helmet design, certification, and damage. Analysis included chi-square tests for association and score test for trends.

Results: There were a total of 164 deaths examined. Nine were unhelmeted and 53 had helmet photographs. Cases with photographed helmets did not differ from non-photographed. For the 53 helmets with photos, seven (13%) motorcyclists had novelty helmets, 13 (25%) had half, 2 (4%) had three-fourth and 31 (58%) had full-face/modular. Three novelty helmets had false DOT certifications. Fourteen (26%) helmets fell off during the crash. Six had evidence of retention malfunction. Although not significant, novelty and half/three-quarter helmets were more likely to crush/cave, have punctures, or crack compared to full/modular helmets. Full/modular had higher odds of scratches or gouges. Although not significant, 86% of unhelmeted motorcyclists, 100% of novelty, 93% of half/three-fourths, and 77% of full/modular wearers sustained a major head injury. Mean head AIS decreased and torso AIS increased as helmet coverage increased (moving from none to full-face helmets). Speed contributed to the crash for 38% of un-helmeted motorcyclists, 53% of half/three-fourths, and 64% of full/modular wearers. Half/three-quarter and novelty wearers had higher odds of using illegal drugs (0.4 and 0.5 versus 0.36) and intoxication (0.17 and 0.40 versus 0.05) compared to full-faced/modular.

Discussion: The probability and severity of fatal head injuries varied by helmet design. Full-face/modular users may have died in crashes with higher impact force. Full-face helmets dissipated crash forces differently than novelty or partial helmets, as indicated by damage patterns. Helmet types were associated with different riders and crash profiles.

Significance and Contribution to the Field: This is one of the first US studies to examine real-world injuries with motorcycle helmet performance. Despite small sample size, the study shows helmet damage can be linked to design and head injury. Even in universal helmet law states, helmet issues persist.

Authors: Laura Blanar, Robert Kaufman, Micheline Lubin, Richard Harruff, Beth Ebel

Preventing Violence Against Children & Youth

Violence Risk Screening - Predicting Cyber Violence Perpetration and Victimization

Eric Sigel, University of Colorado School of Medicine

Statement of Purpose: The Violence, Injury Protection and Risk Screen (VIPRS) predicts future serious violence involvement. We sought to determine whether a + VIPRS also predicts current cyber violence (CV) involvement-perpetration or victimization.

Methods: Adolescents ages 12-17 scheduled for a routine exam in an adolescent clinic were eligible. Assent/Consent was obtained by phone. Youth filled out the VIPRS and a set of 5 validated questions defining CV prior to their visit. CV perpetration was defined as whether one has 1) made rude or nasty comments to someone on line, or 2) used the internet to harass or embarrass someone. CV victimization was defined as having been 1) target of rumors, 2) received rude or nasty comments, and/or 3) received threatening or aggressive comments on line. Bivariate and multivariate relationships were analyzed. This study was approved by the Colorado Multiple Institutional Review Board.

Results: 549/784 (70%) of eligible youth consented), and 74% (n=408) actually completed the pre-visit electronic screen. Mean age was 14.5 (sd 1.6); 65% female, 45 % Hispanic, 38% Black, 17% White. Eighteen percent scored positive on the VIPRS. Twenty-three percent were victims of CV, and 12.5% perpetrated CV in the last year. Females reported more CV victimization compared to males (27.8 v. 14.3, p=.003). Forty-three percent who scored positive on the VIPRS were victims of CV, and 12.5% perpetrated CV in the last year. Females reported more CV victimization compared to males (27.8 v. 14.3, p=.003). Forty-three percent who scored positive on the VIPRS were victims of CV, compared with 20% scoring negative (p=.000); those with a + VIPRS perpetrated CV 40% of the time, compared to 7.4% who screened negative (p=.000). Logistic regression showed that a positive VIPRS screen was the sole predictor of CV perpetration (%99=2.1, p=.000), and the strongest predictor of CV victimization.
Session Abstracts

Session Abstracts

%\(=1.3\) (p=.001). Internet use-frequency nor hours per day were associated with CV. All but one of the 14 VIPRS questions (having ADHD) were associated with CV involvement.

**Conclusions:** A positive VIPRS screen is strongly associated with CV perpetration and victimization, and can be used as a tool to recognize youth involved with CV.

**Significance:** The strong association between physical violence and electronic violence suggests that when assessing violence involvement, cyber violence should be addressed as well.

**Authors:** Eric Sigel

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**Leveraging Systems to Build Collective Action for Child Maltreatment Prevention**

*Malia Richmond-Crum, Division of Violence Prevention at the Centers for Disease Control and Prevention*

**Purpose:** This session will describe several CDC initiatives and tools aimed at building collective action and impact for child maltreatment prevention across multiple sectors including business, policy makers and public health.

**Methods/Approach:** The initiatives aim to accelerate current prevention knowledge to action at the community and societal level and are built around a vision and agenda of assuring “Essentials for Childhood” - Safe, Stable, and Nurturing Relationships (SSNRs) for children with their caregivers and in their broader environments. This approach has included development of a Knowledge to Action Prevention Consortium (K2A), a public health leadership tool kit, application of systems dynamics modeling to child maltreatment prevention, making the business case for prevention and engaging the business/employer sector, and developing suggested actions for business.

**Results:** These efforts have helped move information about Adverse Childhood Experiences (ACEs) to prevention action in multiple ways leading to stronger collaborations between partners around prevention on multiple levels. The Essentials for Childhood document provides guidance on a coordinated approach to promoting SSNRs, and the Public Health Took kit provides other resources for state health departments. An interactive systems dynamics learning lab allows employers a hands on experience to see the hidden impact of ACEs on their current and future workforce, bottom line, and community and to explore possible prevention strategies on multiple levels.

**Conclusions:** Solving complex social and health problems like child maltreatment and other forms of violence requires cross sector actors engaged and committed to a common vision and agenda.

**Significance & Contribution to the Field:** This session provides resources for health departments and others to use to further their work in prevention and to help engage other partners in prevention, particularly the business/employer community. It also uses a systems modeling approach for engaging people in conversation around prevention strategies.

