Injury Prevention and Control in Children

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Injury is the number one cause of death and life-years lost for children. In children, injury mortality is greater than childhood mortality from all other causes combined. Modern injury prevention and control seeks to prevent and limit or control injuries through the 4 Es of injury prevention: engineering, enforcement, education, and economics. Emergency physicians are often placed in a critical role in the lives of individuals, are respected authorities on the health and safety of children and adults, and have daily exposure to high-risk populations. This gives emergency physicians a unique perspective and an opportunity to take an active role in injury control and prevention. Specific methods or strategies for promulgating injury prevention and control in our emergency medicine practices are suggested, ranging from education (for our patients and health professionals); screening and intervention for domestic violence, child maltreatment, drug-alcohol dependency and abuse; data collection; reporting unsafe products; research; legislation; serving in regulatory and governmental agencies; emergency medical services–community involvement; and violence prevention. Emergency physicians can play a significant role in decreasing pediatric injury and its concomitant morbidity and mortality.

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INTRODUCTION

> "The toll that injury takes is enormous. It extends well beyond the victims themselves, to their families, their community, employers, and our economy; including all aspects of the United States health care system."[1]—Larry Bedard, MD, Past President, American College of Emergency Physicians

On an annual basis, 1 in 4 Americans is affected by injury.[2] In persons younger than 44 years old, injury is the lead-

ing cause of death and the leading cause of life-years lost.[2,3] For each injury-related death, another 19 additional injured people are hospitalized.[2,4] Over one third (35%) of all emergency department visits and about 10% of all physician office visits are because of injuries.[5] On an annual basis, in the United States, injury is responsible for 90,000 unintentional deaths, more than 20,000 homicides, and approximately 20,000 suicides.[2,4] Childhood injuries account for 16 million ED visits, 600,000 hospitalizations, and 20,000 deaths per year.[6,7] Deaths in childhood from injuries exceed childhood deaths from all other causes combined.[6-9]

The major causes of unintentional childhood injury are motor vehicle crashes, drowning, burns and scalds, choking, firearms, falls, poisonings, and sports participation.[7] Motor vehicle crashes, which include occupant, bicycle, and pedestrian injuries, are responsible for about half of all childhood injury-related deaths.[6]

Domestic or family violence accounts for a significant amount of morbidity and mortality.[10] In the United States, it is estimated that 2 to 4 million women are battered by their partner each year and that half of all American women have been battered at some time in their lives.[10,11] Children, like women and the elderly, are especially vulnerable. An estimated 2 million children suffer from child maltreatment and neglect, with 169,000 of them being seriously injured or impaired.[12,13]

The economic effect of injury is staggering. It is estimated that the lifetime cost of injuries in 1990 (which include acute care, lost wages, lost productivity, disability, and death) was about $215 billion. This number does not include the physical pain, mental anguish, or emotional distress experienced by the patient or the suffering of their families.

Because emergency physicians are knowledgeable about the health and safety of pediatric and adult patients, frequently play a critical role in the lives of individuals, and interact daily with many individuals, including members of high-risk populations, they have an important and unique perspective and an opportunity to play a key role in injury control and prevention. An understanding of injury as a disease process is essential to integrate injury control and prevention activities into emergency medicine practice and to enumerate the many roles and activities of emergency physicians.

INJURY CONTROL: DEFINITIONS AND METHODOLOGY

Injury control deals with the prevention of injuries, the acute care of the injured patient, and rehabilitation.

Injury prevention refers to the science of injury reduction by means of methodologic review of data, programs, and methods. Although we cannot eliminate every injury, many injuries can be prevented or avoided, and other injuries can be limited or controlled.

Primary prevention seeks to eliminate events that may result in injuries. Secondary prevention measures modify the consequences of such events to either prevent or reduce the severity of an injury once it has occurred.

