Foreword

The United States experience: *Injury in America*

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Fifteen years ago the number of public health professionals with a major involvement in injury prevention was so small that our sessions at meetings of the American Public Health Association (APHA) attracted only a handful of members. To keep the room from looking empty, we had to coerce our spouses and friends into coming to our sessions. Today, however, we warn them that they may not find a seat, because our sessions at APHA are now standing room only.

What led to this dramatic shift? More than anything else, a movement we call “Injury in America”, named for a document of that title produced by the Committee on Trauma Research of the National Academy of Sciences and Institute of Medicine.¹

Our committee was formed in 1983 in response to the great disparity between the minimal funding for injury research and prevention and the enormous size of the injury problem:

- Injuries were—and still are—the leading cause of death and disability in the US among children and young adults. Injuries are also a devastating problem for the elderly, whose injury mortality rates exceed those for any other age group.
- Although the number of years of life lost prematurely to injury exceeded the number lost to cancer and heart disease combined, federal funding for injury research was only one 15th the funding for the latter two diseases.

Into this abysmal situation was thrust the Committee on Trauma Research: 16 physicians, engineers, and public health researchers, national leaders who received a mandate to document the magnitude of the injury problem, determine the most needed research, and recommend governmental action to improve our knowledge of and control of injuries.

Our report, *Injury in America* released in 1985, opened with the following statement¹:

Injuries ... destroy the health, lives, and livelihoods of millions of people, yet they receive scant attention, compared with diseases and other hazards.

- Each year, more than 140 000 American die from injuries, and one person in three suffers a nonfatal injury.
- Injury is the last major plague of the young. Injuries kill more Americans aged 1–34 than all diseases combined, and they are the leading cause of death up to the age of 44.

- Injuries cause the loss of more working years of life than all forms of cancer and heart disease combined.
- One of every eight hospital beds is occupied by an injured patient.
- Every year, more than 80 000 people in the United States join the ranks of those with unnecessary, but permanently disabling, injury of the brain or spinal cord.
- Injuries constitute one of our most expensive health problems, costing \$75–\$100 billion a year directly and indirectly, but research on injury receives less than 2 cents out of every federal dollar for research on health problems.

Among the inadequacies documented were not only the paucity of funding, but also:

- The lack of trained manpower.
 - The need for coordination among specialists in five areas: epidemiology, prevention, biomechanics, treatment, and rehabilitation, and
 - The fact that no central agency had responsibility for reducing the incidence of injuries.
- The last deficiency presented the committee with its greatest challenge: identification of a governmental body that would give visibility to this largely ignored public health problem and develop a coordinated program to effectively address the problem.

After considering a number of possible federal agencies as a potential home for a center, the committee recommended the establishment of a center for injury control within the Centers for Disease Control (CDC), a branch of the federal Department of Health and Human Services. CDC was chosen because of its traditional mission: to prevent disease, disability, and premature death through interdisciplinary research and prevention efforts and the dissemination of information.

The committee's report, *Injury in America*, was widely disseminated and publicized by the national media. Setting forth what was most urgently needed in each of the five designated areas, the report caught the attention of national columnists and of the public health community.

Early results

With crucial support in Congress, led by Congressman William Lehman, the government promptly (!) appropriated \$10 million, attached to a transportation funding bill, and

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channeled this to the Department of Health and Human Services. CDC quickly initiated a request for proposals for multidisciplinary, university based injury centers and for research grants. In response, 420 proposals were submitted in 1986—the largest response to a request for proposals in the history of CDC. Five centers and 31 research projects were funded, at a total of \$8 million per year for three years.

The infusion of federal funding into a previously “dry” area had the effect of attracting to the field new researchers, many of whom had previously been interested in injuries and recognized their importance but had been working in areas where there was a better chance of funding. By 1991, five years after the beginning of the program, 400 participants came to a national consensus conference to help develop an agenda for injury control activities in the 1990s.