**Authors:** Sandra Alexander, Rich Puddy, Diane Hall, Malia Richmond-Crum

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**Stereotyping in Child Abuse Evaluations**

*Lenora Olson, University of Utah*

**Statement of Purpose:** Discriminating between children who have experienced abuse and those who have not is a daunting challenge that child abuse pediatricians attempt to perform correctly for each child. Unfortunately, there are no gold standard tests that allow certain discrimination of abused from not abused children. As a result, the diagnosis of physical child abuse varies widely among child abuse pediatricians. To understand the child and family characteristics that child abuse pediatricians assess in a consultation and how these characteristics may form stereotypes, we qualitatively analyzed child abuse consultation notes for social cues related to the child’s social ecology (child and caregiver characteristics and social setting).

**Methods/Approach:** We collected 730 child abuse consultation notes for physical injuries from 36 child abuse pediatricians representing 28 child abuse pediatrics programs in the US. The consultation notes were analyzed using content analysis for positive and negative descriptions of the child’s social ecology. We developed 15 social cues a priori from a literature review (i.e., single mother, poverty, and social isolation) and 26 positive and negative social cues de novo (i.e., blameshifting, legal issues, social support available). We performed correspondence analysis to explore how the social cues associate together.

**Results:** Social cues clustered into 5 categories we defined as 1) Risky Family, 2) At-risk families, 3) Incompetent
caregivers, 4) Intact family; and 5) Competent caregivers. Overall, physicians determined probable abuse for the social cues clustered within the first three groups as compared to the second two groups.

**Conclusions:** Clusters of social cues may form stereotypes of families that are referred for child abuse evaluations. Stereotypes have the potential to influence diagnostic decision making.

**Significance & Contribution to the Field:** Stereotyping is applying general ideas and beliefs to categorize people. It may be done consciously or unconsciously and is known to effect physician decision making. Stereotyping may change the context in which a patient’s actions are viewed. Whether stereotyping in cases of child abuse effect decision making is unknown. Because the results of child abuse evaluations may have profound effects on the child and the family, our findings warrant further inquiry.

**Authors:** Lenora Olson, Larry Cook, Kristine Campbell, Heather Keenan

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“Anywhere, Anytime, Anyplace”: Using the Creative Arts to Learning with Youth about Bullying

*Michael Yonas, University of Pittsburgh*

**Background:** More than seventy percent of students in the US report incidents of bullying as a problem in their school. Bullying victimization has been linked to increased risk for depression, poor academic performance and increases in violence perpetration and victimization. Engaging youth as experts to learn about social and contextual dynamics of bullying is a necessary step for implementing tailored intervention and prevention efforts.

**Objectives:** Due to increased concerns about bullying, this human service organization initiated a community-based participatory research (CBPR) study designed to examine perceptions and experiences of bullying to increase awareness and inform potential interventions.

**Methods:** The participatory arts-based methodology called Visual Voices was selected to engage youth in a creative, structured, developmentally appropriate co-learning group process. Through a series of interactive and facilitated painting, writing, and drawing and reflection activities, youth explored social and structural factors influencing youths’ experiences with bullying in the school and community settings.

Results: Six girls and 4 boys, ages 11-14, worked together to express and document key themes associated with bullying experiences. Findings document description and definitions of bullying, when and where bullying occurs (e.g., specific unmonitored school and community settings), and teamwork strategies for addressing and preventing bullying in school and community settings. Both girls and boys described gender-specific differences in experiences with bullying, social influences and intervention opportunities. Youth, who identified as both perpetrators and victims, felt that bullying is a pervasive behavior that persists despite existing school-based programs.

**Conclusions:** This creative youth guided research process facilitated individual and group reflection that generated new knowledge and collective awareness associated with bullying in school and community settings. Significance: Findings illustrate the strengths and limitations of existing bullying prevention efforts and the unique value of engaging youth as partners in the bullying research process.

**Authors:** Michael Yonas, Kimberly Rak, Cara Nikolajski, Adrienne Walnoha, Elizabeth Miller

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Making Policy a Priority: Engaging Researchers & Practitioners in Advocacy Efforts

*Theresa Cruz, University of New Mexico*

**Statement of Purpose:** The Core Competencies for Injury and Violence Prevention Researchers – Capacity and Training Needs

**Advocacy among Injury and Violence Prevention Researchers – Capacity and Training Needs**

**Method:** Data were from a 17-question electronic survey sent via email to all members of the Society
for the Advancement of Violence and Injury Research (SAVIR) during spring 2011. We determined prevalence of advocacy experience, interest, and training needs, and examined associations between prior training and advocacy interest and experience.

**Results:** 72 (53.3%) SAVIR members responded. The majority (72.2%) reported at least one of 16 types of advocacy-related activities (M = 5.2, SD = 4.4). Half had served as subject matter experts (50.0%) or written a legislator (54.2%). Only 15.3% reported a relationship with a federal legislator; 25.0% with a state legislator. Strong interest in injury prevention advocacy was reported by 69.4% of respondents. Advocacy barriers included lack of time, institutional support, and training, as well as employer restrictions. One third of respondents had previous advocacy training. Prior training was not correlated with a higher level of interest in advocacy but was significantly associated with advocacy activity ($t = 6.78$). Reported training needs included advocacy “do’s and don’ts” (74%), fact sheets (60%), and webinars (60%).

**Conclusions:** Injury researchers are interested in advocacy but often lack training, have misperceptions, or encounter barriers that limit participation in advocacy efforts.

**Significance and Contribution to the Field:** This research is the first attempt to determine the advocacy experience, interest and needs among researchers in the field of injury and violence prevention. It further informs the field regarding opportunities for professional organizations to support members in advocacy through training and technical assistance.

**Authors:** Theresa Cruz, Susan Gallagher, Megan Ranney

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**Motor Vehicle Injury Prevention**

**Behaviors Increasing the Risk of Crash Injury in Latino Adolescent Males - The Influence of Acculturation and Parent Connectedness**

*Daniel Summers, Yale School of Medicine*

**Statement of Purpose:** Motor vehicle crashes (MVC) are the leading cause of death for U.S. teens. Injury disparities persist and are growing among Latino adolescent males, where mortality rates from MVCs exceed those of their non-Latino White peers. Historically, the Latino family is considered a resilience factor mitigating the effects of poverty, low education, and poor access to healthcare. We sought to assess the effects acculturation and parent connectedness on behaviors increasing the risk of crash injury in Latino adolescent males.