FOUR Es OF INJURY PREVENTION

Strategies for injury prevention can be organized into the 4 Es of injury prevention: engineering, enforcement, education, and economics. Engineering can decrease or eliminate injuries by modifying environmental or product design.[17,18] Examples include installation of seat belts and air bags in automobiles and sprinkler systems in buildings. Enforcement refers to laws or regulations that modify individual behavior. This includes mandatory helmet use for motorcyclists and mandatory seat belt use. Education is aimed at persuading at-risk individuals to change their behavior. The goal of campaigns against drunk driving are to encourage intoxicated individuals not to drink and drive. Economic strategy for injury prevention creates financial incentives to implement injury control measures. Discounts on insurance for individuals who complete certain programs or coupons for the purchase of bicycle helmets or child safety seats are examples of economic incentives.

MODERN INJURY PREVENTION: HADDON MATRIX

In the past, injuries were attributed to accidents, defined as a random or chance occurrence, and often blamed on individual shortcomings or personal attributes of the accident victim.

Modern injury prevention focuses on injury defined as observable and predictable factors in the events that cause injury and then modifying the environment to decrease or eliminate injuries.

Haddon is credited with applying traditional epidemiologic models similar to those for infectious diseases to the problem of injury.[19,20] The Haddon matrix is important because it provides an analytic scientific approach to injury control and identifies risk factors and options or strategies for preventing or limiting injuries. The Haddon matrix is based on several key principles: (1) injury occurs when energy (eg, mechanical, electrical, chemical) is transferred from an object or objects or the environment to the victim; (2) the goal of injury prevention is to elimi-

nate or lessen this energy transfer, thereby preventing or decreasing the severity of an injury; and (3) injuries occur from an interaction between the host (victim), the causative agent, the vehicle or vector, and the environment.

There are 3 phases to the injury process. In the preevent phase, the conditions causing the energy-producing transfer are set in place. Energy transfer or release occurs in the event phase. The postevent phase refers to happenings or events occurring after energy transfer. The host refers to the victim. The vector or agent is the means (the equipment or vehicle) that transfers the energy. The environment is the condition in which the event occurs and can be subdivided into a physical and sociocultural or socioeconomic environment. An example of a completed Haddon matrix is given in Table 1 for a toddler who falls into a swimming pool.

PEDIATRIC INJURY PROBLEMS

There are many causes of pediatric injury, but motor vehicle crashes account for the highest number of serious injuries and deaths in all pediatric age groups.[7,8] Motor vehicle crashes include occupant, bicycle, and pedestrian injuries. After motor vehicle crashes, the cause of injury-related deaths in all pediatric age groups (in descending order) are as follows: homicides, suicides, drowning, and fire- and burn-related injuries.[7,8] Other causes of pediatric morbidity and mortality from injuries include poisonings, choking, falls, and recreational injuries.[7,8,21] Recreational injuries include injuries occurring with sports activities, such as boating, all-terrain vehicles, snowmobiling, skiing, and football.

CHILD MALTREATMENT

In the United States, more than 3 million cases of child maltreatment and neglect are reported each year, with 169,000 children being seriously injured or impaired and more than 1,000 fatalities.[22-24] In infants and children (<5 years of age), 10% of all injuries seen in the ED are from intentional trauma or child maltreatment.[25] Should these children not be recognized, 35% will be seriously injured again, and another 5% will die from future trauma.[25] Thus, it is important for the emergency physician to recognize and care for these pediatric patients and report these incidents to prevent future serious morbidity and mortality.[22-26]

DOMESTIC VIOLENCE

Injury prevention and control should include screening for victims of domestic violence.[24,27-29] Emergency physicians should do routine screening of women to help prevent, identify, and care for victims of violence. Between 2 and 4 million incidents of domestic violence occur yearly in the United States, with more than 1 million women seeking medical care for injuries caused by battering.[24,27-31]

Domestic violence affects the entire family. Estimates indicate that spousal abuse and child maltreatment occur concurrently 30% to 54% of the time.[29] The children of battered women are also at risk for incidental or deliberate injury themselves during an assault on their mother.[32] They are usually battered by the partner who is responsible for the spousal abuse. Children who live in households where there is domestic violence often observe the abuse. There is often

Table 1.
Example of Haddon matrix for a toddler drowning in a pool.

