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Saving Lives and Protecting People from Injuries and Violence

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Abstract

Emergency physicians witness the impact of injury and violence every day. Traumatic brain injury, assault-related trauma, motor vehicle crashes, and drug overdoses make up only some of these injuries—many of which can be prevented and better understood. CDC’s National Center for Injury Prevention and Control—the Injury Center—is uniquely poised to measure the toll of injury and violence on the lives of Americans, to communicate such injury inequities, and to reduce the factors that increase their risk.

Injury is the leading cause of death for people ages 1–44 in the United States. The Injury Center seeks to prevent violence and injuries and to reduce their consequences. For more than 20 years, Injury Center researchers have investigated those factors that put Americans at risk through surveillance and research and translated these findings into evidence-based strategies and interventions. Many of these efforts are directly relevant to emergency medicine through preventing injuries and violence to save lives.

Saving Lives and Protecting People from Injuries and Violence

Emergency physicians witness from the frontlines the devastating impact injury and violence can have on families, neighborhoods and communities. Despite progress in the field, injury and violence is still a leading cause of death in the United States. CDC’s National Center for Injury Prevention and Control (NCIPC) was established in 1993 to address violence and injury in non-occupational settings, focusing on prevention and reducing the consequences of injury and violence when they do occur. This is facilitated through three divisions: 1) the Division of Unintentional Injury Prevention (DUIP), 2) the Division of Violence Prevention (DVP), and 3) the Division of Analysis, Research, and Practice Integration (DARPI). These divisions help operationalize the Center’s public health approach to prevention through 1) defining the problem, 2) identifying the risk and protective factors, 3) developing and testing prevention strategies once the context is known, and 4) ensuring widespread adoption once these strategies have been evaluated, replicated, and proven to work. CDC will continue advancing public health solutions to these injury and violence problems because evidence shows they work. The solutions are varied and many. Some are simple, such as always wearing a seat belt to prevent serious injuries in a car crash. Some are more complex, such as fostering safe, stable, nurturing relationships to prevent child abuse and neglect. Some call for people to make safer choices, such as wearing the right helmet when playing sports.

Some mean making structural changes to a community, like increasing green spaces to prevent violence.

Last year, our Injury Center's leadership met to determine our focus areas. We have two CDC agency-wide priority areas: 1) motor vehicle injury and 2) prescription drug overdose. We also identified growth areas in child abuse and neglect, older adult falls, sexual violence, and youth sports concussion. Further, we updated our [research priorities](#) in these areas to help guide our intramural and extramural research investments in order to accelerate impact.

Violence Prevention

Violence is a serious public health problem. From infants to the elderly, it affects people in all stages of life. In the emergency department, clinicians treat survivors after an acute traumatic injury or for sequelae such as PTSD or chronic medical conditions. The Injury Center focuses primarily on primary prevention, stopping violence before it begins, and invests in surveillance, state and local programs, and research. Some of our programs relevant to emergency physicians includes:

National Violent Death Reporting System (NVDRS)

The National Violent Death Reporting System (NVDRS) provides states and communities with a clearer understanding of violent deaths to guide local decisions about efforts to prevent violence and track progress over time. NVDRS is the only state-based surveillance (reporting) system that pools data on violent deaths from multiple sources into a usable, anonymous database. These sources include state and local medical examiner, coroner, law enforcement, crime lab, and vital statistics records. NVDRS covers all types of violent deaths—including homicides and suicides—in all settings and for all age groups. NVDRS may include data on mental health problems; recent problems with a job, finances, or relationships; physical health problems; and information about circumstances of death. Such data has enabled states to pilot innovative programs, including identifying healthcare visits as an opportunity to screen older adults for depression and potentially implement suicide prevention interventions.

Sexual Violence

CDC's Injury Center is part of the White House Task Force to protect students from sexual assault on campuses. The Task Force has identified existing sexual assault prevention practices on campuses, convened prevention experts, researchers, and campus leaders to develop guidance that will help campuses enhance prevention strategies, and charged Rape Prevention and Education (RPE) grantees and their campus partners to develop action plans to implement prevention guidance. In addition, the Injury Center is supporting a randomized controlled trial of Green Dot, an active bystander approach, in Kentucky high schools. This approach involves helping students to identify situations that might lead to a sexual assault and then to safely intervene to prevent an assault from occurring. The University of Kentucky's Center for Research on Violence Against Women reported that early results provide evidence that the Green Dot program does reduce sexual violence perpetration.

