

Running head: THE NEED FOR A SENIOR ADULT FALL PREVENTION PROGRAM

The Need for a Senior Adult Fall Prevention Program

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CERTIFICATION STATEMENT

I hereby certify this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions or writings of another.

Signed: _____

Abstract

The problem is that The Village of Hales Corners Fire Department (HCFD) is experiencing a significant number of emergency medical services (EMS) requests due to senior adult falls and attributes this to the lack of a risk reduction program to address falls for senior adults. The purpose of this action research is to design and implement a program for reducing the number of senior adult falls. At the completion of this research, the Hales Corners Fire Department will design and implement a fall prevention strategy for senior adults, which will reduce the number of senior adult falls ultimately reducing the number of EMS requests. Action research will be utilized to answer the following research questions:

1. What strategies exist for senior fall prevention programs within private and public agencies?
2. What are the elements for senior adult fall prevention programs that Wisconsin fire and health agencies utilize?
3. What senior adult fall prevention programs are currently available for Village of Hales Corners residents?
4. What concerns need to be addressed when creating a senior adult fall prevention program?

Through the methods of literature review, review of department data, an online survey sent to Wisconsin fire chiefs and an interview with the local health official. Results demonstrated most fire departments do not have a program, but given the opportunity would like to implement a program. Thirty-four total responses were tabulated numerically. An analysis of the data resulted in the need for the Hales Corners Fire Department to identify the senior adult with fall concerns, distribute fall prevention literature, conduct fall prevention classes, and have a

referral process with our local health department who has better access to local services and follow-up capabilities. These combined efforts will reach seniors in the community and their homes and ultimately reduce the number of falls. My recommendation will be that the Hales Corners fire Department implements a senior adult fall prevention program with specific elements that were reviewed in the research.

Preventing falls among patients and residents in acute, long-term care healthcare settings and home residence requires a multifaceted approach, and the recognition, evaluation and prevention of patient or resident falls are significant challenges for all who seek to provide a safe environment in any healthcare setting. It appears that most of the available data, research and guidelines on fall prevention are from long-term care settings; however, much is applicable for all healthcare and residential settings.

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Introduction

According to the Center for Disease Control and Injury Prevention [CDC], 2008, unintentional falls are a threat to the lives, independence and health of senior adults ages 65 and older. Every 18 seconds, an older adult is treated in an emergency department for a fall, and every 35 minutes someone in this population dies because of their injuries. Although one in three older adults falls each year in the United States, falls are not an inevitable part of aging. There are proven strategies that can assist in reducing the number of falls and help senior adults live better and longer.

Research surveyed similar State of Wisconsin fire departments to determine if they have a senior fall prevention program in place and which data elements are collected. This researcher conducted an interview with the Health Administrator with the Village of Hales Corners Health Department. In addition, statistical information from the Hales Corners Fire Department annual report was utilized to demonstrate the number of senior falls responded to annually.

The mission of the Hales Corners Fire Department is “through its members, is to provide effective fire prevention, life safety and emergency services in the most efficient manner possible to ensure public safety and minimize economic loss”. The Executive Fire Officer program (EFOP) Strategies for Community Risk Reduction (SCRR) is a new course designed to teach the participant critical thinking with specific content to lead a community risk reduction effort.

The problem is that the HCFD is experiencing a significant number of EMS requests due to senior adult falls and attributes this to the lack of a risk reduction program to address falls for senior adults. The purpose of this action research is to design and implement a program for reducing the number of senior adult falls. Action research was completed to develop a risk reduction program and answer the following research questions:

1. What strategies exist for senior fall prevention programs within private and public agencies?
2. What are the elements for senior adult fall prevention programs that Wisconsin fire and health agencies utilize?
3. What senior adult fall prevention programs are currently available for Village of Hales Corners residents?
4. What concerns must be addressed when creating a senior adult fall prevention program?

Background and Significance

The Hales Corners Fire Department is comprised of three full-time personnel, eight part-time personnel and 35 paid on call (POC) personnel. This fire department is the only remaining mostly paid on call fire department within Milwaukee County. The Village has benefited from an efficient lower costing fire department. The significant rise in responses places the current system in jeopardy, as it is difficult for paid on call personnel to keep pace with the increase in the number of calls. The fire department covers three and one-half square miles in Milwaukee County from one fire station. The fire department provides emergency response with two ambulances, two engines, one ladder truck, two first response vehicles and one command post. The Hales Corners Fire Department 2008 annual report documents the fire department has 970 annual responses in which 75% are requests for emergency medical service. The remaining 25% are responses to a variety of fire and personal injury motor vehicle crashes. (Hales Corners Fire Department Annual Report 2008). All firefighters are level II certified and are State of Wisconsin Emergency Medical Technicians (EMT). Chief Jankowski became the Fire Chief in January of 2007. The Village of Hales Corners Fire Department annual budget for fiscal year 2008 is approximately \$800,000.00.

The 2008 annual statistics for the Village of Hales Corners Fire Department reveals the department responded to 735 requests for EMS. Of the 735 EMS requests, 194 (Appendix D) were due to falls. Of the 194 requests for falls, 162 were for senior adults' age 65 or greater (Appendix E). Twenty-two percent of the fire departments total EMS responses were for senior adult falls. In 2004, (Appendix F) the Hales Corners Fire Department responded to 56 requests for senior adult falls. In the last four years, the Hales Corners Fire Department has seen an increase from 56 requests in 2004 to 162 requests in 2008; this is an increase of 189% for EMS requests in this category. The fire department has seen an overall increase in the total number of emergency responses from 711 in 2004 to 970 in 2008. This represents a 32 percent increase in the number of emergency requests over the last four years. In calendar year, 2008 falls are identified as the number one cause of injury and the reason for most ambulance requests (Hales Corners Fire Department Annual Report 2008).

The United States Census Bureau (United States Census Bureau, 2000, p. 1) profile for the Village of Hales Corners general demographic characteristics for the year 2000 states the fire department serves a population of 7,765. In the age category of 65 years and greater we have a population of 1,433. This identifies eighteen and one-half percent of our total population are within the senior adult age category. As this is, a beautiful community located within Milwaukee County retirees are moving to this community as Hales Corners offers valuable resources for residents. A large central shopping area, Whitnall Park and its world-famous Boerner Botanical Gardens, and Wehr Nature Center are shared with bordering communities. These facts, promote the reputation of the Village as being a great place to live and retire. With this age group growing (baby boomers) and the expansion of senior development within the

Village of Hales Corners, the demand for emergency services will increase which will challenge the capabilities of the Hales Corners Fire Department.

The Hales Corners Fire Department provides extensive fire prevention and education programs to the youth of the Village. The entire month of October is spent going to every school where all children in grades pre-kindergarten through fifth grade participate in age level appropriate fire education.

The Hales Corners Fire Department provides our seniors with monthly free blood pressure screenings. With the exception of EMS requests for service and the blood pressure screenings, this is the extent of services provided to our seniors. This is clearly not meeting the needs of the senior citizens in the Village of Hales Corners.

This research project directly correlates with the Executive Fire Officer Program and the Strategies for Community Risk Reduction (SCRR) course. SCRR is intended to establish a focus on community risk reduction (National Fire Academy-Department of Homeland Security [NFA], 2008). By researching this problem, the Hales Corners Fire Department will be better prepared to serve the needs of our senior adults by assessing methods, elements and programs for reducing the number of senior adult falls within the Village of Hales Corners.

Literature Review

Throughout the 20th century, the United States (US) has seen the growth of the older adult population (to be defined as persons 65 or older) rapidly exceed the growth of the overall population. This trend will continue well into the 21st century as the baby boomer generation reaches retirement age. This cohort will contribute to substantial growth in both the percentage and actual number of older adults throughout the United States. (United States Census Bureau, 2000) states the number of older adults in the country has multiplied by a factor of 11, from three

million in 1900 to 35 million in the year 2000. During this same period, the population of those 64 and younger only tripled.

The United States is on the brink of a longevity revolution. Improved medical care and prevention efforts have contributed to dramatic increases in life expectancy in the United States over the past century. The growth in the number and proportion of older adults is unprecedented in the history of the United States. Two factors longer life spans and aging baby boomers will combine to double the population of Americans aged 65 and older during the next 25 years. By 2030, there will be 71 million American older adults accounting for roughly 20% of the U.S. population (Centers for Disease Control and Prevention and the Merck Company Foundation [CDC], 2007).

(Tideiksaar, 2002) States life expectancy at the turn of the century was approximately 46 years; today it is approximately 76 years. The number of citizens over age 85 will double by 2030, and by 2050, 40 percent of the population will be older than 50. This means that for the first time in history, seniors will outnumber children and youth. This may create a huge burden on society as it faces a majority of members who traditionally require care and are heavily dependent on others.

The 2000 U.S. Census found that Wisconsin's total population consisted of 702,553 adults' age 65 years old or older representing 13.1% of the population (U.S. Census Bureau, 2000). The percentage of older adults in Wisconsin is higher than the national average of 12.4%. The proportion of older adults is expected to remain relatively stable until the Baby Boomers reach retirement age causing a dramatic increase in the elderly population. By 2010, it is projected there will be 766,626 persons 65 and older in Wisconsin making up 13.3% of the

population. That number will increase to 1,022,359 persons 65 and older in 2020 (16.7%) and 1,336,384 by the year 2030, or 20.8% (Wisconsin Department of Administration, n.d.).

Improved medical care and prevention efforts have contributed to dramatic increases in life expectancy in the United States over the past century. The U.S. Population is aging; the current growth in the number and proportion of older adults living in the United States is unprecedented in our nation's history. (CDC, 2007) states two factors are longer lives and aging baby boomers will double the population of Americans aged 65 or older during the next 25 years. Life expectancy in the U.S. has increased from 47 years for Americans born in 1900 to 77 years for those born in 2001 and baby boomers those born between 1946 and 1964 will begin to reach age 65 in 2011. By 2030, the number of older Americans is expected to reach 71 million, or roughly 20% of the U.S. population.

There is no doubt that such an explosion in the number of senior adults, is good news, but it will bring a new set of concerns for health care providers, for fire and life safety, and the economy. With millions, more of senior adults, the life and safety problems the fire department will face will be far more complicated than they are today. If we are serious about being a community of professionals that drives the changes that will make our community safer, we cannot ignore this group of our population. We will only achieve a safer tomorrow if we plan for it today.

The implications of the increasing number of older Americans and their growing diversity will include unprecedented demands on public health, aging services, and the nation's health care system. Falls are the leading cause of injury deaths and the most common cause of injuries and hospital admissions for trauma among adults aged 65 or older (CDC, 2008, p. 1).

Fall-related injuries cause significant mortality, disability, loss of independence, and early admission to nursing homes.

One of the significant problems with the aging process is identified as the increased vulnerability in falls. Falls are the most common cause of nonfatal injuries and of hospital admissions for trauma among older adults. Ten to 20% of falls cause serious injuries such as fractures or head traumas. In 2004, over 1.8 million seniors were treated in U.S. hospital emergency departments for fall injuries, and one out of four was subsequently hospitalized. Injury rates increased sharply with age and were four to five times higher among people aged 85 and older than those ages 65 to 74. Unlike fatality rates, nonfatal fall injury rates for people ages 65 and older were consistently higher for women (CDC, 2007). After adjusting for age, both the injury rate and the hospitalization rate for women were almost twice that for men.