**Methods/Approach:** From 10/2011 - 10/2012 we prospectively administered a validated acculturation measure, coupled with a youth health behavior risky survey, to northeastern urban Latino adolescent males between the ages of 15-18 years. Participants were asked questions about attitudes toward family and culture, engagement in crash injury risk behaviors (i.e. restraint use, riding with an impaired driver, impaired driving, unlicensed driving), and use of drugs or alcohol. Univariate regression analysis was performed to assess the effects of acculturation and low parent connectedness on engagement these behaviors.

**Results:** We enrolled 138 participants with an overall mean age of 16.9 years. Males of Puerto Rican descent represented the largest portion of the sample (59.1%) and although the majority of participants were US-born (61.6%), most had at least one parent born abroad (84.1%). Few adolescents had driver’s licenses or permits (10.1%) and many reported unlicensed driving (55.1%).

**Conclusions:** Increasing acculturation was a good predictor of marijuana use, predicting lifetime use.

**Authors:** Federico Vaca, Daniel Summers, Linda Roney, Pina Violano, Alison Moriarty Daley, James Dziura, Craig Anderson

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**An Effective Strategy to Increase Booster Seat Use among Children 4-7 Years of Age**

*Marissa Rodriguez, Injury Prevention Center of Greater Dallas*

**Statement of Purpose:** To increase booster seat use among children 4-7 years of age in two elementary schools in Dallas. Despite a state law requiring safety seats for children less than 8 years of age, Dallas data shows that most 4-7 year old children do not ride in a booster seat.

**Methods/Approach:** Using a modified Safe Communities approach, the Give Kids a Boost intervention was developed and implemented using local results of focus groups with teachers and parents as well as recommendations from NHTSA on effective strategies to improve child occupant restraint use. The intervention was implemented January-April 2012 and included: 1)
Session Abstracts

train-the-trainer sessions with teachers and parents; 2) presentations about booster seat safety; 3) tailored communication to parents; 4) distribution of fact sheets/resources, and 5) booster seat inspections. The evaluation involved 2,260 standardized child occupant restraint observations of 4-7 year olds at two intervention and four comparison schools. Observations were conducted during the pre-intervention (Period 1: Fall 2011), early post-intervention (Period 2: Spring 2012), and late post-intervention (Period 3: Fall 2012, after summer break) time periods to determine whether there was a change in booster seat use following the intervention.

Results: Compared to the baseline (Period 1) rate, booster seat use at the two intervention schools increased by 18.1 percentage points in Period 2, and was 22.6 percentage points higher than baseline in Period 3 (4.2%, 22.3%, and 26.8% respectively). The increase was statistically significant for the two intervention schools together (OR=6.5; 95% CI 3.8-11.0; P<0.001) and at each of the schools independently (P<0.001). In the comparison schools, the change was minimal and not statistically significant for any of the time periods (2.4%, 4.6%, and 4.8%) (P=NS).

Conclusions: This strategy resulted in a substantial increase in booster seat use at the intervention schools that persisted into the subsequent school year. The fact that no significant change was seen in the comparison schools supports the hypothesis that the Give Kids a Boost effort was the reason for the increase.

Significance & Contribution to the Field: This strategy, which utilized a train-the-trainer component, may be effective in leveraging resources, and providing sustainability, as well as increasing booster seat use.

Authors: Marissa Rodriguez, Maria Isabel Colunga, Mary McCoy, Carrie Nie, Shelli Stephens-Stidham, Gregory R. Istre

Neurocognitive Correlates of Young Drivers’ Performance
Van-Kim Bui, Johns Hopkins Bloomberg School of Public Health

Statement of Purpose: This study identifies neurocognitive correlates of young driver performance. The purpose of the study is to determine whether measures of intelligence, executive function, inhibition, or risk-taking are associated with specific tasks required for safe driving.

Methods/Approach: Young drivers ages 16 to 24 who had valid learner’s permits or licenses were recruited. After informed consent, each participant drove on a highway- and city- driving simulator for 20 minutes as a warm up, then an additional 40 minutes during which they were exposed to challenges. Challenges include braking for a pedestrian braking for a school bus, making change with coins, and sending a text message. After driving, participants completed a set of neuropsychological tests. Regression analysis determined a correlation between driving performance metrics and neuropsychological performance.

Results: Variability in acceleration and braking distance to a parked bus were the most sensitive indicators of driving performance in the simulator. Drivers with higher verbal IQ scores on the WASI (Wechsler Abbreviated Scale of Intelligence) and those with better executive functioning (i.e., those who completed more categories of the Wisconsin Card Sorting Test), demonstrated significantly less variable acceleration and allowed themselves longer braking distance before the parked bus. Inhibition, as measured by the Stroop Color-Word Task, was only weakly associated with driver performance. Risk-taking, as measured by a gambling task (i.e., the Balloon Analog Risk Task), was not associated with driving behavior.

Conclusions: There are neuropsychological correlates of young driver’s performance in a simulator. Young drivers with higher verbal IQ, and better executive function skills showed a greater ability to maintain stable rates of acceleration in a simulated vehicle. Standard measures of risk taking had little if any correlation to performance of driving tasks.

Significance & Contribution to the Field: Many car insurance companies have offered discounts to “A students”, suggesting actuarial advantages to academic success. Our results suggest that some of these advantages may be due to intelligence itself and other cognitive capacities, rather than by risk taking propensity.

Authors: David Bishai, Sara Johnson, Van-Kim Bui, Anna Graefe, Maria Schultheis

Dose-Response Effects of Driver’s Education on Traffic Violations in Pennsylvania
Amanda Rymph, Saint Joseph University

Statement of Purpose: This study uses three years of
alumni data from a “high end” driving school that offered optional classroom modules and a choice of the number of behind the wheel (BTW) experiences. Drivers’ education can be customizable in Pennsylvania because the state does not require a defined curriculum. We determine whether the exposure to classroom instruction, BTWs and the number of months of enrollment are correlated with fewer traffic violations for alumni of the program.

Methods/Approach: All alumni from a “high end” driving school in suburban Philadelphia from 2009-2011 who had attended at least one BTW or class offered by the school were eligible (N=1715). Their names and variant spellings with birth dates and addresses were searched to determine traffic violations after the date of program completion in the Pennsylvania traffic court dockets. Logistic and Poisson regression respectively determined the probability of any traffic violation and the count of violations.

