

National Electronic Injury Surveillance System

What is the National Electronic Injury Surveillance System (NEISS)?

For more than 45 years, the U.S. Consumer Product Safety Commission (CPSC) has operated a statistically valid injury surveillance and followback system known as the National Electronic Injury Surveillance System (NEISS). The primary purpose of the NEISS is to provide timely data on consumer product-related injuries occurring in the U.S. This data is what CPSC uses to produce nationwide estimates of product-related injury. The CPSC has jurisdiction over more than 15,000 types of consumer products. In 2000, CPSC initiated an expansion of the system to collect data on *all injuries*. With the expansion, NEISS became an important public health research tool, not just for CPSC, but for other federal agencies and a variety of users throughout the U.S. and around the world.

What is the Source of the NEISS Data?

NEISS injury data are collected from the emergency departments (EDs) of 96 hospitals selected as a probability sample of the more than 5,000 U.S. hospitals with EDs, at least 6 inpatient beds, and 24-hour emergency service. The system's foundation rests on ED surveillance data, but the system also has the flexibility to gather additional data at either the surveillance or the investigatory level.

Surveillance data enable CPSC analysts to make timely national estimates of the number of injuries associated with (but not necessarily caused by) specific consumer products in the U.S. These data also provide evidence of the need for further study of particular products. Subsequent follow-back investigations yield important clues to the cause and prevention of injuries. Information gathered from NEISS, together with data from other CPSC sources, guides the Commission in setting priorities for further study and also may provide the Commission with evidence of the need for:

- product recalls or bans,

- public safety standards, and
- public awareness campaigns.

How Does the NEISS Data Collection Work?

The data collection process begins when a patient is admitted to the ED of a NEISS hospital. An ED staff member elicits critical information as to how the injury occurred and documents that information in the patient's medical record.



At the end of each day or every

few days, a NEISS hospital coder reviews all ED records for each treatment date, selecting those that meet the criteria for inclusion in the NEISS. The NEISS coder abstracts pertinent data from the selected ED record and transcribes it as coded variables and a brief narrative into a NEISS record in a CPSC-supplied computer using rules described in the NEISS Coding Manual.

Identification of the consumer product(s) related to an injury is crucial for CPSC. The NEISS coder

assigns a product code from an alphabetical listing of hundreds of products and recreational activities, being as specific as the data allow. For example, lawn mowers may be distinguished as rotary push mowers (powered or unpowered), riding power lawn mowers, or unspecified (powered or unpowered) lawn mowers. If the ED record contains additional product detail, the coder includes that information in a line or two of narrative text (e.g., gasoline powered rotary mower made by XYZ Company).

The victim's age, gender, injury diagnosis, body parts affected, and incident locale are among other data variables coded. A brief narrative description of the incident is always included.



NEISS coders are either hospital staff or CPSC third party contractors approved by NEISS hospital administration to review hospital ED records and code NEISS cases. NEISS coders are expected to follow hospital protocols for accessing medical records. NEISS coders are

also expected to know and adhere to the security and privacy policies and practices specific to the hospital in which they work.



Following completion of the NEISS data entry each day, the NEISS coder submits cases to CPSC using a secure, encrypted Internet transfer system. After undergoing several data reviews, acceptable NEISS cases are automatically incorporated into the Commission's permanent NEISS database.

The NEISS data are available immediately for further review by CPSC staff. The CPSC analytical process begins on the same morning the NEISS data are collected. Analysts at CPSC read each case, checking data for quality control and screening each case for potential emerging hazards.

NEISS Follow-back Investigations

For some incidents identified at the NEISS surveillance level, follow-back investigations are conducted through telephone or on-site interviews with a victim or a victim's family member. Investigation reports provide important details about the likely causes of the incident, including the

interaction among person, product and environment.

Commission staff uses this information to:

- classify incidents by hazard pattern,
- determine actions needed to reduce or eliminate product hazards,
- identify defective or harmful products, and
- evaluate the effectiveness of product safety standards.

NEISS Sample Updates

The NEISS sample is periodically redesigned to update and improve the sample and maintain the validity of injury estimates. The sampling frame (*i.e.*, a list of hospitals meeting the



necessary criteria) has been stratified by hospital size and ordered by geographic location.

The current NEISS sample, which was completed in 1997, includes 96 hospitals grouped into five strata; four representing hospital EDs of differing sizes and a fifth representing EDs of childrens' hospitals. The NEISS redesign has led to decreases in coding errors and underreporting of cases.

Other NEISS Milestones

In addition to updating the NEISS sample, occasionally CPSC staff alter NEISS operational data collection and coding rules to accommodate the needs of other federal agencies and to reflect decisions about which consumer products fall under the Commission's jurisdiction.

Over time, CPSC staff have modified the definitions of the NEISS variables collected. For example, product codes have been added, deleted, combined, or split into two or more codes. This is especially important as new products continually emerge into the U.S. market.

In 2000, NEISS data collection was expanded to collect data on all injuries, necessitating several important operational revisions. The expanded system includes:

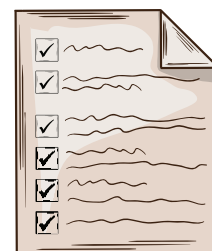
- injuries where *no product* is mentioned (*e.g.*, fall to ground),
- injuries related to products not under CPSC jurisdiction (*e.g.*, motor vehicles, adverse drug events), and
- intentional injuries such as assaults and suicide attempts.

Data users should carefully

consider the likely impact of system updates and modifications, especially when comparing estimated injuries over time.

NEISS Serves Other Federal Agencies

Since 1978, CPSC has assisted other federal agencies by collecting data of special interest through the NEISS. This allows other agencies to quickly and easily gather critically needed, statistically-valid national data without the investment in personnel, time and funding that designing, implementing and executing an independent special survey would require.



NEISS and Other Injury Data is Available Online:

The *Consumer Product Safety Act* requires the maintenance of a National Injury Information Clearinghouse "to collect, investigate, analyze and disseminate injury data and information relating to the causes and prevention of death, injury and illness associated with consumer products..." (CPSA, Section 5(a)(1)).

NEISS surveillance data are available to the public in various formats. Before NEISS data are made public, all personally identifiable information (*e.g.*, brand names of products, hospital names, specific location information) is removed. NEISS data are available online as NEISS Data Highlights, or to query or download up to 20 years of NEISS data. Follow-back investigation data are available as computer printouts, special reports, and hazard analyses.

Certain standard reports may be requested from the *National Injury Information Clearinghouse* free of charge. Custom reports are also available at rates specified in the *Freedom of Information Act*.



U.S. Consumer Product Safety Commission National Electronic Injury Surveillance System

NEISS injury estimates may be queried at:
<https://cpsc.gov/cgibin/NEISSQuery/home.aspx>

To browse data in the National Injury Information Clearinghouse, please go to:
<https://www.saferproducts.gov/Search/default.aspx>

For more information about the NEISS please contact:
Tom Schroeder, Director
Division of Hazard and Injury Data Systems
U.S. Consumer Product Safety Commission
4330 East West Highway
Bethesda, MD 20814
Telephone: 301-504-7431

To request other injury information please contact:
National Injury Information Clearinghouse
U.S. Consumer Product Safety Commission
4330 East West Highway, Room 504
Bethesda, MD 20814
Telephone: 301-504-7921

