# Category:
# UNINTENTIONAL INJURY

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

**GOAL 7:** Reduce the behavioral and environmental health risks that are primary contributors to unintentional injury.

# CATEGORY: UNINTENTIONAL INJURY

In Minnesota, injury causes more deaths among children and young people than does disease. Unintentional injury was the single greatest killer of Minnesotans between the ages of one and 34 in the decade of the 90s, accounting for about one-fourth of all deaths. Furthermore, unintentional injury continues to be among the leading causes of death throughout the lifetime.

In addition to those who die, many additional Minnesotans are affected by unintentional injuries, sometimes for many years. They seek medical attention, are unable to perform normal activities, or are permanently disabled as a result of injury. Injuries from falls, being struck by or against something, poisonings, and motor vehicle crashes accounted for about 60 percent of all emergency room visits in Minnesota during 1999.

Different racial and ethnic groups are affected differently by injury. The rate of death from unintentional injuries is three times greater for American Indians and two times greater for African Americans that it is for whites.

The good news is that injuries are preventable. Multifaceted prevention strategies are the most effective. Successful injury prevention strategies focus on environmental risks, product design, human behavior, education, and legislative and regulatory requirements that support environmental and behavioral change. Many things can be improved in a community to minimize injury, such as traffic calming measures, installing sidewalks and crosswalks, and having purpose-built play and leisure areas constructed. Political lobbying and advocacy can bring about some changes in neighborhoods to increase the safety and livability of them. Community efforts to clean up vacant lots and debris can also help keep residents, particularly children, safe from injury. Policies that provide grants for adaptations in homes with elderly residents or children can minimize falls and poisonings.

For information on prevention of other kinds of unintentional injuries, see the web-based MDH publication, “Click Your Way to the Best Practices in Injury Prevention.” For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on “Injury”. In addition to topics covered in the Violence and Unintentional Injuries sections of this document, “Click Your Way” includes data and prevention recommendations on a variety of topics. Unintentional injury topics include motor vehicle crashes.

## CATEGORY: Unintentional Injury

# TOPIC: BICYCLE INJURY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

| | Governmental Public Health Agencies | Health Plans | Hospitals & Clinics | Educational Systems | Community-based Organizations | Businesses/ Work Sites | Other |
|---|---|---|---|---|---|---|---|
| Promote and offer incentives for bicycle helmet use among parents and children. Distribute helmets. | State and Local | U | U | U | | U | Insurance companies; Minnesota Department of Public Safety and local law enforcement |
| Teach bike safety in schools and communities. | State and Local | | | U | | U | |
| Teach motor vehicle drivers to watch for and be aware of bicyclists. | State and Local | | | U | | U | Insurance companies |
| Enforce traffic laws for bicyclists. | State and Local | | | | | | Minnesota Department of Public Safety and local law enforcement |
| Collect and analyze data and support new prevention efforts. | State and Local | U | U | | | | |

Bicycle safety can be promoted and bicycle-related injuries can be prevented through many strategies. See also "*Click Your Way to the Best Practices for Injury Prevention,*" a part of the MDH's Injury and Violence Prevention Unit website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".

**The Problem:**
In Minnesota, nearly 5,000 people are treated each year in hospitals or emergency departments for bicycle injuries, according to data from the MDH. Nearly 500 of them were injured in crashes involving bicycles and motor vehicles. In 1995, five people died in bicycle crashes in Minnesota while in 2000, 14 people died in similar events. Bike crashes in Minnesota cost, on average, more than $49,000 each, when one accounts for the costs of hospitalization, lost productivity and pain and suffering.

Nationally, 567,000 people were injured on bicycles and 813 died in 1997. Young people were particularly affected: two-thirds of the injuries and 31 percent of the deaths were children or youth under 16. For additional data, see: http://www.cdc.gov/ncipc/factsheets/bikehel.htm; www.safekids.org. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".

National data show that in the event of a crash, wearing a bicycle helmet reduces the risk of brain injury by at least 85 percent. If each rider wore a helmet, an estimated 500 bicycle-related fatalities and 151,000 nonfatal head injuries would be prevented each year; this amounts to one death per day and one injury every four minutes.

The most successful programs to increase helmet use combine education with helmet giveaways or discount programs and state or local legislation requiring helmet use. Some evidence suggests that legislative efforts are more cost-effective than school or community-based programs.

Promising strategies for which research is not conclusive include peer education and counseling by physicians. For other strategies, see: *National Strategies for Advancing Bicycle Safety - National Highway Safety Administrations* http://www.cdc.gov/ncipc/bike/call to action.htm.

## Strategy: Promote and offer incentives for bicycle helmet use among parents and children. Distribute helmets.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | ✔ | ✔ | |
| Secondary | | | |
| Tertiary | | | |

**Background:**
This strategy promotes institutional change among health plans, caregivers, community health organizations, and local public health practitioners. It affects the system and community levels and may be measured or evaluated at system, community and individual levels. At the system and community levels, we can survey to ascertain changes in policy and practice regarding support for helmet distribution.

For example, is age-appropriate counseling by primary care providers being provided in the community? At the individual level, we can continue to conduct observational studies to measure helmet wearing. The net effect of implementing this strategy is to shift community norms regarding helmet use.

Public health agencies may use their Maternal Child Health Special Project (MCHSP) grants or CHS funding to support bicycle helmet programs. Some insurance companies also offer subsidized helmets. Other funding can be obtained through local service organizations, such as, Kiwanis or donations by retailers.