Results: Students who chose and received classroom based training reduce their odds of a traffic violation by 22% (p=0.032) compared to no classroom training and BTW only. Having any BTW episodes raised the odds of violation by 43% (p=0.089) compared to no BTW with classroom only. However, among those who had at least one BTW, additional BTW lessons lowered the odds of violation by 9% per lesson up until the 10th lesson. BTW lessons after the 10th lesson had no statistically significant impact on violations—but the sample was limited to only 33 students having this many lessons. The months enrolled had a protective effect for students enrolled between 1 and 6 months—each month of enrollment lowered violation odds by 8% (p=0.117). For students staying in the program > 6 months, each additional month increased odds of a traffic violation by 4.6% (p=0.043)

Conclusions: Modest doses of driver training are associated with dose-dependent reductions of traffic violations. High doses are associated with increased violations.

Significance & Contribution to the Field: There are dose-dependent effects of driver’s education that reflect self-selection of riskier drivers into higher doses.

Authors: David Bishai, Amanda Rymph
**Policies to Prevent Injuries & Violence**

**Development of a Policy Agenda by a Hospital-Based Violence Prevention Collaborative**

*Rebecca Levin, Ann & Robert H. Lurie Children’s Hospital of Chicago*

**Statement of Purpose:** There were 506 homicides in Chicago in 2012. Lack of coordination among stakeholders can hamper the effectiveness of violence prevention. Strengthening Chicago’s Youth (SCY) is a collaborative of 160+ organizations from different sectors convened by Lurie Children’s to build capacity to connect, collaborate and mobilize around a public health approach to violence prevention, with a focus on policy change.

**Methods/Approach:** Policy agenda development process: Steering committee developed overarching policy principles. Staff compiled list of policy ideas from SCY, current local efforts, national recommendations. Survey on organizations’ policy priorities (n=30). Meeting to develop policy agenda (n=50): brainstormed recommendations; narrowed to 25 items reported out, ranked list of 16 items Steering Committee refined to final 12 priorities.

**Results:** Policy agenda: Reduce Park District youth program fees for low-income families. Public education campaign on positive parenting. Gun violence prevention policies shown to make a difference, including preventing concealed carry, universal background checks, assault weapon/high capacity magazine ban. Strengthen school mental health services. Reduce use of disciplinary practices that remove children from school. Make One Summer Chicago permanent and yearlong. Juvenile justice policies in all settings that reflect evidence regarding adolescent development and impact of trauma. Identify areas that are underserved by Department of Family and Support Services and build community capacity to enhance services. Core set of outcome measures for each type of program, for use by public and private funders. Require that organizations receiving public funding for human services programs provide staff training on violence and trauma. Programs for foreclosure avoidance. Reallocate some funds saved from gradually closing Juvenile Temporary Detention Center to prevention and early intervention.

**Conclusions:** SCY has developed a policy agenda with items of differing levels of complexity. Some policy recommendations are first steps toward larger goals; others will take years to achieve. Supporting materials will ensure consistent messaging regarding the recommendations. By bringing together diverse interests, advocacy will be more effective.

**Significance & Contribution to the Field:** By coordinating efforts around a policy agenda and building on Lurie Children’s reputation, SCY will help the violence prevention community marshal its collective voice to support meaningful change.

**Authors:** Rebecca Levin, Jenifer Cartland, Karen Sheehan

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**Advancing and Sustaining Effective Fall Prevention through Policy Change**

*Ellen Schneider, UNC Center for Health Promotion and Disease Prevention*

**Statement of Purpose:** Present a review and analysis of survey findings of 30 state fall prevention coalitions as the first phase of the CDC/NCIPC SIP II grant awarded to Texas A&M, in collaboration with the University of North Carolina Center for Health Promotion and Disease Prevention (UNC HPDP), to conduct research on policies, regulations, and systems changes that will advance older adult falls prevention.

**Methods/Approach:** In 2012, the National Council on Aging, the State Coalitions on Fall Prevention Workgroup, and UNC HPDP published the State Policy Toolkit to Advance Fall Prevention with suggested strategies, policies, regulatory changes, and salient examples of systems change. Thirty state fall prevention coalitions were surveyed in December to document fall prevention strategies, policies, and regulations being implemented to
advance fall prevention; identify facilitators and barriers for those strategies; and document general coalition practices and procedures.

Results: The majority of states surveyed are considering or implementing policies and systems changes that could advance fall prevention through collaboration, partnership building, and integration of clinical and community evidence-based interventions. States are building on the experiences of the three NCIPC state grantees to bring integrated solutions to select communities. Several states without external funding have already enacted significant and meaningful changes that are featured in the State Policy Toolkit to Advance Fall Prevention; select states will present their innovative activities, lessons learned from implementation, and early outcomes of policy changes.

Conclusions: States are rapidly recognizing the value of policy and regulatory change at the local and state levels to advance and sustain fall prevention activities unfolding across the country. States are beginning to create systems change by activating resources, strategies, and activities while accounting for barriers and challenges unique to their states.

Contributions to the Field: With the growing public health issue of older adult falls, states are searching for more effective public health policies and strategies to reduce falls, fall-related injuries, and deaths. Under state guidance, communities across the country are working to integrate evidence-based interventions to reduce falls. The keys to changing community dynamics, clinical practice, and infrastructure development are sensible and supportive policy and regulatory strategies.

Authors: Ellen Schneider, Rhonda Siegel, Jade Leung, Jennifer Woody

Impact of Iowa’s Anti-Bullying Law on Preventing Bullying Victimization

Marizen Ramirez, University of Iowa

Statement of Purpose: Bullying is the most frequent form of peer-on-peer aggression in schools. Anti-bullying legislation has been used as a strategy to reduce acts of bullying but has not been scientifically evaluated. The goal of this study is to examine the effectiveness of Iowa’s anti-bullying law in reducing acts of victimization.

Method: A longitudinal dataset was created from the 2005, 2008 and 2010 Iowa Youth Survey, a statewide survey of 6, 8, and 11 graders. Approximately 275,000 responses were collected from 412 school districts. The independent variable was exposure to the law, where 2005 responses were coded as pre-law exposure, 2008 responses were immediate post-law, and 2010 responses were coded as delayed post-law. The outcome variable was the frequency of bullying victimization in the last month by form (psychological, verbal, physical, and cyber) dichotomized as at least twice versus once or never. Generalized Linear Mixed Models controlled for gender, ethnicity, living situation and academic performance were used to measure how the probability of victimization differed during pre-law, immediate post- and delayed post-law time periods.

