

Data for Injury Prevention and Control

Many Americans do not understand the magnitude of the injury problem in this country. Data allow us to show how many people are injured each year and how many die or suffer permanent disabilities as a result of those injuries. Data show us where the biggest injury problems are so we can best focus our resources. And data let us know whether our efforts to prevent injuries are effective. CDC obtains injury data from a number of sources and shares the data through several channels.

Data Sources

CDC obtains data from several federal- and state-run systems that routinely capture information about injuries and deaths. Data also come from surveys conducted by staff and partners to obtain information about particular injuries or conditions. Examples of these data sources follow.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) monitors risk behaviors associated with the leading causes of injury and death among Americans 18 and older. The survey, conducted by the states, consists of standard questions CDC developed to facilitate state-by-state comparisons. Injury-related data in BRFSS include falls among older adults, seat belt use, alcohol-impaired driving, and firearm storage. CDC has also developed two optional modules to help states better assess the problem of intimate partner violence, sexual violence, and resulting injuries. BRFSS data can be analyzed by age, race and ethnicity, income level, and education.

Central nervous system surveillance: traumatic brain injury

As early as 1989, CDC began promoting the development of a multistate traumatic brain injury (TBI) surveillance system. The surveillance system is used to assess the extent of injury among individuals with a TBI; to identify high-risk populations and examine trends; to guide development, implementation, and evaluation of prevention and control programs; to prioritize the distribution of TBI resources; and to build a foundation for research and prevention of secondary conditions (e.g., depression and alcohol abuse). CDC developed two guides to help states collect, format, evaluate, and submit TBI surveillance data. The *Guidelines for the Surveillance of Central Nervous System Injury* ensured that the multistate TBI surveillance

system generated consistent, valid, and timely information (Thurman et al. 1995). Later, this information was updated and compiled into the *Central Nervous System Injury Surveillance Data Submission Standards, 2002* (Marr and Coronado 2004). Though developed for participating states, these guides are also a resource for states conducting TBI surveillance independent of the CDC system.

Fatality Analysis Reporting System

The Fatality Analysis Reporting System (FARS), managed by the National Highway Traffic Safety Administration, contains data about all fatal traffic crashes on public roadways within the 50 states, the District of Columbia, and Puerto Rico. FARS provides descriptions of each fatal crash reported, with more than 100 coded data elements that characterize the crash, the vehicles, and the people involved.

National Crime Victimization Survey

Run by the Bureau of Justice Statistics, part of the U.S. Department of Justice, the National Crime Victimization Survey provides representative data about the frequency, characteristics, and consequences of crime in the United States, including violent crimes such as rape, physical and sexual assault, and homicide. Survey data include type of crime; time and location of the crime; relationship between victim and offender; characteristics of the offender; consequences of the victimization; whether the crime was reported to the police and reasons for reporting or not reporting; and offender use of weapons, drugs, or alcohol. Basic demographic information is also included.

National Electronic Injury Surveillance System—All Injury Program

The National Electronic Injury Surveillance System—All Injury Program (NEISS–AIP), operated by the U.S. Consumer Product Safety Commission (CPSC), provides injury data from inner city, urban, suburban, rural, and children's hospitals. Originally, NEISS collected data only about nonfatal injuries related to consumer products and recreational activities. In July 2000, through a cooperative effort between CPSC and CDC, NEISS–AIP began collecting data about all nonfatal injuries treated in hospital emergency departments. CDC uses NEISS–AIP data to generate estimates of nonfatal injuries in the United States and to guide decisions and policies about injury prevention and control.

National Hospital Discharge Survey

Each year, the National Hospital Discharge Survey, administered by CDC's National Center for Health Statistics (NCHS), provides information about persons who survive injuries and are discharged from inpatient hospital care. NCHS gathers data annually from about 270,000 inpatient records acquired from a national sample of about 500 hospitals. Data include patient's age, sex, race, ethnicity, marital status, and expected sources of payment. Patient data also includes diagnosis, length of hospital stay, procedures performed, and condition at the time of discharge.

National Uniform Crime Reports

More than 17,000 city, county, and state law enforcement agencies voluntarily participate in the nationwide Uniform Crime Reports system, managed by the U.S. Federal Bureau of Investigation. From this system, CDC gets important information about violent crimes—rapes, physical and sexual assaults, and murders—committed in this country. Data can be broken down by geographic areas, municipalities of varying population sizes, and specific cities.

National Violent Death Reporting System

Currently, 17 states are part of the National Violent Death Reporting System (NVDRS). These states gather, share, and link state-level data to gain a more accurate understanding of violence. The system includes data collected from medical examiners, coroners, police, crime labs, and death certificates.

National Vital Statistics System

Each state must send information about deaths that occur within its borders to CDC's National Center for Health Statistics, which manages the National Vital Statistics System. For each death—including those caused by injuries and violence—the system contains information about the decedent's age, sex, race, ethnicity, education level, and cause of death.

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) monitors health-risk behaviors among the nation's 9th-through 12th-grade students. State and local departments of education and health conduct this self-administered survey biennially, and CDC assists in analyzing the data. The survey includes several injury-related behaviors: seat belt use, driving after drinking alcohol, riding with a driver who has been drinking, wearing bicycle and motorcycle helmets, carrying a weapon to school, being in a physical fight, experiencing dating violence and forced sexual intercourse, and attempting suicide or having suicidal thoughts. Data can be analyzed by sex, grade in school, and race and ethnicity.

