DOCUMENT RESUME

ED 409 397 UD 031 787

TITLE	Injuries in the School Environment. A Resource Guide. Second Edition.
INSTITUTION	Education Development Center, Newton, MA. Children's Safety Network.
SPONS AGENCY	Health Resources and Services Administration (DHHS/PHS), Washington, DC. Maternal and Child Health Bureau.
PUB DATE	Apr 97
NOTE	46p.; Photographs may not reproduce clearly.
CONTRACT	MCJ-253A1-05
AVAILABLE FROM	Children's Safety Network, Education Development Center, Inc., 55 Chapel Street, Newton, MA 02158-1060 (free).
PUB TYPE	Reference Materials - Directories/Catalogs (132)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Accidents; *Child Health; *Educational Environment; Elementary Secondary Education; First Aid; *Injuries; Prevention; *School Safety; Sports Medicine; Violence

ABSTRACT

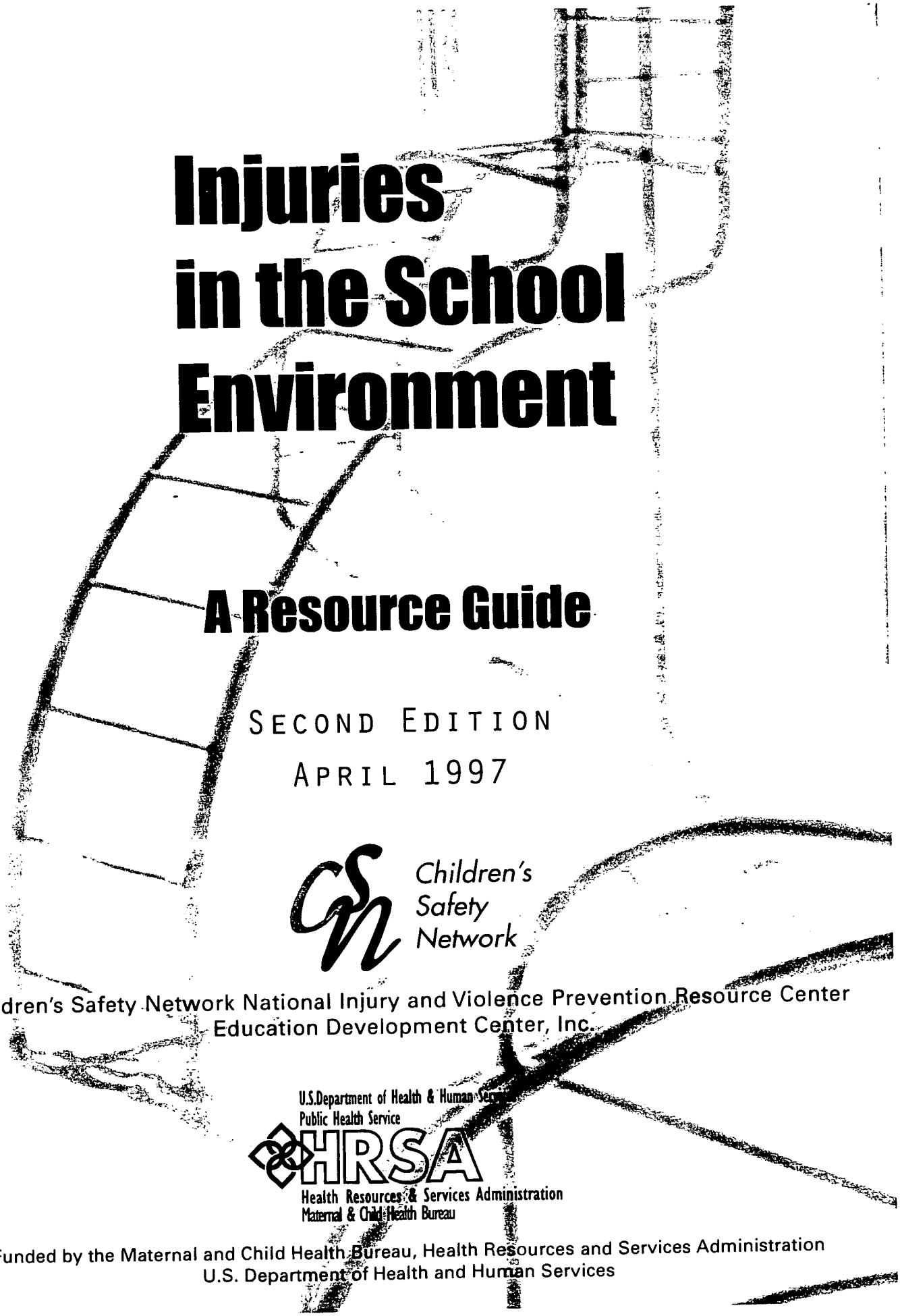
Almost 22 million children are injured in the United States each year, and an estimated 10 to 25% of these injuries occur in and around schools. However, the problem of injuries in the school environment is often unrecognized and preventive measures are often ignored. The Children's Safety Network has designed this packet to inform school personnel, other professionals, and parents about the extent of the problem of injury and to stimulate discussion of possible solutions. The following sections are included: (1) "Understanding the Problem"; (2) "Examining the Circumstances"; (3) "What Is Being Done: Selected Examples"; (4) "Sample Data Collection Forms"; and (5) "Further Reading" (a 66-item bibliography). The ratio of injury for males versus females was 3:1, and 46% of these injuries occurred among 10- to 14-year-olds. The school environment contains a variety of hazards, as vignettes illustrate. Some selected examples of injury prevention programs show how 11 communities, including several urban areas, are addressing aspects of the problem. (Contains 66 references.) (SLD)

Injuries in the School Environment

A Resource Guide

SECOND EDITION

APRIL 1997



Injuries in the School Environment

A Resource Guide

SECOND EDITION

APRIL 1997

Children's Safety Network

Children's Safety Network National Injury and Violence Prevention Resource Center
Education Development Center, Inc.

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Maternal & Child Health Bureau

Funded by the Maternal and Child Health Bureau, Health Resources and Services Administration
U.S. Department of Health and Human Services

Cite as: Children's Safety Network at Education Development Center, Inc. (1997). *Injuries in the School Environment: A Resource Guide* (Second Edition). Newton, MA: Education Development Center, Inc.

The Children's Safety Network (CSN) is a national resource for child and adolescent injury prevention. Funded by the federal Maternal and Child Health Bureau, CSN consists of six sites that provide technical assistance to state and local public health professionals, especially those serving MCH populations. This guide was developed by the National Injury and Violence Prevention Resource Center at Education Development Center Inc., one of the six centers. Primary authors: Susan Gallagher, Alison Dana, Anara Guard. Graphic designer: Jonathan Bruce.

This publication was produced by CSN under its cooperative agreement MCJ-253A1-05 with the Maternal and Child Health Bureau, Health Resources and Services Administration, Public Health Service, U.S. Department of Health and Human Services.

Additional copies of this guide are available at no charge from

Michelle Stober
Children's Safety-Network
Education Development Center, Inc.
55 Chapel Street
Newton, MA 02158-1060
☎ 617.969.7100, ext. 2207

This guide is also accessible on the World Wide Web at *www.edc.org/HHD/csn/schoolinj/schoolpack.html*.

TABLE OF CONTENTS

INTRODUCTION

***71** pupils were killed and **201** severely wounded in schools by handguns during the years 1986–1989, according to the Center to Prevent Handgun Violence.*

***175** pupils were killed in incidents involving school buses during that same period. An additional **29,600** children suffered school-bus-related injuries, with more than half being struck by the bus or another motor vehicle as they boarded or left the bus.*

While media reports sensationalize violence occurring in U.S. schools, the problem of unintentional injuries in the school setting has gone virtually unpublicized.

Almost 22 million children in the United States are injured each year. An estimated 10 to 25 percent of these injuries occur in and around schools. Injuries are one of the most frequent conditions cared for by school health personnel. Over a two-year period, an estimated 80 percent of elementary school children will see a school nurse for injury-related complaints.

Yet the problem of injuries in the school environment is often unrecognized, and consequently, preventive measures are neglected. Recent government initiatives to improve the health of children and adolescents have not addressed the safety of the school environment. For example, neither the problem statement nor the background papers for the National Health Promotion and Disease Prevention Objectives, *Healthy People 2000*, specifically mention injuries in the school setting. And although the National Education Goals call for schools to be free of violence by the year 2000, they do not recognize the importance of preventing unintentional injuries in order to create a safe environment for learning.

Most relevant research in the medical and public health literature focuses on the underreporting of school injuries and the poor quality of data collected, rather than possible prevention measures. The education literature contains numerous references to safety but focuses primarily on liability in the school setting.

Injuries in the School Environment

Patterns and causes of school injuries are poorly understood, and resources to help public health and education professionals address injuries are scarce. Schools usually respond to injuries on an ad hoc basis—after the damage is done. Injury events are not consistently tracked, and it is often difficult to identify who has responsibility for preventing a recurrence.

Currently, no comprehensive guidelines are available for school administrators and other health and education professionals interested in addressing the problem of injuries in the school environment. Thus, schools need to begin by assessing the causes of injuries within individual schools in order to target the leading causes of injury and to prevent them. A multifaceted intervention—including modifications to school equipment and facilities, development of supervision and safety policies, and education of students, teachers, parents, and administrators about injury prevention at school—provides the most comprehensive approach. State maternal and child health practitioners and other injury control experts can provide information and technical assistance to schools interested in developing and evaluating the impact of school-based injury prevention activities.

Schools have an important role to play in addressing the problem of child and adolescent injuries. The Children's Safety Network has designed this packet to inform school personnel, injury prevention professionals, parents, and others about the extent of the problem of injuries in the school environment and to stimulate dialogue about possible solutions. Included are the following materials:

- **UNDERSTANDING THE PROBLEM**—*a fact sheet on school injuries, derived from National Pediatric Trauma Registry data and accompanied by suggested prevention strategies*
- **EXAMINING THE CIRCUMSTANCES**—*a series of vignettes that illustrate the circumstances surrounding injuries occurring in the school environment, along with questions for further discussion*
- **WHAT IS BEING DONE: SELECTED EXAMPLES**—*a description of steps that agencies in nine states are taking to address this problem*
- **SAMPLE DATA COLLECTION FORMS**—*data entry forms from three states that are collecting school injury data*
- **FURTHER READING**—*an annotated bibliography of selected resources, journal articles, studies, and state and federal reports. Topics include: playgrounds and sports, students with special needs, legal and liability issues, transportation, and violence.*

The photographs in this publication illustrate settings and circumstances where students may be injured. You may want to examine these and other settings in your school to identify additional hazards.

We encourage you to distribute this packet or any of its parts to school nurses, school health personnel, other relevant professionals, and community organizations. This guide is also accessible on the World Wide Web at *www.edc.org/HHD/csn/schoolinj/schoolpack.html*. Please cite the Children's Safety Network at Education Development Center, Inc. (EDC) as the source. We would appreciate hearing how you use this information, suggestions of additional resources of which we should be aware, and work you may be initiating in this area.

UNDERSTANDING THE PROBLEM

The research literature indicates that an estimated 10 to 20 percent of all injuries to children and adolescents occur in and around schools. Yet serious injuries that happen on school grounds and result in hospitalization have not been well studied in the United States. The following facts were compiled from a descriptive analysis of the causes and outcomes of 1,558 cases reported to the National Pediatric Trauma Registry (NPTR).[1] Although this is not a population-based source of information, the data are useful in drawing attention to the problem of severe injuries in the school environment.

School Injuries Overall

- The ratio of injury to males vs. females was 3:1.
- 46% of these incidents occurred among 10 to 14 year olds.
- 17% of those injured in school had a preexisting medical condition (e.g., physical or mental disability or chronic illness).
- 49% of the injuries happened in recreational areas, as opposed to the school building or other premises.
- The ratio of unintentional injuries to violence-related injuries was 9:1.
- Falls were the most frequent cause of injury (43%), followed by sports activities (34%) and assaults (10%).
- Other major causes of injury included being cut, striking against objects, and being struck by objects.

[1] National Pediatric Trauma Registry, October 1988–October 1995. Reports from 74 participating hospitals across the United States regarding children ages 0–19. *N* = 1,558 cases of injuries occurring in the school environment out of 49,540 total cases in the database. NPTR does not include cases of injuries on school grounds to children younger than 5 or older than 18, those that occurred during transportation to or from school, and those reported by a Canadian hospital.

Falls (*N* = 665)

- 53 falls were from a height greater than 8 feet, including 12 from windows, roofs, skylights, or balconies; other falls involved bleachers, stairs, and playground equipment.
- Falls accounted for 3 out of 8 deaths, 3 out of 11 cases requiring extensive rehabilitation, and 36% of cases with a high injury severity score.