Results: An increase odds of being bullied was found from pre- to immediate post-law periods. The odds of being bullied decreased from 2008 to 2010 but not below 2005 pre-law levels. This pattern was consistent across all forms of bullying. For example, the odds of being physically bullied was 28% (OR=1.28) greater during the immediate post-law compared with pre-law periods, but decreased during the delayed post-law period but not to levels below the pre-law period (OR=1.03).

Conclusions: Iowa’s anti-bullying policy has likely led to improved reporting and increased awareness, and thus increased rates of bullying during immediate post-law time periods. The law was also associated with a reduction of bullying from immediate to the delayed post-law time period. With additional post-law data, future research can examine if rates of bullying victimization will be lower than pre-law periods. More research is also needed to understand what schools have done in response to anti-bullying laws.

Significance: State policies may be an effective way to impact bullying victimization in schools.

Authors: Marizen Ramirez

Return to Play - New Materials and State Experiences on Implementation and Evaluation

Suzanne Friesen, Centers for Disease Control and Prevention

Statement of Purpose: This session will present new materials available from CDC that may assist states in implementation of “Return to Play” policies and will offer updates on current evaluation and implementation efforts.
in two states. CDC estimates that as many as 3.8 million sports-related and recreation-related concussions occur in the United States each year. During the last decade, emergency department visits for sports and recreation-related traumatic brain injuries (TBIs) among youth, including concussions, increased by 62%. In May 2009, the State of Washington passed the “Zackery Lystedt Law” to address concussion management in youth athletics, becoming the first state law to require a “removal and clearance for Return to Play” among youth athletes. Between 2009 and 2012, at least 40 additional states and the District of Columbia passed similar legislation.

Methods/Approach: The presentation will include speakers from the CDC and two states. CDC speakers will present on upcoming/recent materials developed to assist states in “Return to Play” implementation, including a document on lessons learned from an implementation evaluation of “Return to Play” laws in Washington and Massachusetts and a policy brief on the evidence, approaches, and resources available to states in addressing youth sports concussions. Other panelists will be state speakers, including a state that has evaluated their own “Return to Play” policy and a state that is entering the implementation phase for their “Return to Play” policy. State speakers will cover findings from their evaluation experience as well as approaches to implementation and lessons learned in their states.

Results: Session attendees will learn about resources available to states from the CDC, including a document covering lessons learned from an implementation evaluation and a brief on youth sports concussion policies and strategies. Attendees will also learn about implementation and evaluation efforts in other states. Attendees will be able to apply presentation materials to implementation and/or evaluation efforts in their own states.

Conclusions: Despite the apparent popularity of “Return to Play” policies among states, little has been known, and even less has been shared, about the implementation or effectiveness of these policies. The lessons learned from this workshop will enable participants to understand the lessons learned from previous implementations and evaluations of these promising policies.

Significance & Contribution to the Field: “Return to Play” policies have gained wide acceptance among states. A continued dialogue among the national injury prevention community will be beneficial to share findings on available implementation and effectiveness lessons learned of these policies.

Authors: Donovan Newton

Fire Safety

A Follow-up Survey of a Smoke Alarm Installation Program

Mary McCoy, Parkland Health & Hospital System

Statement of Purpose: To assess the functionality of smoke alarms that had been installed 2, 4, 6, 8 and 10 years previously through a community-based program called Operation Installation.

Methods: A random sample of homes that had previously received smoke alarms 2, 4, 6, 8, and 10 years ago through Operation Installation was selected for follow-up assessment. Homes were visited by Dallas Fire-Rescue Department (DFRD) personnel, and information was collected on the functionality of smoke alarms, missing alarms, and if the smoke alarm was activated as a result of a fire and why, as well as information on home occupants. Smoke alarms installed in Years 6, 8, and 10 were removed from homes to investigate why the alarms were still functional.

Results: Of the 1884 smoke alarms installed in survey homes during Operation Installation, 88.3% (497/563) were still installed after 2 years compared to 54.5% (108/198) in Year 10. The proportion of working smoke alarms ranged from 83.5% (470/563) in Year 2, 55.4% (258/466) in Year 4, 27.3% (96/352) in Year 6, 20.0% (61/305) in Year 8 and 22.2% (44/198) in Year 10. By Year ten, 39% of the smoke alarms tested worked, 30% had missing or disconnect batteries, 12% had “bad” batteries and 19% of the smoke alarms were defective. Multivariate analysis showed that the presence of a working alarm was associated with length of time since the smoke alarm was first installed, how many smoke alarms were originally installed, whether there was a smoker in the house, and whether the original occupant was still living in the home.

Conclusion: The proportion of installed and working smoke alarms was substantially lower in 6-10 years post installation. These smoke alarms did not remain functional for 10 years, mostly because of issues related to the smoke alarm battery.
Session Abstracts

Significance & Contribution to the Field: These findings have important implications for smoke alarm installation programs. Since most smoke alarms do not work for 10 years, programs that install smoke alarms may need to be repeated in high-risk neighborhoods, well before 10 years.

Authors: Mary McCoy, Gregory Istre

Residential Sprinklers for a Safer Tomorrow - What Every Injury Prevention Professional Needs to Know about Sprinkler Technology, Public Opinion, and Policy

Shannon Frattaroli, Johns Hopkins Center for Injury Research and Policy

Statement of Purpose: In 2011, 2520 civilians died in residential house fires in the U.S.; another 13,910 were injured (Karter, 2012). Residential sprinklers are an effective intervention for preventing home fire-related injuries and deaths. However, they have not been widely promoted by injury prevention professionals. In this session we will discuss what participants need to know about residential sprinklers and provide them with the tools they need to advance residential sprinkler efforts in their communities.

Methods/Approach: The session will include four modules: (1) an overview of the residential fire problem and the sprinkler solution; (2) results from the first national survey of homeowners living in single family homes with and without sprinklers; (3) an update on the status of residential sprinkler policies and their implementation; and (4) an interactive session in which participants develop and practice a set of talking points to promote residential sprinklers.

