Environmental Scan: Seniors and Veterans Falls Prevention Initiatives in British Columbia

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**Foreword**

The British Columbia Injury Research and Prevention Unit (BCIRPU), directed by Dr. Ian Pike, was established by the Ministry of Health and the Minister’s Injury Prevention Advisory Committee in August 1997. BCIRPU opened its doors in January 1998. It is housed within the Centre for Community Child Health Research (CCCHR) at Children’s & Women’s Health Centre of British Columbia and supported by BC Research Institute for Children’s & Women’s Health. The primary purpose of the Unit includes “The reduction of unintentional injuries in BC, through the support and evaluation of effective prevention measures, and the establishment of ongoing injury surveillance across the province.”

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*February, 2005*
Executive Summary

Background and Purpose
For seniors aged of 65 and older, it is estimated that one in three persons will likely experience at least one fall per year and many will fall multiple times (O’Loughlin, 1993). In BC, falls among the elderly exceed all other causes of injury. Injuries from falls account for 85 percent of all injuries to the elderly and in 1998 cost British Columbia $180 million in direct health costs.

The purpose of this scan was to collect and analyze data related to existing initiatives designed to promote the reduction of falls and fall-related injuries among seniors and veterans in British Columbia (BC). This work is intended to help disseminate information about how falls can be prevented, promote networking, and contribute to a collective effort currently underway in the province to reduce falls and injuries among older persons.

These findings will also serve to reflect the changes that have taken place since the previous scan completed in March 2001, when only 12 falls prevention initiatives were found to be operating in BC (Scott, Dukeshire, Gallagher, & Scanlan, 2001). In addition, the scan is intended to help practitioners and researchers to better understand the critical factors that have helped to move this important issue forward and what can be done to help sustain this effort in the future.

Methods
Epidemiological data on falls among older adults in British Columbia was extracted from vital statistic and hospital separation databases. Inventory data was collected using a province-wide survey of falls prevention initiatives in all community and healthcare settings serving seniors; a survey tool was developed to collect data on thirteen key elements of each falls prevention initiative. Critical factors of success were gathered from in-depth interviews with key informants of selected initiatives that demonstrated models of excellence.

For an initiative to be included in the inventory, it had to meet each of the following criteria: 1) the principal goal had to be falls and fall-related injury prevention; 2) initiative had to be primarily targeted to adults aged 65 and older in community and/or institutional settings; 3) initiative had to be based in BC; 4) initiative had to be operating now or within the last two years, or would be initiated within two years (of survey date: 2004).

Participants were able to access and submit the survey form either online through the Ministry of Health’s or BCIRPU’s website; if requested, paper copies were sent out by mail and returned by mail or facsimile. SPSS Version 12.0 for Windows was used to create a database of all reported data and to calculate sums and percentages.

Results and Conclusions
In total, 116 inventories were submitted from individuals coordinating or participating in falls prevention initiatives in BC. As compared to the 12 initiatives reported in the previous scan conducted in 2001, this is a nine-fold increase in reported falls prevention initiatives (Scott, et al., 2001). The initiatives are organized into seven categories based on the healthcare setting or provider. The below table illustrates the number and percentage of falls-prevention initiatives reported in each category.
The percentage of total initiatives by region was found to exceed the percentage of those aged 65 years and over for Vancouver Coastal (35.5% to 24%), Northern (8% to 4%) and Interior Health Authorities (23% to 21%). The percentage of initiatives was lower than the percentage of those aged 65 years and over for the Fraser (15% to 30%) and Vancouver Island (10.5% to 21%) Health Authorities.

Over half (n=51) of the initiatives employed a multifactorial approach to falls prevention and 29 used clinical assessment as their main approach. Those involved in the planning and delivery of most initiatives tended to be nurses (77%), physiotherapists (75%), occupational therapists (57%) or seniors (48%). Many products and resources have been produced by these initiatives, including 40 checklists, 38 risk assessment tools, 31 policies and protocol, 29 fall risk screening tools, 28 brochures and 24 training manuals or packages. The majority of initiatives were funded by health authorities (69%) and most initiatives (77) have no projected end date.

It is evident from this environmental scan that there is a growing recognition among healthcare providers and community groups of the importance of the need for seniors’ falls prevention strategies and interventions. The nine-fold growth in the number of falls prevention initiatives reported since the previous scan in March 2001 is a strong indication of this.