Sports (*N* = 524)

- A common scenario involved falling during a sports activity or being struck by a ball or another piece of sports equipment; injuries were related to asphalt surfaces, ruts in the playing field, bleachers, concrete gymnasium walls, and lack of protective equipment.
- Injuries occurred both in gymnasiums and on playing fields.
- Many kinds of sports were implicated, the most common being football, basketball, wrestling, soccer, track and field, and gymnastics.
- 75% of spinal cord injuries occurred during sports.

Assaults (*N* = 160)

Following falls and sports, assaults were the third most frequent cause of injury.

- Assaults included beatings (57%), gunshot wounds (10%), and stabbings (14%).
- The majority of the assaults (78%) occurred to students in grades 7–12.

Severity

Many school-related injuries result in hospitalization or surgery.

- 11% of children injured were in the intensive care unit for one day or longer.
- 35 children sustained a spinal cord injury.
- 39% had a head injury.
- 41% had one or more injuries to the extremities.
- One or more surgical interventions were required in 38% of school-related injuries.
- 8 children died, 6 from head injuries; 4 were unintentional injuries and 4 were assault-related.

- 44% of children were discharged with functional limitations expected to last less than 7 months, mainly due to fractures of the extremities; 2% were discharged with functional limitations expected to last 2 years or longer, caused by head or spinal cord injury.
- The average length of hospital stay was 3.5 days.

Cost

Assuming a conservative average cost of $1,000 per day, the cost of hospitalization was more than $5 million for a total of 5,391 hospital days.

School Triage

Many school-related injuries were not treated immediately or appropriately.

- 248 children (16% of cases) were sent home after being injured and were subsequently admitted to a trauma center.
- 34% of those 248 children ended up in the operating room; 6% were admitted to the intensive care unit.

Prevention

A number of strategies can prevent unintentional injuries and violence in the school environment.

Environmental Changes to Improve Physical Surroundings

- Removal of physical hazards (e.g., breakable glass in doors, concrete or asphalt under playground equipment, bleachers on playing field lines, holes or ruts in playing fields).
- Maintenance of equipment and facilities (e.g., protective guards on shop equipment, lockers anchored securely, playground equipment in good repair, working smoke detectors).
- Addition of safety features and equipment (e.g., padded mats on concrete gymnasium walls, use of mouthguards and other protective equipment, locks on roof doors, improved lighting).
- Institutionalization of an annual safety checklist for school premises.

Policies and Regulations that Are Enforced

- Collection of injury data to identify causes and patterns of injury.
- Development and enforcement of schoolwide safety policies.
- Development of a response protocol for school staff in the event of an injury; emergency or disaster training for school staff.
- Enforcement of regulations, especially during sports and recreational activities.

Modification of Behavior

- Education of students and staff regarding potential hazards and preventive measures, and what to do in the event of an emergency or disaster.

Student Instruction in How to Play Safely

- Training of coaches, gym teachers, and other school staff in emergency first-aid procedures.
- Increased supervision of students.

EXAMINING THE CIRCUMSTANCES

The school environment contains a wide variety of potential hazards. Risks vary considerably as students move through the school day. Students begin in supervised, structured classroom environments; move to science labs and industrial arts shops; take lunch periods; participate in physical and at times aggressive activity in gymnasiums, on playing fields, and during recess; and finish by walking, riding bicycles, or taking the school bus home.

While media attention has focused on violence in U.S. schools, the problem of unintentional injuries in the school environment has gone virtually unpublicized. What follows are real-life descriptions of injury events in the United States that illustrate the scope, causes, and patterns of school injuries.[2] Many of these injuries could have been prevented through better maintenance or repair of school facilities, equipment, and playing fields; enforcement of rules, building codes, and other standards; emergency preparedness; improved supervision; and education of school officials, students, and parents.

These vignettes are designed to spark discussion among staff in public health agencies and educational systems and among parents regarding how each can play a role in preventing such injuries.

[2] Case studies derived from National Pediatric Trauma Registry, October 1988–April 1993; *ATLA Law Reporter*, 1986–1992; and *Jury Verdict Research*, 1987–1992.

Each example brings to mind a number of questions. Among them are:

- *How could this injury have been prevented?*
- *Does my school or school district have policies in place that would prevent similar tragedies?*
- *Is the incident strictly a supervision issue or are changes needed in the physical environment?*
- *Is it less expensive to implement a prevention strategy or to pay the cost of litigation for even one case of injury?*
- *What injuries have happened in my school?*
- *Are the appropriate safety issues discussed with students in school health education?*
- *Whose responsibility is it to follow through and take corrective action after a reported injury?*
- *Who should have a role in preventing unintentional injuries and violence in schools?*
- *What is my role in preventing unintentional injuries and violence in schools?*

Crossing a busy street after exiting his school bus, a 6 year old was struck by the driver's side view mirror of a passing car. He received serious damage to his optic nerve and is now totally blind. The bus stop was in an unsafe location, and the bus driver had not used flashing lights to stop traffic for a sufficient period.

A student's hand was severely injured when she raised it to stop a classroom door from being shut by another student. Her hand broke through and shattered one of the glass panels. The panel was not made of safety glass or coated with a safety glaze and did not meet the building code.

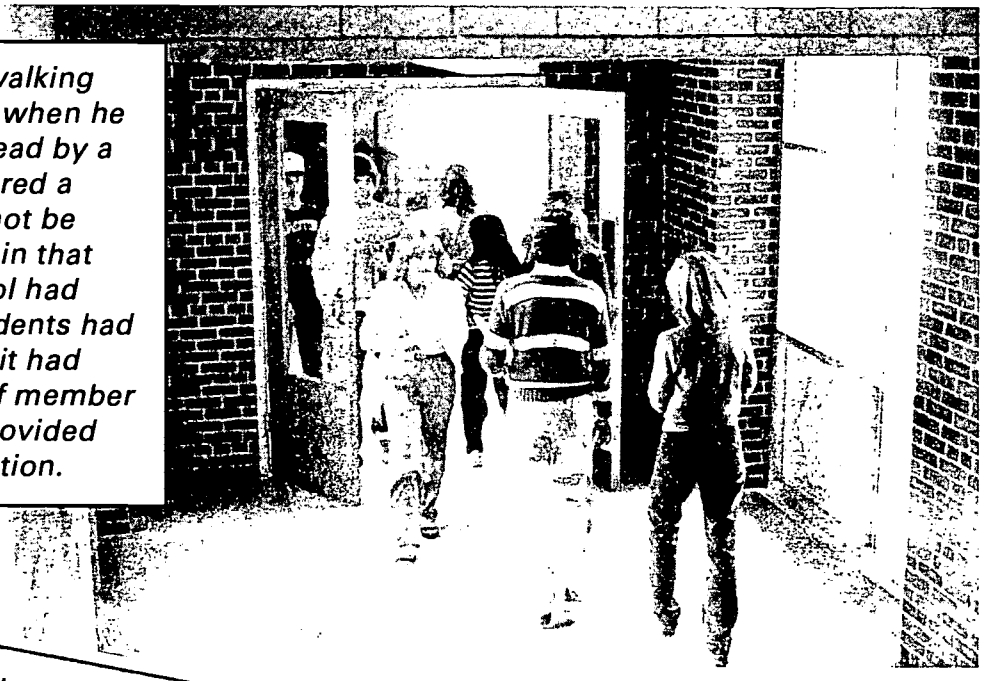
A 15-year-old student was using a table saw in his high school shop class when the board he was cutting flew up. When he pushed the board down again, his hand landed on the saw blade. He lost most of the flesh on his left thumb and underwent a fusion of the joints of his index and middle fingers. He now has little feeling and no fine motor coordination in his hand. The school staff had removed the saw guard and failed to replace it.

A vocational student in an auto mechanics class in a 2-story building was injured when he slipped on a staircase while carrying an engine block. His right hand was crushed by the block, 3 tendons were severed, and he underwent 8 major surgeries. Although heavy auto parts were frequently transported into and out of the building, the school had no elevator or lift and relied on students to carry the parts up and down the grease-stained wooden stairs.

A high school senior participating in a football game blocked an opposing player and sustained a broken neck and a slipped disk. Although he underwent two surgeries, he still has permanent neurological damage and partial paralysis of his neck and left arm. His high school "B" division team had been allowed to play with an "A" division team and was grossly mismatched. The coach was aware that the player was very fatigued but decided to keep him in the game anyway.

A 15-year-old student slid head-first into home plate during a baseball game, sustaining a neck fracture that resulted in quadriplegia. He now requires a respirator and 24-hour care. A subsequent investigation revealed that the student's helmet was too small and twisted his neck on impact. No instruction had been given to the students about the danger of sliding into bases head-first; nor were breakaway bases used on the playing field.

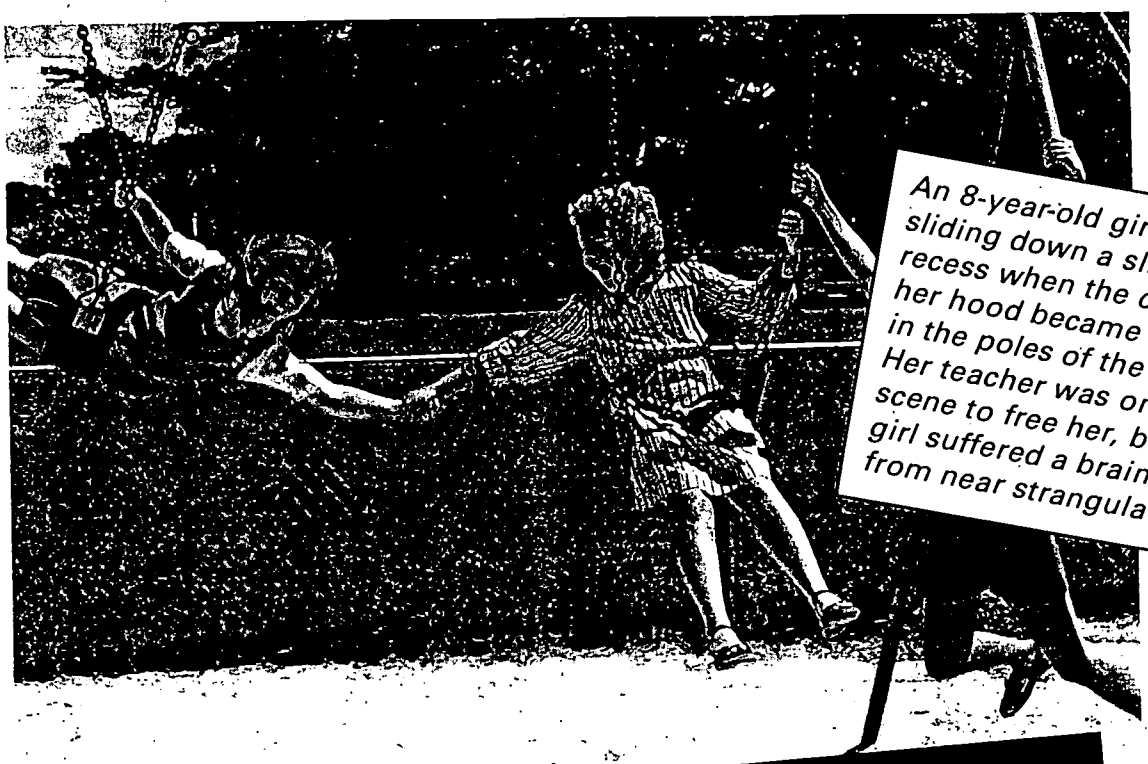
A 13-year-old student was walking between 2 school buildings when he was repeatedly hit on the head by a group of students. He suffered a detached retina that could not be corrected, and he lost sight in that eye. Even though the school had been notified that other students had been harassed in that area, it had neither posted an adult staff member to supervise the area nor provided other remedies for the situation.



A 13-year-old girl was killed when a flagpole on the grounds of her parochial school fell in heavy winds. The flagpole had corroded and rusted 3 years prior to the incident and not been restored.

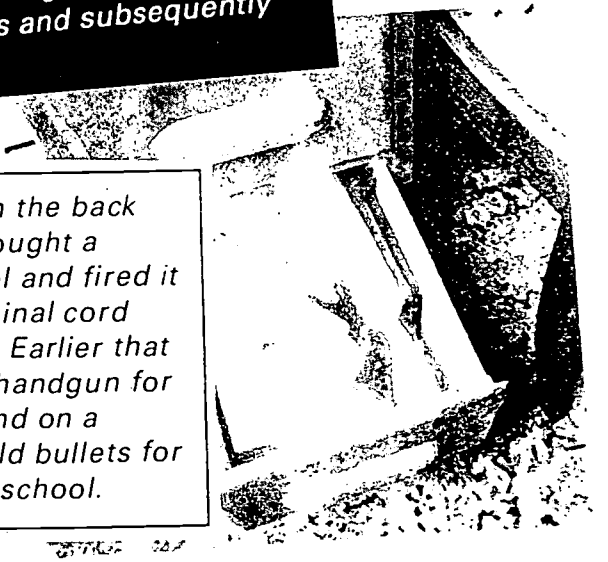
An 11-year-old boy with muscular dystrophy collided with another student on a ramp and fell out of his wheelchair. He died of head injuries 12 hours later.