Falls affect the mind and body. Falls can have significant psychological and social consequences (Wisconsin Department of Administration, n.d.). Many older people, whether or not they have fallen, develop a fear of falling. This fear can cause them to limit their activities, which in turn leads to reduced mobility and physical fitness and subsequently to an increased risk of falls. Fear of falling is strongly associated with future falls even among people who have not fallen recently. This fear can lead to deteriorating health, a decline in physical and social functioning, and increased likelihood of admission to a nursing home.

As older adults become a larger proportion of the U.S. population, the number of fall injuries can be expected to increase. From 1993 to 2003, the number of people aged 65 and older increased 13%, from 32.8 million to 36.9 million, while the number of fatal falls more than doubled, from 7,130 to 14,899. After adjusting for age, fall death rates for both men and women increased about 55% during this time and rates were consistently higher for men. The rise in

fatal fall rates in part reflects the 37% increase in the number of people aged 85 and older, who are the fastest growing segment of the older population and the one that is most susceptible to falling (CDC, 2007).

Falls among older adults, unlike other ages tend to occur from several etiologies such as anticipated physiologic, unanticipated physiologic or intrinsic risk factors. Because the rate of falling increases proportionally with increased number of pre-existing conditions and risk factors, the fall risk assessment is a useful guideline for providers. The fall risk assessment is a distinct approach to fall evaluation recommended by national professional organizations. In acute or long-term care, a best practice approach incorporates the use of the Hendrich II Fall Risk Model (Ann Hendrich, 2008), which is quick to administer, and provides a determination of risk for falling based on gender, mental and emotional status, symptoms of dizziness, and known categories of medications increasing risk. This tool screens for primary prevention of falls. The Hendrich II Fall Risk Model is intended to be used in the acute care setting to identify adults at risk for falls. The Hendrich II Fall Risk Model was validated in a large case control study in an acute care tertiary facility with skilled nursing and rehabilitation populations. The risk factors in the model had a statistically significant relationship with patient falls. The strengths of the Hendrich II Fall Risk Model are its conciseness, the inclusion of high-risk medication categories, and its focus on interventions for specific areas of risk rather than on a single, summed general risk score. Categories of medications increasing fall risk as well as adverse side effects from medications leading to falls are built into this tool. (D. Persak, personal communication, April 1, 2009) states this tool is utilized by long-term care facilities in the Village of Hales Corners to document patients risk and ultimately reduce senior adult falls within the facilities.

Fractures are among the most prevalent fall injuries. Each year, 360,000–480,000 older adults sustain fall-related fractures. (CDC, 2008) states fall-related injuries also create a significant financial burden for the United States. Research has shown that many falls can be prevented by addressing personal risk factors such as monitoring medications, improving balance, and correcting vision problems and environmental risk factors such as removing tripping hazards and installing safety features such as handrails.

Osteoporosis, a metabolic disease that causes bones to become brittle, greatly increases the chances that a senior person who falls will suffer a fracture, especially a fracture of the vertebrae, forearm, wrist, or hip. One study found that women with osteoporosis were three times more likely to sustain hip fractures than those without this disease. This study found that almost 60% of women ages 70 to 79 and 84% of women over age 80 had osteoporosis. The most serious and disabling fracture is hip fracture. The majority of hip fractures, up to 95%, are caused by falls, and more than 76% of hip fractures occur among women (Stevens, 2005). The outcome of these injuries is extremely serious. Mortality following a hip fracture is high and many patients die within a year following their injury. Those who survive often experience significant disability and diminished quality of life. After being hospitalized for about one week, many hip fracture patients are discharged to nursing homes. As many as a quarter of formerly independent older adults remain in nursing homes for at least a year. In recent years, osteoporosis screening for women and effective treatments to rebuild bone have become widespread, and this public health measure might be reflected in the lower fracture rates. Men tend to have greater bone mass and consequently less risk for hip fractures. However, men do sustain hip fractures, especially after age 80, and the hip fracture rates among men have not decreased. To counter this trend, screening and osteoporosis treatment might be broadened to

include elderly men. The data elements of previous history of falls, fractures and osteoporosis are key elements in identifying risk factors in a fall prevention program.

In 2000, (CDC, 2008) there were almost 10,300 fatal fall injuries and 2.6 million medically treated nonfatal fall-related injuries. Direct medical costs totaled \$0.2 billion dollars for fatal and \$19 billion for nonfatal injuries. Of the nonfatal injury costs, 63% (\$12 billion) were for hospitalizations; 21% (\$4 billion) were for emergency department visits; and 16% (\$3 billion) were for treatment in outpatient settings. Medical expenditures for women, who comprised 58% of the older adult population, were two to three times higher than for men for all medical treatment settings. Fractures accounted for just 35% of nonfatal injuries but 61% of costs. Hip fractures are the most costly fall-related fractures. In 1991, Medicare costs for this injury were estimated to be \$2.9 billion. The total annual cost of these injuries is projected to reach \$240 billion by the year 2040 (Medicare Payment Advisory Commission, 2006). These costs do not account for the long-term consequences of falls, such as disability, functional limitations, decreased productivity, and diminished quality of life.

The cost of providing health care for an older American is three to five times greater than the cost for someone younger than 65. As a result, by 2030, the nation's health care spending is projected to increase by 25% due to these demographic shifts (Medicare Payment Advisory Commission, 2006). Developing and implementing a strategic plan for reducing the number of falls, will decrease the number of EMS requests and ultimately the cost of operating the fire department.

This may have been the case with previous generations, but this is the new senior adult population. Reviewing this cohort, it is a possibility that they will be taking care of the younger generations and society's responsibilities instead of the opposite scenario (Vierck & Hodges,

2003). Today's senior adult Americans have not only experienced some of the most influential events in history, they continue to be involved in this country's activities. Many commit the free time found in retirement to volunteer opportunities, and some find occupations to keep them active.

The senior population shows no signs of slowing down or decreasing in size. It is nearly impossible to clearly define or label such a diverse group of people, but diversity is one of their greatest assets and strengths. They have the potential to be as great an influence on the future of America as this country's past was on them.

Reducing community risk requires planned strategies and tactics. Developing strategies to reduce community risk is similar to pre-incident planning. (NFA, 2008) describes a proactive approach to risk reduction. There are five processes for developing risk management. Those processes are understand risk reduction, accept personal responsibility for reducing community risk, develop personal vision of how a safe community would appear, evaluate authority and politics that affect the ability to act and develop a plan to reduce the risk.

The SCRR course details five mitigation strategies, which are education, engineering, enforcement, economic incentives, and emergency response (NFA, 2008). Education to make citizens aware of the problem, engineering to develop mechanical designs, enforcement to gain conformity, economic incentives used as motivation to change behavior and emergency response to eliminate the risk.

The agencies available to Hales Corners senior adult citizens for the senior adult fall prevention program are the Hales Corners Fire Department, Hales Corners Health Department and the Milwaukee County Department of Aging. The goal of fall prevention strategies is to

educate, design interventions that minimize falls by eliminating those factors that may lead to or create the fall (Tideiksaar, 2002).

Procedures

The purpose of this action research is to design and implement a program for reducing the number of senior adult falls. This will enable the fire department to be better prepared to serve the needs of our senior adults.

This researcher utilized action research methodology. Literature review was conducted using research facilities at the Learning Resource Center (LRC) of the National Fire Academy (NFA) Emmitsburg, Maryland, the Franklin Public Library Franklin, Wisconsin, and the Hales Corners Public Library Hales Corners, Wisconsin. Further research was completed by reviewing Journal of Emergency Medical Services (JEMS), Firehouse and Fire Chief; trade magazines located at the Village of Hales Corners Fire Department. This researcher accessed on-line resources from my home. This researcher searched for articles on “aging America”, “Wisconsin aging”, “fact finder”, and “CDC older adults”. The internet search engines utilized were www.google.com and www.dogpile.com. In addition, searches were made at www.firehouse.com, www.iafc.org, and www.firechief.com.

An electronic survey (Appendix A) utilizing Survey Monkey was developed to gather information from forty fire departments (Appendix B) in Wisconsin. Ten questions were posed as to, does their fire department have a senior adult fall prevention program and what are the data elements and fall prevention programs utilized. The list of Wisconsin fire departments with mostly paid on call personnel was obtained through the Wisconsin Fire Chief’s Education Association’s fall survey and selecting the departments that listed their staffing as “mostly paid

on call”. Once this random list of forty departments was created, this researcher group e-mailed the departments with the link to the survey.

The questions posed are:

1. Does your agency have a senior adult fall prevention program?
2. Did your agency have any obstacles in implementing the senior adult fall program?
3. Does your agency provide educational materials to senior adults in regards to fall prevention information?
4. What delivery method does your agency use to deliver the senior adult fall prevention materials?
5. Does your agency utilize an evaluation tool to determine the effectiveness of the senior adult fall program?
6. Does your agency have a referral program for senior adult falls?
7. Is your agency affiliated with other agencies that will provide the fall prevention education or materials?
8. Does your agency have a referral form for senior adult falls?
9. What are the data elements obtained in your referral form? You may fax or e-mail me the data elements in addition if you prefer. (414) 529-6169 or mjankowski@halescornersfire.org
10. What additional senior fall prevention programs are available to your agency? Please list public and private programs/agencies.

This survey was distributed to forty similar fire departments in Wisconsin. The survey was distributed electronically by e-mail with a link to complete the survey. The intended person for completion may not have received the survey. This researcher did not receive any

undeliverable e-mails after sending the survey. I received an 85% completion rate for the survey.

Information received for similar fire departments in Wisconsin was taken from the Wisconsin Fire Chief's Education Association's fall 2008 survey. The survey was distributed on the information received from this survey. Accuracy listed in this survey was not verified.

Statistical data was retrieved from Firehouse® software the fire and EMS management system utilized by the Hales Corners Fire Department. The data will demonstrate the total number of fall related emergency responses that the fire department responded to during the calendar year January 2008- January 2009. In addition, the data will show the increase of fall response from calendar year 2004. This researcher will determine which elements of senior adult fall prevention programs throughout Wisconsin would be most beneficial for the citizens of the Village of Hales Corners.

The final procedure used to obtain needed research was obtained by conducting an interview (Appendix C). This writer chose to interview Debra Persak, Health Administrator for the Village of Hales Corners. The intent of the interview was to determine her thoughts as a referring agency on the necessity and importance of a fall prevention program and necessary elements to be collected when completing a referral form. A preliminary phone call was made on March 28, 2009 to determine if Debra Persak would be willing to participate. Debra agreed to the phone interview. The interview was completed on April 1, 2009.

Because no universally accepted definition is developed, falls are defined and reported in several ways. To track and trend fall data accurately and consistently, it is important for each organization to establish a fall definition. This researcher utilized the following definition:

Definition of terms

An event that results in the patient or a body part of the patient coming to rest inadvertently on the ground or other surface lower than the patient as defined by the National Library of Medicine and the National Institute of Health (“The Prevention of Falls in Later Life.”, 2008).