**Additional resources:**
Bibliographic resources:

- American Academy of Pediatrics. 1997. *Injury Prevention and Control for Children and Youth.* Elk Grove, IL: Widome, M. (Ed.).
- Centers for Disease Control. 1990. Childhood injuries in the United States. *American Journal of the Diseases of Children*, Volume144.
- Dannenberg, AL, et al. 1993. Bicycle helmet laws and educational campaigns: An evaluation of strategies to increase children's helmet use. *American Journal of Public Health* 83 (5):667-674.
- Farley C., et al. 1996. The effects of a 4-year program promoting bicycle helmet use among children in Quebec, *American Journal of Public Health* 86(1):46-51.
- National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* Oxford: New York.
- National Highway Safety Administration. *National Strategies for Advancing Bicycle Safety*, available at: http://www.cdc.gov/ncipc/bike/call to action.htm.
- Otis, J., et al. Predicting and reinforcing children's intentions to wear protective helmets while bicycling. *Public Health Reports* 107 (3):283-289.
- Rivara FP., et al. 1994. The Seattle children's bicycle helmet campaign: Changes in helmet use and head injury admissions. *Pediatrics* 93(4):567-569.

Organizational resources:

- Bike Helmet Safety Institute at: http://www.bhsi.org/.
- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on " Bicycle Injury".
- State Bicycle Advisory Committee at: http://www.dot.state.mn.us/sbac/.

**Evidence for strategy:**
National data show that wearing a bicycle helmet reduces the risk of brain injuries, fatalities, and nonfatal head injuries from bicycle crashes. In addition, there is evidence to support the use of incentives is successful in establishing initial helmet use, although sustaining helmet use over time appears to be more difficult.

**Has this strategy been implemented in Minnesota?**
Yes, between 1994 and 1997, approximately 15 Minnesota communities participated in a comprehensive helmet promotion and observation campaign. Helmet use increased in each of the communities, although by differing levels, dependent upon age group.

**Indicators for this strategy:**
- Number and type of incentives offered.
- Change in parental behaviors.
- Number of helmets distributed.
- Observational studies to measure number of helmets being worn.

**For more information contact:**
Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

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## Strategy: Teach bike safety in schools and communities.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | | ✔ | |
| Secondary | | | |
| Tertiary | | | |

**Background:**
The purpose of this strategy is to suggest alternative ways to reach people, particularly pre-school and elementary-aged school children; with the information and skills they need for the safe operation of bicycles. Law enforcement staffs are particularly well equipped to conduct bicycle safety training sessions at schools, city halls, police departments, or parking lots. In addition, staff members from bicycle repair shops may assist in offering equipment checks.

**Additional resources:**
- Bike Helmet Safety Institute, at http://www.bhsi.org/.
- National Bicycle Safety Network, at www.cdc.gov/ncipc/bike.
- SafeKids Campaign, at www.safekids.org.

**Evidence for strategy:**
Evidence exists to suggest that bike safety can be taught and learned in school and community settings.

**Has this strategy been implemented in Minnesota?**
Yes, many school districts invite local law enforcement and members of the state patrol to teach bike safety in the classrooms and to assist with bike safety rodeos.

**Indicators for this strategy:**
- Number of classes taught by location and group.
- Change in parental behaviors.
- Number of helmets observed being worn in communities.

**For more information contact:**
- Robert W. Fischer, at (651) 582-8873, MN Department of Children, Families and Learning.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

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## Strategy: Teach motor vehicle drivers to watch for and be aware of bicyclists.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | ✔ | | ✔ |
| Secondary | | | |
| Tertiary | | | |

**Background:**
This strategy enhances and promotes the education of new and current motor vehicle drivers, to make them more aware of and responsive to bicyclists sharing the roadway with them. Along with the system changes

supporting education, individuals will need to be taught and will need to exhibit new learned behaviors in the operation of their motor vehicles.

**Additional resources:**

- Children's Safety Network, Education Development Center, at (617) 969-7100, provides materials and curricula for education.
- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".
- Minnesota Department of Public Safety, Office of Traffic Safety, at http://www.dps.state.mn.us/trafsafe/00crashfacts/2000crashhome.html.

**Evidence for strategy:**
This strategy is still being evaluated.

**Has this strategy been implemented in Minnesota?**
Yes, this strategy has been implemented in several communities, but not uniformly across the state.

**Indicators for this strategy:**

- Number of driving education companies and instructors incorporating bicycle safety in their classroom and behind-the-wheel instruction.
- Percentage of students who answer classroom questions correctly and who respond correctly to situations in the field.

**For more information contact:**

- Sharon Johnson, at (651) 215-9092, Department of Public Safety, Office of Traffic Safety.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

## Strategy: Enforce traffic laws for bicyclists.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | ✔ | ✔ | |
| Secondary | | | |
| Tertiary | | | |

**Background:**
The purpose of this strategy is to empower state and local law enforcement officials to enforce existing traffic laws as they currently apply to bicyclists.

**Additional resources:**
Bibliographic resource:

- U.S. Department of Health and Human Services. 1991. *Setting the National Agenda for Injury Control in the 1990's.* Public Health Service, Centers for Disease Control and Prevention.

Organizational resources:

- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".
- Minnesota Department of Public Safety, Office of Traffic Safety at: http://www.dps.state.mn.us/trafsafe/00crashfacts/2000crashhome.html.
- Minnesota Department of Public Safety, State Patrol at: http://www.dps.state.mn.us/statepatrol/htm.

**Evidence for strategy:**
This strategy is still being evaluated.

**Has this strategy been implemented in Minnesota?**
Yes, but only episodically and not uniformly.

**Indicators for this strategy:**
- Number of citations issued to cyclists.
- Knowledge of cyclists about correct cycling behavior.

**For more information contact:**
Sharon Johnson, at (651) 215-9092, Department of Public Safety, Office of Traffic Safety.

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## Strategy: Collect and analyze data and support new prevention efforts.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | ✔ | ✔ | |
| Secondary | ✔ | ✔ | |
| Tertiary | | | |

**Background:**
Quality data are necessary to determine the effectiveness of programs and to guide new prevention efforts. The purpose of this strategy is to provide data collection and analysis systems that will provide necessary information. Both qualitative and quantitative techniques can yield appropriate information.