While taking a state-mandated physical performance test during gym class, a 16 year old complained of leg cramps and exhaustion and sat down on the outdoor field. His class headed indoors, leaving him on the field. Fifteen minutes later, he was found unconscious and not breathing. Once notified, the school nurse telephoned paramedics and took a wheelchair to the field. The fire department arrived in 2 minutes and administered CPR, but was unable to resuscitate the student and he died. The substitute physical education teacher had not followed guidelines, and the only staff person trained in CPR did not react promptly to the emergency situation.



An 8-year-old girl was sliding down a slide during recess when the cords of her hood became entangled in the poles of the slide. Her teacher was on the scene to free her, but the girl suffered a brain injury from near strangulation.

A 16-year-old student and members of a school club were being photographed in front of a skylight on the roof of their high school. The 16-year-old stood on the skylight and fell through to the concrete stairwell below. She was in a coma for two days and subsequently died of her injuries.



An 8-year-old girl was shot in the back by an 8-year-old boy who brought a .38-caliber handgun to school and fired it randomly. She received a spinal cord injury and is unable to walk. Earlier that morning the boy had sold a handgun for $20 to a school bus driver, and on a previous occasion he had sold bullets for 50 cents to other children at school.

As these vignettes demonstrate, injuries in the school environment do not have one or two single identifiable causes that can be targeted to "solve the problem." Nor are school injuries just a result of inadequate supervision. Consequently, public health and education professionals must build consensus with parents, legislators, school board members, and others to effectively address this issue on local, state, and national levels.

WHAT IS BEING DONE: SELECTED EXAMPLES

Arizona School Injury Surveillance Program

Doris Evans-Gates
Office of Women's and Children's Health
Arizona Department of Health Services
411 North 24th Street
Phoenix, AZ 85008
602.220.6550 ☎
602.220.6551 FAX

The Arizona School Injury Surveillance Program was initiated in 1991 with two years of funding from the Arizona Disease Control Research Commission. The original goal of the program was to collect accurate and reliable data to reflect the nature, incidence, and outcome of playground-related injuries to students in Arizona's elementary schools. This focus has since been expanded to include (1) high schools, junior high schools, and day care centers and (2) all intentional and unintentional injuries—regardless of where they occur.

School health personnel, upon receiving training and a "self-help" manual, complete an Arizona Student Injury Report form detailing information on injuries that require the student to be (1) sent home, (2) sent to a physician, (3) transported and/or admitted to a hospital, or (4) placed under restricted activity. Forms are completed (usually by a school nurse) and forwarded to the Office of Women's and Children's Health on a monthly basis. Forms are reviewed for completeness and accuracy via quality control procedures and scanned into an injury surveillance database on a weekly basis. In addition, Arizona Department of Health Services minigrants are made available to participating schools to assist them in making changes to their physical environment and in expanding staff training.

Data are analyzed annually for each individual school, and school injuries are compared with the incidence of injuries statewide. In addition, each participating elementary/junior high/high school and day care center receives an annual summary with recommendations for injury prevention activities specific to each site. Data are also analyzed, interpreted, and presented in aggregate form for a year-end review. As trend data become available, it will be easier to determine whether the prevention initiatives being implemented are having an effect on reducing the number of injuries at each school site. Due to the comprehensive examination of school-based injuries at more than 162 public and private schools, the Arizona School Injury Surveillance Program is frequently the topic of presentations at local, national, and international health-related conferences (e.g., the 1996 World Health Organization's international conference in Melbourne, Australia).

The program has been supported primarily by Maternal and Child Health Block Grant funds. School injury data are shared with the schools, Arizona Department of Health Services program staff, the state SAFE KIDS Coalition coordinator, and organizations and individuals throughout Arizona. The data are used to plan risk management strategies and interventions to make schools safer places. Minigrants are made available to those participating in the program to assist schools and daycare centers in eliminating or modifying identified hazards that are contributing to the incidence of injury. A statewide School Injury Task Force will be established, to be composed of parents, principals, teachers, students, insurers, risk managers, school health professionals, and representatives from the department of education, the department of health, and the Consumer Product Safety Commission.

A copy of the Arizona Student Injury Report may be found with other sample data forms beginning on page 25.

Key Recommendations for Injury Prevention in California: School Injury Work Group

Tina Zenzola
California Center for Childhood Injury Prevention
San Diego State University
Graduate School of Public Health
Maternal and Child Health Division
6505 Alvarado Road, Suite 208
San Diego, CA 92120
619.594.3691 ☎
619.594.1995 FAX

At the tenth annual California Conference on Childhood Injury Control in 1996, participants attended action-planning workshops at which they developed recommendations on a range of injury control topics for use in the development of the 1998–2002 Strategic Plan for Injury Prevention and Control in California. Workshop participants included federal, state, and county

public health administrators; physicians; public health nurses; school nurses; injury prevention coordinators from local departments of education; directors of county and community injury prevention programs; PTA representatives; police officers; other public safety professionals; researchers; advocates; child care and child development experts; and emergency medical services professionals. School injuries was one of 13 topics, and recommendations were developed in the following five areas:

- research/data
- policy/advocacy
- prevention programs
- infrastructure/systems enhancement
- public information/professional training

The action-planning workshop was preceded by a one-hour plenary session on "School Injuries: Issues and Interventions," which provided conference attendees with background information on (1) the causes and costs of injuries at school, (2) barriers/reasons why schools have not adequately addressed the injury problem, and (3) potential solutions/policies that could be implemented to make schools a healthier and safer environment.

These are the primary recommendations developed for school injury prevention:

- Encourage the state health department to take the lead in developing a statewide task force to examine and make recommendations for a universal school injury tracking system.
- Establish uniform state regulations on school personnel CPR and first-aid training and policy enforcement.
- Amend the State Education Code to include formation of school district safety boards (with parent participation) to enforce, enhance, implement, and evaluate school safety and violence prevention plans.
- Develop and implement school safety and violence prevention programs.
- Hire a school nurse for every school.

Additional workshop discussion topics included:

Research/Data

- Encourage the state health agency to provide funding for local county agencies to examine school injury data. Conduct pilot demonstrations.
- Enhance the level of data collection and perform cost analysis.
- Streamline accident report collection among school districts so that uniform data collection and definitions are used.

Policy/Advocacy

- Utilize more fully the expertise of school nurses.
- Improve the California Playground Safety Standards legislation to include enforcement of the law.
- Review existing school injury policies and levels of enforcement.
- Encourage members of the PTA and other parents to lobby for increasing the ratio of school nurses to students. Emphasize that school nurses are ideal personnel to do injury prevention.

Prevention Programs

- Perform a safety hazard inspection at the beginning of the school year and on a regular basis thereafter.
- Encourage the development of parent-school-community partnerships.

Infrastructure/Systems Enhancement

- Restructure schools so that emergency protocols are in place, especially since health personnel are so rarely on-site.
- Include CPR/first-aid training requirements in the collective bargaining agreement between teachers and schools.
- Include a uniform safety inspection of each school in the statewide commission's annual visit to schools.

Public Information/Professional Training

- Assess the safety training of school nurses and coaches. Provide appropriate training where necessary.
- Increase parents' participation in educating children about safety.
- Educate parents about how much time nurses spend at the schools and what they do.

The recommendations from the workshop will be submitted to the California Department of Health Services, Emergency Preparedness and Injury Control Branch, as a suggested starting point for developing a new state plan.

School Nurse Emergency Medical Services for Children Program

Elaine Brainerd
SNEMS-C Project
P.O. Box 3115
Branford, CT 06405-1715
203.488.1524 ☎
203.488.6334 FAX

To help school nurses improve their skills in providing emergency care to injured or ill students, the Department of Pediatrics at the University of Connecticut Health Center developed the School Nurse Emergency Medical Services for Children Program (SNEMS-C). The program is funded by a two-year grant from the federal Emergency Medical Services for Children (EMSC) program of the Maternal and Child Health Bureau of the U.S. Health Resources and Services Administration.

SNEMS-C trains registered school nurses to:

- use emergency assessment skills recognized by EMSC
- provide a level of pre-hospital care that conforms to EMSC protocols
- develop specific intervention strategies for students with special health care needs
- collect and analyze data on school-related injuries to improve student health and safety

The course consists of a three-day workshop presented by a team of instructors (a school nurse and an emergency nurse with pediatric experience), a manual for school nurses on providing emergency care in schools, and demonstration and practice of assessment, triage, documentation, planning, and prevention. In collaboration with emergency medical services personnel, participants also analyze victim scenarios and determine applicable assessment and intervention strategies.

The program was piloted at four sites in Arizona, Iowa, New Jersey, and Texas during summer 1996. Materials were revised based on these initial pilot programs, and in late 1996, 19 teams of instructors were trained to teach the course. Each team has committed itself to replicate the SNEMS-C program and evaluate its effectiveness with 40 to 60 school nurses in the teams' individual states during the second year of the project.

The states that will be assisting in the evaluation and the second phase of the program include Alabama, Arizona, Connecticut, Georgia, Illinois, Iowa, Kansas, Maryland, Montana, Nebraska, New Hampshire, New Mexico, New York, Pennsylvania, Texas, Washington, and Wyoming. At the end of the grant, the SNEMS-C manuals will be published and available for purchase and a mechanism for training of additional instructors will be established.

Estimating the Cost of Injuries to Children at School

Rebecca Spicer
Children's Safety Network Economics and Insurance Resource Center
National Public Service Research Institute
8201 Corporate Drive, Suite 220
Landover, MD 20785
301.731.9891, ext. 121 ☎
301.731.6649 FAX

Cost analysis is an important research tool that is increasingly a focal point for debate and decisionmaking. In injury prevention research, cost analyses provide data that help formulate health policy and improve delivery systems. These analyses provide a way to reduce disparate outcomes—traumatic deaths, fractured wrists, head injuries—to a common metric. That makes cost data invaluable for problem size and risk assessment, broad priority setting, resource allocation modeling, health and safety advocacy, regulatory analysis, and program evaluation.

The CSN Economics and Insurance Resource Center (EIRC) has undertaken two projects that estimate the cost of injuries to children at school.

First, EIRC is collaborating with the Utah Department of Health's Child Injury Prevention Program (CIPP) to analyze the cost of injuries in Utah schools. The Utah Student Injury Reporting System collects data on date, time, activity, location, victim demographics, body region injured, type of injury, and level of treatment of the injury. Costs are estimated based on the body region and type of injury, as well as treatment received. CIPP will share the results with state legislators, school administrators, the Utah Offices of Risk Management and Education, and parent-teacher organizations to promote school safety programs. The analysis is expected to be completed in spring 1997.

Recently, EIRC estimated the national incidence and cost of injuries to children at school using 1987–1992 National Health Interview Survey (NHIS) data. The NHIS annually collects information from 45,000 nationally representative households regarding demographic characteristics, health care use, and acute and chronic conditions, including episodes of persons injured and place the injury occurred. Costs were estimated based on the injury diagnosis. Results show that each year, an estimated 1 in 14 children suffers a medically treated injury at school. These injuries annually result in $3.2 billion in medical spending and nearly $89 billion in good health lost.

Needham High School Health and Safety Reporting

Sally Toran
Needham High School
609 Webster Street
Needham, MA 02194
617.455.0865 ☎
617.449.5111 FAX

Like many school districts, the town of Needham, Massachusetts, finds itself with a growing school population and aging school facilities. As a result, many of the schools are undergoing large-scale renovations, including new carpeting, fresh paint, and new heating and ventilation systems. These renovations have brought with them some unanticipated health and safety outcomes. Many students attending classes in the renovated school buildings presented to the school nurse with headaches, allergy symptoms, and other health complaints. Investigation revealed that fumes from paint and new carpeting were the culprits. As a result of these incidents, the town's health officer, in cooperation with the school nurses, instituted a surveillance system to track health and safety complaints and incidents at the schools. Injuries are one of 10 categories included in this surveillance system. Although not originally designed as an injury prevention tool, this surveillance system has become a valuable source of information about injuries and has resulted in several preventive measures.

Every school is required to complete a school accident report form for all serious injuries that occur within the school building or on school grounds. The school nurse is responsible for ensuring that the information on the forms is accurate and complete. Each month, the school nurse conducts a simple analysis of frequency and circumstances of injuries (and other health and safety incidents or complaints) occurring in the school environment. The results of each school's analysis are presented at the monthly meeting of the school's Health and Safety Committee, whose members include the school principal, representatives from the faculty, parents, students, and a school nurse. The committee discusses the cause of the injuries and potential strategies for prevention. When possible, the committee recommends amendments to the physical environment or school policy to lessen the chances of these injuries recurring. Examples of changes that have been implemented as a result of data collected through this surveillance system include, at the elementary school level, repair and replacement of playground equipment, the addition of teacher aides on playgrounds to enhance supervision, and a bike helmet program. At the high school level, athletic trainers have used these data to improve conditioning regimens and to make modifications to the gym environment to enhance safety.