Accidental falls are defined as when patients fall unintentionally. For example, they may trip, slip, or fall because of a failure of equipment or by environmental factors such as spilled water or urine on the floor.

Unanticipated physiologic falls are defined as when the physical cause of the falls is not reflected in the patient’s risk factor for falls. A fall in one of these patients is caused by physical conditions that cannot be predicted until the patient falls. For example, the fall may be due to fainting, a seizure, or a pathological fracture of the hip.

Anticipated physiologic fall is defined as patients who have some of the following characteristics: a prior fall, weak or impaired gait, use of a walking aid, intravenous access, or impaired mental status.

Intrinsic risk factors are defined as integral to the patient’s system, many of which are associated with age-related changes.

Extrinsic risk factors are defined as external to the patient’s system and relating to the physical environment.

Polypharmacy is defined as the use of multiple medications by a patient

Results

Literature review is consistent that the senior adult cohort will contribute to substantial growth in both the percentage and actual number of senior adults throughout the United States. (United States Census Bureau, 2000) states the number of older adults in the country has

multiplied by a factor of 11, from 3 million in 1900 to 35 million in the year 2000. In the age cohort of 65 years and greater we have a population of 1,433. This identifies eighteen and one-half percent of our total population are within the Village of Hales Corners in the senior adult age category (United States Census Bureau, 2000).

An electronic survey (Appendix A) utilizing Survey Monkey was developed to gather information from forty fire departments (Appendix B) in Wisconsin. Thirty-four of forty people responded to the electronic survey giving this researcher an 85% response rate. Each question is broken down into the number of responses. Ten questions were posed with a comment section for each question to answer the four research questions as to, does their fire department have a senior adult fall prevention program and what are the data elements their fall prevention programs utilize.

In relation to the first research question: What strategies exist for senior fall prevention programs within private and public agencies?

The results of survey question one, are as follows “Does your agency have a senior adult fall prevention program?” Of the fire departments surveyed, 22 of the fire departments surveyed do not have a fall prevention program and 11 departments participate in fall prevention program. One department did not respond to this specific question. Of the departments surveyed, most departments do not have their own strategy to address senior adult fall prevention. In the comments section 15 of the 22 departments that do not have a program would like the opportunity to establish a program.

The results of survey question three are as follows “Does your agency provide educational materials to senior adults in regards to fall prevention information?” Of the fire departments surveyed, 22 provide fall prevention materials and 10 do not provide materials.

Two departments skipped this question. Analysis of this data has this researcher accept that even if departments do not have a designated fall prevention program, the departments do provide educational material in relation to fall prevention materials.

The results of survey question six are as follows “Does your agency have a referral program for senior adult falls?” Research question six identified 25 respondents do not have a referral form for senior adult falls and seven of the departments responded utilize a referral program for senior adult falls. Two departments skipped this question. Analysis of this data has this researcher recognize that those departments that do not have their own fall prevention program do not utilize a specific referral form. Ten of the 25 fire departments utilized the EMS run form as a referral document. Of those departments that have a senior adult fall program, most utilize a referral program in conjunction with or as their senior adult fall programs.

The results of survey question seven are as follows “Is your agency affiliated with other agencies that will provide the fall prevention education or materials?” Research question seven identified 17 respondents are affiliated with other agencies that provide education or materials. Less than half of the respondents, 13 are not affiliated with other agencies to provide education or materials for fall prevention. Two departments skipped this question. Analysis of this data has this researcher recognize that more than half of the respondents are affiliated with another agency to provide education or fall safety materials. Those departments that do not have a fall prevention program are affiliated with another agency to provide fall prevention or education.

The results of survey question eight are as follows “Does your agency have a referral form for senior adult falls?” Research question eight identified 28 departments do not have a referral form to a specific agency, and three utilize a referral form to a specific agency. Three departments did not respond to this question. Analysis of this data has this researcher recognize

specifically from the comments section of this survey question that even though a specific referral form does not exist, of those departments that are affiliated with another agency, the fire department EMS run sheet is forwarded to the appropriate referral agency and is utilized as the referral form. (D. Persak) believes that a focused referral form with the proper data elements captured and documented, will result in a more efficient and better outcome for the patient.

In relation to the second research question: What are the elements for senior adult fall prevention programs that Wisconsin fire agencies utilize?

The results of survey question four are as follows: “What delivery method does your agency use to deliver the senior adult fall prevention materials?” Research question four identified that 22 respondents use pamphlets, seven respondents use video and 11 respondents use direct lecture as elements of their fall prevention program. One person skipped this question. The fall prevention materials presented are documented as a purchased product or the other affiliated agency was responsible for the elements of the program. Products such as the Step on course for seniors and the Remembering When program by the NFPA were specifically documented. Analysis of this data has this researcher recognize the various elements utilized to deliver the information to the public and the most utilized delivery method is by pamphlet.

The results of survey question five are as follows: “Does your agency utilize an evaluation tool to determine the effectiveness of the senior adult fall prevention program?” Research question five identified that 26 respondents did not use an evaluation tool as an element of their program. Four respondents utilize an evaluation tool and four respondents skipped the question. Analysis of this data has this researcher believe that many of the departments that do not use an evaluation tool do not have a program. This is a limitation of the survey question. The four respondents that use an evaluation tool as an element of the program documented they

utilize a satisfaction survey mailed to the person, which does not address specifically if the program is accomplishing the goal of reducing falls. It addresses the element of satisfaction by the person in the process or program. (D. Persak) believes evaluation is the process of determining whether programs or specific elements of programs are effective, efficient, appropriate or meaningful, and if not, how to make them so. Additionally, evaluation will produce the information to show if a program has unexpected benefits or problems. Evaluation needs to be a critical and integral component of any program.

The results of survey question six are as follows: “Does your agency have a referral program for senior adult falls?” Research question six identified 25 respondents do not have a referral program for senior adult falls and seven of the departments responded utilize a referral program for senior adult falls. Two departments skipped this question. Analysis of this data has this researcher recognize that those departments that do not have any elements of a fall prevention program in addition do not have any referral element of a program as well.

The results of survey question nine are as follows: “What are the data elements obtained in your referral form? You may fax or e-mail me the data elements in addition if you prefer (414) 529-6169 or mjankowski@halescornersfire.org. Research question nine identified eight respondents answered the question and 26 departments skipped the question. Eight departments listed the specific data elements obtained in their referral form. The consistent data elements obtained with all eight respondents are getting the demographics and history to include the patient age, gender, history of previous falls, fear of falling and history of a stay in a long-term health care facility. The second consistent data elements refer to the medical condition or any specific diagnosis. The specific items are history of cardiac problems, stroke, musculoskeletal conditions, issues with mobility or gait, fractures, dizziness and any other medical illness or

specific diagnosis. The third consistent data element refers to the medications the person is taking. Specific medications of concern are diuretics, analgesics, tranquilizers and polypharmacy. The fourth consistent data element refers to environmental and other general category. No specific items are listed in this category. Analysis of this data has this researcher believe that the consistent items of the eight respondents are important elements to capture for a successful program. In Addition analysis of this data has this researcher believe that many of the departments skipped the question, as a specific form is not utilized. This is a limitation of the survey question.

In relation to the third research question research: What senior adult fall prevention programs are currently available for the Village of Hales Corners residents?

The results of survey question ten are as follows: “What additional senior fall prevention programs are available to your agency? Please list public and private programs/agencies.” Research question ten identified 13 respondents identified they have additional public or private programs or agencies available to them. Nine of the 13 respondents utilize their local health department as part of their fall prevention program. The remaining three respondents utilize a variety of agencies as part of their fall prevention program. These range from local churches, senior groups and Milwaukee County Department on Aging.

The Milwaukee County Department on Aging (MCDA) is the federally designated Area on aging and the County Aging Unit for Milwaukee County residents age 60 and over. MCDA is organized into three divisions: Area Agency on Aging, Aging Resource Center of Milwaukee County and Family Care Management Organization. The mission of the Milwaukee County Department on Aging is to affirm the dignity and value of older adults of Milwaukee County by supporting their choices for living in, and giving to, our community. (D. Persak) Milwaukee

County's Aging Resource Center provides information and assistance about public and private benefits for older adults aged 60 and older. Resource center staff can help determine if funds are available to help with long-term care and daily living. You can receive information about both public and private benefits and services available in your community. Besides the Milwaukee County's Aging Resource Center and the Village of Hales Corners Health Department, Mrs. Persak is not aware of other agencies available.

In relation to the fourth research question: What concerns need to be addressed when creating a senior adult fall prevention program?

The results of survey question two are as follows: "Did your agency have any obstacles in implementing the senior adult fall program?" Research question two identified six respondents as having obstacles and 20 departments that did not have obstacles. Eight departments skipped this question. The six respondents listed funding as their primary obstacle in implementing a fall prevention program. As fire departments are asked to do more with less funding only the primary functions of the department can be completed. The second obstacle is the availability of staff to initiate and manage the fall prevention program. The third and final obstacle listed is the concern from seniors in the community that a program that may potentially have them removed from their home and placed in a long-term facility is targeting them. (D. Persak) believes the only obstacles in implementing a senior adult fall prevention programs are the ones in which we create and justify to never implement a program. Mrs. Persak believes the benefits of implementing a fall prevention program are numerous and outweigh the obstacles real or perceived.

The literature review, results of the survey and the personal interview make it apparent that the community, citizens and the Village of Hales Corners Fire Department would benefit

from a senior adult fall prevention program. In cooperation with the health department and community leaders, this researcher developed a fall referral form and a community Power Point presentation. The referral form and Power Point presentation were developed using elements learned through literature and the survey.

Discussion

According to the Center for Disease Control and Injury Prevention [CDC], 2008, unintentional falls are a threat to the lives, independence and health of senior adults ages 65 and older. Every 18 seconds, an older adult is treated in an emergency department for a fall, and every 35 minutes someone in this population dies because of their injuries. Although one in three older adults falls each year in the United States, falls are not an inevitable part of aging. There are proven strategies that can assist in reducing the number of falls and help senior adults live better and longer.

The literature review, results of the survey and the personal interview make it apparent that the community, citizens and the Village of Hales Corners Fire Department would benefit from a senior adult fall prevention program. The 2008 annual statistics for the Village of Hales Corners Fire Department reveals the department responded to 735 requests for EMS. Of the 735 EMS requests, 194 (Appendix D) were due to falls. Of the 194 requests for falls, 162 were for senior adults age 65 or greater (Appendix E). Twenty-two percent of the fire departments total EMS responses were for senior adult falls. In 2004, the Hales Corners Fire Department responded to 56 requests for senior adult falls. In the last four years, the Hales Corners Fire Department has seen an increase from 56 requests in 2004 to 162 requests in 2008; this is an increase of 189% for EMS requests in this category. In the calendar year, 2008 falls are

identified as the number one cause of injury and reason for most ambulance requests (Hales Corners Fire Department Annual Report 2008).

This researcher did not investigate any specific fall prevention program. This researcher investigated the elements, methods and programs for reducing the number of senior adult falls that are currently being utilized by other Wisconsin fire departments and our local senior care facilities.