The emphasis on interdisciplinary efforts also had a noticeable effect. The first centers were required to represent all five areas of epidemiology, prevention, biomechanics, acute care, and rehabilitation. Our center at the Johns Hopkins School of Public Health, in the first group to be funded, had the advantage of a pre-existing program with a number of faculty members working together on injury related problems in the areas of epidemiology and prevention. We also had collaborative projects with pediatric trauma surgeons. To qualify for funding, we developed projects in consort with rehabilitation experts, the Department of Bioengineering at the School of Medicine, and the School of Engineering, efforts that have borne fruit over the years.

Although funding was not provided for teaching and training, the Johns Hopkins Injury Prevention Center took as our primary mission the training of injury control professionals. Many came for doctoral degrees, as Johns Hopkins was the only institution to offer a wide range of courses related to injury control. Scores applied each year for our Summer Institute in Injury Prevention, which responded to the need to quickly give training to people in state health departments, which

suddenly found that they were expected to include injury control in their missions.

CDC also took on the job of coordinating injury control efforts in a variety of federal agencies that sponsored some research—typically quite limited—related to injury. Table 1 describes the early (1988) interagency activities. An advisory committee for the injury program at CDC was established shortly thereafter and included representatives from these and other agencies; the advisory committee has helped to define objectives, set priorities, and spur needed research.

A new federal center

As the injury program grew at CDC, it approached the critical mass for a new center to be established. In 1992, CDC's programs in unintentional injury, violence, and injury related acute care and rehabilitation were combined in the new National Center for Injury Prevention and Control (NCIPC). There are now 10 injury control research centers and a total of 137 investigator initiated research projects that have been funded, at a total cost during the past 11 years of almost \$134 million. The NCIPC also conducts intramural research and works closely with injury programs in state health departments.

In addition....

While the direct funding from CDC has been enormously beneficial, of equal benefit has been the stimulus for work funded by other agencies and private foundations. Much of the research at the injury control research centers is supported by these other means, but the stimulus provided by CDC and by the positive atmosphere generated by *Injury in America* cannot be over estimated. This atmosphere is reflected in multidisciplinary multicenter research, widespread educational activities, community based activities, and media attention to the injury problem.

It is hard to convey the tremendous impact of *Injury in America*. The explosion in numbers of scientists addressing the injury problem, the increased funding from many sources, the bur-

Table 1 Interagency activities in the federal government involving the CDC's Division of Injury Epidemiology and Control, three years after program initiation

Department	Agency	Activity
Transportation Health and Human Services	National Highway Traffic Safety Administration	Major financing source and collaboration in grant awards
	National Institute on Aging	Regular informal exchange of information on falls in the elderly
	National Institute of Child Health and Human Development	Collaborative review of five year research plan
	National Institute of General Medical Sciences	Regular communication; representative spent two weeks at CDC
	Indian Health Service	Interagency agreement on surveillance and control in service areas
	Health Resources and Services Administration (Office of Maternal and Child Health)	Joint conferences; collaboration on a book on injury prevention for practitioners
	National Institute of Mental Hygiene	Information exchange on suicide research efforts; jointly organized youth suicide task force and workshops
	National Institute for Occupational Safety and Health	Assistance in grant review process; coordination of occupational injury projects
	National Institute on Alcohol Abuse and Alcoholism	Collaborative monitoring of research on alcoholism and family injuries
Defense	Army	Informal exchange of information on trainee fractures
	Air Force	Informal exchange of information on fall injuries
Education	National Institute on Disability and Rehabilitation Research	Support of database development at a NIDRR rehabilitation and training center
Independent	Consumer Product Safety Commission	Information exchange and exploration of use and expansion of databases

geoning number of papers being published in the top journals, the interest in advocacy for injury prevention through legislative efforts and safer products—all of these reflect a movement that could scarcely have been envisioned 15 years ago.

Injuries are no longer accepted by most people as inevitable. As the results of our research are increasingly applied to effective interventions, we are optimistic, to an extent that was

not possible two decades ago, that we will witness continued decreases in the toll taken by injury in America. My hopes are that *Action on Injury: Setting the Agenda for Children and Young People in the UK* will have equally impressive results.

- 1 Committee on Trauma Research, Commission on Life Sciences, National Research Council and Institute of Medicine. *Injury in America: a continuing public health problem*. Washington, DC: National Academic Press, 1985.