**Additional resources:**
Bibliographic resource:
- Thompson, NJ., and McClintock, HO. 2000. *Demonstrating Your Program's Worth: A Primer on Evaluation for Programs to Prevent Unintentional Injury.* Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Organizational resource:
- Minnesota Department of Health, Injury and Violence Prevention Unit. Other sources of bicycle injury data include death certificates, hospital e-codes, trauma registries, the Department of Public Safety, Office of Traffic Safety, and BRFSS (Behavioral Risk Factor Surveillance System) data. Most of this data can be obtained from the MDH Injury and Violence Prevention Unit, at (651) 281-9857, the MDH Center for Health Statistics, at (651) 296-3036, or the Department of Public Safety, at (651) 215-9092.

**Evidence for strategy:**
Data collection and analyses create a foundation for solid public health planning, decision-making, and resource allocation.

**Has this strategy been implemented in Minnesota?**
Yes, data collection and program evaluation are integral activities at the MDH. The data on the mortality and morbidity of bike-related injury have been used to a small degree to make program decisions at the state and local levels across Minnesota.

**Indicators for this strategy:**
- Data systems expanded and supported at the state and local levels.
- Programs designed based on the data collected.
- Decisions made regarding injury prevention resources based on the data collected.

**For more information contact:**
Mark Kinde, at (651) 281-9832,
mark.kinde@health.state.mn.us, MDH
Injury and Violence Prevention Unit.

## CATEGORY: Unintentional Injury

# TOPIC: FIRES, FALLS AND OTHER HOME HAZARDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

| | Governmental Public Health Agencies | Health Plans | Hospitals & Clinics | Educational Systems | Community-based Organizations | Businesses/ Work Sites | Other |
|---|---|---|---|---|---|---|---|
| Conduct home visits to assess the home environment for the risks of falls and other home hazards. | ✔ | ✔ | ✔ | ✔ | ✔ | | Insurance Companies, MN Department of Human Services (DHS) |
| Conduct home visits to assess presence, distribute, install, and maintain smoke alarms. | ✔ | ✔ | ✔ | ✔ | ✔ | | Insurance Companies, (DHS) |
| Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies. | ✔ | ✔ | ✔ | | ✔ | ✔ | Day care, Head Start, Social Services, Insurance Companies, DHS, Retailers |
| Provide academic instruction on injury prevention and control. | ✔ | | ✔ | ✔ | ✔ | ✔ | Insurance Companies, DHS |
| Provide age-appropriate and culturally sensitive counseling by primary care providers. | ✔ | ✔ | ✔ | | | | |
| Collect and analyze data and support new fire prevention efforts. | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | Insurance Companies, DHS |
| Offer fire safety education following a burn or a visit to the emergency department. | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | Fire departments |

| | Governmental Public Health Agencies | Health Plans | Hospitals & Clinics | Educational Systems | Community-based Organizations | Businesses/ Work Sites | Other |
|---|---|---|---|---|---|---|---|
| Provide instruction and public education on fire safety and burn injury care. | | ✔ | ✔ | ✔ | ✔ | ✔ | |
| Enforce current smoke alarm legislation. | ✔ | | | | | | Public safety agencies |

Home hazards affect people of all ages, but especially the very young and very old. The strategies presented here specifically target fires, falls and other home hazards such as drowning, suffocation, and poisoning. The focus for all home injury prevention strategies is on the identification and correction of hazards in the home and on the promotion of safe behaviors. For additional information, see the strategies in the *Alcohol, Tobacco and Other Drugs*; *Decreased Independence/ Disability*; and *Mental Health* categories, and "*Click Your Way to the Best Practices for Injury Prevention,*" a part of the MDH's Injury and Violence Prevention Unit website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Injury".

**Fires:**
Fires cause many home injuries and deaths. Great strides have been made in reducing residential fire-related deaths. In 1999, 60 Minnesotans died, and 849 suffered fire-related injuries that were treated in hospital emergency departments. In 2001, 46 fire deaths were reported to the Minnesota Department of Public Safety. Death rates due to fire continue to decline, despite an increase in state population. Most, 76 percent of the state's fire deaths and 73 percent of injuries occurred in residential dwellings in 1990-1999.[1]

Risky behavior near flammable materials causes most residential fires in Minnesota. Examples include wearing loose clothing when cooking, smoking carelessly, using malfunctioning heating systems, and negligently using flammable liquids. In many of the smoking fire deaths, people were using alcohol or other drugs.

Those most at risk live in older homes built under less-stringent code requirements. Requiring smoke alarms has helped people escape from dangerous situations. In Minnesota, children under age 15 and adults aged 55 and above are particularly vulnerable to fire-related death and injury. Education, engineering, and enforcement have been recommended as successful strategies in a national symposium on fire safety, "Solutions 2000."[2] It is clear from the causes of fire-related death and injury such as careless smoking, inability to escape, and not knowing how to react in a fire, that education programs are essential. Smoke alarms in homes and sprinkler systems in hotels, motels, schools, health care and day care facilities are highly successful prevention strategies.

**Falls:**
Young children and older adults are particularly vulnerable to falls in the home. Although many people identify falls primarily as a risk for the elderly, falls were the most common cause of hospitalized injuries for all adults age 30 and over from 1990-99.

Specifically among elderly people, about one-third of all Americans have fallen, and

[1] *Fire in Minnesota 2000* and data from the State Fire Marshal Division, Department of Public Safety

[2] United States Fire Administration. (April, 1999). *Solutions 2000, Advocating Shared Responsibilities for Improved Fire Protection*. TriData Corporation, Arlington, VA.

most fall at home. Environmental conditions, slippery surfaces, uneven floors, poor lighting, loose rugs, unstable furniture, and tripping hazards all contribute to these falls. Environmental modifications (e.g., installing grab bars and removing tripping hazards) can prevent fall injuries.

Personal strategies to prevent falls include: regularly exercising to improve strength and balance, having a health care provider review all medications to ensure correct dose and possible interactions and having vision checked.

Also, clothing can also contribute to falls and injuries. Wearing well-fitting shoes with low or flat heels provides sturdy footing. Repairing torn or loose hems, and removing loose cords or belts, will help prevent tripping. Thin slippers with treads will help provide stability, by providing friction and allowing the wearer to feel the floor.

