

Current National Data Sources on Accidental Injuries

As noted in chapter 7, there are five major national sources of accidental injury data:

1. death certificates,
2. hospital discharge abstracts,
3. hospital emergency room reports,
4. national health survey data, and
5. traffic accident data.

These sources, along with their advantages and disadvantages are described briefly below.

Death Certificates

Death certificates include information on the cause of death and thus can yield injury fatality statistics. Because States are required to report all deaths to the Centers for Disease Control, this system presumably includes all accidental deaths in the United States. Fatality statistics are compiled and published by the National Center for Health Statistics (NCHS).

Accident fatality statistics have four major drawbacks. First, such statistics obviously include only deaths; since most specific types of accidental injury lead to only a few childhood deaths, changes in fatality statistics are generally useful for monitoring only large-scale, national changes in accident fatalities. Second, accident fatality statistics may overstate accidental injury fatalities if *some* nonaccidental injuries (e.g., child abuse, suicide) are incorrectly reported as accidental (e.g., fall down stairs, accidental gun wound). Or conversely, fatality statistics may understate accidental deaths if there is incomplete reporting of all deaths. Third, these statistics are not detailed enough to be useful in analyzing accident fatality trends in great detail, because the fatalities are summarized according to the injury groupings of the International Classification of Diseases (see below). Fourth, the compilation of national fatality statistics is time-consuming; thus, for example, the most recent statistics available in 1987 are from 1984. Despite their drawbacks, however, accident fatality statistics are a very useful way of monitoring overall national progress in accident prevention.

Hospital Discharge Abstracts

Hospital discharge abstracts summarize essential information on patients admitted to the hospital, including numerical codes representing patient diagnoses,

Various organizations, such as the American Hospital Association and NCHS, use these abstracts to compile health statistics.

The available diagnostic codes, listed in the International Classification of Diseases, include a special subset of codes for the cause of an injury. The codes in this subset are prefixed by the letter "E". Thus, the inclusion of the appropriate "E" code, when applicable, on discharge abstracts could lead to a very large national database of information on injuries serious enough to cause hospitalization. Such a database could also be used as a basis for in-depth studies of certain geographical areas, injury costs, or trends in serious injury.

Unfortunately, few hospitals routinely include "E" codes on their discharge summaries (the information sheets used as the basis for the discharge abstracts). Health officials in Massachusetts report that in that State, only about one-half of hospitals include the codes (189). Furthermore, the abstracting services commonly used by hospitals often drop these codes on the final abstract even when the codes are included on the summaries, because there is room on the form for only a limited number of codes and the "E" codes have no effect on hospital reimbursement for patient care. Consequently, only about one-fourth of hospital discharge abstracts include information on the cause of injury when applicable. And, even when the "E" code is included, it may be inaccurate or insufficiently specific where the codes themselves are ambiguous or include large categories of injuries. As a result, hospital discharge abstracts offer great potential for extensive injury information but are not useful as they now exist except where special provisions are made in local studies to change these practices.

Hospital Emergency Room Reports

The Consumer Product Safety Commission (CPSC) operates the National Electronic Injury Surveillance System (NEISS), under which a sample of 62 hospital emergency rooms across the country report detailed information regarding injuries associated with products under CPSC's jurisdiction (414). Rather than reporting "E" codes that designate causes of injuries, participating hospitals report codes for particular products (e. g., bicycles). NEISS provides timely data on accidental injuries and is capable of detecting national

trends (e.g., the increase in the number of injuries associated with all-terrain vehicles) in time for direct action. The data supplied by participating hospitals, by providing the information necessary for followup telephone interviews and hospital records review, also serve as a basis for more in-depth studies of possible issues. A major benefit is that all relevant injuries treated in emergency rooms—not just the very serious injuries resulting in hospitalization or death—are reported.

NEISS has three major drawbacks. First, the system is very expensive to maintain (414). Second, it does not include all accidental injuries (e.g., CPSC has no jurisdiction over firearms or motor vehicles, so injuries associated with these products are not reported). Third, the small hospital sample does not enable CPSC to estimate national injury rates associated with particular products when the number of injuries is relatively small; nor is the sample useful for detecting regional differences in injury rates or for following regional trends.

National Health Interview Survey

The National Health Interview Survey (NHIS), conducted annually on approximately **40,000 households (including about 30,000 children)**, includes questions on days of limited activity for health reasons and on hospital and physician use. From time to time, additional information is collected on medical care costs or on specific child health issues. As currently formulated, only very general information regarding injuries (e.g., the number of limited activity days of children due to injuries) is regularly collected by the survey. There is currently an effort underway to design the next Child Health Supplement to NHIS (scheduled for 1988) to include some additional, more specific questions on accidental injuries (564).

Unlike other national data sources, NHIS collects background information that can be used to help

correlate injury risk with social, economic, environmental, and behavioral factors. When combined with more specific information on injuries from the survey, this information might help in formulating preventive strategies and targeting them to populations at the greatest risk of accidental injuries.

Traffic Accident Data

The National Highway Traffic Safety Administration (NHTSA) compiles traffic accident data from two sources. The first is the Fatal Accident Reporting System (FARS), under which all **50 States** provide comprehensive data to NHTSA on all fatal motor vehicle accidents that occur on trafficways (261). FARS reports are based primarily on police reports. Data include geographic details, roadway and other conditions, information on the driver of the vehicle(s) (e.g., prior driving offenses, intoxication), and information on both fatally and nonfatally injured victims (including pedestrians and other persons involved). This database yields extensive information on the circumstances surrounding fatalities; its main drawback, of course, is that only fatal accidents on trafficways (e.g., not driveway fatalities) are included. Data on injured victims are not extensive.

The second database maintained by NHTSA is the National Accident Sampling System. Unlike FARS, this system includes many motor vehicle accidents reported to the police but not involving a fatality. It is based on a statistical sample of 15,000 accidents per year. Data from police reports, collected by a sample survey team, are supplemented with hospital records and, sometimes, by observations of the involved vehicles (261). Advantages of this database are broader representation of traffic accidents and more extensive injury and hospital data; disadvantages are the limits of the sample size and the fact that the database includes only traffic accidents.