Hospital separation and vital statistic data are beginning to demonstrate a slight decline in falls rates for some age groups in some areas in the province; falls rates are decreasing over the same time that initiatives are increasing. It is evident that, thus far, falls prevention resources have been well-utilized and are worth investing in as a strategy for health promotion.

Several conclusions and implications arose from the in-depth inquiry of selected initiatives, including the finding that in order to be successful, fall prevention programs require strong leadership and commitment, good information on local risk magnitude, and a cultural shift in the organization that will support both individual and population based health promotion efforts.

As our population continues to age, the health delivery system must be prepared and equipped to address a wide range of seniors’ health issues. More original research on falls prevention interventions is needed as well as evaluation support. Although a growing number of initiatives exist, few have systematic evaluation. Falls and related injuries are a significant cause of morbidity and mortality among seniors that will continue to impact community services and health care delivery if appropriate and timely interventions are not put into practice.
## Recommendations

<table>
<thead>
<tr>
<th>Healthcare Setting/Provider</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| **Acute Care / Geriatric Rehabilitation Facilities** | Perform a falls-risk assessment upon admission, when patient’s health changes and at regular intervals.  
Conduct surveillance of falls and fall-related injuries, paying close attention to activity and location at the time of the fall. |
| **Community / Pre-frail and Well-Elderly Service Providers** | Carry out thorough falls-risk assessment and health screening, including falls history, current medications, vision problems and level of mobility of every first-time client.  
An environmental assessment of a client’s home and their interaction with their surrounds should be conducted upon first meeting a client; fall-related risks should be modified with appropriate measures, utilizing resources available, such national assistance programs.  
Consideration should be given to safe pedestrian routes, building codes that reflect the needs of seniors, accessible transportation systems and a process for reporting and repairing hazards. |
| **Long-Term Care Facilities** | Apply universal falls precautions for all residents as part of a facility-wide policy that reflects current best practices.  
Conduct regular surveillance of falls and fall-related injuries. The location and activity at the time of the fall are particularly important for guiding appropriate improvements.  
Falls-risk assessment should occur upon resident’s admission to the facility, when a resident’s health changes and at regular intervals. Appropriate interventions should be considered and implemented. |
| **Cross-Site** | Employ a multi-disciplinary healthcare team, including those at-risk, in the development, implementation and evaluation of initiatives.  
Incorporate evaluation into any falls prevention program to measure the effectiveness in its process, impact and outcome.  
Allow time for planning of initiative or program; build on local strengths and resources. Invite input from a variety of experts and healthcare professionals.  
Attend to the needs of persons who are disadvantaged because of language barriers, economic hardship or physical or mental limitations.  
Identify a local champion and make falls-prevention a clear mandate in the description of their roles and responsibilities. |
| **Regional Health Authorities** | Allocate appropriate resources to falls prevention initiatives that represent a cross-section of healthcare settings for seniors. The number of initiatives should match regional needs and population.  
Partner with municipal jurisdictions to promote safety in the design of public places, public transportation and infrastructure appropriate to seniors’ needs and abilities. Consult with Health Canada/Veterans Affairs Canada concerning community-based initiatives. |
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I. Introduction

It is estimated that one in three persons over the age of 65 is likely to fall at least once each year and many fall multiple times. In BC this means that an estimated 191,467 seniors will likely fall this year. Almost half of those who fall experience a minor injury and up to 25 percent sustain a more serious injury that requires medical attention for a fracture, laceration or sprain. In 2003 alone, over 300 people over the age of 65 died from falls in BC and more than 10,000 were hospitalized.

In BC, falls among the elderly exceed all other causes of injury both in terms of the number of people affected and the personal and societal costs – falls have more human and economic impact than the combined effect of motor vehicle crashes, poisonings, drowning, fires and all other causes of injury. Injuries from falls account for 85 percent of all injuries to the elderly and in 1998 cost British Columbia $180 million in direct health costs.

Understanding the interaction between the risk factors for falls and the settings where falls take place can help tailor more effective strategies to reduce the incidence of falls. Existing evidence shows that falls tend to occur for difference reasons among sub-populations of seniors in the following locations:

1. **Home/community:** Among the well elderly in the community, falls occur most often while taking risks such as climbing ladders or standing on stools or while engaging in vigorous activity outside of the home. Among the frail elderly in the community, who are mobile but unsteady on their feet, falls tend to occur while performing routine activities like dressing, bathing and toileting or walking along a familiar route.