**Other Home Hazards:**
Just under half (48 percent) of the unintentional injury deaths of Minnesota children aged four years and younger occur in the home. In the decade of the 1990's, the leading causes of those deaths were fire, falls, drowning, and suffocation, (e.g., inhalation or ingestion of food or an object).

Most home injuries to young children can be prevented through modifying the home environment (e.g., reducing the hot water temperature or installing safety supplies such as smoke alarms, cabinet latches, and outlet plugs). Using these strategies with parental education will improve the potential of creating safe environments for children. Home injuries also are a serious problem for older adults. The leading causes of unintentional injury in the home for older adults (aged 55 and over) are falls, fire and burns, poisoning (e.g., from drugs, medicinal substances, gases), firearms, suffocation, and natural or environmental events (e.g., excessive heat or cold, hunger, or tornados). For related strategies see the category *Decreased Independence/ Disability*.

## Strategy: Conduct home visits to assess the home environment for the risks of falls and other home hazards.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | U | U | U |
| Tertiary | | | |

**Background:**
The purpose of this strategy is to prevent injuries in the home by reducing home hazards and promoting safe behavior. This can be accomplished by using a *Home Safety Checklist* to identify environmental and behavioral risks and is most effective when used as part of a home inspection. A trained home visitor identifies and corrects home hazards that place residents or the family at risk for injury by fire, choking, suffocation, drowning, or falls and counsels the residents and/or family in injury prevention. The risks can be most successfully eliminated by providing the residents and/or family with basic safety supplies including smoke alarms, cabinet latches and locks, outlet covers, safety gates, and child car seats, and installing them.

Many public health agencies use their Maternal Child Health Special Project (MCHSP), Technical Assistance to Needy

Families (TANF) grants, or CHS funding to support home visits for this program. Some insurance companies also pay for these injury prevention visits. Funding for supplies can be obtained through local service organizations, such as Kiwanis or donated by retailers. The *Home Safety Checklist* and *Home Safety Checklist Inspector's Guide* are available from the MDH Family Home Visiting Program (see organizational resources below). The *Data Collection Tool*, available on CD-ROM from local public health agencies (see the strategy in this section "Collect and analyze data, and support new prevention efforts"), also provides training for professionals performing home safety inspections.

**Additional resources:**

Bibliographic resources:

< Centers for Disease Control and Prevention. 1990. Childhood injuries in the United States. *American Journal of the Diseases of Children* 144:627-646.
< Dershewitz, R., and Christophersen, E. 1984. Childhood household safety. *American Journal of the Diseases of Children* 138:85-88.
< Gallagher, S., Hunter, P., and Guyer, B. 1985. A home injury prevention program for children. *Pediatric Clinics of North America* 32:95-112.
< Jones, N E. 1993. Childhood residential injuries. *MCN: The American Journal of Maternal Child Nursing* 18(3):168-172.
< Marcus, BH., Banspach, SW., Lefebvre, RC., et al. 1992. Using the stages of change model to increase the adoption of physical activity among community participants" *American Journal of Health Promotion* 6 (6): 424-429.
< National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* Oxford: New York.
< Sullivan, M., Cole, B., Lie, L., and Twomey, J. 1990. Reducing child hazards in the home. *Journal of Burn Care and Rehabilitation* 11(2):175-179.
< Widome, M. (Ed.). 1997. *Injury Prevention and Control for Children and Youth.* Elk Grove, IL: American Academy of Pediatrics.

Organizational resources:

< The CDC's National Center for Injury Prevention and Control can mail reports and brochures. See their website at http://www.cdc.gov/ncicp to order materials.
< Minnesota Department of Health Family Home Visiting Program (for contact information, see "For more information contact:" below). Several tools available in CD-ROM format. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist". The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist Inspector's Guide,* and the *Home Safety Checklist Program Summary: 1989-1994.*

**Evidence for strategy:**

The *Home Safety Checklist* home visit program has been carefully evaluated. Originally pilot-tested in four counties in 1990, it was re-evaluated in 18 counties in 1994. As a result of this evaluation, the program and checklist were found to be effective in reducing home hazards that cause injury to young children and older adults.

**Has this strategy been implemented in Minnesota?**
Yes, in 1997 more than 100 agencies in Minnesota used the *Home Safety Checklist* including public health, Early Childhood Family Education (ECFE), Head Start, and other home visiting programs. It also was used by 75 public health nursing agencies, 35 of which used MCHSP funding for its support.

**Indicators for this strategy:**
- < Number and type of home hazards identified.
- < Change in parental and personal behaviors.
- < Number and type of home injuries sustained by children and/or older adults.
- < Number and type of supplies provided to residents and families.

**For more information contact:**
- < Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

***Special Notes:***
*The "Home Safety Checklist Data Collection Tool" can be used to record information about home hazards identified, behavioral changes, supplies given, and child injuries sustained.*

## Strategy: Conduct home visits to assess presence, distribute, install, and maintain smoke alarms.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | U | U | U |
| Tertiary | | | |

**Background:**
The presence or absence of working smoke alarms is a key factor in fire fatalities. Nearly 70 percent of the state's 446 fatalities from 1990-1999 occurred in dwellings in which no smoke alarms were present, the alarms were present but not functional, or it was unknown if the alarms were working. In the deaths where a working smoke alarm was present, the victims were unable to react effectively because they were elderly, too young, mobility impaired, or alcohol or drug impaired.

Community-based smoke alarm installation programs are most successful when home visits are conducted by fire and public health professionals, trained volunteers, or both. The program may be conducted as a one-time, door-to-door neighborhood canvas, or as ongoing individual home visits. In either case, smoke alarms in the home are tested for correct placement and maintenance. If needed, free or low-cost smoke alarms and batteries should be available for installation and programs should target areas at high risk for residential fires, the elderly, the disabled, and residents and families with young children. Strobe light alarms can be effective for people who are deaf or hard of hearing.

Fire safety education should accompany a smoke alarm installation program or be provided in settings such as clinics,

emergency rooms, parenting classes, or home visits. Topics could include how to install and maintain smoke alarms, the design and practice of a fire escape plan, safe use of heating devices, proper storage of flammable materials, controlling children's access to lighters and matches, and proper treatment of burn injuries.