The school nurses and the Health and Safety Committees in every school in Needham are committed to maintaining this surveillance system in order to improve the health and safety of their students and to collect detailed documentation of incidents when they do occur.

New Hampshire Safe Playground Project

Elaine Frank
The Injury Prevention Center
Dartmouth Hitchcock Medical Center
7455 Butler Building, Room 8
Hanover, NH 03755-3851
603.650.1780 ☎
603.650.1614 FAX

The New Hampshire Safe Playground Project is designed to identify risks and strategies for reducing the number and severity of playground-related injuries in New Hampshire schools for grades K–8. The project is funded by the New Hampshire Department of Education, Division of Educational Improvement, and managed by the Injury Prevention Center at Dartmouth Hitchcock Medical Center, in conjunction with the North Country Educational Foundation, a consortium of superintendents and school boards in the rural northern region of New Hampshire that provides training and technical assistance to teachers and administrators.

The goal of the Safe Playground Project is to assist elementary school nurses and staff, school administrators, and insurers to systematically examine playground- and recreation-related injuries in order to develop effective prevention strategies to reduce risks. Data are collected for incidents that occur during school-sanctioned time, on the playground, or during recess or recreational activities, including physical education classes and school-sponsored sports. The data collection form is a modified version of the form developed in Arizona. Also reported are injuries that result in the loss of one half-day of school or more, students referred for outside medical care, and any other significant playground injury. The project is particularly interested in collecting data on injuries to students with special educational needs, to assess the incidence of playground injuries to this population.

Beginning in October 1996, more than 65 schools began voluntary participation in the data collection effort. Schools provide completed injury reports for all incidents meeting the data collection criteria. Participating schools receive training for school nurses and designees related to the project, individualized reports detailing school-based injuries, access to and use of Playground Inspection Kits, ongoing technical assistance and updates on playground safety, and first-aid kits/fannypacks for use on playgrounds and on field trips. All training is provided by the staff of the Injury Prevention Center at Dartmouth Hitchcock Medical Center.

The project has produced six Playground Inspection Kits, located around the state and available for loan at no charge. The kits include materials that can assist schools and community groups to learn more about playground safety in general, as well as assess their own playgrounds. A resource library has been developed; it houses playground safety information that is available for loan to schools.

South Carolina Annual School Health Nurse Survey

Mary Ellen Hatfield
Division of Women and Children's Services
South Carolina Department of Health and Environmental Control
Robert Mills Complex
Box 101106
Columbia, SC 29211
803.737.4085 ☎
803.737.4005 FAX

The South Carolina Department of Health recommends tracking all serious injuries, which are defined as those needing immediate medical care and involving loss of one half-day of school. The purpose is to determine the causative factors and prepare a report for the school principal, with suggestions for preventing or deterring future injury occurrences. The South Carolina Annual School Health Nurse Survey includes questions on unintentional injuries and violence. Survey questions assess the number, type, and location of serious injuries occurring at school and the number of minor injuries requiring first aid. Currently, 56 of the 91 school districts (61 percent) report injuries to the Division of Women and Children's Services. School nurses collect the data throughout the school year.

Subsequently, the school district report is submitted to the South Carolina Department of Health and Environmental Control for compilation in an aggregate report that documents the health status of students and quantifies the many services that school nurses provide. Continuing education and technical assistance are provided to school districts to help them develop and use local data for program planning.

The South Carolina Department of Health assumes major responsibility for providing continuing education for locally employed school health nurses. Managing school emergencies and developing health and injury control programs are included in the compendium of topics planned for school nurses. These are presented at the orientation for new school nurses, regional seminars, and the annual School Nurse Conference.

Texas Independent School District Crime Report

Pam Nickel
Texas Department of Public Safety
Uniform Crime Reporting
5805 North Lamar Boulevard
Box 4143
Austin, TX 78765-4143
512.424.2090 ☎

In 1994, the Texas legislature passed a resolution encouraging the Texas Department of Public Safety to collect information on crimes that occur on campuses within independent school

districts. A three-month pilot project was conducted, from September to November 1994, to collect data from a sampling of the 1,048 school districts across the state. Participation was voluntary. The incident reporting form was developed by the Department of Public Safety in cooperation with the Texas Education Agency, the Juvenile Probation Commission, and Sam Houston State University.

Data were collected on the incident, offense, victim and offenders, circumstances, location, time, and grade level. Data collection tools and training were provided to participating districts at no charge. The pilot data were compiled by the Texas Education Agency and submitted to the state legislature in January 1995. Copies of the report are available from the Texas Department of Public Safety.

Utah Student Injury Reporting System

Cal Cazier
Violence and Injury Prevention Program
Community and Family Health Services Division
Utah Department of Health
288 North 1460 West, PO Box 144240
Salt Lake City, UT 84114-4240
801.538.6863 ☎
801.538.6510 FAX

In operation since 1984, the Utah Student Injury Reporting System is funded by the state Title V Maternal and Child Health Block Grant. All 40 local school districts voluntarily participate in this surveillance system. School personnel complete a student injury report form when an injury causes a student to miss one half-day or more of school or if the injury necessitates a visit to a health care provider. Completed forms are sent to the Violence and Injury Prevention Program (VIPP) at the state health department.

The form was developed collaboratively by VIPP and the state office of education. Forms and self-addressed, stamped envelopes are provided at no cost to schools. The Utah Department of Health completes the data analysis and generates statewide injury data reports. In the near future, district-specific reports will be disseminated at no charge and will be formatted to best meet the information and presentation needs of local communities.

VIPP also provides consultation to school districts and individual schools to develop injury prevention strategies in response to the findings from the student injury report forms. VIPP, the Utah Office of Risk Management, and local health department staff serve as a resource on the selection of new playground equipment, maintenance of existing equipment, and liability issues.

A copy of the Utah Department of Health Student Injury Report Form may be found with other sample data forms beginning on page 25.

School Injuries in Virginia: A Pilot Study

Jeanne K. Sanders
Childhood Injury Prevention Program
Medical College of Virginia
Commonwealth University
P.O. Box 980522
Richmond, VA 23298
804.828.7009 ☎
804.828.8668 FAX

The Childhood Injury Prevention Program at the Medical College of Virginia is conducting a seven-month pilot project to evaluate the use of a school injury reporting form in 54 Virginia public schools. The project is funded by the state health department, using Maternal and Child Health Block Grant funds. The objectives of the pilot project are to determine what injury reporting policies are currently in place; whether an injury reporting form can be used to identify the leading causes of school injuries; whether the pilot form is manageable, user-friendly, and amenable to rapid analysis; and whether institutionalizing the form would be feasible. The findings from the pilot project will be used to develop recommendations to the Virginia Departments of Health and Education regarding the feasibility of using standardized reporting forms statewide, types of information to collect, ways this information could help in determining the leading causes of school injuries, and methods of preventing school injuries in the future.

Virginia will use a modified version of the surveillance form developed in Arizona and also used in New Hampshire (see Arizona and New Hampshire project descriptions). Data fields will be added to collect information on special education and disabled students, and playground equipment and surface specifics will be detailed as well. Other data elements include supervision at time of injury, activity during which injury occurred, equipment involved, and action taken.

A school information survey will also be used to collect information on ecological variables at each school, such as demographics (enrollment, student-staff ratios, percentage of students enrolled in special education or free lunch programs), programmatic characteristics (school hours, lunch/recess procedures, playground policies), physical characteristics (age of school buildings, age and condition of playground and playground equipment), and health program characteristics (current injury reporting policies, nurse's experience and education, nurse hours, presence of a nurse's aide). School nurses will collect the data. An hour-long training will be provided on how, when, and why to complete the injury reporting forms.

Development of Capacity for Prevention of Injuries in School Settings in Washington State

Richard Ellis
Washington State Department of Health
Airdustrial Park, Building 7
Olympia, WA 98504-7880
360.586.4496 ☎
360.586.7868 FAX

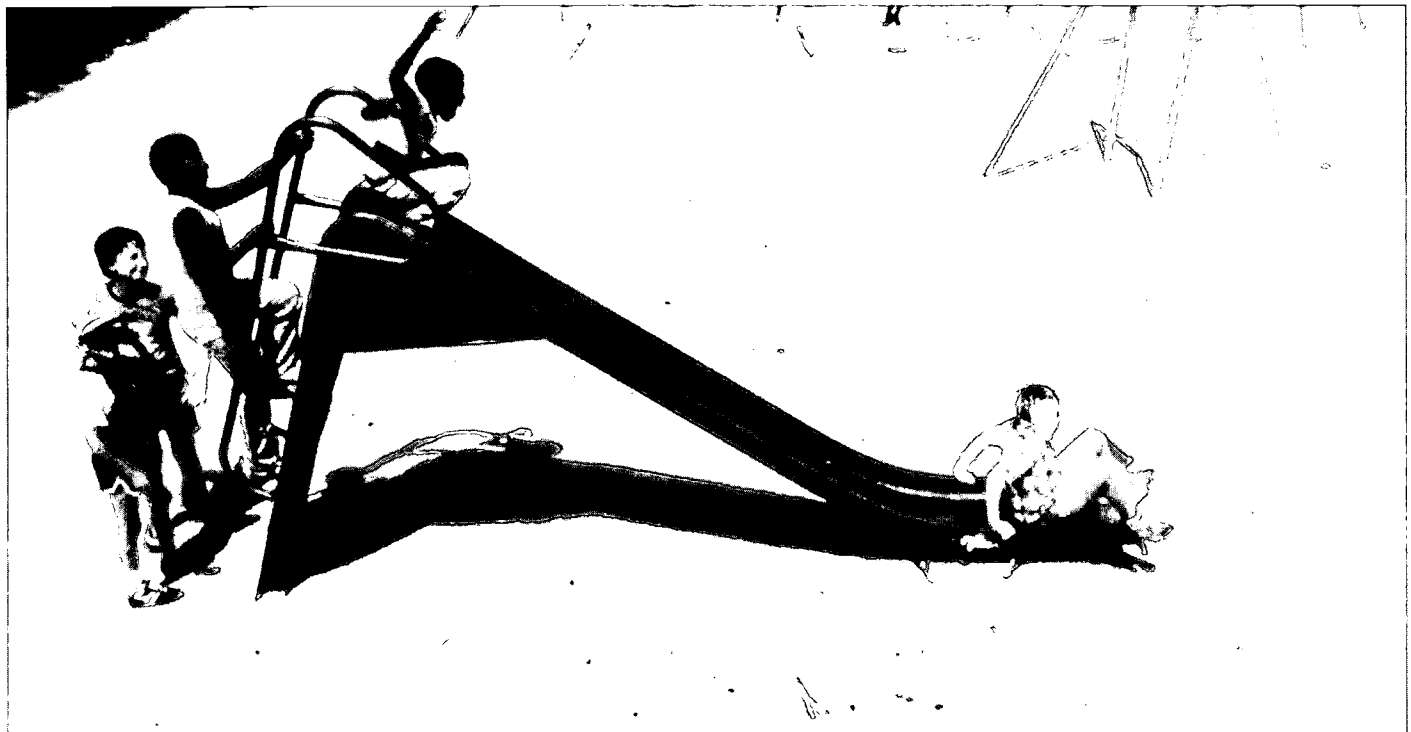
In 1990, the Washington State Department of Health published the *School Injury Surveillance Project Report*, a study that assessed injury incidence in typical elementary, junior high, and high school settings in one county in the state. Reportable injuries were those that were more serious as determined by treatment levels (e.g., child was sent home, physician care was required). This report demonstrated an overall school-based injury incidence rate during the two-year surveillance period of 3.36 injuries per 100 student-years. Extrapolating these findings statewide suggested that approximately 22,000 injuries are experienced by Washington State students per year. The greatest proportion of the injuries documented occurred on school playgrounds. The occurrence of injuries in school settings had not previously been systematically assessed and reported to local, state, and federal public health officials.

Over the next three-year period, a school-based safety program was developed by the Disability Prevention Program to address playground injury. Playground inspection programs and a pilot injury surveillance system were developed to identify injury risks and determine injury incidence at elementary schools. State specialists trained personnel in local health departments and at schools in playground hazard identification, injury surveillance, and program plan review. With the expertise gained through this project, the state assisted in the development of Consumer Product Safety Commission and American Society of Testing Materials playground safety standards.

During the following three years, 1993–1996, with disability prevention funding from the Centers for Disease Control, the state, in collaboration with Washington State University and the private consulting firm of Thom Thompson and Associates, piloted an elementary school injury surveillance system in five school districts at 15 elementary schools located in various geographic regions. More detailed than any previous research, this effort focused on obtaining epidemiologic information about the settings, mechanisms, and risk factors related to injury in the elementary school setting and, in particular, on the playground. Preliminary analysis of the data from this research has provided information about the characteristics of injuries occurring on the playgrounds of the elementary schools studied, as well as the association of these injuries with environmental factors such as playground design, equipment, and supervision.