Falls affect the mind and body. Falls can have significant psychological and social consequences (Wisconsin Department of Administration, n.d.). A concern for implementing a senior adult fall prevention program is that the senior adult may not believe that you are trying to help them. The fear of being displaced from their home or family member can be of great concern. It needs to be explained that by minimizing or eliminating the falls they will have a better chance to remain in their homes with their family members.

Through the survey, it is demonstrated that the majority of the fire departments do not have their own specific fall prevention program. Those departments that have a fall prevention program work in conjunction with their local health department to have the fire department identify the persons falling. The fire department will make the appropriate referrals to the health department who are more equipped and have staff available to make the appropriate follow up assessment, care and referral to other local agencies that can provide assistance.

The purpose of this action research is to design and implement a program for reducing the number of senior adult falls. At the completion of this action research, the Hales Corners Fire Department will design and implement a fall prevention strategy for senior adults, which will reduce the number of senior adult falls ultimately reducing the number of EMS requests.

A concern for this researcher is that the results of survey question five are as follows: “Does your agency utilize an evaluation tool to determine the effectiveness of the senior adult fall prevention program?” Only four respondents utilize an evaluation tool for their fall prevention program. The four respondents that use an evaluation tool as an element of the program documented they utilize a satisfaction survey mailed to the person, which does not specifically address if the program is accomplishing the goal of reducing falls. An evaluation of the program and review of statistics will be required to determine the programs success.

A health department referral form (Appendix G) and Power Point presentation were developed as part of this action research. (Appendix H) Fire department personnel will need to have the research and goal of the research explained to understand the goal of the fall prevention program. Personnel will need to complete training on the use of the form on how it is to be completed and routed in the interdepartmental mail for the health department. The prevention officer will need to educate those fire department personnel that will be presenting the Power Point slides to the community.

(D. Persak) believes the only obstacles in implementing a senior adult fall prevention programs are the ones in which we create and justify to never implement a program. Mrs. Persak believes the benefits of implementing a fall prevention program are numerous and outweigh the obstacles real or perceived. It is time for the fire department to realize that our job entails more than picking the person up or making a transport. When the fire department identifies a problem or a need it is job and our responsibility to get the person the assistance they need. At the completion of this research, the Hales Corners Fire Department will design and implement a fall prevention strategy for senior adults, which will reduce the number of senior adult falls ultimately reducing the number of EMS requests. The reduction in the number of EMS requests

will allow the Village of Hales Corners Fire Department to continue to provide the efficient, low cost primarily paid on call fire department.

Recommendations

The following recommendations by this researcher are made to address the problem that The Village of Hales Corners Fire Department (HCFD) is experiencing a significant number of emergency medical services (EMS) requests due to senior adult falls and attributes this to the lack of a risk reduction program to address senior adult falls.

1. The knowledge and information gained from completing this research project needs to be presented to local health officials, citizens, and public officials to demonstrate the needs and benefits of this program.
2. Meetings will be established to determine other potential interested community groups, public or private agencies and the senior adult residential centers. A task force will be created of all interested parties that will support the initiative.
3. The task force will review this research project and the referral form developed by this researcher.
4. The person will begin the fall prevention program by the fire department personnel completing the referral form and making the referral to the health department.
5. Further study will be required to determine the appropriate program information and follow up criteria, which will be utilized by the health department officials and brought to the task force for review. The health department will lead this section, as they are responsible for the follow up visits, completing the safety inspection and will make any necessary referrals to the Milwaukee County Department of Aging.

6. Educating all personnel involved with this program and the operations of the program will be essential to the success.
7. Once a person is referred to the health department, it is critical that an open line of communications be established between the fire department and health department to address any concerns or unanswered questions.
8. After the person is referred to the health department and the follow up is complete, the health department will notify the fire department the status of the person. Were any issues resolved or are their issues that have not been resolved and why.
9. Routine meetings of the task force and thorough documentation in all facets of the program is critical. This will assist in determining the success or failure of the program. Without being able to determine success or failures, it will be challenging for Village officials to support this initiative. The public officials, who are responsible for funding this project, will take a vested ownership with proven success as determined by statistics.
10. Additional evaluation of the initiated program will be required to determine if the numbers of falls are reduced, by reviewing fire department statistics as to the number of emergency medical responses for senior adult falls are decreased.

The purpose of this action research is to design and implement a program for reducing the number of senior adult falls. At the completion of this action research, the Hales Corners Fire Department developed a referral form and Power Point presentation for community education. The implementation of these components of a fall prevention program and the need to create a fall prevention pamphlet for future distribution for fall prevention strategies to the senior adults will reduce the number of senior adult falls ultimately reducing the number of EMS requests.

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Appendix A

Does your agency have a senior adult fall prevention program?

Did your agency have any obstacles in implementing the senior adult fall program?

Does your agency provide educational materials to senior adults in regards to fall prevention information?

What delivery method does your agency use to deliver the senior adult fall prevention materials?

Does your agency utilize an evaluation tool to determine the effectiveness of the senior adult fall program?

Does your agency have a referral program for senior adult falls?

Is your agency affiliated with other agencies that will provide the fall prevention education materials?

Does your agency have a referral form for senior adult falls?

What are the data elements obtained in your referral form? You may fax or e-mail me the data elements in addition if you prefer. (414) 529-6169 or mjankowski@halescornersfire.org

What additional senior fall prevention programs are available to your agency? Please list public and private programs/agencies.

Appendix B

Allouez Fire Department, Wisconsin
Altoona Fire Department, Wisconsin
Baraboo Fire Department, Wisconsin
Beaver Dam Fire Department, Wisconsin
Black River Falls Fire Department, Wisconsin
Bloomfield Genoa City Fire and Rescue, Inc, Wisconsin
Blooming Grove Fire Department, Wisconsin
Bristol Fire Department, Wisconsin
Butler VFD, Inc, Wisconsin
Chippewa Fire District, Wisconsin
Chippewa Fire District, Wisconsin
City of Burlington Fire Department, Wisconsin
City of Delafield Fire Department, Wisconsin
City of Fitchburg Fire Department, Wisconsin
City of Lake Mills Fire Department, Wisconsin
City of Monona Fire Department, Wisconsin
City of Oconomowoc Fire Department, Wisconsin
City of Onalaska Fire Department, Wisconsin
City of Ripon Fire Department, Wisconsin
City of St. Francis Fire Department, Wisconsin
City of Sturgeon Bay Fire Department, Wisconsin
City of Wind Lake Fire Department, Wisconsin

Columbus Fire Department, Wisconsin
Dousman Fire District, Wisconsin
Dupont Volunteer Fire Department, Wisconsin
Eagle Fire Department, Wisconsin
Germantown Fire Department, Wisconsin
Grand Chute Fire Department, Wisconsin
Hartford Fire and Rescue, Wisconsin
Hartland Fire Department, Wisconsin
Holmen Area Fire Department, Wisconsin
Jackson Fire Department, Wisconsin
Johnson Creek Fire & EMS, Wisconsin
Lac Courte Oreilles Tribal Fire Department, Wisconsin
Menomonee Falls Fire Dept, Wisconsin
Menomonie Fire Department, Wisconsin
Mequon Fire Department, Wisconsin
Pleasant Prairie Fire/Rescue, Wisconsin
Two Rivers Fire Dept, Wisconsin
Vernon Fire Department, Wisconsin

Appendix C

Interview Questions

1. What program is utilized by the long-term care facilities in the Village of Hales Corners to determine patients' risk of falling?
2. What services does the Milwaukee County Department of Aging provide?
3. What do you believe are the foreseeable obstacles in establishing a senior adult fall prevention program?
4. Do you believe it is essential to have a specific referral form to your department in regards to senior adult falls?
5. Do you believe it is important to evaluate the program once it is established?

Appendix D

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 "

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
00F FALL FROM HEIGHT GREATER THAN 9 FEET							
08-0000095	02/02/2008	22:39:00	HC	A612	5746 S 116th ST	16	M
Subtotal Count		1				Subtotal Percent	0.51%

12 Fall

08-0000003	01/02/2008	12:21:00	HC	A612	10133 W BROOKSIDE DR	82	F
08-0000004	01/02/2008	13:24:00	HC	A612	6000 S 108th ST	89	M
08-0000008	01/03/2008	07:37:29	HC	A612	11077 W FOREST HOME AVE /306e	66	M
08-0000009	01/03/2008	12:02:00	HC	A612	5444 S 108th ST	78	F
08-0000010	01/03/2008	14:56:15	HC	A612	11077 W FOREST HOME AVE /106W	85	F
08-0000032	01/12/2008	19:57:00	HC	A612	10125 W RIDGE RD	90	M
08-0000032	01/12/2008	19:57:00	HC	A610	10125 W RIDGE RD	94	F
08-0000034	01/13/2008	09:08:42	HC	A612	12300 W JANESVILLE RD /Gift Shop	60	F
08-0000037	01/14/2008	03:12:00	HC	A612	11077 W FOREST HOME AVE /# 306 E	66	M
08-0000042	01/15/2008	17:17:20	HC	A612	11077 W FOREST HOME AVE	89	F
08-0000046	01/17/2008	09:00:22	HC	A612	10030 W FOREST HOME AVE /hallway	78	F
08-0000048	01/17/2008	13:59:34	HC	A612	11077 W FOREST HOME AVE /309W	78	F
08-0000050	01/17/2008	16:21:44	HC	A612	5900 Mockingbird LN /GREENDALE, WI 53129	62	F
08-0000060	01/22/2008	08:21:00	HC	A612	11077 W FOREST HOME AVE /306E	66	M
08-0000061	01/22/2008	08:59:00	HC	A610	9420 W GARDEN CT	79	M
08-0000068	01/24/2008	15:13:33	HC	A612	11077 W FOREST HOME AVE	85	F
08-0000069	01/24/2008	18:11:18	HC	A612	11077 W FOREST HOME AVE /# 103 E	87	F
08-0000081	01/28/2008	22:20:23	HC	A612	11077 W FOREST HOME AVE /# 201 E	87	F
08-0000085	01/30/2008	07:33:38	HC	A612	11077 W FOREST HOME AVE /202N	88	F
08-0000088	01/30/2008	14:44:03	HC	A612	5307 S 92nd ST	50	F
08-0000096	02/03/2008	16:33:00	HC	A612	5961 S 108th PL	78	F
08-0000098	02/04/2008	22:02:10	HC	A612	9631 W FOREST HOME AVE	32	F
08-0000103	02/06/2008	18:25:00	HC	A612	10143 W FOREST HOME AVE /107	39	F
08-0000108	02/09/2008	06:33:35	HC	A612	11399 ARROWHEAD TRL	63	F
08-0000118	02/14/2008	00:12:07	HC	A612	6175 S 122nd ST	80	F
08-0000120	02/14/2008	12:36:00	HC	A612	10600 W GRANGE CT	55	F
08-0000121	02/15/2008	14:47:00	HC	A612	5767 S 108th ST	67	F
08-0000132	02/18/2008	11:32:00	HC	A612	11077 W FOREST HOME AVE /301W	82	F
08-0000151	02/26/2008	10:27:15	HC	A612	5910 S 118th ST	87	F
08-0000152	02/26/2008	13:12:38	HC	A612	11077 W FOREST HOME AVE /302W	88	F
08-0000158	02/28/2008	14:26:59	HC	A612	10920 W FOREST HOME AVE	89	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}

and Cause of Injury In "00F", "00I", "12 "