**Additional resources:**
Bibliographic resources:

< Kulenkamp, A., Lundquist, B., and Schaenman, P. 1990. *Reaching the Hard-to-Reach: Techniques From Fire Prevention Programs.* Arlington, VA: TriData Corporation. Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.
< National Association of State Fire Marshals. 1994. *The Community-based Fire Safety Education Handbook.* Washington, DC: Rossomando & Associates.
< National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households. An Inventory of Programs.* Centers for Disease Control and Prevention, http://www.cdc.gov/ncicp.
< Shults, R., Sacks, J., Briske, L., and Dickey, P. 1998. Evaluation of three smoke detector programs. *American Journal of Preventive Medicine* 15(3): 165-171.

**Evidence for strategy:**
Shults et al. (1998) summarize an evaluation of the long-term functional status of smoke alarms distributed to high-risk households in Minnesota and Oklahoma. They found that programs such as these can reduce residential fire injuries and that visiting homes is an effective way to distribute and evaluate the status of smoke alarms in high-risk households. The smoke alarms were still functioning at a three-year follow-up visit.

**Has this strategy been implemented in Minnesota?**
Yes, from 1994-97, seven communities were funded by the MDH to conduct home visits to assess the presence, maintenance, and functioning of home smoke alarms. Beginning in 1998, Hennepin, Aitkin, Itasca, and Koochiching Counties received similar funding. These programs have been replicated by many other communities throughout Minnesota.

In a 1994-97 study, the MDH Injury and Violence Prevention Unit found that only 55 percent of residences had a working smoke alarm on every level. (This unpublished study can be found in an MDH grant proposal submitted to CDC [1997] entitled *The Minnesota Collaborative Fire-Related Burn Prevention Program*.)

**Indicators for this strategy:**

< Number of correctly located and properly maintained smoke alarms in homes visited.
< Number of smoke alarms distributed and installed.
< Number of people who demonstrate changes in behaviors and attitudes about fire safety.

**For more information contact:**

< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

***Special Notes:***
*The MDH Injury and Violence Prevention Unit has a tested tool, the "Household Smoke Detector Assessment Form," for use with home inspections for residential smoke alarm programs. Data collected with this tool can be used to evaluate the program's effectiveness. Call Mari Mevissen for copies of the tool.*

## Strategy: Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | U | U | U |
| Tertiary | | | |

**Background:**
People are often unaware of common hazards that may cause serious injury. Educating the public through community organizations, clinics, and other public facilities can increase awareness of hazards and increase the likelihood that environmental and behavioral changes will be made to correct the hazards.
Changing environmental risks is most successful if residents and families are provided with basic safety supplies and shown how to use them. These supplies might include smoke alarms, toilet and cabinet locks, outlet covers, door knob covers, window cord shorteners, toddler safety gates, child car seats, bath mats, grab bars, flashlights, night lights, anti-scald sensors, and trigger locks.

In addition to using the *Home Safety Checklist* during home visits, strategies to distribute home safety supplies include giving supplies away during home visits, selling them at low cost at health care facilities and community health fairs, or giving them away at baby showers or adoption parties. For related strategies, see "Bicycle Injuries" in this category.

**Additional resources:**
Bibliographic resources:

< American Academy Of Pediatrics. 2001. Falls from heights: Windows, roofs, and balconies, (RE9951). *Committee On Injury And Poison Prevention* 107 (5):1188-1191.
< Frank, OR. 1996. Preventing falls in the elderly at home: A community-based program. *Medical Journal of Australia* 165 (4):238.
< Hennepin County Community Health Services. *Preventing Senior Falls*. This report includes checklists to assess personal risk factors and fall prevention tips, http://www.co.hennepin.mn.us/commhlth/reports/SeniorHealth.htm.
< Hokkanen, B., Wyman, JF., Elswick, RK., Ford-Smith, C., Fernandez, T., et al. (Unpublished paper). *A Modified Tinetti's Balance Scale: Reliability, Validity and Normative Values in Community-dwelling Older Adults*.
< King, MB. and Tinetti, ME. 1995. Falls in community-dwelling older persons. *Journal of the American Geriatrics Society* 43:1146-1154.
< Murrey, GJ., Helgeson, SR., Courtney, CT., and Starzinski, DT. 1998. State-coordinated services for traumatic brain injury survivors: Toward a model delivery system. *Journal of Head Trauma Rehabilitation* 13:72-81.

< National Fire Protection Association and the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call (800) 344-3555.
< Sattin, RW. 1992. Falls among older persons: A public health perspective. *Annual Review of Public Health* 13:489-508.
< Thurman, DJ., Alverson, C., Dunn, KA., Guerrero, J., and Sniezek, JE. 1999. Traumatic brain injury in the United States: A public health perspective. *Journal of Head Trauma Rehabilitation* 14 (6):602-15.
< Tinetti, ME., Baker, DI., McAvay, G., Claus, EB., Garrett, P., Gottschalk, M., Koch, ML., Trainor, K., and Horwitz, RI. 1994. A multi-factorial intervention to reduce the risk of falling among elderly people living in the community. *New England Journal of Medicine* 331: 821-827.
< Wolf, S., Barnhart, HX., Kutner, NG., McNeeley, E., Coogler, C., et al. 1996. Reducing falls in older persons: An investigation of Tai Chi and computerized balance training. *Journal of the American Geriatrics Society* 44:489-497.

Organizational resources:

< The Brain Injury Association of Minnesota, supports those affected by brain injuries of all types. Phone: (612) 378-2742 or toll-free in state: (800) 669-6442, Fax: (612) 378-2789, info@braininjurymn.org, http://www.braininjurymn.org. 43 Main Street SE, Suite 135, Minneapolis, MN 55414.
< Center for Urban and Regional Affairs (CURA), Phone: (612) 625-1551, Fax: (612) 626-0273 http://www.cura.umn.edu/. 330 HHH Center, 301 - 19th Ave. S., Minneapolis, MN 55455.
< Elderberry Institute, for information about "Living at Home/Block Nurse" programs. Phone: (651) 649-0315 or toll-free: (800) 320-1707. www.elderberry.org. 475 Cleveland Ave. N, Suite #322, St. Paul, MN 55104.
< Minnesota Department of Health. Several tools available in CD-ROM. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist". The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist Inspector's Guide,* and the *Home Safety Checklist Program Summary: 1989-1994.*

**Evidence for strategy:**
Researchers conclude that education in the home is most effective, but that education at day care facilities, in parenting classes, and in early childhood classes could also be effective.