The results of this project have helped to weave playground injury monitoring and inspection into the fabric of public health in the state. Intervention strategies focusing on playground design and supervision modifications have been suggested and the feasibility of testing and evaluating the effects of these and similar ideas have been explored. Feedback from this project can provide others with a base of information from which to develop their own surveillance systems and assessment tools. Also, it has provided some basic epidemiologic information about elementary school injury. Upon completion of the project, the Washington State Department of Health will transfer the data collection and analysis system to the state superintendent of public instruction, for use with school districts throughout the state.

A copy of the Washington Elementary School Student Injury Reporting Form may be found with other sample data forms beginning on page 25.



SAMPLE DATA COLLECTION FORMS

Washington Elementary School Student Injury Reporting Form *(1 page)*

Arizona Student Injury Report *(double-sided)*

Utah Department of Health Student Injury Report Form *(double-sided)*

WASHINGTON
ELEMENTARY SCHOOL STUDENT INJURY REPORTING FORM

(10/28/93)

School:_____ School ID#_____ Date of Incident: __/__/__ Time of Injury:_____

Student Name: _____ Gender: M F Date of Birth: __/__/__ Grade: ____

Address: _____ City: _____ Zip: _____ Phone:_____

Person completing this form: _____ Title: _____ Phone:_____

Description of Incident: _____

_____

_____

Witness Name:_____

Phone: _____

1) Was this incident during?
- 1 = Recess
- 2 = Lunch Period
- 3 = P.E.
- 4 = Class
- 5 = Before/After School
- 9 = Unknown

2) Where did the incident occur?
- 1 = Playground w/Equipment (P I)
- 2 = Play Field
- 3 = Other Outdoor Area
- 4 = Gymnasium
- 5 = Stairway
- 6 = Hallway/Corridor
- 7 = Classroom
- 8 = Other Indoor Area
- 9 = Unknown

3) Did the incident involve another student?
- 1 = No
- 2 = Yes
- 9 = Unknown

3a) If 'Yes', were they?
- 1 = Playing a Game
- 2 = Fighting/Misbehaving
- 3 = Other (Specify:_____)
- 9 = Unknown/Not Applicable

4) If no other student was involved, was the injured student?
- 1 = Running (tripped and fell)
- 2 = Jumping from or Climbing onto Something
- 3 = Other (Specify:_____)
- 9 = Unknown

5) Was an object involved?
- 1 = No
- 2 = Ball/Bat/Game Equipment
- 3 = Rock/Stick/Natural Object
- 4 = Other (Specify:_____)
- 9 = Unknown

6) Did this incident involve equipment?
- 1 = No
- 2 = Yes → Equipment Number
- 9 = Unknown

7) Did the student fall?
- 1 = No Fall
- 2 = From an elevated height
- 3 = From ground level height
- 9 = Unknown

8) Fall occured to what type of surface?
- 1 = Not a Fall
- 2 = Grass or Dirt
- 3 = Concrete or Blacktop
- 4 = Loose Material
- 5 = Fell to Equipment
- 6 = Other (Specify:_____)
- 9 = Unknown

Complete for all injuries sustained:

(Mark all that apply)

Body Part Injured	Injury Type	Treatment Required
Face		
Eye		
Teeth/Jaw		
Head (Brain, Skull)		
Head (Scalp, Ears)		
Neck		
Trunk		
Arm (Left)		
Arm (Right)		
Hand (Left)		
Hand (Right)		
Leg (Left)		
Leg (Right)		
Foot (Left)		
Foot (Right)		
Other ( )		

Injury Types:
- 1 = Bump, Bruise, Scrape
- 2 = Cut, Laceration
- 3 = Sprain
- 4 = Fracture, Dislocation
- 5 = Internal Injury
- 6 = Knocked Out, Head Inj.
- 7 = Spinal Cord Injury
- 8 = Other (Specify Below)

Treatment Required:
- 1 = Sent Home
- 2 = School First Aid
- 3 = Physician/Clinic
- 4 = Hospital Emergency Room
- 5 = None

Injury Follow-Up: _____

_____

_____

_____

_____

Principal: _____ (Sign)

Was the student hospitalized?
- 1 = No
- 2 = Yes
- 3 = Unknown

Student School Days Missed: ____

Report Follow-Up (For DOH Use Only): _____

_____

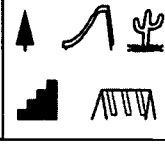
ARIZONA STUDENT INJURY REPORT
NARRATIVE

NAME OF STUDENT		DATE OF REPORT		TIME OF REPORT	

ADDITIONAL DESCRIPTION OF INCIDENT

Diagram of Incident

LEGEND



EQUIPMENT INVOLVED IN INCIDENT	*Description*	
Manufacturer	*Date Installed* ☐ Approx. ☐ Unknown	*Installed By* ☐ Unknown
Playground Designed By ☐ Not Relevant		
Maintenance Schedule Included? ☐ Yes ☐ No		
Dimension of Fill Area	*Person Responsible for Maintenance*	
Distance to Other Objects	*Fill Material at Impact Point* ☐ Not Relevant	
Other Pertinent Equipment Information	*Height of Equipment*	

SUPERVISORS PRESENT AT INCIDENT ☐ None Present		
Name:	*Title:*	*Phone:*
Name:	*Title:*	*Phone:*
EMPLOYEES PRESENT AT INCIDENT ☐ None Present		
Name:	*Title:*	*Phone:*
Name:	*Title:*	*Phone:*

OTHER WITNESSES ☐ None

STATEMENTS/COMMENTS ☐ None

REPORT COMPLETED BY:	REPORT RECEIVED BY:
X _____ *Signature* *Date*	X _____ *Signature* *Date*
_____ *Name* *Title*	_____ *Name* *Title*

Insurance Company

ARIZONA STUDENT INJURY REPORT

STUDENT'S NAME/ADDRESS

Last First MI

Street Address

City State Zip

PARENT/GUARDIAN'S NAME/ADDRESS

Last First MI

Street Address

City State Zip

DATE OF BIRTH M M D D Y Y

GENDER ○ Female ○ Male

GRADE ○ Preschool/Headstart ○ Kindergarten ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10 ○ 11 ○ 12

CNTY **DIST** **SCHOOL #**

ETHNIC ORIGIN

○ Asian ○ Native Am. ○ Black ○ White ○ Hispanic ○ Other

SCHOOL INSURANCE? ○ Yes ○ No ○ Unknown

SCHOOL PHONE #

DATE OF INJURY M M D D Y Y (93 94 95 96 97)

TIME OF INJ. MILITARY TIME

PERIOD

○ After School (Authorized) ○ Intraschool Competition
○ After School (Unauthorized) ○ Lunch
○ Before School ○ Lunch Recess
○ Assembly ○ Phys. Ed. Class
○ Class Time ○ Recess
○ Class Change ○ Unauthorized
○ Field Trip ○ Other
○ Interschool Competition

DATE REPORTED M M D D Y Y (93 94 95 96 97)

TIME REPT'D MILITARY TIME

INCIDENT TYPE

○ Sports-Related Injury
○ Bite/Sting
○ Collision w/Object
○ Collision w/Person
○ Drown/Near Drown
○ Electrical
○ Burn ○ Fire ○ Chemical ○ Other
○ Poisoning
○ Motor Vehicle Crash
○ Pedestrian
○ Assault

○ Intentional ○ Unintentional

○ Shooting
○ Stabbing
○ Standing Ht. Fall
○ Fall < 5'
○ Fall 5–10'
○ Fall > 10'
○ Other Penetrating Trauma
○ Other Trauma

INCIDENT LOCATION

○ Athletic Field ○ Auditorium/Multi ○ Basketball Court ○ Bathroom/Shower ○ Bus Loading Area ○ Classroom ○ Corridor ○ Driveway ○ Gymnasium ○ Home Economics ○ Lab
○ Lockers ○ Lunchroom/Kitchen ○ Off School Property ○ Parking Area ○ Playground ○ Pool ○ School Bus ○ Shop/Industrial Arts ○ Other

Did Injury Involve Stairs/Steps? (Y)

POSSIBLE CONTRIBUTING FACTORS

○ Lighting ○ Surface ○ Weather ○ Heat ○ Cold ○ Medical ○ Alcohol ○ Substance(s) ○ Self-Infliction ○ Other

SUPERVISION

○ None ○ Instructor ○ Aide ○ Driver ○ Parent ○ Other

ACTIVITY DURING WHICH INJURY OCCURRED

○ Baseball/Softball ○ Basketball ○ Bicycling ○ Classroom Activity ○ Dancing ○ Dodgeball/War Ball ○ Fight/Roughhouse ○ Football
○ Gymnastics/Tumbling ○ Hockey (Field/Floor/Ice) ○ Jumping ○ Kickball ○ Lab/Shop Activities ○ Playing on Bars ○ Running ○ Sitting
○ Skating ○ Sliding ○ Soccer ○ Swimming ○ Swinging ○ Tetherball ○ Throwing Rocks/Snowballs
○ Track & Field ○ Volleyball ○ Walking ○ Weight Training ○ Wrestling ○ Other

INJURY SITE/TYPE

Bilateral? (Y) Concussion? (Y)

	Abrasion	Amputation	Bite	Bruise	Burn	Contusion	Crush Wound	Dislocation	Fracture	Hematoma	Laceration/Cut	Pain	Puncture Wound	Sprain	Strain	Other
Head	○	○	○	○	○	○	○	○	○	○	○	○	○			○
Eye	○		○	○	○	○		○		○	○	○	○			○
Ear	○	○	○	○	○	○		○		○	○	○	○			○
Nose	○	○	○	○	○	○	○	○	○	○	○	○	○			○
Mouth/Lips	○	○	○	○	○	○	○			○	○	○	○			○
Teeth							○	○				○				○
Gums	○		○	○	○	○	○			○	○	○	○			○
Face	○		○	○	○	○	○		○	○	○	○	○			○
Jaw	○		○	○	○	○		○	○	○	○	○	○			○
Chin	○		○	○	○	○		○	○	○	○	○	○			○
Neck	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Clavicle	○		○	○		○	○	○	○	○	○	○	○			○
Shoulder	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Upper Arm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Elbow	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Forearm	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Wrist	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hand	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fingernail	○	○	○	○		○	○	○	○	○	○	○	○			○
Finger	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Chest/Ribs	○	○	○	○	○	○	○	○	○	○	○	○	○			○
Back	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Abdom./Groin	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Genitals/Rect.	○	○	○	○	○	○	○	○	○	○	○	○	○			○
Pelvis/Hip	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Leg	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Knee	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Ankle	○		○	○	○	○	○	○	○	○	○	○	○	○	○	○
Foot	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

SURFACE ON WHICH INJURY OCCURRED

○ Wet ○ Dry Uneven? (Y)

○ Blacktop ○ Concrete ○ Dirt ○ Gravel
○ Grass/Lawn ○ Ice/Snow ○ Sand
○ Brick Wall ○ Metal ○ Carpet
○ Mats ○ Tile ○ Hardwood
○ Wood Chips/Ash ○ Other ○ Not Relevant

EQUIPMENT ON WHICH INJURY OCCURRED

○ Slide ○ Concrete Pipe ○ Balance Beam ○ Swing (Regular)
○ Climbing Tower ○ Horizontal Ladder ○ Monkey Bars ○ Pole Climb
○ Swing (Tire) ○ Tetherball ○ Three-level Bars ○ Tire (Crawl)
○ Turn Bar ○ Object ○ Other ○ Not Relevant

ACTION TAKEN (Mark all that apply)

Specify Name:

○ First Aid Administered
○ Parent/Guardian Notified
○ Unable to Cont. Parent/Grd.
○ Other Student Involved
○ Remained in/Returned to Class
○ Sent/Taken Home
○ Chkd. by School Nurse
○ Chkd. by Paramedics/EMS
○ Taken to Physician
○ Taken to Emerg. Facility
○ Other

DAYS ABSENT | **DAYS RESTR. ACT.**

○ Approx. ○ Unknown ○ Did Not Return

○ Approx. ○ Unknown

COMMENTS

X
Signature of Person Completing Report Date

Name 33 Title

43968

DO NOT WRITE IN THIS AREA

UTAH DEPARTMENT OF HEALTH
DIVISION OF FAMILY HEALTH SERVICES
STUDENT INJURY REPORT FORM

156376

This form is to be completed immediately following the occurrence of any injury that is severe enough to: (a) cause the loss of one-half day or more of school, (b) warrant medical attention and treatment (i.e. school nurse, M.D., E.R., etc..) and/or (c) require reporting according to School District policy. *Additional instructions on back.*

1. Child's Name _____ 5. Date of Birth ____/____/____ 8. Date of Injury ____/____/____
2. Parent's Name _____ mo day yr mo day yr
3. District Name _____ # _____ 6. Grade _____ 9. ( ) Male ( ) Female
4. School Name _____ # _____ 7. Time of Injury _____ ( ) am ( ) pm 10. Fatal ( ) Yes ( ) No