Results: Sprinkler technology has been used for more than 100 years and has been demonstrated to be effective. Our national survey data suggest that homeowners value residential sprinklers: 52% of those living in sprinkler-equipped homes reported that the sprinklers influenced their decision to buy their home; 74% reported their next home will be sprinkler-equipped. Despite the fact that sprinkler policies are reported to be controversial by the local and state experts we interviewed, over 300 localities and two states currently require residential sprinklers in all new single-family homes.

Conclusions: There is ample evidence to support the life saving benefits of residential sprinkler technology as well as growing support for them among the public and policymakers. Injury prevention professionals should have the knowledge and skills to facilitate the widespread adoption of this technology.

Significance and Contribution to the Field: Residential sprinkler technology is developing rapidly and policies to mandate residential sprinkler systems in single-family homes are being debated by policymakers throughout the country. House fires are a recognized injury problem; however, sprinkler systems have gone largely unnoticed by injury prevention professionals. This session will address this oversight and engage participants in the residential sprinkler issue.

Authors: Shannon Frattaroli, Keshia Pollack, Jessica Young, Andrea Gielen

In Their Own Words - Exploring Unique Perspectives from Partners in a Smoke Alarm Distribution Academic-Community Collaborative

Eileen McDonald, Johns Hopkins Bloomberg School of Public Health

Statement of Purpose: Work highlights the role of a partnership to implement a smoke alarm program in an urban community. Partners will share their experiences and discuss how to maximize community-academic partnerships.

Methods/Approach: Formed 5 years ago, the partnership implemented a fire safety home visiting program that included: 1) Formative work (focus groups, community tours); 2) Baseline household surveys to assess knoweldge and practices; 3) Smoke alarm distribution and education; 4) Follow up surveys 6 months later to assess smoke alarm maintenance; and 5) Dissemination of results.

Results: The partnership includes an academic injury center, a fire department, government agencies, and a variety of community groups. Formative work confirmed the community’s interest in a smoke alarm program. Over 13 months, the program visited 8080 homes and someone was present in 40%. We entered 2197 home to educate the residents, and installed 3816 smoke alarms. Follow up surveys were completed with 986 homes, revealing that 97% of the alarms we tracked were still working. To disseminate results, letters were sent to all households and a report for policy makers is underway. Partners will describe their most important contributions and roles, and ideas for improving the partnership approach.
Conclusions: Partnerships are both feasible and effective as a means to promote home fire safety.

Significance & Contribution to the Field: Injuries’ toll on communities coupled with lean economies point to urgent need for collaborations. Lessons shared during this session will facilitate future partnerships to address multiple community injury prevention needs.

Authors: Eileen McDonald, Shannon Frattaroli, Ray O’Brocki, Pat Tracey, Beth Myers, Andrea Gielen

Examining Fire Department Injury Data as a Tool for Epidemiological Investigation

Elise Perry, Johns Hopkins Bloomberg School of Public Health

Statement of Purpose: Residential fires, while constituting only a small fraction of fire incidents, are responsible for the majority of civilian fire-related injuries. This study investigates census tract neighborhood socioeconomic factors as correlates of civilian injuries occurring during residential fires in Baltimore, Maryland between 2004 and 2010.

Methods: Civilian residential-fire related injuries were geocoded and linked to the American Community Survey 2005-2009 data. Negative binomial regression was used to analyze the relationship between fire-injury rates and neighborhood socioeconomic indicators including household income and percentages of households below the poverty line, persons 25 years or older with at least a bachelor’s degree, homes built in 1939 or earlier, vacant properties, and owner occupied homes.

Results: Between January 2004 and July 2007, there were 482 civilian fire-related injuries that occurred during 259 fires. A total of 182 residential fires resulted in a single injury while 77 residential fires resulted in multiple injuries. Over 60% of injuries occurred in the winter or spring months. Older adults (60 or more years) suffered 23% of fire-related injuries. In a multivariate negative binomial regression, a ten percent increase in the number of vacant homes was associated with an increase in injury rates by a factor of 1.31 (95% CI 1.11, 1.54). A ten percent increase in persons over 25 years with at least a bachelor’s degree in a census tract was associated a decrease in injury rates by a factor of 0.87 (95% CI 0.77, 0.98).

Conclusion: We observed a relationship between fire-related injuries and measures of neighborhood socioeconomic status. Markers of lower neighborhood socioeconomic status were associated with higher incidence of fire-related injuries. In particular, neighborhoods with a higher number of vacant or old residential buildings and lower educational attainment had increased burden of fire injuries.

Significance & Contribution to the Field: Households within census tracts known to be at greater fire risk should receive priority during smoke alarm distribution efforts. In addition, attention to other risk factors, such as electric outlet overload and alternative heating sources, can be part of the intervention when smoke alarm distribution efforts include installation.

Authors: Elise Perry, Wendy Shields, Raymond O’Brocki, Andrea Gielen

Innovative Tools & Methods

Getting to Action: How the Toyota Company Improved the Colorado Child Fatality Prevention System

Lindsey Myers, Colorado Department of Public Health and Environment

Statement of Purpose: The Colorado Child Fatality Prevention System (CFPS) has been reviewing child deaths since 1989. Although codified in 2005, the CFPS remains an unfunded mandate. With dwindling monetary and human resources, the CFPS was forced to take a critical look at its system. The CFPS applied a process improvement technique borrowed from Toyota called, Lean, to strengthen the quality of prevention recommendations, while greatly reducing the time and effort spent on reviewing child death cases.

Methods/Approach: In January 2012, the Colorado CFPS engaged key stakeholders in a Lean process, using the A3 problem-solving template developed by Toyota. Over 12 hours, members of the Lean team went through a systematic process to:

1) identify the problem;
2) understand the current state;
3) develop the target state;
4) perform root-cause analysis;
5) determine countermeasures;
6) create a countermeasures implementation plan; 
7) confirm the effect; and 
8) update standard work.

The CFPS began implementing the changes that resulted from the A3 Lean process in February 2012.

Results: The Lean event identified significant improvements to the data collection and child death review processes. During 2012, the CFPS reduced the number of meetings from 40 to 18, reduced the number of staff hours to abstract cases from 1328 to 620, secured a CDC fellow to serve a two-year assignment as a CFPS prevention coordinator, and developed a plan for the production and distribution of a community and systems-based recommendation report. Additionally, the CFPS generated actionable child fatality prevention recommendations.