The *Home Safety Checklist* home visit program has been carefully evaluated (see the previous strategy, "Conduct home visits to assess the home environment for falls and other home hazards."). Culturally specific home visits with community partners have proven effective within the Hmong community of St. Paul.

Providing other home safety supplies such as children's bike helmets, window screens, and safety gates have helped to protect against injury from falls.

The Living at Home/Block Nurse and Parish Nurse programs help elder adults to remain safely independent in their homes, with support from their neighbors. Some faith-based organizations employ parish nurses to attend to community members.

To help prevent falls, attending exercise classes that improve strength, balance, and coordination (like Tai Chi classes) are helpful, especially for older adults. For related information see the strategies in the *Decreased Independence/Disability* category.

**Has this strategy been implemented in Minnesota?**
Yes, education on home safety is provided in a variety of settings throughout Minnesota, including adult and child care facilities, ECFE programs, Head Start, and other home visiting programs. MDH has established grant-funded programs in Itasca and Aitkin Counties to conduct programs for older adults using the "Remembering When" curriculum.

Classes to improve balance and coordination are offered through community education organizations, health clubs, workplaces, and senior organizations. Health plans and clinics offer classes for their members, too.

**Indicators for this strategy:**
- < Number and types of organizations (day care facilities, well child clinics, health plans, etc.) that offer home safety education to their clients.
- < Percentage of clients who utilize the information and materials provided in their homes.
- < Number and type of supplies distributed.
- < Number and kind of methods and organizations used to distribute supplies.
- < Number of community residents who know about home safety and ways to injury-proof their houses.

**For more information contact:**
- < Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

## Strategy: Provide academic instruction on injury prevention and control.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | | |
| Secondary | U | | |
| Tertiary | U | | |

**Background:**
The purpose of this strategy is to increase the knowledge of students preparing for professions that can influence injury prevention and control. Although prevention is key to injury control, not all schools of public health, medicine, nursing, law, or public policy address injury. Efforts should be made to incorporate injury control into the standard curricula of such training programs.

**Additional resources:**
Bibliographic resource:
- < U.S. Department of Health and Human Services. 1991. *Setting the National Agenda for Injury Control in the 1990's.*

Public Health Service, Centers for Disease Control and Prevention.

Organizational resources:

< Children's Safety Network, Education Development Center, at (617) 969-7100, provides materials and curricula for education.
< Local colleges, universities, and county extension educators supply important information, and well-informed guest speakers
< Minnesota Department of Health Injury and Violence Prevention Unit, provides numerous materials and speakers as resources for the development and implementation of professional education. Contact Mari Mevissen, at (651) 281-9864.
< Minnesota Institute for Public Health/ Minnesota Prevention Resource Center offers videos for loan, printed materials and evidence-based program supports. Phone: (763) 427-531, or (800) 782-1878 www.emprc.org. 2720 Highway 10, Mounds View, MN 55112.
< Minnesota Safety Council's SAFE KIDS Coalition, at (651) 228-7313, provides materials and curricula for education, http://www.safekids.org/ and www.mnsafetycouncil.org/kids/skcoal.htm.

**Evidence for strategy:**

In 1991, CDC, in *Setting the National Agenda for Injury Control in the 1990's*, recommended that public health take a lead role in providing academic instruction in injury prevention and control.

**Has this strategy been implemented in Minnesota?**

Yes, the University of Minnesota Schools of Public Heath, Nursing, and Medicine invite MDH Injury and Violence Prevention Unit staff to teach injury control in selected courses. Many baccalaureate-nursing programs include the *Home Safety Checklist* in their community health curricula.

**Indicators for this strategy:**

< Number of classes taught and educational seminars provided to students preparing for professions that can influence injury prevention and control.
< Number and types of professions in which classes and seminars are provided.
< Knowledge of students about injury prevention and control.

**For more information contact:**

< Evelyn Anderson, at (651) 281-9870, evelyn.Anderson@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

## Strategy: Provide age-appropriate and culturally sensitive counseling by primary care providers.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | | | U |
| Secondary | | | U |
| Tertiary | | | |

**Background:**
The purpose of this strategy is to educate parents and children about the risks for injury. A health care professional that regularly sees the child and parents can be influential in changing parental behavior to reduce injury risk. In order to influence parental behavior most effectively, information must be provided in an age-appropriate and culturally sensitive manner. A variety of materials are available to assist with injury prevention counseling. For related information, see the strategies in the sections, "Eliminate Barriers and Improve Access to Health Care – Children and Adolescents," "Eliminate Barriers and Improve Access to Health Care – Children and Adolescents with Special Health Care Needs," and "Eliminate the Disparities" in the *Service Delivery Systems* category.

**Additional resources:**
Bibliographic resources:

< Eichelberger, Gotschall, Feely, Harstad, and Bowman. 1990. Parental attitudes and knowledge of child safety. *American Journal of Diseases of Children*.
< Graafmans, WC., Ooms, ME., Hofstee, HMA., Bezemer, PD., Bouter, LM., et al. 1996. Falls in the elderly: A prospective study of risk factors and risk profiles. *American Journal of Epidemiology* 143:1129-1136.
< Shumway-Cook, A., Gruber, W., Baldwin, M., and Liao, S. 1997. The effect of multidimensional exercises on balance, mobility, and fall risk in community-dwelling older adults. *Physical Therapy* 77:46-57.
< Tinetti, ME., Williams, CS. 1997. Falls, injuries due to falls, and the risk of admission to a nursing home. *New England Journal of Medicine* 337:1279-1284.

