

MDCH Childhood & Unintentional Injury Prevention Program

The development of injury prevention capacity within the Michigan Department of Community Health has grown in response to recognition at both state and national levels that injury is a public health problem. The Childhood & Unintentional Injury Prevention Section was established in the late 1980s and is responsible for reducing morbidity, mortality and risk behaviors related to unintentional injuries.

The section provides leadership, training, public education, funding support and technical assistance for the development, implementation and evaluation of community-based primary prevention programs and surveillance related to the leading causes of childhood and unintentional injuries. Section staff also serve on various state, regional and national committees to provide consultation and facilitate cooperation among agencies to foster focused support for policies and programs designed to reduce the impact of injuries in the state. In addition, section staff are responsible for developing research grant proposals, conducting data analysis and writing scientific articles and reports based upon the research findings resulting from surveillance and community projects.

Injuries as a Public Health Problem

One fourth of Michigan's citizens sustain an injury each year. Injuries are the fifth leading cause of death in the state, exceeded only by heart disease, cancer, stroke and pulmonary disease. Although injuries affect persons of all ages, 80% occur to people under the age of 45 years. As a result, injuries are the leading cause of premature death. There are, on average, 36 years of life lost per injury death, many more than those resulting from heart disease and cancer, which generally afflict an older population. Although the greatest cost of injury is in human suffering and loss, the actual dollar cost of injury nationally is estimated at more than \$224 billion, an increase of 42% in the last decade. These costs include direct medical care and rehabilitation costs as well as lost wages of the individual and productivity losses to the nation. Public sources (federal, state and local) pay about 28% of the cost of injuries while private sources (e.g., insurance) pay about 72%. The federal government alone pays about \$12.6 billion annually in medical costs and \$18.4 billion in disability and death benefits.

Most of these injuries are due to motor vehicle crashes, falls, fires, drowning, bicycle crashes, firearm discharges, sporting-related incidents and poisoning. The good news is that these injuries are preventable through increased use of safety equipment, environmental modification and behavior changes. It has been proven that injuries are not accidents. Injuries occur in patterns and risk factors can be identified. And, just as for chronic and infectious diseases, effective prevention strategies do exist.

The most effective, but costly, prevention measures provide automatic protection without any action or behavior change required on behalf of an individual. Such passive protection includes air bags to cushion the blow during a motor vehicle crash, automatic sprinkler systems to extinguish house fires and childproof lids on medications to prevent poisoning. This mode of prevention is achieved through technological modification of a product or the environment. Other prevention strategies are less costly, however they require some effort on the part of the individual to be effective during an injury-producing situation. Examples of this type of protection include use of safety belts, child safety seats, bicycle helmets, trigger locks for guns and other protective equipment. Policies and laws are also effective mechanisms of prevention which encompass large groups of people and require a certain behavior (safety belt use) or use of safety equipment (installation of smoke detectors in all new construction).

The health care costs of injuries are high and the payoffs of prevention are great. Correct use of a child safety seat reduces a child's chances of being killed in a motor vehicle crash by 70%. According to the Children's Safety Network, for children 0-4, every \$45 child safety seat saves \$85 in medical costs. Bicycle helmets prevent 52-60% of bike-related injury deaths and each dollar spent on bike helmets saves society \$30. The chances of dying in a residential fire are cut in half when a working smoke detector is present and every dollar spent on smoke detectors saves society approximately \$62. These are just a few examples of how a small investment in prevention can save lives and reduce health care costs.