11. **DAYS ABSENT:** *Record letter of the DAYS absent from school related to this injury in box at left.*

a) Less than 1/2	b) 1/2	c) 1	d) 1 1/2 - 2	e) 2 1/2- 3	f) If more than 3 days, then specify # _____

12. **ACTION TAKEN:** *PLEASE CHECK AND COMPLETE ALL THAT APPLY.*

	TIME:	BY WHOM (List title code) (Title codes on back.)
1. ☐ First aid administered	_____( ) am ( ) pm	_____Specify name_____
2. ☐ Parent or guardian notified	_____( ) am ( ) pm	_____Specify name_____
3. ☐ Unable to contact parent/guardian	_____( ) am ( ) pm	
4. ☐ Remained in or returned to class		9. ☐ Called 911
5. ☐ Sent/taken home		10. ☐ Taken to M.D., health care provider, hospital., etc. **Diagnosis:** _____
6. ☐ Parents deemed no medical action necessary		11. ☐ Hospitalized. Specify length: _____
7. ☐ Checked by school nurse		12. ☐ Restricted school activity. Specify length: _____
8. ☐ Checked by EMT on staff		13. ☐ Other-Specify _____

13. **NATURE OF INJURY:** *List the injuries/symptoms incurred. (Record # in boxes at left.)*

☐ More Severe	1. Abrasion/Scrape	5. Cut/Laceration	9. No Pulse	13. Shortness of Breath	
	2. Bump/Bruise/Contusion	6. Dislocation (possible)	10. Not Breathing	14. Sprain/Strain/Tear	
	3. Burn/Scald	7. Fracture/Broken (possible)	11. Pain/Tenderness Only	15. Swelling/Inflammation	
☐ Less Severe	4. Concussion (possible)	8. Loss of Consciousness	12. Puncture	16. Other _____	

14. **AREA AFFECTED:** *List area affected for each injury/symptom code listed in 13 above. (Record # in boxes at left.)*

	HEAD		TRUNK		EXTREMITIES	
☐ More Severe	1. Chin/Cheek	6. Neck/Throat	10. Stomach	15. Genitalia	19. Ankle	24. Hand/Wrist
	2. Ear	7. Nose	11. Back	16. Internal	20. Arm	25. Knee
	3. Eye	8. Head	12. Buttocks	17. Pelvis/Hip	21. Elbow	26. Leg
☐ Less Severe	4. Forehead	9. Tooth/Teeth	13. Chest/Ribs	18. Shoulder	22. Finger/Thumb	27. Toe
	5. Mouth/Tongue/Lip		14. Collarbone		23. Foot	

15. **CONTRIBUTING FACTOR:** *List factor which may have led to the injury. (Record # in box at left.)*

☐	1. Animal bite (dog bite etc.)	5. Contact with fire, hot liquid or hot object	9. Hit with thrown object	13. Unknown
	2. Collision with object or person	6. Drug, alcohol or other substance	10. Overexertion/Twisted	14. Weapon (gun, knife, etc.)
	3. Compression/Pinch	7. Fall	11. Seizure disorder	Specify _____
	4. Contact with equipment (shop, home ec.)	8. Foreign body/Object	12. Tripped/Slipped	15. Other _____

16. **PERIOD:** *List period during which injury occurred. (Record # in box at left.)*

☐	1. After school	4. Athletic practice session	7. Class time (exclude PE)	10. Lunch	13. P. E. class
	2. Assembly	5. Before school	8. Field trip	11. Lunch recess	14. Other _____
	3. Athletic event (team competition)	6. Class change	9. Intramural competition	12. Recess	

17. **SURFACE:** *List surface on which injury occurred. (Record # in box at left.)*

☐	1. Blacktop	4. Dirt	7. Lawn/Grass	10. Synthetic surface	12. Wood(waxed)
	2. Carpet	5. Gravel	8. Mats	(i.e.Tartan surface)	13. Other_____
	3. Concrete	6. Ice/Snow	9. Sand	11. Tile	14. Fibar

18. **LOCATION:** *List location at which injury occurred. (Record # in box at left.)*

☐	1. Athletic field	5. Corridor (exclud. stairs)	9. Lunchroom/Kitchen	13. Sidewalk/Stairs/Ramp
	2. Auditorium/Multipurpose	6. Doorway	10. Playground/Playfield	14. Street/Driveway/Parking Area
	3. Bus loading area	7. Gymnasium	11. School bus/Public bus	15. Restroom/Lavatory
	4. Classroom	8. Lab (Home Ec., Chem, etc.)	12. Shop (Indust. Arts, etc.)	16. Other _____

19. **ACTIVITY:** *List activity during which injury occurred. (Record # in box at left.)*

☐	1. Baseball/Softball	7. Fighting	13. Playing on bars	18. Sliding	24. Throwing rocks	
	2. Basketball	8. Flag/Touch football	(monkey bars/big toy/etc.)	19. Sliding on ice	or snowballs	29. Other _____
	3. Bicycling	9. Football	14. Riding	20. Sitting	25. Track and field	
	4. Classroom activity	10. Gymnastics/Tumbling	15. Running	21. Soccer	26. Volleyball	
	5. Climbing	11. Jumping	16. Roughhousing	22. Standing	27. Walking	
	6. Dodge ball/War ball	12. Kickball	17. Setting up/Moving equipment	23. Swinging	28. Wrestling	

20. **EQUIPMENT:** Was equipment or apparatus involved in injury? ☐ Yes ☐ No IF YES, (a) Did equipment appear to be used appropriately? ☐ Yes ☐ No
Specify equipment _____ (b) Was there any apparent malfunction of equipment? ☐ Yes ☐ No

21. **DESCRIPTION:** Describe specifically how the injury happened _____

22. _____ title code _____ 23. _____
Signature of person making report Principal's signature

STUDENT INJURY REPORT FORM INSTRUCTIONS

This form is to be completed immediately following the occurrence of any injury that is severe enough to:

a. Cause the loss of one-half day or more of school,
b. Warrant medical attention and treatment (i.e. school nurse, M.D., E.R., etc.), and/or
c. Require reporting according to School District policy.

Item #

1-2 Self explanatory.

3-4 District and school numbers are found in the Utah School Directory published by the State Office of Education.

5-10 Self explanatory.

11 Do not send the form until you have filled in days missed. If student is going to be absent for an extended period of time, use parent's estimate. If no school is missed, check less than 1/2.

12 Check and complete *all* that apply. By marking either #6 or #10 specify whether or not student received medical attention and list diagnosis if known. List title code (from the codes that follow) and name of person(s) who perform first aid and who notify parents.

Title Codes

1. Advisor/Counselor
2. Assistant Principal
3. Bus Driver
4. Coach
5. Paramedics/EMT
6. Playground Supervisor
7. Principal
8. School Nurse
9. Secretary/Office Aid
10. Substitute Teacher
11. Teacher (excluding Coach)
12. Teacher's/Playground Aid
13. Other
14. Trainer

13 Of the injuries the child sustained, list whichever is the most severe in the box labeled "more severe" (even if you consider the injury to be minor). The other box is used only if there is more than one injury to the child.

14 List the area affected in the "more severe" box that corresponds to the injury listed in the "more severe" box in #13. Do the same for the less severe box.

15-16 Self explanatory.

17 Describe surface over which injury occurred (i.e. surface upon which child was standing, running, or playing).

18-19 Self explanatory.

20 If you check no to first question, leave the others blank.

21 Briefly describe specifically how the incident happened. If there were witnesses, please list names at the end. If additional space is needed, continue on another sheet of paper and attach.

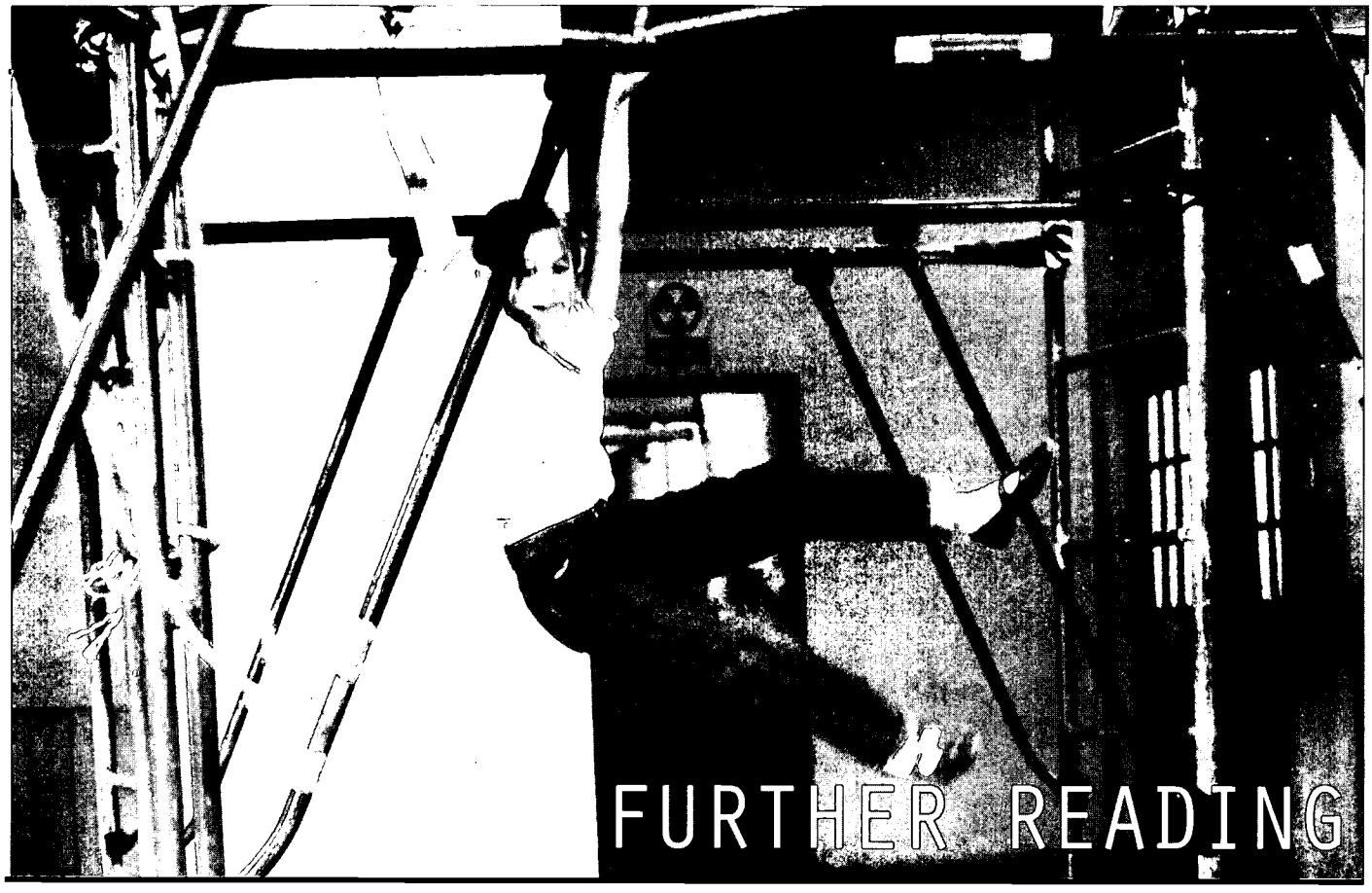
If you have questions or need self-addressed envelopes or additional forms, please contact the office listed below.

Retain original in school; send copy to School District (according to time frame specified by District policy); and one copy to:

CHILD INJURY PREVENTION PROGRAM
UTAH DEPARTMENT OF HEALTH
FAMILY HEALTH SERVICES
Box 144240
Salt Lake City, Utah 84114-4240
Telephone: 538-6864

Copies for Child Injury Prevention Program may be retained and submitted on a monthly basis in the self-addressed envelope or to the address above.

Revised 5/95



General Resources

American Academy of Pediatrics Policy Statements.

A listing of AAP policy statements relevant to school injury has been compiled by CSN.

Evans, GD, and Sheps, SB. (1987). The epidemiology of school injuries: The problem of measuring injury severity. *Journal of Community Health, 12*(4): 246–256.

Examines the association between two commonly used measures of injury severity and referral to medical assessment. Reviewed 3,000 school accident reports in Vancouver. Concludes that the major issue facing school staff is appropriate referral of the child for medical treatment.

National School Safety Center. *School Safety.*

This quarterly publication regularly covers topics of bullying, violence in schools, and other safety concerns. Published by the National School Safety Center, 4165 Thousand Oaks Boulevard, Suite 290, Westlake Village, CA 91362. ☎ 805.373.9977.

Office of Technology Assessment. (1995). *Risks to Students in School.* Washington, DC: OTA.

This background paper reviews the available data on environmental hazards, infectious diseases, and unintentional and intentional injuries occurring in schools K–12. Available from Superintendent of Documents. ☎ 202.512.1800. $14.00. Stock number 052-003-01447-5.

Shearer, RM. (1994). Emergency care training for school nurses in Fairbanks, Alaska. *Journal of School Health 64*: 340–341.