	Pre-event	Event	Postevent
Host (victim)	Lack of knowledge and comprehension regarding dangerous environment	Physical and structural characteristics of patients immature muscle coordination, limited muscle strength, and inability to surface and climb out of pool	Results of drowning on host (body injury): aspiration, hypoxia, and suffocation
Agent (vector)	Condition of vector and vehicle: pool filled with water (deep); no shallow area; pool not cleaned (particulate debris aspirated)	Design and structure of agent: floating devices in pool (to grab on to)	Results of fall into pool: traumatic injuries from fall into pool (fractures, head injury, and bleeding)
Environment: physical (injury scene)	Hazards present: wet, slippery on edge of pool; no pool fencing; if fence, no lock on gate	Environmental designs: no shallow end, no stairs, no side rails to grab on to (pool visibility near house-motel lobby-walkway)	Method (means of response): 911, lights, visibility (so victim can be seen and possibly rescued)
Environment: socioeconomic or sociocultural	Programs, legislative: restrictions on hours of use, locked gates	Socioeconomic effect on physical: lifeguards	Response systems: EMS, trauma systems, ED care, rehabilitation

a negative effect on children who are witnesses to spousal abuse in terms of their learning ability and academic performance. Furthermore, children raised in a violent atmosphere frequently have behavioral problems and have an increased likelihood of being a violent adult.[29,32]

VIOLENCE AND VIOLENT INJURIES

The United States has the highest youth homicide and suicide rates among the wealthiest nations in the world.[33] Among teenagers, homicide and suicide are the second and third leading causes of death.[33] For black youth, homicide is the leading cause of death.[33,34] Serious short- and long-term consequences (both physical and emotional) can occur in those children and adolescents who are the victims, witnesses, and perpetrators of violence.[33]

INJURY PREVENTION STRATEGIES

Prevention strategies can take the form of either a passive environmental strategy or an active strategy that requires constant vigilance or a behavioral change. Passive environmental strategies work through the use of a device to prevent injury,[35] such as 4-sided pool fencing or child-proof caps on medications. Examples of active prevention strategies are increased parental supervision or causing a behavioral change, such as getting adolescents to avoid alcohol and drugs, especially when driving. An injury prevention strategy is less likely to be effective when active participation or maintenance is required and vice versa.

Because there are limited resources, determining priorities for implementing injury prevention initiatives is difficult. Factors that influence priorities are the severity and frequency of injury, the strategies being contemplated, and the age groups involved. Examples of pediatric injuries and prevention strategies are given in Table 2.

One example of a very successful injury prevention initiative is the community-based Harlem Hospital program in New York City. The general program included a pediatric injury program,[9,36] which involved reconstruction of playgrounds and establishment of alternate activity programs (eg, dance, art, Little League) for children to replace activities with greater hazards. There was a 15% decrease in major injury admissions, a 12% decrease in ED visits for playground injuries, and a 15% decrease in school playground injuries within 1 year.[9] After 2 years, the decrease in major injuries was 23% from baseline during a time when nontrauma admissions had increased by 28%.[9]

INJURY COUNSELING

The goal of injury prevention counseling is to alert parents and children to unsafe or risky environments and behaviors so that appropriate changes may occur, leading to a decrease in the number of injuries.

Major professional societies and organizations, including the American Academy of Pediatrics, the American Academy of Family Physicians, the US Preventive Services Task Force, and the Canadian Task Force on the Periodic Health Examination,[6] have recommended that age-specific safety counseling should be a part of routine well-child care.

In today's age of decreasing health care resources, is injury prevention counseling by health care professionals effective? The evidence in several different settings strongly suggests that it is effective.[8,37,38] Bass et al[37] studied a

Table 2.
Injury prevention topics and strategies.