Incident	Alm Date	Time	Strn	Unit	Scene Address	Age	Gender
08-0000159	02/28/2008	15:11:32	HC	A612	11305 W ABBOTT AVE	1	F
08-0000161	02/29/2008	10:44:28	HC	A612	5321 S 108th ST	94	F
08-0000163	03/01/2008	23:23:45	HC	A612	10030 W FOREST HOME AVE /205	79	F
08-0000164	03/02/2008	07:31:28	HC	A612	11077 W FOREST HOME AVE /302S	83	M
08-0000169	03/04/2008	11:22:38	HC	A612	5321 S 108th ST	66	F
08-0000170	03/04/2008	17:10:49	HC	A612	10630 W RIDGE RD	78	F
08-0000175	03/06/2008	11:05:11	HC	A612	11077 W FOREST HOME AVE /201N	74	F
08-0000176	03/06/2008	11:28:38	HC	A610	10150 W PLUMTREE CIR /102	88	M
08-0000180	03/08/2008	10:30:14	HC	A612	11077 W FOREST HOME AVE /305N	73	F
08-0000186	03/10/2008	22:07:59	HC	A612	11094 W FOREST HOME AVE	57	M
08-0000189	03/12/2008	13:20:39	HC	A612	5080 S 108th ST	53	M
08-0000196	03/14/2008	06:35:52	HC	A612	5910 S 118th ST	94	M
08-0000198	03/15/2008	17:20:00	HC	A612	9520 W FOREST HOME AVE	76	M
08-0000200	03/19/2008	19:55:00	HC	A612	11070 W FOREST HOME AVE /# 4	0	M
08-0000204	03/21/2008	06:02:45	HC	A612	11077 W FOREST HOME AVE /220	85	F
08-0000215	03/26/2008	14:16:16	HC	A612	5976 S KURTZ RD	76	F
08-0000222	03/29/2008	16:34:26	HC	A612	11077 W FOREST HOME AVE /Parking Garage	67	M
08-0000235	04/01/2008	18:39:51	HC	A610	10224 W FOREST HOME AVE /104	92	F
08-0000237	04/02/2008	09:17:19	HC	A610	5910 S 118th ST	91	F
08-0000240	04/03/2008	02:18:00	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000241	04/03/2008	12:08:50	HC	A610	11077 W FOREST HOME AVE	86	F
08-0000244	04/04/2008	22:15:35	HC	A610	12210 W JANESVILLE RD	55	M
08-0000245	04/05/2008	10:17:08	HC	A610	11077 W FOREST HOME AVE /107N	87	M
08-0000248	04/06/2008	14:34:08	HC	A610	5800 S 108th ST	85	M
08-0000254	04/08/2008	20:30:30	HC	A610	11077 W FOREST HOME AVE /309 N	77	M
08-0000256	04/09/2008	17:05:05	HC	A610	6134 S 120th ST	66	M
08-0000260	04/11/2008	07:15:00	HC	A610	11077 W FOREST HOME AVE /313	84	M
08-0000262	04/11/2008	10:01:00	HC	A610	11077 W FOREST HOME AVE /201E	87	F
08-0000265	04/11/2008	23:43:00	HC	A610	8664 Westlake DR /GREENDALE, WI 53129	62	
08-0000267	04/14/2008	06:41:00	HC	A610	10300 W UPHAM AVE	74	F
08-0000277	04/19/2008	07:10:41	HC	A610	11077 W FOREST HOME AVE /302N	83	F
08-0000288	04/23/2008	12:16:46	HC	A610	11077 W FOREST HOME AVE /228	91	M
08-0000290	04/23/2008	19:56:37	HC	A610	9449 W FOREST HOME AVE	86	F
08-0000294	04/26/2008	13:00:12	HC	A610	11399 ARROWHEAD TRL	63	F
08-0000302	04/30/2008	21:46:18	HC	A610	11077 W FOREST HOME AVE /201E	87	F
08-0000310	05/05/2008	20:00:32	HC	A612	11077 W FOREST HOME AVE /206S	92	F
08-0000314	05/06/2008	16:21:34	HC	A610	10430 W UPHAM AVE	69	M
08-0000315	05/07/2008	18:49:41	HC	A610	5511 S MEADOW PARK CT	80	F
08-0000322	05/08/2008	22:59:09	HC	A610	11077 W FOREST HOME AVE /118	83	M
08-0000324	05/09/2008	10:38:52	HC	A610	11230 W GRANGE AVE	84	F
08-0000335	05/14/2008	04:28:29	HC	A610	5356 S 98th ST	84	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 "

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
08-0000336	05/14/2008	11:30:00	HC	A610	10544 PARKLANE CT	91	M
08-0000337	05/14/2008	11:39:00	HC	A612	11016 LUTHER AVE	77	M
08-0000340	05/14/2008	20:17:00	HC	A610	11077 W FOREST HOME AVE	89	F
08-0000343	05/16/2008	01:49:29	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000344	05/16/2008	07:49:10	HC	A610	11077 W FOREST HOME AVE /218	83	F
08-0000345	05/17/2008	10:24:39	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000348	05/18/2008	15:27:32	HC	A610	12326 W GRANGE AVE	77	F
08-0000355	05/22/2008	12:06:48	HC	A610	11077 W FOREST HOME AVE /Lobby	85	F
08-0000358	05/23/2008	07:58:33	HC	A610	11077 W FOREST HOME AVE /106N	56	M
08-0000360	05/24/2008	19:48:34	HC	A610	5601 S 113th ST	45	M
08-0000370	05/27/2008	09:59:39	HC	A610	11077 W FOREST HOME AVE /305E	74	F
08-0000373	05/28/2008	19:21:35	HC	A610	11811 W JANESVILLE RD	74	M
08-0000374	05/29/2008	01:08:00	HC	A610	11077 W FOREST HOME AVE /102E	78	M
08-0000383	06/01/2008	00:49:29	HC	A610	11077 W FOREST HOME AVE /# 222	81	F
08-0000384	06/01/2008	15:49:15	HC	A610	10330 W UPHAM AVE	75	F
08-0000386	06/02/2008	16:10:21	HC	A610	10077 W FOREST HOME AVE /106w	86	F
08-0000388	06/03/2008	09:24:29	HC	A610	11077 W FOREST HOME AVE /226	79	F
08-0000389	06/03/2008	11:26:06	HC	A610	10703 W GRANGE AVE	81	F
08-0000390	06/03/2008	12:59:16	HC	A610	11319 W GODSELL AVE	7	F
08-0000395	06/04/2008	01:03:22	HC	A610	11077 W FOREST HOME AVE /306 N	67	M
08-0000405	06/07/2008	12:37:44	HC	A612	6101 S 108th ST	73	M
08-0000431	06/11/2008	08:23:38	HC	A610	10913 W COPELAND AVE	85	F
08-0000434	06/12/2008	19:04:48	HC	A610	11077 W FOREST HOME AVE /120	78	F
08-0000437	06/13/2008	06:33:00	HC	A610	11077 W FOREST HOME AVE /124	70	F
08-0000440	06/14/2008	10:11:33	HC	A610	5601 S 113th ST	23	M
08-0000442	06/15/2008	18:13:27	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000446	06/17/2008	11:22:12	HC	A610	11439 W GODSELL AVE	68	F
08-0000448	06/18/2008	08:58:02	HC	A610	10010 W FOREST HOME AVE /209	61	M
08-0000453	06/19/2008	17:33:54	HC	A610	5430 S 108th ST	74	F
08-0000455	06/19/2008	21:23:04	HC	A610	11077 W FOREST HOME AVE /203 W	91	F
08-0000457	06/21/2008	08:43:39	HC	A610	11628 W PARNELL AVE	81	F
08-0000459	06/21/2008	20:42:20	HC	A610	5635 S NEW BERLIN RD	50	F
08-0000471	06/24/2008	16:46:26	HC	A612	5976 S KURTZ RD	77	F
08-0000472	06/24/2008	18:42:28	HC	A612	10133 W BROOKSIDE DR	83	F
08-0000478	06/26/2008	10:35:19	HC	A612	5544 S 106th ST	89	M
08-0000480	06/27/2008	17:17:42	HC	A612	5976 S KURTZ RD	77	F
08-0000483	06/30/2008	17:28:59	HC	A610	5987 S KURTZ RD	77	F
08-0000486	07/03/2008	18:04:35	HC	A610	11077 W FOREST HOME AVE /309N	78	M
08-0000487	07/04/2008	16:49:28	HC	A610	S 116th ST & W JANESVILLE RD	81	M
08-0000490	07/05/2008	15:15:36	HC	A610	S 114th ST & W GRANGE AVE	92	M
08-0000501	07/08/2008	21:57:51	HC	A610	10300 W UPHAM AVE	75	F
08-0000517	07/14/2008	12:50:25	HC	A610	5250 S 108th ST /A	81	F
08-0000519	07/15/2008	11:01:24	HC	A610	11825 W JANESVILLE RD	47	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 "