Organizational resources:

< American Academy of Pediatrics, TIPP (The Injury Prevention Program). This is the system most widely used to provide counseling to parents. It consists of *Childhood Safety Counseling Schedules,* safety information sheets, and safety surveys for use in providing anticipatory guidance to parents. The TIPP can be obtained from the American Academy of Pediatrics, at (800) 433-9016. Fact sheets can also be downloaded from www.aap.org.
< The Centers for Disease Control and Prevention (CDC), "Toolkit to Prevent Senior Falls" has camera-ready masters and fact sheets for health professionals to use in developing their own campaigns. Many materials are also available in Spanish; available at: www.cdc.gov/ncipc/pub-res/toolkit/toolkit.htm.
< Minnesota Department of Health. Several tools available in CD-ROM. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist." The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist*

*Inspector's Guide,* and the *Home Safety Checklist Program Summary: 1989-1994.*

**Evidence for strategy:**
Research by Eichelberger et al. (see the resources section above) indicated that parents had significant educational needs concerning childhood injury, that they would most likely obtain information on child safety from their physicians and that physicians were cited as the parent's first choice for information on injury control and child safety. For more information, see the previous strategy, "Provide age-appropriate and culturally sensitive counseling by primary care providers."

**Has this strategy been implemented in Minnesota?**
Yes, most clinics in Minnesota provide some injury prevention education to parents.

**Indicators for this strategy:**
- Number of clinics that provide injury prevention education to parents.
- Types of injury prevention information offered by primary care providers.
- Changes made by parents in their homes as a result of the education.

**For more information contact:**
- Evelyn Anderson, at (651) 281-9870, evelyn.anderson@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

## Strategy: Collect and analyze data and support new prevention efforts.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | | | |
| Tertiary | | | |

**Background:**
Quality data is necessary to make decisions about the effectiveness of programs and to guide resources to new prevention efforts. The purpose of this strategy is to provide systems of data collection and analysis that will provide necessary information. The *Home Safety Checklist* program has a data collection tool that can be used during home visits. The *Home Safety Checklist Data Collection Tool* can be used to record information about home hazards identified, behavioral changes, supplies given, and child injuries. It is distributed on CD ROM to local public health agencies.

National researchers conduct studies on preventing injuries through use of safer building materials and methods. Each year the State Fire Marshal's office produces a report, *Fire in Minnesota*, which describes the residential fire problem as reported by local fire departments. The MDH Injury and Violence Prevention Unit has the *Smoke Detector Home Assessment Tool* for use in home inspections for residential smoke alarm programs. This tool is used to evaluate the effectiveness of programs. Qualitative data collection methods can also provide insight.

**Additional resources:**

Bibliographic resources:

< Bukowski, R. 1996. Fire risk or fire hazard as a basis for building fire safety performance evaluation: in *Fire Safety Engineering in the Pursuit of Performance-based Codes: Collected Papers*. W14: NISTIR 5878, United States Department of Commerce, Technology Administration, National Institute of Standards and Technology, Building and Fire Research Lab, Gaithersburg, MD, 20899-0001, http://www.bfrl.nist.gov/866/CIB_W14/COLLECTN.htm.

< Center for Disease Control and Prevention. *Healthy People 2010* identifies national goals to build a healthy U.S. population. It states that in 1988 the national baseline for residences with a functioning smoke alarm on every floor was 87 percent. One hundred percent is desired. For more detail, see www.cdc.gov.

< Minnesota Department of Public Safety, State Fire Marshal Division. *Fire in Minnesota*. St. Paul, MN. This report contains information on residential fires from local fire departments through the Minnesota Fire Incident Reporting System. For a copy, contact Suite 145, 444 Cedar Street, St. Paul, MN 55101, or download from www.fire.state.mn.us. State rules on building codes, www.revisor.leg.state.mn.us/arule/7510/ or at Minnesota's Bookstore.

< Minnesota Institute for Public Health/ Minnesota Prevention Resource Center offers free or low cost videos, printed materials and evidence-based program supports. Phone: (763) 427-531, or (800) 782-1878, www.miph.org. 2720 Highway 10, Mounds View, MN 55112.

< National Committee for Injury Prevention and Control. 1989. Chapter 2: Learning from data. Chapter 3: Working with data: in *Injury Prevention: Meeting the Challenge.*

Organizational resources:

< Minnesota Department of Health. The *Smoke Detector Home Assessment Tool* can be obtained by calling Mari Mevissen, at (651) 281-9864.

< National Center for Chronic Disease Prevention and Health Promotion Behavioral Risk Factor Surveillance System (BRFSS) presents reliable national and state prevalence data, including injury control and testing of smoke detectors; available at: http://www.cdc.gov/brfss/.

< The National Fire Prevention Association's One Stop Data Shop can provide national statistics and trend information. Contact Nancy Schwartz, (617) 984-7450, or visit the website: http://www.nfpa.org/Research/OneStopDataShop/OneStopDataShop.asp.

**Evidence for strategy:**

Data collection and analyses are fundamental public health tasks and create a foundation for solid public health planning, decision-making, and resource allocation.

The *Smoke Detector Home Assessment Tool* was used in a 1994-97 CDC-funded evaluation project to be an effective method of collecting data in the home.

**Has this strategy been implemented in Minnesota?**

Yes, the Home Safety Checklist data on the mortality and morbidity of home injury has been used to make program decisions on the state and local levels across Minnesota. For example, the Home Injury Prevention Program was funded partly because the data

showed that children aged 0-6 years are more frequently injured in their homes than in other locations.

**Indicators for this strategy:**

- < Data systems expanded and supported at the state and local levels.
- < Programs designed based on the data collected.
- < Decisions made regarding injury prevention resources based on the data collected.
- < Number of homes using the *Smoke Detector Home Assessment Tool*.
- < Number of agencies using the tool with their clients.
- < Degree to which program objectives have been met.
- < Numbers and types of decisions made based on data collected.
- < Continuation of data systems' expansion and support.