Describes a program that provided emergency care continuing education to school district nurses and led to improved plans and procedures.

U.S. General Accounting Office. (1995). *School facilities: Condition of America's schools.* Washington, DC: GAO.

This report presents information on the overall physical condition and prevalence of schools that need major repairs and the amount of funding that schools report needing to improve inadequate facilities. Available from GAO. ☎ 202.512.6000. Document number GAO/HEHS-95-61.

U.S. General Accounting Office. (1996). *School facilities: America's schools report differing conditions.* Washington, DC: GAO.

Analyzes conditions of school buildings, amounts of funding needed for repairs, and numbers of students attending schools in inadequate condition, by state and region, community type, percentage of minority and poor students, and school level and size. Available from GAO. ☎ 202.512.6000. Document number GAO/HEHS-96-103.

U.S. General Accounting Office. (1996). *School facilities: Profiles of school conditions by state.* Washington, DC: GAO.

This report profiles by each state the condition of school buildings, and estimates the amount of funding needed to bring schools into good overall condition. Available from GAO. ☎ 202.512.6000. Document number GAO/HEHS-96-148.

Wilson, MH, Baker, SP, Teret, SP, Shock, S, and Garbarino, J. (1991). *Saving Children: A Guide to Injury Prevention.* NY: Oxford University Press.

This book is aimed at educators, policymakers, and health care providers. Each chapter contains a section on opportunities for prevention, organized by audience and including schools. Part IV focuses on the school and recreation environment: playground injuries, sports injuries, and drowning and other water-related injuries.

Legal and Liability Issues

Dunklee, DR. (1989). An educator's responsibility for proper maintenance of property. *School Business Affairs,* July: 25–27.

Briefly discusses school liability for personal injury that results from negligent maintenance.

Grier, TB, Reep, BB, and Turner, MJ. (1991). Follow these 10 cardinal rules and stay out of court. *Executive Educator, 13*(8): 21–22.

Advice for principals, including steps to ensure student supervision, reporting of dangerous situations, and preparation of emergency procedures.

Quinlan Publishers. *School Law Bulletin.* Boston, MA: Quinlan.

Gives examples of court cases and lawsuits relevant to schools, including injuries; issued monthly. Available from Quinlan Publishing, 23 Drydock Avenue, Boston, MA 02210-2387. ☎ 617.542.0048.

Vos, R, and Pell, SW. (1990). Limiting lab liability: Protect yourself and your students. *Science Teacher, 57*(9): 34–38.

By examining several litigation cases, the authors demonstrate that teachers are held responsible for vigilantly supervising their lab students. Self-assessment checklists for teachers, guidelines to mitigate the risk of liability, and a list of proper safety actions are included.

Studies

Boyce, WT, Sprunger, LW, Sobolewski, S, and Schaefer, C. (1984). Epidemiology of injuries in a large, urban school district. *Pediatrics, 74*(3): 342–349.

Describes the results of 5,379 school injury reports over a two-year period. Eighteen percent of the injuries were severe; playground- and equipment-related injuries were more likely to be severe; and 49 injuries occurred per 1,000 student-years.

Boyce, WT, and Sobolewski, S. (1989). Recurrent injuries in schoolchildren. *American Journal of Diseases of Children, 143*: 338–342.

Identifies injuries prospectively over three school years, from school nurse reporting forms. One percent of the school district population sustained recurrent injuries, especially among boys, junior high students, and students in alternative educational programs.

Bremberg, S. (1989). Is school-based reporting of injuries at school reliable? A literature review and an empirical study. *Accident Analysis and Prevention, 21*(2): 183–189.

Combines a literature review of studies from six countries with a four-year empirical study in Sweden of injuries requiring physician treatment. Results indicated that routine school nurse reports underestimate the extent of injuries.

Burke, GS, Lapidus, GD, Zaboski, RW, Wallace, L, and Banco, LI. (1996). Evaluation of the effectiveness of a pavement stencil in promoting safe behavior among elementary school children boarding school buses. *Pediatrics, 97*: 520–523.

School bus stops with pavement stencils and education of the children proved more effective than bus stops with education alone. The presence of an adult at the stop did not have an independent effect on behavior.

Dale, M, Smith, ME, Weil, JW, and Parrish, HM. (1969). Are schools safe? Analysis of 409 student accidents in elementary schools. *Clinical Pediatrics, 8*(5): 294–296.

Examines accidents as recorded on school report forms (including those that did not always result in injury) and concludes that boys and second graders experienced the most accidents, most events occurred during lunch hour and recess, and head injuries accounted for 64 percent of the injuries.

Feldman, W, Woodward, CA, Hodgson, C, Harsanyi, Z, Milner, R, and Feldman, E. (1983). Prospective study of school injuries: Incidence, types, related factors, and initial management. *Canadian Medical Association Journal, 129*: 1279–1283.

A prospective study of school accident report forms from 212 schools over one year revealed that most injuries occurred during athletic activities and 28.7 percent of all injuries were serious.

Fothergill, NJ, and Hashemi, K. (1991). Two hundred school injuries presenting to an accident and emergency department. *Child: Care, Health, and Development, 17*(5): 313–317.

Analyzes 204 medical exam records of students injured at school and brought to an emergency department in Surrey, England. More than half of the injuries occurred while students were unsupervised.

Hodgson, C, Woodward, CA, and Feldman, W. (1984). A descriptive study of school injuries in a Canadian region. *Pediatric Nursing,* May/June: 215–220.

Analyzed more than 4,000 school accident report forms, as well as parent recall and school board records. The results showed an occurrence of 5.4 injuries per 100 children, with 29 percent of the injuries deemed serious. Discusses the importance of the school nurse's role in addressing these issues.

Hodgson, S, Woodward, CA, and Feldman, W. (1985). Parent report of school-related injuries. *Canadian Journal of Public Health, 76*: 56–58.

Fifteen percent of respondents in a random survey of parents reported that their children had been injured at school during the previous month.

Hodgson, C, Yacura, W, Woodward, CA, Feldman, W, and Feldman, E. (1984). Sequelae of school-related injuries: School and parent perspectives. *Canadian Journal of Public Health, 75*: 273–276.

A prospective study of three boards of education over one year found that schools underestimated the number of health care visits resulting from school injuries, and parents overestimated the amount of first aid provided at school.

Langley, JD, Chalmers, D, and Collins, D. (1990). Unintentional injuries to students at school. *Journal of Pediatric Child Health, 26*: 323–328.

Examines national mortality data and more than 1,000 hospital admissions in New Zealand. Deaths from school-related injuries were most frequently the result of falls. Overall incidence rate for hospitalization from school injury was 151 per 100,000 students per year.

Langley, JD, Silva, PD, and Williams, SM. (1981). Primary school accidents. *New Zealand Medical Journal, 94*: 336–339.

Analyzes two years of standard school accident report forms. Of 518 primary school injuries, nearly one-third resulted in fractures.

Lenaway, DD, Ambler, AG, and Beaudoin, DE. (1992). The epidemiology of school-related injuries: New perspectives. *American Journal of Preventive Medicine, 8*(3): 193–198.

Prospective surveillance of a modified student injury report form from nine Colorado schools over one school year showed that sports activities accounted for 53 percent of all injuries; middle/junior high school had the highest rates.

Nader, PR, and Brink, SG. (1981). Does visiting the school health room teach appropriate or inappropriate use of health services? *American Journal of Public Health, 71*(4): 416–419.

A study over two school years of a random sample of urban K–5 children concluded that trauma was the most frequent reason for a visit to the school health room, across all ages, genders, and socioeconomic groups.

Passmore, D, Gallagher, S, and Guyer, B. (1989). *Injuries at school: Epidemiology and prevention.* Harvard Injury Control Center Working Paper Series, No. 17. Boston, MA: Harvard University School of Public Health.

A population-based study of injuries requiring hospital treatment or resulting in deaths found that injuries at school account for 9.5 percent of all injuries. Of these, 36 percent involve a product (usually a stair, a wall, bleachers, or recreation or sport equipment)

Sheps, SB, and Evans, GD. (1987). Epidemiology of school injuries: A two-year experience in a municipal health department. *Pediatrics, 79*(1): 69–75.

A retrospective Canadian study of injury report forms for two school years showed a rate of 2.82 injuries per 100 students per year; contusions and abrasions to the head were the most frequent type of injury. Falls were most common among elementary school children; sports injuries were most frequent among secondary school students.

Taketa, S. (1984). Student accidents in Hawaii's public schools. *Journal of School Health, 54*(5): 208–209.

One school year of student injury report forms from 204 schools showed the highest number of injuries occurring in the intermediate grade level and 43 percent of injuries involving the head and neck .

Woodward, CA, Feldman, W, Feldman, E, Hodgson, C, and Milner, R. (1983). The McMaster school injury study. 1: Overview of methods. *Canadian Journal of Public Health, 74*: 276–280.

Describes the research design, sampling strategies, and analysis procedures used in surveying school injuries in Ontario.

Ways to Identify and Improve Conditions

Most of these articles are aimed at educators and administrators. Such articles tend to be brief, appear in appropriate professional literature, and are not written by injury professionals. The focus is often on avoiding legal liability.

Child Accident Prevention Foundation of Australia. (1993). *School Safe: A Program for Injury Prevention in Primary Schools.* Melbourne, Australia: Child Accident Prevention Foundation of Australia.

Covers the components and process of an effective school safety program, common school accidents, helpful hints, and curriculum starters, organized by elementary, middle, and upper school levels. Available from Kidsafe Australia, 10th floor, 123 Queen Street, Melbourne, Australia 3000. Fax (61) (3) 670-7616. Cost: $20 Australian.

Gerlovich, JA, and Gerard, TF. (1989). Don't let your hands-on science program blow up in your face. *American School Board Journal, 176*(5): 40–41.

Advice for administrators and school board members on their responsibilities and on the wisdom of conducting safety audits.

McKenzie, JF, and Williams, IC. (1982). Are your students learning in a safe environment? *Journal of School Health, 52*(5): 284–285.

Presents no data but acknowledges that unsafe conditions exist in schools and that teachers must be responsible for providing a safe environment. A teacher checklist for self-awareness of safety is included.

Padham, EA. (1990). Safety: Your first responsibility. *Vocational Education Journal, 65*(2): 16–17.

Advocates for a school safety philosophy with clear policies for teachers, administrators, maintenance staff, students, and shop architects.

Sabo, SR. (1993). Security by design. *American School Board Journal*, January: 37–39.

Discusses safety issues that can be addressed by architects so that the building design enhances security, on both the exterior and the interior of the facility.

Saunders, CS. (1994). *Safe at School: Awareness and Action for Parents of Kids Grades K–12.* Minneapolis, MN: Free Spirit Publishing.

Helps parents identify and respond to safety problems at their children's schools, using step-by-step action plans. Topics includes violence and crime, discipline, transportation issues, supervision, the building and playground, physical and mental health, environmental issues, legal issues, and disaster preparation. Cost: $14.95.

Texas Education Agency, Office of Curriculum, Assessment and Professional Development. (1994). *Safe school checklist.* Austin, TX: Texas Education Agency.

Helps students, parents, teachers, and administrators assess a school's safety strengths and weaknesses. Topics include accidents, assaults, violent behavior, natural disasters, and suicide attempts. Checklists are included. The document is issued in English and in Spanish.

Playgrounds/Sports Injuries

American Medical Association Group on Science and Technology. (1994). Athletic preparticipation examinations for adolescents: Report of the Board of Trustees. *Archives of Pediatrics and Adolescent Medicine, 148*: 93–98.

Assesses the usefulness of these examinations at identifying adolescents at risk for orthopedic injury and recommends guidelines developed by the American Academy of Pediatrics.

American Orthopedic Society for Sports Medicine. (1988). Sports injury research. *American Journal of Sports Medicine, 16* (Supp. 1).

Research issues and findings in sports medicine, as well as vignettes, information on four surveillance systems, and a primer for beginning sports injury researchers.

Arizona Department of Health Services, Community and Family Health Services, Office of Women's and Children's Health. (1993). *A study of the nature, incidence and consequences of elementary school playground-related injuries: Final report.* Tucson, AZ: Arizona Department of Health Services.

Summarizes the results of the first year of using injury report forms in grades K–8 to collect data on body part injured, actions taken by schools and parents, type of surface and equipment involved, and activity in which student was engaged. Samples of injury form, database descriptions, and data forms are included.

Association of Trial Lawyers of America and Johns Hopkins Injury Prevention Center. (1992). *Good sports: Preventing recreational injuries.* Washington, DC: ATLA.

Summary of a safety conference that included presentations, discussions, and recommendations on school sports injuries and playground injuries.

Consumer Product Safety Commission. (1994). *Handbook for Public Playground Safety.* Washington, DC: CPSC.

Covers major types of equipment, surfacing, use zones, and layout and design. Available from CPSC, Washington, DC 20207. ☎ 800.638.2772.

Daugs, DR, and Fukui, F. (1989). *Playground Perspectives: A Curriculum Guide for Promoting Playground Safety.* Salt Lake City, UT: Utah Department of Health.