Conclusions: Participating in the A3 Lean process increased the CFPS ability to act as a catalyst for public health action. Presenting data to the CFPS State Team members in aggregate, yielded stronger, more actionable prevention recommendations. States that conduct state-level child death review programs may benefit from presenting case review data in aggregate to review teams, rather than making prevention recommendations on a case-by-case basis.

Significance & Contribution to the Field: A majority of child death reviews around the country are underfunded. The Lean process may help other child death reviews to streamline their programs to eliminate waste while improving productivity.

Authors: Lindsey Myers, Aimee-Rika Trudeau

Understanding Evidence - CDC's Interactive Evidence-Based Decision Making Tool for Building Decision-Making and Evaluation Capacity

Natalie Wilkins, CDC; Sally Thigpen, CDC

Statement of Purpose: Increasing emphasis has been placed on the importance of evidence in guiding public health prevention efforts. Understanding Evidence is a new interactive tool that provides guidance and support to practitioners for thinking about multiple forms of evidence, and using these forms of evidence to make prevention decisions.

Methods/Approach: CDC has developed a comprehensive framework for thinking about evidence which includes not only the best available research evidence on effective prevention strategies, but also evidence on the complex ecology in which these strategies are implemented and evaluated, including contextual evidence and experiential evidence. Best available research evidence is the primary form of evidence used in most science-based fields. The more rigorous a study’s research design, the more compelling the research evidence, indicating whether or not a program, practice, or policy is effective. Experiential evidence is the collective experience and expertise, accumulated over time, of those who have practiced or lived in a particular setting, and contextual evidence is information on measurable characteristics of the local context.

Results: In this training session, facilitators will engage participants in learning how to use Understanding Evidence, a new, online evidence-based decision making tool developed from this comprehensive framework of evidence. The training will include a general overview of the tool and its function as a support for practitioners making decisions about prevention strategies. It will also focus on key tips for evaluators on using the tool to build stakeholders’ capacity for understanding evidence, and apply multiple forms of evidence to strengthen evaluation practice.

Conclusion: In this demonstration, participants will learn about how to use the online evidence-based decision making tool to build their communities’ decision-making and evaluation capacity.

Significance and Contribution to the Field: Definitions of what constitutes “evidence” have been debated but most agree that evidence is extremely important for practitioners, evaluators, researchers and policy makers charged with the task of making decisions around the funding, implementation, and evaluation of prevention strategies. Understanding Evidence brings CDC’s comprehensive Framework for Thinking About Evidence to life and provides interactive, engaging training and resources to support evidence-based decision making in public health.

Authors: Natalie Wilkins, Sally Thigpen, Helen Singer
WISQARS Mobile Application for Injury Data

J. Lee Annest, CDC

Statement of Purpose: To present an overview of features of the WISQARS Mobile Application for Injury Data that will provide current injury death data for the United States.

Methods/Approach: WISQARS Mobile App is being developed to provide user-friendly and readily accessible graphic displays of national and state-level injury-related death data from the National Vital Statistics System (NVSS) on mobile devices through a free downloadable App using the internet.

Results: Our society is rapidly moving in the direction of accessing statistical and textual information through mobile devices, such as tablets and smartphones. To keep pace with new information technology, WISQARS Mobile App will provide interactive access to death data, including injury mortality maps, trend graphs, and charts with death counts, death rates, and cost of injury estimates, by cause of injury (unintentional injury, unintentional motor vehicle-traffic, unintentional poisoning, homicide, suicide, and traumatic brain injury), age groups, sex, race, Hispanic origin and state of residence. The App will also include direct links to WISQARS (www.cdc.gov/injury/wisqars) and other NCIPC web pages with relevant information on national and state injury prevention and surveillance activities. Graphic and tabular information can be used for presentations on a mobile device or can be easily downloaded for slide presentations.

Conclusions: WISQARS Mobile App will provide death data relevant to each of NCIPC’s four primary focus areas: motor vehicle-related injury prevention, prevention of violence against children and youth, prevention of prescription drug overdose, and prevention of traumatic brain injury. In the future, the App will be expanded to include access to data on other major causes of fatal and nonfatal injury. Significance & Contribution to the field: WISQARS is a national resource for data on fatal and nonfatal injuries. The App will allow mobile device users to access and interact with graphic presentations of injury data useful for program planning and evaluation, monitoring trends and geographic patterns of leading causes of injury death, and making presentations to public health officials and policy makers.

Authors: J. Lee Annest

Suicide Prevention

Men Can’t Fix Their Mental Health with Duct Tape-Man Therapy - An Innovative Approach to Preventing Suicide in Working Age Men

Shannon Breitzman, Colorado Department of Public Health and Environment

Statement of Purpose: The burden of suicide rests largely on the shoulders of men of working age, and those men at highest risk are often the ones least likely to seek help. These facts point to the need for communities to think differently about how to reach men struggling with suicide. Data suggest that historical, traditional approaches to reaching men with mental health and suicide prevention messages have been mostly unsuccessful and innovative approaches are needed. After a review of the literature and a thematic analysis of interviews and focus groups with men, the following prevention approaches were identified: take the mental health language out of communication; show role models of hope and recovery; connect physical symptoms with emotional issues; meet men where they are instead of trying to turn them into something they are not; offer opportunities to give back and make meaning out of their struggle; coach the people around the high-risk men on what to look for and what to do; give men a chance to assess and fix themselves.

Key partners in Colorado developed and implemented an innovative Website and communication campaign, called Man Therapy that leverages a statewide network of community-based referral partners. The goal of Man Therapy is to show working age men that talking about their problems and getting help is masculine. The campaign strength is its humorous and interactive approach. The website has had more than 100,000 unique visitors since launching in July 2012. Visitors are spending an unprecedented amount of time on the website at an average of 6 minutes per visit. The Office of Suicide Prevention has received numerous emails from men who found the website helpful, and for some, lifesaving. The campaign has already won several health communication and marketing awards and was featured in the New York Times. This new approach holds great promise for being the bridge between men at risk for suicide, and the interventions that can save their lives.

Authors: Shannon Breitzman, Jarrod Hindman
Primary Prevention of Suicide in University Settings - A Systematic Review

Curtis Harrod, Colorado School of Public Health (CSPH)

Statement of Purpose: To examine the effect of interventions for the primary prevention of suicide within post-secondary institutions.