**For more information contact:**

- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < John Weber, at (651) 281-9834, john.weber@health.state.mn.us, MDH Injury and Violence Prevention Unit.

## Strategy: Offer fire safety education following a burn or a visit to the emergency department.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | | | |
| Secondary | | | U |
| Tertiary | | | |

**Background:**

Following a hospitalization or emergency department visit for a burn injury, patients and their families are referred to public health nurses for a home visit at which a safety assessment and education are conducted. This strategy requires referral mechanisms between the hospital and the local public health or home visiting agency. The purpose is to reduce the fire and burn hazards in the home. For additional information, see the strategies in this section on, "Conduct home visits to assess presence, distribute, install, and maintain smoke alarms", "Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies", and "Provide age-appropriate and culturally sensitive counseling by primary care providers."

**Additional resources:**

Bibliographic resources:

- < Kulenkamp, A., Lundquist, B., and Schaenman, P. 1990. *Reaching the Hard-to-Reach: Techniques From Fire Prevention Programs.* Arlington, VA: TriData Corporation. Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.
- < National Association of State Fire Marshals. 1994. *The Community-based Fire Safety Education Handbook.*

Washington, DC: Rossomando & Associates.
< National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households. An Inventory of Programs.* Centers for Disease Control and Prevention, http://www.cdc.gov/ncicp.
< National Fire Protection Association in cooperation with the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call 1-800-344-3555.
< Pratt, L. et al. 1998. Home visitors' beliefs and practices regarding childhood injury prevention. *Public Health Nursing* 15(1):44-49.
< Shults, R., Sacks, J., Briske, L., and Dickey, P. 1998. Evaluation of three smoke detector programs. *American Journal of Preventive Medicine* 15(3): 165-171.

**Evidence for strategy:**
A follow-up study in Hennepin County indicates that parents followed the recommendations of the public health nurse at a rate of 42 percent for burn prevention hazards.

**Has this strategy been implemented in Minnesota?**
Yes, the Hennepin County Burn Center and the Metropolitan Visiting Nurse Association implemented such a program in 1987, using the *Home Safety Checklist.*

**Indicators for this strategy:**
< Number of home assessment visits made.
< Number of hazards identified.
< Parental compliance with recommendations.

**For more information contact:**
< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Mari Mevissen, at (651) 281-0964, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Visit".

## Strategy: Provide instruction and public education on fire safety.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | U | U | U |
| Tertiary | | | |

**Background:**
Good public education can prevent fire-related injury. Successful programs carefully target a particular aspect of fire safety, tailor the program to its audience, have allies in the community who support the work, use materials which are clear and readily-available, repeat messages, and have good evaluation methods.

In addition to accompanying smoke alarm installation in homes, fire safety education can be provided in clinics, emergency rooms, or parenting classes. Successful programs help people learn to identify hazards, install smoke alarms, practice a fire escape plan, safely use cooking and heating devices, properly store flammable materials, restrict children's access to lighters and

matches, and properly treat burn injuries.

**Additional resources:**

- The Federal Emergency Management Agency (FEMA) has created English and Spanish materials and materials specific to a variety of audiences with special needs that can be used in a public media campaign. Download from: http://www.usfa.fema.gov/applications/publications/ or contact The United States Fire Administration, Public Fire Education, 16825 South Seton Avenue, Emmitsburg, MD, 21727.
- National Fire Protection Association in cooperation with the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call (800) 344-3555.
- Schaenman, Stambaugh, Rossomando, Jennings, and Perroni. 1990. *Proving Public Education Works.* Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.

**Evidence for strategy:**
The Schaenman reference demonstrates that public education on fire safety is effective and that it prevents more casualties and saves more money per staff-year than any other aspect of fire protection. Many aspects of the program can be used by multiple community partners.

**Has this strategy been implemented in Minnesota?**
Yes, many local fire departments in Minnesota conduct fire safety education. The Minnesota State Fire Marshal's office has supported fire education in K-12 classrooms. Little has been done to provide fire prevention education in higher education settings. The University of Minnesota, the St. Paul-Ramsey County Department of Health, and neighborhood groups have collaborated with Hmong peer educators to visit and assure safety in Hmong homes.

**Indicators for this strategy:**

- Number of trained fire educators in the state.
- Number of programs provided.
- Number of community agencies involved in fire safety education.
- Number of academic institutions that teach fire safety and injury prevention education.

For more information contact:

- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

## Strategy: Enforce current smoke alarm legislation.

| | Systems | Community | Individual |
|---|---|---|---|
| Primary | U | U | U |
| Secondary | U | U | U |
| Tertiary | | | |

**Background:**
The federal government (Public Law 102-522) and the state of Minnesota (Minnesota Statutes 299F.011, since 1993) require the placement of smoke alarms in all residences with sleeping quarters. This includes both private and rental properties.

Local fire marshals enforce compliance in rental properties through routine inspections or building codes and planning. Private property is not usually inspected, although it is checked upon sale of the home. To prevent loss, insurance organizations provide financial incentives for fire-resistant construction or controls and alarms.

**Additional resources:**

- National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households: An Inventory of Programs.* Centers for Disease Control and Prevention.
- The U.S. Office of Housing and Urban Development (HUD). Free publications on installation of sprinklers and smoke alarms in support of PL 102-522, http://www.huduser.org/publications/destech/hudguide.html. These and other materials can be ordered from the U.S. Department of Housing and Urban Development, 451 7th Street S.W., Washington, DC 20410 Telephone: (202) 708-1112 TTY: (202) 708-1455, or download from their website at: www.hud.gov/healthy/index.cfm and http://www.huduser.org/publications/pdrpubli.html.

**Evidence for strategy:**
States with smoke alarm legislation have higher rates of smoke alarm use. Legislation, combined with education and technology, provide a comprehensive approach to the prevention of injuries.

**Has this strategy been implemented in Minnesota?**
Yes, Minnesota has a state law for smoke alarms, but it is not consistently enforced or supported with education programs throughout Minnesota.

**Indicators for this strategy:**

- Every community would have a process to enforce smoke alarm legislation.

**For more information contact:**

- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.