Injury Prevention Topic	Prevention Strategy
Alcohol and drug abuse	"Just Say No" educational campaigns, rehabilitation programs
Bicycle safety	Use of helmets (local promotions with rebates or certificates), proper lighting and reflectors, building more bicycle trails
Burn prevention	Stove safety, proper hot water temperatures, smoke detectors, fire escape plans
Child maltreatment and neglect	Warning signs and available hotlines and local resources
Drowning prevention	Pool fencing and proper flotation devices for boating
Gun safety	Statistics of gun-related injury and strategies to limit injuries (ie, gunlocks, separation of ammunition and firearm, locked gun cabinet)
Motor vehicle	Child restraint: age- and weight-determined proper restraint, backseat placement of children, hazards of air bags.
Playground injuries	Proper height and landing materials at local parks and schools
Poison prevention	Poison control center access, poison-proofing home, promoting the use of bittering agents
Suicide prevention	Suicide hotline, availability of counseling and psychiatric resources
Violence prevention	Include spousal abuse and conflict resolution outside of the family, hotlines, and availability of alternate safe housing

suburban pediatric group practice and noted a 15.3% decline in childhood injuries after beginning injury prevention counseling.

Injury prevention counseling should include a discussion regarding a healthy lifestyle and specific injury prevention recommendations. When the child develops an ability to control his or her actions, then counseling should include the child and the parents or caregivers. For example, the dangers of alcohol, drug, or tobacco use and violence avoidance should be discussed with the teenager, as well as with the parents.

The American Academy of Pediatrics has developed The Injury Prevention Program (TIPP), the goal of which is to prevent childhood injuries through safety counseling of parents about various hazards or dangers in a child's environment (Table 3 and Appendix 1). TIPP includes a safety counseling schedule, age-appropriate safety surveys, and age-appropriate safety sheets for families to take home with them (Table 3).[38,39]

In today's cost-conscious society, injury prevention counseling can be cost-effective. Cost-benefit analysis indicates that application of TIPP for children between birth and 4 years of age could save $880 per child or $80 per visit. If all 19.2 million children aged 0 to 4 years completed TIPP, the total annual savings are estimated at $230 million, and injury costs would decrease by $3.4 billion.[40] For each dollar spent on TIPP, the return would be $13.00.

INCORPORATION OF INJURY CONTROL INTO EMERGENCY MEDICINE PRACTICE (TABLE 4)

Involvement in secondary prevention or the postevent in the Haddon matrix

At this time, emergency medicine, as a specialty, has the greatest effect in injury prevention in the postevent arena (ie, caring for the injured in our EDs). When primary injury prevention fails, the child enters the emergency care system.[41] EDs and any clinical setting that evaluates and treats injured children should have the appropriate equipment, resources, and well-trained personnel available to respond to and stabilize a child. Knowledge and skills necessary for the care of the injured child should be reviewed on a routine basis by emergency physicians caring for children.

Assess ED patients for family violence

To help prevent, identify, and care for pediatric (and adult) victims of violence, emergency physicians need to

Table 3.
TIPP safety counseling schedule.

Table available in print only.

become well educated about domestic violence and child maltreatment so they can recognize and screen for these problems. An example of how a physician can integrate violence prevention in a clinical practice[24] is outlined in Table 5.

Assess ED patients for drug-alcohol dependency and abuse

Many patients will accept suggestions and assistance,[37] and this should be provided to them during the physician-patient encounter. Making available a list of drug and alcohol counseling facilities and psychiatry services for patients seen with an alcohol- or drug-related problem might be helpful.

Injury event analysis

Emergency physicians need to assist in data collection efforts and cultivate effective reporting systems to make mechanisms more uniform and user friendly and to explore ways to link trauma registries to other injury databases. E-codes are the codes for external causes of injury.[42] E-codes help recreate a picture of the specific circumstances of an injury by providing data on injury mechanism. Determination and documentation of the circumstances surrounding the injury event by the emergency physician is important so that E-codes can be assigned to ED patients.

Report unsafe products

Emergency physicians should report any unsafe products to eliminate hazardous or dangerous products. The emergency physician may be the first provider to discover that a product could be unsafe. The Consumer Product Safety Commission has a toll-free consumer product safety hotline to report such occurrences (Appendix 1).

Education

Health professionals education. Emergency physicians should promote continuing education on injury prevention topics to help them stay current in injury prevention strategies and to assess patients for family violence and for drug-alcohol dependency and abuse.[24,29] Limited physician involvement may partially be due to a lack of knowledge regarding available resources rather than an actual deficiency of resource materials. Physicians need to be made aware of resources, especially educational materials (Appendixes 1 and 2), available to them.