Finally, we will be releasing “technical packages” this year of effective strategies to prevent sexual violence and child maltreatment.

Hospital-Community Partnerships

Cross-sectoral partnerships are key in advancing violence prevention. The United Kingdom’s (UK) Cardiff Violence Prevention Programme, funded by the Robert Wood Johnson Foundation is being implemented in the Atlanta metropolitan area/Dekalb County and Philadelphia. Colleagues in the UK in collaboration with CDC scientists conducted research that showed sustained reductions in injuries and significant cost savings from the Cardiff Programme in Wales. The Cardiff model brings together local hospitals, police departments, and city leaders to share information about violence hotspots and devise novel strategies for addressing such violence. The project is advancing CDC’s understanding of translating violence prevention plans in communities and clinical settings.

Unintentional Injury Prevention

Unintentional injuries are the leading cause of death among children and are a significant public health burden for individuals, families and communities around the country. CDC’s Injury Center works with a wide variety of partners, including healthcare systems and emergency medicine providers, to deliver lifesaving interventions and primary prevention of older adult falls, motor vehicle crashes, prescription drug overdose and concussions.

Older Adult Falls

CDC’s Injury Center scientists developed the Stop Elderly Accidents, Deaths, and Injuries (STEADI) toolkit to help healthcare providers address the problem of older adult falls. This suite of materials is based on established clinical guidelines and evidence-based interventions and assists healthcare providers through assessing a patient’s fall risk, educating patients, selecting interventions, and managing their patient’s risk factors over time. We have developed free CME on this falls prevention program. The Injury Center is also working with electronic health records vendors to develop fall prevention clinical decision support modules based on STEADI. Each module will streamline how fall prevention is conducted in the clinical setting by guiding healthcare providers on when and how to screen their older patients for fall risk; how to assess gait, strength, and balance; how to optimize medications, a prompt for when to follow-up; and, how staff can document results and treatment plans.

Prescription Drug Overdose

In 2016, CDC will release its new Guideline for Prescribing of Opioids for Chronic Pain, aimed at primary care providers treating patients with chronic pain outside active cancer treatment, palliative care, and end-of-life care. The guideline is a major step forward for improving the way these drugs are prescribed and will help physicians offer safer, more effective care for patients with chronic pain and reduce misuse, abuse, and overdose from these drugs. CDC’s Injury Center is creating a coordinated care plan (CCP) technical package to distill lessons and best practices from the most effective health system CCPs. CDC will implement the CCP in six pilot sites starting in 2016, to address opioid prescribing

and ensure patients at high risk for opioid abuse disorder receive consistent, effective, evidence-based care. Finally, CDC launched Prescription Drug Overdose: Prevention for States (PFS), a program to help states end the ongoing prescription drug overdose epidemic. Over the next 4 years, CDC will fund states to advance prevention in different areas including enhancing prescription drug monitoring programs (PDMPs) and working with health systems, insurers, and professional providers to make informed decisions about prescribing pain medication.

Concussion

CDC is working to develop a surveillance system to address [recommendations](#) made within the National Academy of Medicine report on youth sports concussion. CDC has devised a strategy to improve traumatic brain injury (TBI) surveillance, particularly surveillance of sports-related concussions among youth ages 5–21. This system will produce a more complete picture of the incidence and circumstances of brain injuries among Americans, capturing TBIs that are missed by current healthcare-based surveillance systems and surveillance, focused on organized sports. We have also collaborated with Children's Healthcare of Philadelphia to examine the use of their electronic health records (EHRs) SmartSet module, designed to improve the diagnosis and management of pediatric TBI. In addition, CDC worked with a consortium of stakeholders to develop a concussion screening tool and uniform discharge instructions that use CDC's Heads Up campaign messaging. The goal is widespread integration of the screening tool and discharge instructions in EHRs to greatly improve the diagnosis and management of concussion.

Conclusion

For more than two decades, CDC's Injury Center has sought to reduce injuries and their consequences, and emergency physicians play a critical role in both the immediate treatment of acute injuries, but also in longer-term opportunities to prevent injuries and violence in families, communities, and the population at large.

Partnerships with health systems are critical to assessing current and future injury and violence prevention strategies in order to influence trends and keep Americans safe and out of hospital emergency departments.