Provides background information, classroom activities, and resources for teachers, with an emphasis on grades K–3. Available from Utah Department of Health. ☎ 801.538.6864.

Helsing, K., Massachusetts Sports Injury Prevention Task Force. (1990). *The status of sports injury prevention and treatment among Massachusetts high school interscholastic athletic programs.* Boston, MA: Massachusetts Department of Public Health.

Assesses the status of injury prevention within high school athletic programs in Massachusetts and identifies 15 areas of concern. Provides specific recommendations to address these concerns.

Morrison, ML, and Fise, ME. (1992). *Report and Model Law on Public Play Equipment and Areas.* Washington, DC: Consumer Federation of America.

Discusses playground injuries and developmental issues, and presents model law provisions for all play areas, preschool areas, and school-age areas. Also includes a parent checklist.

National Center for Catastrophic Sports Injury Research. (1994). *Twelfth annual report, fall 1982–spring 1994.* Chapel Hill, NC: University of North Carolina.

A summary of data collected from high school and college coaches, athletic directors, and athletic organizations on catastrophic injuries and fatalities.

National Institute of Arthritis and Musculoskeletal and Skin Diseases, U.S. Department of Health and Human Services. (1992). *Conference on Sports Injuries in Youth: Surveillance Strategies. Proceedings and Executive Summary.* Bethesda, MD: NIAMSD.

Provides recommendations and findings from a 1991 conference, including the need for a uniform surveillance system, national database of sports-related injuries, investigation of reinjury rates, and evaluation of standard classification systems.

National Youth Sports Safety Foundation. (1994). *Bibliography of youth and adolescent sport medicine literature, June 1990–1994.* Needham, MA: NYSSF.

Includes a list of sports medicine books currently in print and journal articles on the subject. Supplements an earlier bibliography, covering 1984 to June 1990. Available from NYSSF, 10 Meredith Circle, Needham, MA 02192. ☎ 617.449.2499.

Nowjack-Raymer, RE and Gift, HC. (1996). Use of mouthguards and headgear in organized sports by school-aged children. *Public Health Reports, 111*: 82–86.

Assesses the wearing practices of this protective equipment, using data from the 1991 National Health Interview Survey's Child Health Supplement. Results indicate that football was the only sport in which the majority of children used mouthguards and headgear.

Sosin, DM, Keller, P, Sacks, JJ, Kresnow, M, and van Dyck, PC. (1993). Surface-specific fall injury rates on Utah school playgrounds. *American Journal of Public Health, 83*(5): 733–735.

Studies injury reports from elementary schools over two years to estimate fall injury rates and the surfaces involved. Data showed that impact-absorbing surfaces do not reduce fall injuries better than grass.

U.S. Consumer Product Safety Commission. (1995). *Guidelines for drawstrings on children's outerwear.* Washington, DC: CPSC.

Guidelines to help consumers prevent hazards of drawstrings catching on playground equipment and other items. Document number 1006. Available from CPSC, Washington, DC 20207. ☎ 800.638.2772.

School Buses/Transportation Issues

American Academy of Pediatrics, Committee on School Health and Committee on Injury and Poison Prevention. (1996). School transportation safety. *Pediatrics, 97*: 754–757.

A revised committee policy statement that provides updated information regarding relevant federal regulations and outlines recommendations for addressing school bus safety education, awareness, and practices.

Center for Urban Transportation Research. (1994). *To belt or not to belt? Experiences of school districts that operate large school buses equipped with seatbelts.* Tampa, FL: Center for Urban Transportation Research, College of Engineering, University of South Florida.

This report, prepared for the Florida legislature, summarizes results of a national-scale, exploratory study pertaining to experiences of school districts in 15 states that operate school buses equipped with seat belts.

Harrington-Lueker, D. (1992). School buses buckle up. *American School Board Journal, 178*(11): 37–38.

New Jersey became the first state to require the use of seat belts on school buses; arguments for and against this requirement are summarized.

National Highway Traffic Safety Administration. (Annual). *Traffic Safety Facts: School Buses.* Washington, DC: NHTSA.

An annual summary, with tables of occupant fatalities by principal impact point on school bus; school-age pedestrians killed by school bus vehicle maneuver; fatalities by time of day; and other information on fatalities associated with school buses.

National Highway Traffic Safety Administration. (1992). *Highway safety program guideline #17: Pupil transportation safety.* Washington, DC: NHTSA.

Establishes minimum recommendations for state highway safety programs for pupil transportation safety, including school bus operation and maintenance; training of passengers, pedestrians, and bicycle riders; and administration.

National Highway Traffic Safety Administration. (1993). *School bus safety report.* Washington, DC: NHTSA.

Summarizes and updates school bus safety activities conducted by NHTSA and points out that school bus crashes tend to be minor, while pedestrians—particularly 5 and 6 year olds—are significantly at risk around school buses. Seat belt issues and use of vans as school buses are also addressed.

National Safety Council. (1995). *Walk-Ride-Walk: Getting to School Safely.* Itasca, IL: National Safety Council.

A comprehensive school bus/pedestrian safety program, with videos and brochures, for teachers, parents, and bus drivers. Available from National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143-0242. ☎ 800.621.7619.

Spital, M, Spital, A, and Spital, R. (1986). The compelling case for seat belts on school buses. *Pediatrics, 78*(5): 928–932.

Argues that training children to use seat belts on school buses will keep them safer and will instill lifelong habits of seatbelt use.

Special Needs

American Academy of Pediatrics, Committee on Injury and Poison Prevention. (1994). School bus transportation of children with special needs. *Pediatrics, 93*: 129–130.

A committee policy statement that addresses child safety seats, wheelchairs, and staffing issues.

Collins, BC, Wolery, M, and Gast, DL. (1991). A survey of safety concerns for students with special needs. *Education and Training in Mental Retardation, 26*(3): 305–318.

Based on a survey of special educators and parents of children with special needs, this article presents a list of safety concerns across different age groups.

University of Colorado Health Sciences Center School of Nursing. (1995). *Safe at School: Planning for Children with Special Needs.* Denver, CO: University of Colorado, School of Nursing.

A 28-minute videotape and viewer's guide that includes information about planning for the safety of children with special needs by using a systematic process of assessing risk factors and implementing intervention strategies. Available for purchase or rental from Learner Managed Designs, Inc., P.O. Box 3067, Lawrence, KS, 66046. ☎ 913.842.9088. Order number 1801.

Violence

Kachur, SP, Stennies, GM, Powell, KE, Modzeleski, W, Stephens, R, et al. (1996). School-associated violent deaths in the United States, 1992–1994. *JAMA, 275*(22): 1729–1733.

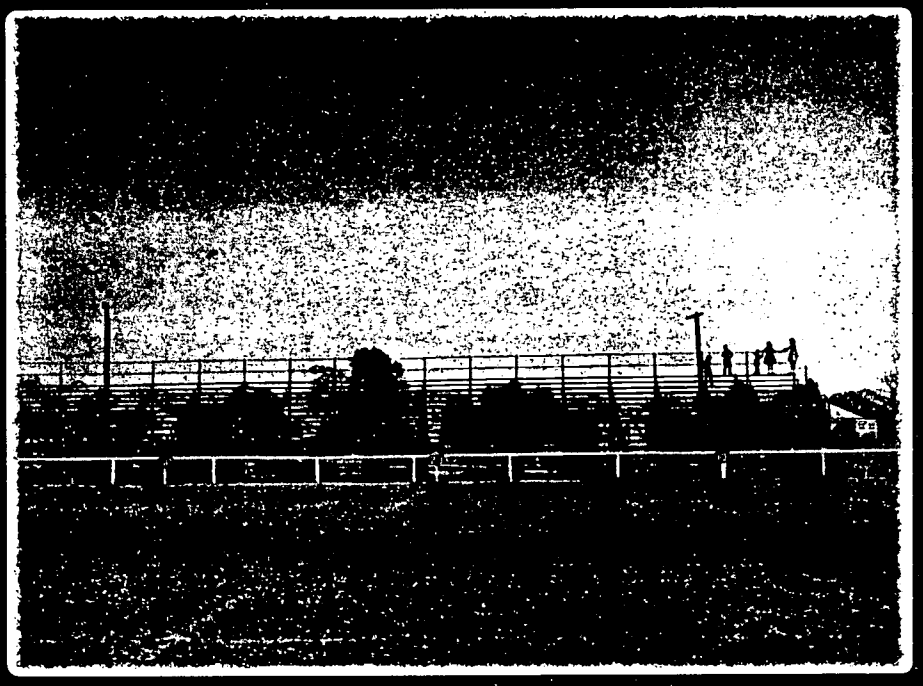
Examines 105 school-associated violent deaths, identified through news accounts, police reports, medical examiner records, and interviews with school officials; 77 percent of the deaths were attributable to firearms.

Metropolitan Life Insurance. (1993). *The Metropolitan Life Survey of the American Teacher, 1993: Violence in America's Public Schools.* New York: Metropolitan Life Insurance Company.

A national survey found that despite media attention to crime and violence in schools, the large majority of teachers and students feel safe and have not been personally involved in a violent incident. Students see and fear violence more than teachers do; law enforcement officials express the highest levels of concern about violence in public schools.

National School Safety Center. (1990). *School Safety Check Book.* Malibu, CA: Pepperdine University.

Covers school climate and discipline, attendance, personal safety, and school security. Prevention and response strategies and assessment surveys for each of these topics are included.



Children's Safety Network

ildren's Safety Network National Injury and Violence Prevention Resource Center
Education Development Center, Inc.

U.S.Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Maternal & Child Health Bureau

Funded by the Maternal and Child Health Bureau, Health Resources & Services Administration
U.S. Department of Health and Human Services

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
Educational Resources Information Center (ERIC)

REPRODUCTION RELEASE

(Specific Document)

UD031787

I. DOCUMENT IDENTIFICATION:

Title: INJURIES IN THE SCHOOL ENVIRONMENT: A RESOURCE GUIDE 2ND EDITION	
Author(s): Children's Safety Network	
Corporate Source: Education Development Center, Inc. Newton, Massachusetts	Publication Date: April 1997

II. REPRODUCTION RELEASE:

In order to disseminate as widely as possible timely and significant materials of interest to the educational community, documents announced in the monthly abstract journal of the ERIC system, *Resources in Education* (RIE), are usually made available to users in microfiche, reproduced paper copy, and electronic/optical media, and sold through the ERIC Document Reproduction Service (EDRS) or other ERIC vendors. Credit is given to the source of each document, and, if reproduction release is granted, one of the following notices is affixed to the document.

If permission is granted to reproduce and disseminate the identified document, please CHECK ONE of the following two options and sign at the bottom of the page.

	The sample sticker shown below will be affixed to all Level 1 documents	The sample sticker shown below will be affixed to all Level 2 documents	
☒ Check here For Level 1 Release: Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical) *and* paper copy.	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY Sample TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)	☐ Check here For Level 2 Release: Permitting reproduction in microfiche (4" x 6" film) or other ERIC archival media (e.g., electronic or optical), but *not* in paper copy.
	Level 1	Level 2	

Documents will be processed as indicated provided reproduction quality permits. If permission to reproduce is granted, but neither box is checked, documents will be processed at Level 1.

"I hereby grant to the Educational Resources Information Center (ERIC) nonexclusive permission to reproduce and disseminate this document as indicated above. Reproduction from the ERIC microfiche or electronic/optical media by persons other than ERIC employees and its system contractors requires permission from the copyright holder. Exception is made for non-profit reproduction by libraries and other service agencies to satisfy information needs of educators in response to discrete inquiries."

Sign here→ please		
Signature: Anara Guard	Printed Name/Position/Title: ANARA GUARD LIBRARIAN	
Organization/Address: EDC 55 Chapel St. Newton MA 02158-1060	Telephone: 617-969-7100	FAX: 617-527-4096
	E-Mail Address: CSN@EDC.ORG	Date: 5/22/97

(over)

III. DOCUMENT AVAILABILITY INFORMATION (FROM NON-ERIC SOURCE):

If permission to reproduce is not granted to ERIC, *or*, if you wish ERIC to cite the availability of the document from another source, please provide the following information regarding the availability of the document. (ERIC will not announce a document unless it is publicly available, and a dependable source can be specified. Contributors should also be aware that ERIC selection criteria are significantly more stringent for documents that cannot be made available through EDRS.)

Publisher/Distributor:
Address:
Price:

IV. REFERRAL OF ERIC TO COPYRIGHT/REPRODUCTION RIGHTS HOLDER:

If the right to grant reproduction release is held by someone other than the addressee, please provide the appropriate name and address:

Name:
Address:

V. WHERE TO SEND THIS FORM:

Send this form to the following ERIC Clearinghouse:

ERIC Clearinghouse on Urban Education
Box 40, Teachers College
Columbia University
New York, NY 10027

However, if solicited by the ERIC Facility, or if making an unsolicited contribution to ERIC, return this form (and the document being contributed) to: