Injuries to San Francisco Seniors:
Defining the Problem and Prioritizing Prevention Strategies

Injuries are a large problem for seniors living in San Francisco, and injuries are no accident! That is, injuries have causes. By understanding the types and causes of injuries common to San Franciscans age 65 and over, we can design programs which will reduce or prevent future injuries. By recognizing the prevalence and cost of injury to seniors, and the fact that most injuries are preventable, we can bring together the professionals, agencies, communities and resources necessary for successful prevention efforts.

Injury Deaths by Cause and Intent among Seniors
San Francisco, 1987-1996 (n = 1186)

Injuries are categorized by cause (or mechanism) and intent. Falls, motor vehicles, and suffocation were the leading causes of injury deaths among seniors. About 2/3 of all injury deaths among seniors were unintentional, and falls were by far the leading cause of injury-related hospitalizations and deaths. Suicides accounted for approximately 27% of injury deaths; they were the majority of deaths caused by firearms, suffocation, and poisoning. Homicides accounted for about 5% of injury-related deaths among persons in this age group.
Overview

Persons over age 65 are at increased risk for injury-related deaths and hospitalizations. While those over 65 years of age represent less than 15% of the San Francisco population, they represent approximately 45% of all injury hospitalizations, and 21% of all injury-related deaths.

Rates for Injury Deaths by Age
San Francisco, 1987-1996

Source: CDHS, 1998

Rates for injury-related hospitalizations and deaths rise steadily after the age of sixty-five. Probable reasons include:

- Slowed or impaired functioning frequently associated with aging increases vulnerability to environmental risk factors.
- Diminished physiological reserves and high prevalence of chronic conditions may:
  - increase the likelihood of sustaining injuries when potentially injurious events occur and
  - slow the healing process and increase susceptibility to adverse outcomes including loss of independence, permanent disability, and death.

Rates for Injury Hospitalizations by Age
San Francisco, 1996

Source: OSHPD, 1998
Causes of Injury Death and Hospitalization Among Seniors

Nearly 1,200 San Francisco seniors died of injuries from 1987 to 1996. Falls were the leading cause of injury-related death in this age group, accounting for nearly a third of all these deaths. Motor vehicle crashes (14.8%) (most involving senior pedestrians), suffocation (12.4%), firearms (10.3%), and poisoning (9.5%) were other leading causes of injury death among seniors.

Leading Causes of Injury Deaths among Seniors
San Francisco, 1987 - 1996 (n = 1186)

Source: CDHS, 1998

Over 2,500 seniors were hospitalized for injury-related causes in 1996 alone, in San Francisco. Falls accounted for more than three quarters of these hospitalizations.

Leading Causes of Injury Hospitalizations among Seniors
San Francisco 1996 (n = 2329)

Source: OSHPD, 1998
Injury Intent: Unintentional, Assaultive, and Self-Inflicted

Unintentional Injury and Assault Hospitalizations among Seniors
San Francisco, 1996

While many seniors may fear being assaulted, older persons in San Francisco are overwhelmingly more likely to be hospitalized for unintentional injuries, such as falls, than for assault or even self-inflicted intentional injuries. Homicide rates are much lower for persons in this age group than for younger persons. Self-inflicted injury hospitalizations for seniors are also comparatively few, suggesting the possibility that a greater proportion of suicide attempts are successful.

Suicides by Age Groups
San Francisco, 1987-1996 (n = 1395, 6 missing)

Suicide rates increase steadily after age 65. A total of 319 senior San Franciscans killed themselves between 1987 and 1996, representing 27% of the population committing suicide. Rates were higher for males than females. Firearms was the most frequent method of suicide, followed by hanging, drug overdose and falls.

Source: CDHS, 1998
Falls

Most injuries in the elderly are the result of falls. About one quarter of persons aged 65 to 75, and a third or more of those aged 75 and older report a fall in the previous year. About one quarter of falls in the community result in an activity limitation. About 8 to 15 percent of falls cause serious injuries requiring medical care: 3 to 5 percent result in fractures. (From The Second Fifty Years: Promoting Health and Preventing Disability, Chapter 15, Institute of Medicine, 1990.)

Deaths due to Falls, by Gender and Age
San Francisco, 1987-1996 (n = 767, 2 missing)

The number of fatal falls and the fall mortality rate increase drastically after age 70 for both males and females, indicating a need for targeted prevention programs.

Hospitalizations due to Falls, by Gender and Age
San Francisco, 1996 (n=2575)

Rates for fall-related hospitalizations increase even more dramatically with age. In San Francisco, falls accounted for 74% of all injury hospitalization discharges to long term residential or home health service care.
Pedestrian Deaths & Death Rates by Age

Pedestrian Vehicular Deaths

A total of 715 San Francisco residents were killed by motor-vehicles between 1987 and 1996. Nearly a third of these (234) were pedestrian deaths. However, pedestrian fatalities were an even greater share of the motor vehicle deaths occurring in San Francisco, where equal numbers of pedestrians and car occupants were killed in 1996. Nationally, pedestrians accounted for only 13% of traffic fatalities. San Francisco Paramedics responded to 746 calls to 9-1-1 involving injured pedestrians in 1996.

Of these 234 pedestrian deaths, 45% were among those age 65 and over, 3 times their representation in the population. Problem areas for seniors included the inner Richmond, downtown, and on Market, Van Ness, and Mission Streets. Rates for pedestrian deaths increased dramatically with age, while rates for other motor-vehicular deaths remained constant. While pedestrian death rates were similar to the rest of the nation for those below age 55, rates for older San Franciscans were considerably higher. Rates used for San Francisco deaths are unadjusted rates, which means that there may be various confounding factors and the actual differences may be slightly larger or smaller. The majority of pedestrian deaths among seniors occur at intersections, during daylight hours, and to pedestrians who had the right of way.
A total of over $40 million was spent on injury hospitalizations among senior San Francisco residents in 1996, excluding Kaiser hospitals. This represents over 43% of all charges for injury-related hospitalizations, even though seniors represent less than 15% of the population. Over 75% of charges for seniors was spent on falls. Motor vehicles accounted for 6% of total non-Kaiser injury-related hospitalization charges; flames or smoke accounted for 3.4%, poisonings accounted for 2.4%. These charges represent bills generated, and exclude revenues collected, physician or other professional fees, follow-up care, rehabilitation, and the wider range of human and economic burdens. For seniors, who frequently require extensive follow-up care, including long-term institutionalization, permanent dependency on family members or attendants, home renovations and other direct and indirect costs, actual costs are considerably higher. A national estimate of lifetime costs from one year's injuries to seniors in the U.S., computed for 1985, was approximately $15 billion dollars. (CDC Report to Congress, 1989).
Existing Prevention Programs

Most injuries are not random, unpredictable accidents or the inevitable accompaniments of aging, but rather are the result of a combination of modifiable risk factors. Prevention strategies require the consideration of a complex set of behavioral, biomedical and environmental risk factors to identify possible interventions. The following are currently injury prevention programs in San Francisco which include a focus on senior issues.

Falls and other in-home injuries

The San Francisco Department of Public Health established the Community and Home Injury Prevention Project for Seniors (CHIPPS) to reduce the rate of unintentional injuries to senior San Francisco residents. CHIPPS provides training, home safety information, pharmacy consultations, and referrals for assistance with home modifications to all interested seniors, and free grab bars to low-income seniors. CHIPPS trains medical providers, home care providers, and caregivers on senior injury prevention.

Part of the program included a demonstration project to examine the efficacy of a home safety intervention to reduce falls, burns and scalds. Seniors were followed for a six month observation period prior to the intervention, and asked to record any fall, burn or scald that occurred during that time. After the observation period, an intervention was implemented, which included the following:

- Counseling on injury risk factors
- Providing written materials on home safety, and pedestrian and public transportation safety.
- Assessing homes for hazards.
- Removing or reducing hazards, such as clearing away clutter, lowering hot water thermostats, and securing throw rugs and extension cords.
- Modifying the home to improve safe mobility and fire safety, such as installing rails, grab bars, non-skid strips, and smoke alarms, and
- Repairing stairs, banisters, entryways, and flooring.

Clients were followed for six months after the intervention. Rate of falls were reduced by 59%. Scalds and burns were reduced from 7 and 9, respectively, to 0 each, during the post-intervention phase.

The CHIPPS Community Council meets quarterly. Questions can be directed to council staff at (415) 554-2924.
Suicide

The Center for Elderly Suicide Prevention and Grief Related Services (CESP), was formed in 1990, in association with the Mt. Zion Institute on Aging, in an attempt to provide services addressing the special needs of older suicidal adults. The Center was developed to provide a unique combination of crisis intervention and ongoing emotional support and counseling to older persons who are depressed, isolated, lonely, bereaved, abused, and/or acutely suicidal. Services include:

- A 24-hour Friendship telephone line, primarily staffed by volunteers, which provides acute counseling and referrals.

- Regularly scheduled outreach calls and counseling visits.

- Volunteer training to interested community members, including a two day suicide intervention workshop, and 20 hours of geriatric specific training.

- Bereavement counseling, including:
  - Eight weeks of group counseling therapy for persons who have lost a loved one to suicide.
  - Eight weeks individual counseling sessions for those who have a lost a loved one to a traumatic or sudden death.
  - Monthly drop-in group counseling sessions for those who have completed the eight week sessions for survivors of suicide.

- Educational presentations on bereavement and elderly suicide.

- Grief sessions for co-workers, neighbors, and friends of persons who have committed suicide.

- Research to determine the effectiveness and costs savings of the services they provide.

- Development of a manual which demonstrates to other communities how their program can be replicated.

- Internship training to undergraduate and graduate students.

All services are provided free of charge, to persons living in San Francisco County.

The Friendship Line receives an average of 1,000 calls per month. Volunteers have averaged over 1100 call-outs, and 56 home visits monthly.