Incident	Alm Date	Time	Strn	Unit	Scene Address	Age	Gender
08-0000544	07/25/2008	08:17:55	HC	A610	11077 W FOREST HOME AVE /321	90	F
08-0000545	07/25/2008	10:21:01	HC	A610	11077 W FOREST HOME AVE /306W	88	F
08-0000547	07/25/2008	18:58:05	HC	A610	11077 W FOREST HOME AVE	87	F
08-0000562	07/31/2008	17:32:55	HC	A610	10615 W RIDGE RD	17	M
08-0000564	08/01/2008	09:07:46	HC	A610	11077 W FOREST HOME AVE /Lobby	72	F
08-0000566	08/02/2008	10:57:08	HC	A610	9400 BOERNER DR	80	M
08-0000570	08/03/2008	19:42:22	HC	A610	11077 W FOREST HOME AVE /203E	85	F
08-0000578	08/07/2008	08:30:49	HC	A610	11077 W FOREST HOME AVE /308N	80	F
08-0000617	08/23/2008	05:53:13	HC	U604	11077 W FOREST HOME AVE /102E	78	M
08-0000620	08/24/2008	11:31:36	HC	A612	11077 W FOREST HOME AVE /306E	67	M
08-0000627	08/26/2008	07:31:30	HC	A610	11077 W FOREST HOME AVE /110 S	79	M
08-0000635	08/29/2008	13:29:15	HC	A610	11077 W FOREST HOME AVE	79	M
08-0000640	08/31/2008	02:00:45	HC	A610	11077 W FOREST HOME AVE /# 324	87	M
08-0000656	09/07/2008	17:50:18	HC	A610	11077 W FOREST HOME AVE /120	78	F
08-0000658	09/07/2008	22:28:46	HC	A610	11077 W FOREST HOME AVE /214	84	F
08-0000665	09/11/2008	18:20:22	HC	A610	3702 S Bayberry	89	M
08-0000668	09/13/2008	13:35:03	HC	A610	11077 W FOREST HOME AVE /205E	90	F
08-0000673	09/14/2008	17:29:46	HC	A610	10305 W BROOKSIDE DR	83	F
08-0000674	09/14/2008	22:30:09	HC	A610	11077 W FOREST HOME AVE /306 E	67	M
08-0000675	09/15/2008	10:45:00	HC	A610	11077 W FOREST HOME AVE /306 E	67	M
08-0000696	09/25/2008	13:53:19	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000701	09/26/2008	11:27:37	HC	A610	11077 W FOREST HOME AVE /104S	86	F
08-0000710	10/01/2008	13:40:30	HC	A610	6000 S 108th ST	66	M
08-0000712	10/03/2008	10:15:00	HC	A612	11077 W FOREST HOME AVE /110S	79	M
08-0000713	10/03/2008	10:21:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000727	10/08/2008	07:06:30	HC	A610	11077 W FOREST HOME AVE /303 N	85	F
08-0000728	10/09/2008	10:18:19	HC	A610	5313 S 108th ST	90	M
08-0000737	10/10/2008	18:40:17	HC	A610	11077 W FOREST HOME AVE	87	M
08-0000744	10/12/2008	06:23:36	HC	A610	11077 W FOREST HOME AVE /321	91	F
08-0000745	10/13/2008	09:26:17	HC	A610	11077 W FOREST HOME AVE /103 N	96	F
08-0000746	10/13/2008	11:09:14	HC	A610	11077 W FOREST HOME AVE /306N	87	F
08-0000747	10/13/2008	13:21:45	HC	A610	5585 S 111th ST	86	M
08-0000751	10/17/2008	01:12:00	HC	A610	11077 W FOREST HOME AVE /313	91	F
08-0000760	10/19/2008	13:00:20	HC	A610	9600 W GRANGE AVE	0	F
08-0000763	10/22/2008	19:27:00	HC	A612	11077 W FOREST HOME AVE /204E	81	F
08-0000764	10/24/2008	00:25:00	HC	A610	11077 W FOREST HOME AVE /218	84	F
08-0000767	10/24/2008	21:45:01	HC	A612	11077 W FOREST HOME AVE /307E	87	M
08-0000769	10/25/2008	15:59:50	HC	A610	9520 W FOREST HOME AVE	78	M
08-0000780	10/29/2008	15:59:53	HC	A610	5321 S 108th ST	62	M
08-0000782	10/30/2008	18:31:00	HC	A610	11018 W FOREST HOME AVE	28	M
08-0000791	11/04/2008	12:23:00	HC	A610	11077 W FOREST HOME AVE /306N	87	F
08-0000792	11/04/2008	14:09:32	HC	A610	11077 W FOREST HOME AVE /305	74	F
08-0000795	11/04/2008	15:28:03	HC	A612	5425 S 111th ST	9	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 "

Incident	Alm Date	Time	Strn	Unit	Scene Address	Age	Gender
08-0000801	11/06/2008	09:50:58	HC	A610	10239 W GRANGE AVE	83	F
08-0000803	11/06/2008	12:35:44	HC	A612	11521 W PARNELL AVE	90	F
08-0000808	11/08/2008	13:34:00	HC	A610	5341 S 113th ST	74	F
08-0000810	11/09/2008	13:45:57	HC	A610	5170 FROEMMING DR	91	M
08-0000814	11/09/2008	23:31:52	HC	A610	6151 SENECA TRL	97	F
08-0000815	11/10/2008	08:24:00	HC	A610	5425 S 111th ST	70	F
08-0000817	11/11/2008	07:54:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000825	11/14/2008	05:49:49	HC	A610	11077 W FOREST HOME AVE /321 W	91	F
08-0000828	11/14/2008	20:20:54	HC	A610	9770 W EDGERTON AVE	81	M
08-0000840	11/19/2008	11:26:42	HC	A610	11077 W FOREST HOME AVE /lobby	66	F
08-0000841	11/19/2008	13:19:36	HC	A612	9415 W FOREST HOME AVE /202	67	F
08-0000854	11/27/2008	02:01:00	HC	A610	11077 W FOREST HOME AVE /206S	88	M
08-0000855	11/27/2008	12:17:00	HC	A610	11318 W GODSELL AVE	53	M
08-0000859	11/30/2008	10:36:00	HC	A610	5466 S 113th ST	73	F
08-0000862	11/30/2008	17:06:00	HC	A612	10030 W FOREST HOME AVE /207	99	F
08-0000869	12/02/2008	08:31:00	HC	A610	5701 S 114th ST	47	
08-0000877	12/05/2008	07:36:45	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000884	12/08/2008	12:18:00	HC	A610	10030 W FOREST HOME AVE /207	99	F
08-0000887	12/09/2008	07:14:00	HC	A610	11077 W FOREST HOME AVE /115	95	F
08-0000888	12/09/2008	11:09:00	HC	A610	5400 S 98th ST	88	F
08-0000895	12/10/2008	18:18:00	HC	A610	11077 W FOREST HOME AVE /201N	88	F
08-0000899	12/12/2008	14:37:00	HC	A610	10824 W GREEN AVE	50	M
08-0000905	12/14/2008	17:24:00	HC	A610	5800 S 108th ST	55	
08-0000908	12/16/2008	07:29:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000916	12/18/2008	12:32:00	HC	A610	5145 S 116th ST	7	M
08-0000919	12/19/2008	00:17:00	HC	A610	11077 W FOREST HOME AVE /306W	97	M
08-0000926	12/21/2008	23:10:00	HC	A610	11077 W FOREST HOME AVE /# 102 E	79	M
08-0000930	12/23/2008	04:07:00	HC	A610	9753 W EDGERTON AVE	66	M
08-0000934	12/23/2008	16:19:00	HC	A610	5444 S 108th ST	38	F
08-0000953	12/28/2008	06:08:55	HC	A610	5170 FROEMMING DR	91	M
08-0000954	12/28/2008	18:04:47	HC	A610	11077 W FOREST HOME AVE /203	85	F
08-0000957	12/29/2008	02:30:44	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000958	12/29/2008	06:05:33	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000963	12/29/2008	23:05:00	HC	A610	11077 W FOREST HOME AVE /107N	86	F
08-0000965	12/30/2008	14:49:38	HC	A610	11077 W FOREST HOME AVE /dining room	74	F
08-0000967	12/31/2008	08:43:07	HC	A610	11077 W FOREST HOME AVE /outside	97	F
Subtotal Count						194	
Subtotal Percent						99.48%	