References

- Marr AL, Coronado V. *Central Nervous System Injury Surveillance Data Submission Standards, 2002*. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2004.
- Thurman DJ, Sniezek JE, Johnson D, Greenspan A, Smith SM. *Guidelines for Surveillance of Central Nervous System Injury*. Atlanta (GA): Department of Health and Human Services (US), Centers for Disease Control and Prevention; 1995.

Data Sharing

To help injury professionals, policy makers, and researchers better understand the injury problem and develop strategies to reduce it, CDC shares injury data through a variety of means. Following are examples of communication channels.

Injury Maps

Launched in 2002, Injury Maps is an interactive Web application that creates maps from injury mortality rates. Injury Maps enables injury mortality rates to be mapped, displayed in an easy-to-interpret format, and compared across states and counties. The appearance of a map can be tailored by changing colors, zooming in on specific areas, or adding features such as major cities and towns, highways, bodies of water and Congressional districts. The maps are printable and downloadable. To access Injury Maps, visit www.cdc.gov/ncipc/maps.

State Injury Profiles

CDC's *State Injury Profiles* give policy makers and health care workers an easy way to look at statistics about injuries to help them make informed decisions about where to allocate limited prevention resources. Maps and graphs in the *Profiles* show each state's death rates from motor vehicle crashes, falls, poisoning, drowning, suffocation, fires and burns, suicide, homicide, traumatic brain injuries, and injuries related to firearms. The graphics show how each state compares with others in the nation and with mortality rates in the United States as a whole. The *Profiles* also contain a table showing the ten leading causes of death for each state and for the United States overall. In 2001, the Injury Center began offering a free CD-ROM with data from the *State Injury Profiles* in slide presentation format to facilitate communication about injuries. To access the *Profiles* on the Web, go to www.cdc.gov/ncipc/StateProfiles/index.htm.

WISQARS™

WISQARS (pronounced “whiskers”), the Web-based Injury Statistics Query and



Reporting System, is an interactive database of injury morbidity and mortality data. It offers prompt, customized reports about both unintentional and violent injuries, including leading causes of death reports, leading causes of nonfatal injury reports, and years of potential life lost reports. Data are updated each year in the fall. Tutorials, frequently asked questions, and a help file ensure that users obtain the data they need. To use WISQARS, go to www.cdc.gov/ncipc/wisqars.

Downloadable leading causes charts

To assist partners in communicating the threat of injury to public health, CDC's Injury Center has released several charts on its website. The charts show ten leading causes of death and nonfatal injury, highlighting both unintentional injury and violence. Available in several file formats, the charts can be used in slide presentations, Web pages, and print documents. To download a chart, go to www.cdc.gov/ncipc/osp/charts.htm.

A Note About CDC's Injury Data

As you read the *CDC Injury Fact Book*, you will note that data are 2 to 3 years old. These data were the most recent available when this book was first developed. CDC must compile injury data from numerous sources, verify those data, and prepare data in a way that is useful and meaningful for the public. While this process may result in lag time between data collection and data release, it ensures that CDC provides the public with accurate, reliable information.

Please visit CDC's Injury Center website for current data: www.cdc.gov/injury.

Capacity Building and Surveillance

Surveillance is key to developing effective public health programs. By knowing the magnitude of a problem and the affected populations, resources can be directly applied and capacity can be built to control or prevent the injury or violence-related problem. One way to build capacity and to strengthen the infrastructure is by integrating programs, thereby leveraging resources and increasing efficiency through coordinated efforts.

Public Health Injury Surveillance and Prevention Program

In 2005, CDC began funding the Public Health Injury Surveillance and Prevention (PHISP) Program. The PHISP Program is designed to combine the Integrated Core Injury Prevention and Control Program with specialized TBI programs. Funding for the specialized TBI programs is awarded to certain states in varying combinations (see map for 2005-funded programs).

This departure from traditional single-program funding increased the number of states receiving core injury funding from 28 to 30; states receiving funding

to conduct basic, electronic TBI surveillance increased over 100%—from 12 to 30.

The PHISP Program funding makes it possible to integrate the “core” Integrated Core Injury Prevention and Control Program (which includes basic TBI surveillance) with specialized TBI programs:

Integrated Core Injury Prevention and Control (ICIPC) Program.

The “core” ICIPC Program systematically collects information about TBIs, drownings, fire-related injuries, motor vehicle injuries, poisonings, homicides, suicides, and injuries resulting from mass casualty events and then analyzes these data to direct future injury prevention plans. The ICIPC Program also focuses on building capacity and strengthening essential infrastructure support. Through this program, CDC encourages states to build coalitions with partners from academic, nonprofit, private, local government, and professional organizations.

Traumatic Brain Injury Extended Surveillance (TBIES) Program.

The TBIES Program supports efforts to provide expanded information on the incidence of TBI. It provides centralized, statewide electronic surveillance of TBI using linked and unduplicated data from hospital discharge and vital statistics databases.

Traumatic Brain Injury Emergency Department (TBIED) Surveillance Program.

In addition to performing basic electronic surveillance, the program supports efforts to provide information on the incidence of TBI treated in the emergency department.

Traumatic Brain Injury Service Linkage (TBISL) Program.

Supports efforts to link individuals with TBI to information about services.

The PHISP Program is one of many ways in which CDC helps fulfill its Healthy People 2010 responsibilities to prevent injury and violence while leveraging resources and increasing efficiency. For more information about the PHISP Program, log on to www.cdc.gov/injury.

2005 Recipients of Public Health Injury Surveillance and Prevention (PHISP) Program Funding