Methods/Approach: Eligible studies evaluated interventions implemented in post-secondary settings that targeted students without known mental health disorders, suicidal ideation, or previous suicide attempts, using randomized controlled trial (RCT), controlled before-after (CBA) or interrupted time series (ITS) designs. No date, language or publication status restrictions were applied. We searched 11 electronic bibliographic databases, hand-searched 10 journals, and screened conference proceedings and organizational websites. Bibliographic, lateral, and author searches were conducted on included studies. Two researchers independently screened over 30,000 identified records for eligibility and extracted outcome data, including suicide, suicide attempts, suicidal ideation, knowledge, attitudes and self-efficacy, from eligible studies. RCT outcomes were pooled using random-effects model meta-analyses. Non-randomized study results were summarized qualitatively. Study risk of bias was assessed.

Results: Of eight eligible studies (3 RCT, 5 CBA) identified, only one (a CBA) assessed suicide and none measured suicidal ideation or attempts. A campus policy mandating professional assessment of students who threatened or attempted suicide reduced completed suicide compared to 11 control schools (2.0 vs. 8.7 per 100,000; p<0.05). Classroom-based instructional programs featuring experiential and didactic components significantly increased post-test knowledge of suicide [Standardized Mean Difference (SMD) =1.51 (95% CI: 0.57, 2.45)] and suicide prevention [0.72 (0.36, 1.07)], but not prevention self-efficacy [-0.20 (-0.54, 0.14)]. Gatekeeper training of students, faculty and staff changed attitudes towards suicide and improved suicide prevention self-efficacy and knowledge of suicide and its prevention, measured post-test, but effect sizes were small-to-medium and most changes were not statistically significant.

Conclusions: Campus policies mandating professional assessment of suicidal students may reduce suicide but rigorously designed studies are needed to replicate findings. Classroom instruction and gatekeeper training improved short-term knowledge and attitudes, however additional rigorously-designed studies should determine if improvements persist long-term and reduce suicidal behavior. Significance & Contribution to the Field: This review suggests there may be important benefits from campus policies mandating professional assessment of suicidal students. It also highlights the dearth of high-quality evidence evaluating effects on suicidal behavior of suicide prevention efforts targeting post-secondary students.

Authors: Curtis Harrod, Cynthia Goss, Lorann Stallones, Jeffrey Gliner, Carolyn DiGuiseppi

Sustaining Youth Suicide Prevention Efforts - Lessons Learned from Garrett Lee Smith Alumni Grantees

Colleen Carr, Education Development Center’s Suicide Prevention Resource Center

Statement of Purpose: The Suicide Prevention Resource Center is the nation’s federally supported resource center devoted to advancing the National Strategy for Suicide Prevention. SPRC provides technical assistance to Garrett Lee Smith (GLS) grantees and state suicide prevention coordinators. GLS grants are designed to support the development and implementation of youth suicide prevention and early intervention strategies. The purpose of this project was to determine the extent to which GLS grantees have been able to sustain their suicide prevention activities following the completion of their grant.

Methods/Approach: The scientific aims of this project are to: 1) document infrastructure, activities and/or impact sustained after the end of federal funding and 2) document factors that GLS grantees attribute to their sustainability successes. SPRC’s partner, Social Science Research and Evaluation, conducted a literature review and developed the research instruments. Key findings of the review include the need to operationalize sustainability, and to consider not only what remains in the communities, but also how programs, policies, practices, and services were sustained. GLS grantees that were at least one year beyond the period of federal funding (including no-cost extensions) were asked to participate in a brief online questionnaire. The purpose of the questionnaire was to identify the extent to which alumni grantees were still engaged in suicide prevention activities following the completion of their grant.

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Authors: Curtis Harrod, Cynthia Goss, Lorann Stallones, Jeffrey Gliner, Carolyn DiGuiseppi
Once key data themes were identified from the questionnaire, a sub-set of respondents were selected for semi-structured interviews. The purpose of the interviews was to learn more about each state’s sustainability success.

**Results:** The results from the questionnaire and semi-structured interviews will be available in the spring of 2013; preliminary findings will be shared with participants.

**Conclusions:** This presentation will engage state injury and violence leaders on issues related to the findings and potential implications for state suicide prevention programs.

**Contribution to the Field:** It is anticipated that findings will be useful for injury and suicide prevention practitioners’ future sustainability planning efforts.

**Authors:** Robert Apsler, Colleen Carr, Scott Formica, Elly Stout

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**The New National Strategy for Suicide Prevention - Implications and Opportunities for Your State**

Gayle Jaffe, Suicide Prevention Resource Center

In September 2012, the revised National Strategy for Suicide Prevention (NSSP) was released. This new strategy serves as a renewed call to action to prevent suicide in the United States, and reflects the significant advances in the field of suicide prevention over the past ten years. These developments include a dramatic increase in science and best practices, a greater comprehension of which groups are at heightened risk for suicide, and an improved understanding of the importance of comprehensive, multi-sector approaches to prevention. Acknowledging that approaches to suicide prevention continue to evolve, the NSSP provides important, future-oriented goals and objectives to guide the nation’s prevention work during the next ten years. The release of a new NSSP has important implications for state suicide prevention plans and related initiatives, and offers opportunities to revisit current plans, many of which may be several years old. While the NSSP identifies numerous potential strategies and approaches to consider, planners should start by looking at their own data on what suicidal behaviors look like in their state. After a strategic assessment of state-specific suicide prevention needs has been done, states can look to the NSSP to develop appropriate strategies to meet those needs and reduce the suicide burden. In addition to a state’s individual goals and objectives, there are a number of other elements included in each state’s suicide prevention plan to ensure it is effective and strategic, maximizes existing resources, and promotes broad collaboration across different sectors. New recommendations from the Substance Abuse and Mental Health Services Administration (SAMHSA) will supplement the NSSP as a key resource that participants can apply to their own state plans. This workshop will enable injury prevention practitioners to better understand the implications of the new NSSP for their state suicide prevention plans; identify ways in which their state suicide prevention plans can be monitored and updated to reflect a data-driven, science-based approach that is responsive to their states’ needs; and determine which other state agencies and programs should be partners in that process.

**Authors:** Gayle Jaffe, Colleen Carr, Ellyson Stout