Appendix E

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs > 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
12 Fall							
08-0000003	01/02/2008	12:21:00	HC	A612	10133 W BROOKSIDE DR	82	F
08-0000004	01/02/2008	13:24:00	HC	A612	6000 S 108th ST	89	M
08-0000008	01/03/2008	07:37:29	HC	A612	11077 W FOREST HOME AVE /306e	66	M
08-0000009	01/03/2008	12:02:00	HC	A612	5444 S 108th ST	78	F
08-0000010	01/03/2008	14:56:15	HC	A612	11077 W FOREST HOME AVE /106W	85	F
08-0000032	01/12/2008	19:57:00	HC	A612	10125 W RIDGE RD	90	M
08-0000032	01/12/2008	19:57:00	HC	A610	10125 W RIDGE RD	94	F
08-0000037	01/14/2008	03:12:00	HC	A612	11077 W FOREST HOME AVE /# 306 E	66	M
08-0000042	01/15/2008	17:17:20	HC	A612	11077 W FOREST HOME AVE	89	F
08-0000046	01/17/2008	09:00:22	HC	A612	10030 W FOREST HOME AVE /hallway	78	F
08-0000048	01/17/2008	13:59:34	HC	A612	11077 W FOREST HOME AVE /309W	78	F
08-0000060	01/22/2008	08:21:00	HC	A612	11077 W FOREST HOME AVE /306E	66	M
08-0000061	01/22/2008	08:59:00	HC	A610	9420 W GARDEN CT	79	M
08-0000068	01/24/2008	15:13:33	HC	A612	11077 W FOREST HOME AVE	85	F
08-0000069	01/24/2008	18:11:18	HC	A612	11077 W FOREST HOME AVE /# 103 E	87	F
08-0000081	01/28/2008	22:20:23	HC	A612	11077 W FOREST HOME AVE /# 201 E	87	F
08-0000085	01/30/2008	07:33:38	HC	A612	11077 W FOREST HOME AVE /202N	88	F
08-0000096	02/03/2008	16:33:00	HC	A612	5961 S 108th PL	78	F
08-0000118	02/14/2008	00:12:07	HC	A612	6175 S 122nd ST	80	F
08-0000121	02/15/2008	14:47:00	HC	A612	5767 S 108th ST	67	F
08-0000132	02/18/2008	11:32:00	HC	A612	11077 W FOREST HOME AVE /301W	82	F
08-0000151	02/26/2008	10:27:15	HC	A612	5910 S 118th ST	87	F
08-0000152	02/26/2008	13:12:38	HC	A612	11077 W FOREST HOME AVE /302W	88	F
08-0000158	02/28/2008	14:26:59	HC	A612	10920 W FOREST HOME AVE	89	F
08-0000161	02/29/2008	10:44:28	HC	A612	5321 S 108th ST	94	F
08-0000163	03/01/2008	23:23:45	HC	A612	10030 W FOREST HOME AVE /205	79	F
08-0000164	03/02/2008	07:31:28	HC	A612	11077 W FOREST HOME AVE /302S	83	M
08-0000169	03/04/2008	11:22:38	HC	A612	5321 S 108th ST	66	F
08-0000170	03/04/2008	17:10:49	HC	A612	10630 W RIDGE RD	78	F
08-0000175	03/06/2008	11:05:11	HC	A612	11077 W FOREST HOME AVE /201N	74	F
08-0000176	03/06/2008	11:28:38	HC	A610	10150 W PLUMTREE CIR /102	88	M
08-0000180	03/08/2008	10:30:14	HC	A612	11077 W FOREST HOME AVE /305N	73	F
08-0000196	03/14/2008	06:35:52	HC	A612	5910 S 118th ST	94	M
08-0000198	03/15/2008	17:20:00	HC	A612	9520 W FOREST HOME AVE	76	M
08-0000204	03/21/2008	06:02:45	HC	A612	11077 W FOREST HOME AVE /220	85	F
08-0000215	03/26/2008	14:16:16	HC	A612	5976 S KURTZ RD	76	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs > 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
08-0000222	03/29/2008	16:34:26	HC	A612	11077 W FOREST HOME AVE /Parking Garage	67	M
08-0000235	04/01/2008	18:39:51	HC	A610	10224 W FOREST HOME AVE /104	92	F
08-0000237	04/02/2008	09:17:19	HC	A610	5910 S 118th ST	91	
08-0000240	04/03/2008	02:18:00	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000241	04/03/2008	12:08:50	HC	A610	11077 W FOREST HOME AVE	86	F
08-0000245	04/05/2008	10:17:08	HC	A610	11077 W FOREST HOME AVE /107N	87	M
08-0000248	04/06/2008	14:34:08	HC	A610	5800 S 108th ST	85	M
08-0000254	04/08/2008	20:30:30	HC	A610	11077 W FOREST HOME AVE /309 N	77	M
08-0000256	04/09/2008	17:05:05	HC	A610	6134 S 120th ST	66	M
08-0000260	04/11/2008	07:15:00	HC	A610	11077 W FOREST HOME AVE /313	84	M
08-0000262	04/11/2008	10:01:00	HC	A610	11077 W FOREST HOME AVE /201E	87	F
08-0000267	04/14/2008	06:41:00	HC	A610	10300 W UPHAM AVE	74	F
08-0000277	04/19/2008	07:10:41	HC	A610	11077 W FOREST HOME AVE /302N	83	F
08-0000288	04/23/2008	12:16:46	HC	A610	11077 W FOREST HOME AVE /228	91	M
08-0000290	04/23/2008	19:56:37	HC	A610	9449 W FOREST HOME AVE	86	F
08-0000302	04/30/2008	21:46:18	HC	A610	11077 W FOREST HOME AVE /201E	87	F
08-0000310	05/05/2008	20:00:32	HC	A612	11077 W FOREST HOME AVE /206S	92	F
08-0000314	05/06/2008	16:21:34	HC	A610	10430 W UPHAM AVE	69	M
08-0000315	05/07/2008	18:49:41	HC	A610	5511 S MEADOW PARK CT	80	F
08-0000322	05/08/2008	22:59:09	HC	A610	11077 W FOREST HOME AVE /118	83	M
08-0000324	05/09/2008	10:38:52	HC	A610	11230 W GRANGE AVE	84	F
08-0000335	05/14/2008	04:28:29	HC	A610	5356 S 98th ST	84	F
08-0000336	05/14/2008	11:30:00	HC	A610	10544 PARKLANE CT	91	M
08-0000337	05/14/2008	11:39:00	HC	A612	11016 LUTHER AVE	77	M
08-0000340	05/14/2008	20:17:00	HC	A610	11077 W FOREST HOME AVE	89	F
08-0000343	05/16/2008	01:49:29	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000344	05/16/2008	07:49:10	HC	A610	11077 W FOREST HOME AVE /218	83	F
08-0000345	05/17/2008	10:24:39	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000348	05/18/2008	15:27:32	HC	A610	12326 W GRANGE AVE	77	F
08-0000355	05/22/2008	12:06:48	HC	A610	11077 W FOREST HOME AVE /Lobby	85	F
08-0000370	05/27/2008	09:59:39	HC	A610	11077 W FOREST HOME AVE /305E	74	F
08-0000373	05/28/2008	19:21:35	HC	A610	11811 W JANESVILLE RD	74	M
08-0000374	05/29/2008	01:08:00	HC	A610	11077 W FOREST HOME AVE /102E	78	M
08-0000383	06/01/2008	00:49:29	HC	A610	11077 W FOREST HOME AVE /# 222	81	F
08-0000384	06/01/2008	15:49:15	HC	A610	10330 W UPHAM AVE	75	F
08-0000386	06/02/2008	16:10:21	HC	A610	10077 W FOREST HOME AVE /106w	86	F
08-0000388	06/03/2008	09:24:29	HC	A610	11077 W FOREST HOME AVE /226	79	F
08-0000389	06/03/2008	11:26:06	HC	A610	10703 W GRANGE AVE	81	F
08-0000395	06/04/2008	01:03:22	HC	A610	11077 W FOREST HOME AVE /306 N	67	M
08-0000405	06/07/2008	12:37:44	HC	A612	6101 S 108th ST	73	M
08-0000431	06/11/2008	08:23:38	HC	A610	10913 W COPELAND AVE	85	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs > 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
08-0000434	06/12/2008	19:04:48	HC	A610	11077 W FOREST HOME AVE /120	78	F
08-0000437	06/13/2008	06:33:00	HC	A610	11077 W FOREST HOME AVE /124	70	F
08-0000442	06/15/2008	18:13:27	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000446	06/17/2008	11:22:12	HC	A610	11439 W GODSELL AVE	68	
08-0000453	06/19/2008	17:33:54	HC	A610	5430 S 108th ST	74	F
08-0000455	06/19/2008	21:23:04	HC	A610	11077 W FOREST HOME AVE /203 W	91	F
08-0000457	06/21/2008	08:43:39	HC	A610	11628 W PARNELL AVE	81	F
08-0000471	06/24/2008	16:46:26	HC	A612	5976 S KURTZ RD	77	F
08-0000472	06/24/2008	18:42:28	HC	A612	10133 W BROOKSIDE DR	83	F
08-0000478	06/26/2008	10:35:19	HC	A612	5544 S 106th ST	89	M
08-0000480	06/27/2008	17:17:42	HC	A612	5976 S KURTZ RD	77	F
08-0000483	06/30/2008	17:28:59	HC	A610	5987 S KURTZ RD	77	F
08-0000486	07/03/2008	18:04:35	HC	A610	11077 W FOREST HOME AVE /309N	78	M
08-0000487	07/04/2008	16:49:28	HC	A610	S 116th ST & W JANESVILLE RD	81	M
08-0000490	07/05/2008	15:15:36	HC	A610	S 114th ST & W GRANGE AVE	92	M
08-0000501	07/08/2008	21:57:51	HC	A610	10300 W UPHAM AVE	75	F
08-0000517	07/14/2008	12:50:25	HC	A610	5250 S 108th ST /A	81	F
08-0000544	07/25/2008	08:17:55	HC	A610	11077 W FOREST HOME AVE /321	90	F
08-0000545	07/25/2008	10:21:01	HC	A610	11077 W FOREST HOME AVE /306W	88	F
08-0000547	07/25/2008	18:58:05	HC	A610	11077 W FOREST HOME AVE	87	F
08-0000564	08/01/2008	09:07:46	HC	A610	11077 W FOREST HOME AVE /lobby	72	F
08-0000566	08/02/2008	10:57:08	HC	A610	9400 BOERNER DR	80	M
08-0000570	08/03/2008	19:42:22	HC	A610	11077 W FOREST HOME AVE /203E	85	F
08-0000578	08/07/2008	08:30:49	HC	A610	11077 W FOREST HOME AVE /308N	80	F
08-0000617	08/23/2008	05:53:13	HC	U604	11077 W FOREST HOME AVE /102E	78	M
08-0000620	08/24/2008	11:31:36	HC	A612	11077 W FOREST HOME AVE /306E	67	M
08-0000627	08/26/2008	07:31:30	HC	A610	11077 W FOREST HOME AVE /110 S	79	M
08-0000635	08/29/2008	13:29:15	HC	A610	11077 W FOREST HOME AVE	79	M
08-0000640	08/31/2008	02:00:45	HC	A610	11077 W FOREST HOME AVE /# 324	87	M
08-0000656	09/07/2008	17:50:18	HC	A610	11077 W FOREST HOME AVE /120	78	F
08-0000658	09/07/2008	22:28:46	HC	A610	11077 W FOREST HOME AVE /214	84	F
08-0000665	09/11/2008	18:20:22	HC	A610	3702 S Bayberry	89	M
08-0000668	09/13/2008	13:35:03	HC	A610	11077 W FOREST HOME AVE /205E	90	F
08-0000673	09/14/2008	17:29:46	HC	A610	10305 W BROOKSIDE DR	83	F
08-0000674	09/14/2008	22:30:09	HC	A610	11077 W FOREST HOME AVE /306 E	67	M
08-0000675	09/15/2008	10:45:00	HC	A610	11077 W FOREST HOME AVE /306 E	67	M
08-0000696	09/25/2008	13:53:19	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000701	09/26/2008	11:27:37	HC	A610	11077 W FOREST HOME AVE /104S	86	F
08-0000710	10/01/2008	13:40:30	HC	A610	6000 S 108th ST	66	M
08-0000712	10/03/2008	10:15:00	HC	A612	11077 W FOREST HOME AVE /110S	79	M
08-0000713	10/03/2008	10:21:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000727	10/08/2008	07:06:30	HC	A610	11077 W FOREST HOME AVE /303 N	85	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs > 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
08-0000728	10/09/2008	10:18:19	HC	A610	5313 S 108th ST	90	M
08-0000737	10/10/2008	18:40:17	HC	A610	11077 W FOREST HOME AVE	87	M
08-0000744	10/12/2008	06:23:36	HC	A610	11077 W FOREST HOME AVE /321	91	F
08-0000745	10/13/2008	09:26:17	HC	A610	11077 W FOREST HOME AVE /103 N	96	F
08-0000746	10/13/2008	11:09:14	HC	A610	11077 W FOREST HOME AVE /306N	87	F
08-0000747	10/13/2008	13:21:45	HC	A610	5585 S 111th ST	86	M
08-0000751	10/17/2008	01:12:00	HC	A610	11077 W FOREST HOME AVE /313	91	F
08-0000763	10/22/2008	19:27:00	HC	A612	11077 W FOREST HOME AVE /204E	81	F
08-0000764	10/24/2008	00:25:00	HC	A610	11077 W FOREST HOME AVE /218	84	F
08-0000767	10/24/2008	21:45:01	HC	A612	11077 W FOREST HOME AVE /307E	87	M
08-0000769	10/25/2008	15:59:50	HC	A610	9520 W FOREST HOME AVE	78	M
08-0000791	11/04/2008	12:23:00	HC	A610	11077 W FOREST HOME AVE /306N	87	F
08-0000792	11/04/2008	14:09:32	HC	A610	11077 W FOREST HOME AVE /305	74	F
08-0000801	11/06/2008	09:50:58	HC	A610	10239 W GRANGE AVE	83	F
08-0000803	11/06/2008	12:35:44	HC	A612	11521 W PARNELL AVE	90	F
08-0000808	11/08/2008	13:34:00	HC	A610	5341 S 113th ST	74	F
08-0000810	11/09/2008	13:45:57	HC	A610	5170 FROEMMING DR	91	M
08-0000814	11/09/2008	23:31:52	HC	A610	6151 SENECA TRL	97	F
08-0000815	11/10/2008	08:24:00	HC	A610	5425 S 111th ST	70	F
08-0000817	11/11/2008	07:54:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000825	11/14/2008	05:49:49	HC	A610	11077 W FOREST HOME AVE /321 W	91	F
08-0000828	11/14/2008	20:20:54	HC	A610	9770 W EDGERTON AVE	81	M
08-0000840	11/19/2008	11:26:42	HC	A610	11077 W FOREST HOME AVE /lobby	66	F
08-0000841	11/19/2008	13:19:36	HC	A612	9415 W FOREST HOME AVE /202	67	F
08-0000854	11/27/2008	02:01:00	HC	A610	11077 W FOREST HOME AVE /206S	88	M
08-0000859	11/30/2008	10:36:00	HC	A610	5466 S 113th ST	73	F
08-0000862	11/30/2008	17:06:00	HC	A612	10030 W FOREST HOME AVE /207	99	F
08-0000877	12/05/2008	07:36:45	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000884	12/08/2008	12:18:00	HC	A610	10030 W FOREST HOME AVE /207	99	F
08-0000887	12/09/2008	07:14:00	HC	A610	11077 W FOREST HOME AVE /115	95	F
08-0000888	12/09/2008	11:09:00	HC	A610	5400 S 98th ST	88	F
08-0000895	12/10/2008	18:18:00	HC	A610	11077 W FOREST HOME AVE /201N	88	F
08-0000908	12/16/2008	07:29:00	HC	A610	11077 W FOREST HOME AVE /225	90	F
08-0000919	12/19/2008	00:17:00	HC	A610	11077 W FOREST HOME AVE /306W	97	M
08-0000926	12/21/2008	23:10:00	HC	A610	11077 W FOREST HOME AVE /# 102	79	M
					E		
08-0000930	12/23/2008	04:07:00	HC	A610	9753 W EDGERTON AVE	66	M
08-0000953	12/28/2008	06:08:55	HC	A610	5170 FROEMMING DR	91	M
08-0000954	12/28/2008	18:04:47	HC	A610	11077 W FOREST HOME AVE /203	85	F
08-0000957	12/29/2008	02:30:44	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000958	12/29/2008	06:05:33	HC	A610	11077 W FOREST HOME AVE /306E	67	M
08-0000963	12/29/2008	23:05:00	HC	A610	11077 W FOREST HOME AVE /107N	86	F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2008} And {12/31/2008}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs > 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
08-0000965	12/30/2008	14:49:38	HC	A610	11077 W FOREST HOME AVE /dining room	74	F
08-0000967	12/31/2008	08:43:07	HC	A610	11077 W FOREST HOME AVE /outside	97	F