For information on the CESP contact (415) 750-5355, or write to: Patrick Arbore, Ed.D. Director, Center for Elderly Suicide Prevention & Grief Related Services, 3330 Geary Blvd, San Francisco, CA 94118
For the Friendship Line, contact (415) 752-3778, 24 hours daily.
Pedestrian Safety

Pedestrian Safety Task Force
The Pedestrian Safety Task Force, created in 1993, was formed to develop solutions to improve pedestrian safety throughout San Francisco. Its Mission Statement is:

The Pedestrian Safety Task Force (PSTF) brings together individuals from senior, disabled, environmental and service groups with representatives from City and County Agencies to increase pedestrian safety. Goals include physical improvements to the pedestrian environment; laws and government policy protecting pedestrians, including law enforcement activities; and better engineering and design measures affecting every aspect of transportation. The PSTF considers that every person is a pedestrian from the moment they leave their home or transport vehicle until they reach their destination. The PSTF will advocate for pedestrian safety improvements, advise public agencies, encourage community involvement, release publicity and work with other transportation organizations to promote these goals. The PSTF promotes education for users of all transportation modes to increase awareness and safer practices to reduce hazards to pedestrians. The PSTF will also work to enhance the ambiance of all public areas to encourage safe walking for transportation, health and environmental benefits.

Past activities include:
- Creating and implementing a “See Pedestrians” awareness campaign (see bumper sticker on back page).
- Community outreach and education, including publicizing a “Dirty Dozen” of dangerous intersections.
- Working with the Department of Motor Vehicles to emphasize pedestrian safety measures and rules in the Drivers’ Handbook.
- Developing an educational program for professional drivers.
- Working with the Department of Parking and Traffic to implement environmental interventions, such as lengthening crossing times at busy and high risk intersections.
- Collaborating with other agencies on street design and traffic calming improvements.

The Pedestrian Safety Task Force meets on the 3rd Tuesday of each month at 10 A.M., at the Department of Public Health, 101 Grove Street, room 220.

Walk San Francisco
Walk San Francisco is a recently organized action and advocacy group for pedestrians. Its Mission Statement is:

Walk San Francisco promotes walking as a safe and sustainable form of transportation that increases our city’s livability, enhances public life, and improves public and environmental health. We are a coalition of organizations and individuals that seeks to improve San Francisco’s walking environment through activism and policy advocacy that educates residents, city agencies, and elected officials regarding the need for more pedestrian-friendly streets.

Our goals are:
- To ensure the design of a human-scaled, pedestrian-oriented city.
- To promote community attitudes and government policies that favor walking.
- To increase funding for pedestrian-friendly transportation planning and projects.
- To reduce pedestrian deaths and injuries.
- To increase walking in San Francisco by making it fun again.
- To make San Francisco the most walkable city in the United States.

Contact Walk San Francisco at 58 Allen Street S F, CA 94109 (415) 921-8064 or www.walksf.org
This report was prepared by the San Francisco Department of Public Health, Health Promotion Section, in collaboration with the UCSF San Francisco Injury Center for Research and Prevention. Funding was provided by a grant from the State and Local Injury Prevention section of the California Department of Health Services to the Community and Home Injury Prevention Program (CHIPPS). Most of the data were obtained from the “Profile of Injury in San Francisco,” December, 1998, a joint project of the San Francisco Injury Center and the San Francisco Department of Public Health. Rates used are unadjusted rates for San Francisco, and were not calculated where categories contained less than 5 items. The “Profile of Injury” also contains additional explanation of the sources and limitations of the data, background issues, and technical terms. For technical questions about the data, please contact Elizabeth McLoughlin, San Francisco Injury Center for Research and Prevention, at SFGH, Building 1, Room 400, S. F., CA 94110, (415), 821-8209. For questions about senior issues and prevention programs, or for copies of the overall “Profile of Injury In San Francisco,” please contact Michael Radetsky, CHIPPS Program, SFDPH, 101 Grove Street, Room 118, S.F., CA 94102, (415) 554-2924.

Special thanks to Lucille Hornby for technical work on this report, and to Elizabeth McLoughlin, Sc.D., at the Injury Center, and Tomás Aragón, MD, MPH, and Carolyn Klassen, MPH, at the Department of Public Health, for their review and comments.
Recommendations

- Encourage a comprehensive approach to injury prevention by establishing an injury prevention focal point within the Community Health Promotion and Prevention Branch, to coordinate injury surveillance and prevention programs.

- Increase community awareness of the increased injury risk to San Francisco seniors, emphasizing that these injuries can be prevented, through community outreach and education, and by ensuring that senior-related issues are addressed as a key aspect of injury prevention strategies.

- Involve all senior services providers, in the Health Department, other agencies, and community based organizations, in prioritizing senior injury prevention as an essential component of services, through expanded training and improved documentation of injury prevention activities.

- Re-establish the direct services component of the Health Department’s CHIPPS Program (see page 9) to provide in-home safety assessment and minor home safety repairs by creating linkages with other managed care and health insurance providers, and with job training agencies.

- Allocate expanded resources to address prevention of major aspects of senior injury, especially falls, motor vehicle injuries and self-inflicted injuries, with ongoing evaluation to demonstrate effectiveness and identify system-wide savings achieved.