Patient education. Incorporation of injury control into physician practice can be as simple as having educational materials available in patient rooms and waiting areas and making appropriate referrals to agencies dedicated to injury prevention and control.

Physicians need to educate patients, as well as parents, about age-appropriate injury risks through anticipatory guidance and investigation of incidents to identify the factors that led to the injury. A physician can offer accident-specific counseling that can be done during visits for illness or injury.

Emergency physicians can avail themselves of the American Academy of Pediatrics TIPP.[24,25] Hospital administrations can be encouraged to use public information programs on injury prevention in their advertisements. Mailers can be sent to homes, and advertisements could be placed in newspapers. Other marketing tools, such as posters or covers for children's schoolbooks, could be distributed.

Materials should be available for all pediatric patients and their caregivers that present to the ED, whether the visit is injury related or not. Key places to have this material available are in the waiting and examination rooms

Table 4.
American College of Emergency Physicians policy statement: Role of emergency physicians in the prevention of pediatric injury.[*]

Emergency physicians are specialists who provide emergency care for injured children, can provide important injury prevention information to the family, serve as leaders in injury prevention, and conduct research on injury prevention and control.
Emergency physicians should do the following:

- Provide rapid and appropriate care to injured children.
- Use the ED encounter to provide parents or guardians and children with information necessary to help prevent injuries.
- Serve as an advocate for children in the coordination of emergency or urgent care with out-of-hospital providers, ancillary personnel, and other health care specialists.
- Identify safety risks and strategies to prevent injury.
- Serve as a community resource for information concerning childhood injury prevention and treatment, injury surveillance, product modification, and legislative advocacy.
- Consider the cause of children's injuries as potentially abusive or intentional and intervene appropriately.

[*]Approved by the ACEP Board of Directors, March 1997.

and with discharge instructions. Various sources and modes of information delivery (written materials and TV/VCR- or computer-based materials) should be used to accommodate the education, attention span, and interest range of patients and their parents that present to an ED.

Support emergency medical services in injury prevention

Emergency physicians should support and promote out-of-hospital emergency medical services (EMS) providers as a valuable resource for injury prevention.[43,44] EMS personnel could function as leaders, in conjunction with other organized services, in spearheading injury prevention efforts in a community.[45] Areas of injury control include the protection of individual EMS providers from injury, providing education to EMS providers in the fundamentals of primary injury prevention, and participation in the data collection process.

Support legislation for injury prevention and control

Emergency physicians should support legislation that has a positive effect on injury control and prevention. This includes laws on domestic violence, mandatory helmets for bicyclists, child safety caps, driving while intoxicated laws, and requirements for pool fencing. Legislative initiatives, such as funding for bicycle paths (primary prevention) and bicycle helmet laws (secondary prevention), can be quite effective and may have the highest return on dollars invested for injury prevention.

Be involved in the hospital and in community coalitions and serve in regulatory agencies

Emergency physicians can work to change policies within their institutions in an attempt to incorporate or institutionalize injury prevention education behavior and make it a local priority.[46] Emergency physicians should be active members of a community coalition that provides a mechanism for a multidisciplinary body of community child safety advocates to share resources, expertise, and strategies for prevention.[46] Emergency physicians should serve in local, state, and federal agencies that affect injury control efforts. Emergency physicians should work with other community groups to promote injury control and prevention.

Violence prevention

Emergency physicians can encourage the development and promotion of programs that teach conflict resolution by nonviolent means and focus on positive images of youth, emphasizing their accomplishments, resilience, and nonviolence.

Table 5.
Methods for integrating violence prevention into clinical practice.

Ten steps for physicians

Dialogue

1. Just ask
   - Remember to routinely ask all patients about the presence of violence in their lives.
   - Ask directly. Open-ended questions, such as "at any time, has a partner hit, kicked, or otherwise hurt or frightened you?," are effective and inoffensive.
2. Listen
3. Give therapeutic messages

Documentation

4. Document all injuries
   - Document your findings using direct quotes whenever possible.

Detail safety

5. Patient safety
   - Assess the patient's safety. Is it safe to return home? Are there weapons in the home? If children are in the home, are they in danger? Are the violent episodes escalating in frequency or severity?
6. Refer patient for intervention and help
   - Review all options with the patient. Refer the patient to appropriate agencies.