Subtotal Count	162					Subtotal Percent	100.00%

Appendix F

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2004} And {12/31/2004}
and Cause of Injury In "00F", "00I", "12 " and Age
Yrs >= 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
12 Fall							
04-0000008	01/06/2004	02:32:00	HC	A612	11077 W FOREST HOME AVE /110E	74	M
04-0000020	01/14/2004	10:29:00	HC	A612	12160 LUTHER AVE	72	F
04-0000021	01/14/2004	14:47:00	HC	A610	6226 S 122nd ST	79	F
04-0000050	01/25/2004	12:09:00	HC	A612	11077 W FOREST HOME AVE /203E	87	F
04-0000068	02/06/2004	19:44:00	HC	A612	9641 W FOREST HOME AVE	74	F
04-0000075	02/11/2004	11:42:00	HC	A612	11077 W FOREST HOME AVE	86	F
04-0000126	03/09/2004	15:24:00	HC	A612	5910 S 118th ST	82	F
04-0000143	03/20/2004	15:24:00	HC	A612	11077 W FOREST HOME AVE /126	87	M
04-0000147	03/23/2004	08:46:00	HC	A610	9543 W FOREST HOME AVE /6	69	F
04-0000158	03/28/2004	14:07:00	HC	A612	9520 W FOREST HOME AVE	76	F
04-0000160	03/29/2004	07:20:00	HC	A610	11077 W FOREST HOME AVE /303S	98	F
04-0000166	04/01/2004	16:17:00	HC	A610	5080 S 108th ST	88	F
04-0000200	04/24/2004	17:47:00	HC	A610	10830 W PARNELL AVE	77	F
04-0000201	04/25/2004	03:31:00	HC	A610	11077 W FOREST HOME AVE /220	80	F
04-0000204	04/27/2004	12:21:00	HC	A610	11077 W FOREST HOME AVE /208	79	M
04-0000207	04/28/2004	23:04:00	HC	A610	5600 DENIS CT	89	F
04-0000212	05/01/2004	02:17:00	HC	A610	5585 S 111th ST	81	M
04-0000223	05/04/2004	23:46:00	HC	A610	11077 W FOREST HOME AVE /116	86	F
04-0000293	05/31/2004	17:31:00	HC	A610	5217 ALLENWOOD LN	90	M
04-0000325	06/14/2004	14:20:00	HC	A610	11077 W FOREST HOME AVE /322	83	F
04-0000347	06/25/2004	15:00:00	HC	A610	10030 W FOREST HOME AVE /103	79	F
04-0000356	07/02/2004	03:50:00	HC	A610	10137 W FOREST HOME AVE	80	M
04-0000361	07/04/2004	12:40:00	HC	A610	11525 W GODSELL AVE	88	F
04-0000384	07/10/2004	10:34:00	HC	A612	11077 W FOREST HOME AVE	86	F
04-0000388	07/11/2004	19:44:00	HC	A610	9520 W FOREST HOME AVE	71	F
04-0000419	07/25/2004	08:04:00	HC	A610	11077 W FOREST HOME AVE /E120	87	M
04-0000459	08/14/2004	06:19:00	HC	A610	11077 W FOREST HOME AVE /322	83	F
04-0000469	08/18/2004	16:59:00	HC	A610	10269 W KAY PKY	85	F
04-0000477	08/23/2004	12:35:00	HC	A610	11077 W FOREST HOME AVE /208W	81	F
04-0000479	08/23/2004	14:45:00	HC	A610	10010 W FOREST HOME AVE /206	90	F
04-0000480	08/23/2004	17:00:00	HC	A610	10500 W RIDGE RD	92	M
04-0000484	08/25/2004	07:03:00	HC	A610	11077 W FOREST HOME AVE /201N	85	F
04-0000497	08/29/2004	08:52:00	HC	A612	9540 W FOREST HOME AVE	98	F
04-0000498	08/29/2004	10:15:00	HC	A610	12210 W GRANGE AVE	83	F
04-0000530	09/15/2004	20:29:00	HC	A610	11077 W FOREST HOME AVE	85	F
04-0000532	09/16/2004	08:02:00	HC	A610	11077 W FOREST HOME AVE /106E	87	F
04-0000556	09/25/2004	17:42:00	HC	A610	11077 W FOREST HOME AVE /319	68	M
04-0000560	09/26/2004	15:13:00	HC	A610	5080 S 108th ST	89	F
04-0000563	09/27/2004	03:21:00	HC	A612	11077 W FOREST HOME AVE /319	68	M
04-0000570	09/30/2004	14:00:00	HC	A610	11321 BRIDGET LN	93	M

Hales Corners Fire Department

Cause of Injury/Illness Analysis

Alarm Date Between {1/1/2004} And {12/31/2004}
 and Cause of Injury In "00F", "00I", "12 " and Age
 Yrs >= 65

Incident	Alm Date	Time	Stn	Unit	Scene Address	Age	Gender
04-0000585	10/08/2004	10:24:00	HC	A610	11077 W FOREST HOME AVE /206S	89	F
04-0000590	10/10/2004	07:36:00	HC	A610	11077 W FOREST HOME AVE /106E	87	F
04-0000599	10/13/2004	07:15:00	HC	A610	11077 W FOREST HOME AVE /108S	86	F
04-0000600	10/14/2004	00:50:00	HC	A610	11077 W FOREST HOME AVE /305N	95	F
04-0000604	10/16/2004	03:48:00	HC	A610	11362 ARROWHEAD TRL	87	F
04-0000628	10/26/2004	09:12:00	HC	A610	5821 S 109th ST	74	F
04-0000641	11/06/2004	13:17:00	HC	A612	10524 W SCHARLES AVE	77	F
04-0000646	11/08/2004	19:33:00	HC	A612	5340 S 114th ST	89	F
04-0000655	11/13/2004	17:39:00	HC	A612	11077 W FOREST HOME AVE /304N	90	F
04-0000671	11/24/2004	14:43:00	HC	A612	11077 W FOREST HOME AVE	90	F
04-0000702	12/08/2004	23:27:00	HC	A612	5585 S 111th ST	82	M
04-0000706	12/12/2004	10:31:00	HC	A612	11077 W FOREST HOME AVE /106N	81	F
04-0000716	12/16/2004	15:27:00	HC	A612	11077 W FOREST HOME AVE /205W	93	F
04-0000746	12/28/2004	07:45:00	HC	A612	10030 W FOREST HOME AVE /207	95	F
04-0000752	12/30/2004	09:41:00	HC	A612	5427 S 113th ST	83	F
04-0000754	12/31/2004	05:19:00	HC	A612	11077 W FOREST HOME AVE /221	88	F
Subtotal Count						56	Subtotal Percent 100.00%

Appendix G

Hales Corners Fire Department- Health Department Referral

HCFD Incident Number _____ Date of Incident: _____

Referred by: _____ Date of Referral: _____

Patient Demographic Information

Patient name: _____ Date of birth: _____

Patient address: _____

City: _____ Zip: _____ Phone: _____

Transported: Yes No Transported to: _____

Chief complaint/reason for call: _____

Referral Information

This patient is being referred to the Health Department for the following reason(s)

Medical Conditions:

- | | |
|---|--|
| <input type="checkbox"/> Disorientation | <input type="checkbox"/> Mobility issues |
| <input type="checkbox"/> Stroke | <input type="checkbox"/> Dementia |
| <input type="checkbox"/> Cardiac | <input type="checkbox"/> Gait |
| <input type="checkbox"/> Fractures/osteoporosis | <input type="checkbox"/> Hallucinations |
| <input type="checkbox"/> Medical conditions\diagnosis _____ | |

Medications

Environmental Conditions:

- | | |
|---|--|
| <input type="checkbox"/> Lack of utilities in home | <input type="checkbox"/> Housekeeping needed |
| <input type="checkbox"/> Excessive temperature in home | <input type="checkbox"/> Excessive trip/fall hazards |
| <input type="checkbox"/> Human/animal feces/urine in home | <input type="checkbox"/> other _____ |

Physical Problems:

- Possible Malnutrition
- Possible unresolved medical problems
- Excessive falling

- Possible dehydration
- Lack of mobility
- Acute injury not addressed


Comments: _____

Appendix H



Guard Your Independence!

Protect Yourself from Falls




What's the Problem?

- One out of three over age 65 fall each year
- Serious health risk
- Seniors lose their independence
- One half to two-thirds of falls happen at home
- Emergency Medical Services requests for falls has seen an increase of 189% since 2004
- Cost: \$43.8 billion by 2020




Risk Factors

- Lower body weakness
- Problems with walking and balance
- Multiple medications
- Other health conditions




Reduce Your Risk

- Exercise regularly
- Review medications
- Pay attention to your health
- Make your home safer



Exercise Regularly

- Increase upper and lower body strength
- Work on hand strength
- Improve balance and coordination
- Increase overall sense of well-being



Review Medications

- Reduce side effects and interactions
- See a doctor or pharmacist




Pay Attention to Your Health

- Make regular visits to your doctor
- Monitor recurring health issues
- Schedule vision and hearing checks



Make Your Home Safer

- Easy Modifications
- Design Changes




Look for Common Risk Factors

- Tripping hazards
- Lack of railings or grab bars
- Slippery surfaces
- Awkward reaches, storage
- Poor lighting
- Unstable furniture



Easy Modifications

- Kitchen
- Bathroom
- Bedroom
- Closets




More Easy Modifications!

- Floors
- Hallways, steps, stairs
- Lighting
- Entrances, doors




Making Design Changes

- Improve accessibility and adaptability
- Incorporate Universal Design principles
- Build safety into your pre-retirement plans




Do It Now!

- For those who live there AND your visitors!
- Maximize your return on investment
- Piggyback your projects



Who Can Help?

- Health care provider
- Local health department
- Local fire department
- Centers for Disease Control
http://www.cdc.gov/ncipc/falls/de_fault.htm
- AARP
<http://www.aarp.org/life/homedesign>



Sources

- Administration on Aging, United States Department of Health and Human Services
- U.S. Centers for Disease Control
- Minnesota Department of Aging