Determine change

7. Become involved in your community
8. Speak out
9. Advocate
10. Live a violence-free life

Use RADAR—Remember, Ask directly, Document, Assess the patient's safety, and Review all options—when dealing with violence in the ED.

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Research

Emergency physicians need to contribute to the injury prevention research database. Injury control should be a research priority. There has been very little research dealing with injury control or prevention interventions in the ED. However, the limited research so far suggests that ED intervention can have a positive effect and even change the behavior of high-risk individuals.[47] A study of teenagers (age 18 to 19 years) treated in an ED for an alcohol-related event demonstrated a decrease in alcohol use and alcohol-related consequences after the use of a brief motivational interview.[47] At follow-up, adolescents who received the motivational interview had a significantly decreased incidence of, for example, drinking and driving and traffic violations than those who received standard care.[47]

In summary, emergency physicians need to be active members of the injury prevention and control community because they are well positioned to reduce the burden of preventable injuries and their effects on health care costs. Emergency physicians, by increasing patient, family, and provider knowledge of injury control, can contribute to a safer community and enhance the quality of life for all children. Through advocacy and implementation of prevention strategies, the emergency physician can help prevent childhood injury and its consequences, including death. An advocacy role should begin during residency and continue throughout a physician's career.

Many venues are available to the emergency physician for injury prevention and control: (1) educating the public (our patients, their families, and the community); (2) serving as a resource for community groups and governmental agencies; (3) increasing support of out-of-hospital care and EMS activities in injury prevention; (4) working with governmental agencies and advocacy groups; (5) promoting legislative activity; (6) improving and expanding data collection and reporting including E-codes; (7) encouraging research; (8) joining community coalitions; (9) screening and intervention for domestic violence, child maltreatment, and drug and alcohol dependency-abuse; and (10) violence prevention.

Multidisciplinary efforts at injury control have had an effect on decreasing childhood injuries by implementing various prevention strategies. Nevertheless, injury continues to be the leading cause of childhood morbidity and mortality in the United States. Emergency physicians must capitalize on their unique position as respected health care providers who interact daily with the public on an individual basis (often in a critical role) to create a major effect in reducing pediatric injury and its associated morbidity and mortality by incorporating injury prevention and control into our emergency medicine practice.

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APPENDIX 1.

*Organizations and Federal Agencies or Programs Involved With Injury Prevention and Control.**

Organizations

Advocates for Highway and Auto Safety
750 First Street NW, Suite 901
Washington, DC 20001
202-408-1711
Web site: www.saferoads.org

American Academy of Pediatrics
141 Northwest Point Boulevard
Elk Grove Village, IL 60009-1098
847-228-5005
Fax 847-228-5097
E-mail: kidsdoc@aap.org
Web site: www.aap.org

American College of Emergency Physicians
PO Box 619911
Dallas, TX 75261-9911
972-550-0911, 800-798-1822
Fax 972-580-2816
Web site: www.acep.org

American Medical Association
515 North State Street
Chicago, IL 60610-4377
312-464-5000
Fax 312-464-4184
Web site: www.ama-assn.org

Building Safe Communities
Education Development Center, Inc
55 Chapel Street
Newton, MA 02458-1060
617-969-7100
Web site: www.edc.org

Child Welfare League of America
440 First Street NW, Suite 310
Washington, DC 20001
202-638-2952
Web site: www.cwla.org

Children's Safety Network
Web site: www.edc.org/HHD/csn/

Harborview Injury Prevention Resource Center
Web site: www.depts.washington.edu/hiprc/

Injury Control and Emergency Health Services
Section of the American Public Health Association
(ICEHS of APHA)
Web site: www.injury control.com/ICEHS

Injury Prevention Research Center
Web site: www.public-health.uiowa.edu/IPRC/

Mothers Against Drunk Driving–MADD
511 East John Carpenter Freeway, Suite 700
Irving, TX 75062
214-744-6233, 800-GET-MADD
Fax: 972-869-2206
Web site: www.madd.org

National Coalition for Injury Control
E-mail: Injurycontrol@erols.com

National Safe Kids Campaign
1301 Pennsylvania Avenue NW, Suite 1000
Washington, DC 20004-1707
202-662-0600
E-mail: info@safekids.org
Web site: www.safekids.org

National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
630-285-1121
Web site: www.nsc.org

Physicians for A Violence-Free Society
PO Box 35528
Dallas, TX 75235-0528
214-590-8807
E-mail: PVS84@airmail.net.www.pvs.org
Web site: www.pvs.org

Federal Agencies

EMSC National Resource Center
(Deals with the administration of EMSC activities, including grants)
111 Michigan Avenue NW
Washington, DC 20010
202-884-4927
Fax 301-650-8045
E-mail: info@emscnrc.com
Web site: www.ems-c.org

NEDARC (National EMSC Data Analysis and Research Center)
(Deals with EMSC data and research)
The University of Utah
410 Chipeta Way, Suite 222
Salt Lake City, UT 84108
801-581-6410
Fax 801-581-8686
Web site: www.nedarc.med.utah.educ/nedarc.html

Center for Disease Control and Prevention (CDC)
(An agency of the US Public Health Service, USPHS,
within the Department of Health and Human Services)
1600 Clifton Road NE
Atlanta, GA 30333
404-639-3311, 800-311-3435
Fax 888-232-3228
Web site: www.cdc.gov

Agencies within the CDC:

National Center for Injury Prevention and Control (NCIPC)
(This is the injury control agency within the CDC)
4770 Buford Highway NE
Mail Stop K-02
Atlanta, GA 30341
770-488-4696
Web site: www.cdc.gov/ncipc

National Institute for Occupational Safety and Health (NIOSH)
(Deals with workplace injuries)
4676 Columbia Parkway
Cincinnati, OH 45226
800-356-4674
Fax 513-533-8573
Web site: www.cdc.gov/niosh

National Center for Health Statistics
(Provides morbidity and mortality statistics)
6525 Belcrest Road
Hyattsville, MD 20782
301-458-4636
Web site: www.cdc.gov/nchs

Division of Adolescent and School Health (DASH)
(Deals with injuries relating to comprehensive school health)
4770 Buford Highway NE
Mail Stop K-29
Atlanta, GA 30341
770-488-3251

US Consumer Product Safety Commission
(An agency of the General Service Administration; independent federal regulatory agency whose function is to protect the public against unreasonable risks of injury and death associated with consumer products)
Washington, DC 20207
800-638-2772 (hotline), 800-638-CPSC, 301-504-0580
Fax 301-504-0399
Web site: www.cpsc.gov

*This is not an all-inclusive list, but it identifies some of the organizations and federal agencies involved in injury prevention and control.

APPENDIX 2.

American College of Emergency Physicians (ACEP) Policy Statements and Council Resolutions Related to Injury Prevention and Control and Pediatrics (Date Approved by ACEP Board of Directors).

ACEP Policy Statements

Domestic violence: The role of EMS personnel (April 1995)

Emergency Medicine and Domestic Violence (September 1997)

Management of the patient with the complaint of sexual assault (December 1994)

Mandatory reporting of domestic violence to law enforcement and criminal justice agencies (June 1997)

Motor vehicle safety (June 1997)

Poison information and treatment systems (September 1995)

Preparedness of the emergency department for the care of children (October 1993)

Role of the emergency physician in the care of children (January 1996)

Role of the emergency physician in injury prevention and control (March 1998)

Role of the emergency physician in the prevention of pediatric injury (March 1997)

Violence-free society (January 1996)

ACEP Council Resolutions

Consumer product safety (September 1994)

Federal taxes on handguns and handguns ammunition (September 1994)

Firearm legislation (September 1989)

Handgun ownership (October 1993)

Handgun purchase (September 1994)

Handguns (January 1985)

Increased oversight of gun dealers (September 1994)

Possession of firearms (September 1994)

Semiautomatic weapons (September 1989)

Size and safe design requirements (September 1995)

Violence prevention (October 1998)