2. **Acute care hospitals and geriatric rehabilitation services:** Acute illness, extended bed rest, decreased mobility, delirium, recovery from anesthesia, unfamiliar surroundings and use of psychotropic medication can predispose elderly persons to falling while in hospital. The first few months after discharge, when many seniors engage in rehabilitation services, is a high-risk time for falls when elderly persons may be recuperating from acute illness or surgery and are still unsteady on their feet. Prolonged bed rest is also associated with loss of muscles mass and loss of bone density from disuse atrophy and lack of weight bearing, predisposing these seniors to increased risk of injury from a fall.

3. **Long-term care settings:** High levels of frailty are predominant among residents of long-term care facilities where most have chronic illnesses, disabilities and/or cognitive impairments. These conditions, combined with increasing levels of resident acuity on admission, reduced staff/resident ratios, resident inactivity, and use of high-risk medications predispose most long-term care residents to falls and injuries.

In 2000, an Inventory of Canadian Programs for the Prevention of Falls and Fall-related Injuries Among Seniors Living in the Community (Scott, Dukeshire, Gallagher and Scanlan, 2001) identified ten programs located in British Columbia. However, because
these programs were limited to seniors living in the community, they would not include those targeted to acute care and long-term care settings. In 2001, a scan was conducted by the Senior Advisor on Falls Prevention with the BC Injury Research and Prevention Unit (BCIRPU), using the Regional Health Service Plan Report (Ministry of Health, 2000), which includes a regional reporting of health initiatives, including those related to falls and injury prevention (Scott et al., 2001). This scan resulted in a list of 19 falls prevention programs that covered all sites (community, acute and long-term care), including the five Health Canada/Veterans Affairs funded projects that were not in place at the time of the 2001 inventory.

Together, these two prior inventories covered falls prevention initiatives that targeted each of the above settings. However, what was found to be lacking in BC was a comprehensive inventory of these initiatives highlighting their successes and challenges in reducing falls and resulting injuries. Also missing from prior inventories are research and policy initiatives for falls prevention. The purpose of this Environmental Scan is to address these gaps.

A. Purpose

The purpose of this scan is to collect and analyze data related to existing initiatives designed to promote the reduction of falls and fall-related injuries among seniors and veterans in British Columbia (BC). This work is intended to help disseminate information about how falls can be prevented, promote networking, and contribute to a collective effort currently underway in the province to reduce falls and injuries among older persons. These findings will also serve to reflect the changes that have taken place since the previous scan completed in March 2001 (Gallagher & Scott, 2001), when only 12 falls prevention initiatives were found to be operating in BC. In addition, the scan is intended to help practitioners and researchers to better understand the critical factors in BC that have helped to move this important issue forward and what can be done to help sustain this effort in the future.

B. Goal

The goal of the environmental scan is three-fold:

1. To synthesize epidemiological data relating to falls among older adults in British Columbia
2. To produce a comprehensive, province-wide inventory of falls prevention initiatives in all settings
3. To explicate critical factors from selected initiatives that demonstrate models of excellence of community capacity to reduce falls.
C. Objectives

The key objectives of the environmental scan are to:

- Update existing falls prevention inventories in British Columbia.
- Uncover falls prevention activities occurring in health care and community settings that are part of existing services to seniors.
- Provide an update on falls prevention research being undertaken in BC.
- Create a practical, insightful guide for those who provide services and programs to seniors to use in developing and promoting falls prevention initiatives.
- Generate a network for falls prevention planning across health authorities and research centers to support the implementation of recommendations put forward in the Provincial Health Report 2004: Preventing Falls and Injuries Among the Elderly (http://www.healthservices.gov.bc.ca/pho/special.html).
II. Methods

A. Epidemiological Methods

This scan includes epidemiological data relating to fall-related injuries among older adults in British Columbia. Data are extracted from vital statistic and hospital separation databases, showing rates and cases for deaths and injury due to falls by age groups, gender, and differences by regions. These data are presented in charts with an interpretation of the findings.

B. Inventory Methods

For this scan, the authors developed a survey tool designed to capture key elements of falls prevention initiatives in all settings. This scan builds on a previous environmental scan conducted in BC (Gallagher & Scott, 2001), which was limited to community-based initiatives and identified the following elements: contact information, partners, initiative description and evaluation results.

For the proposed scan, the authors were in a good position to exercise their years of experience in this field and their considerable range of contacts to expand the 2001 inventory and invite long-term care, home support services and transitional settings such as acute care, hospital discharge and seniors day centres to participate. Surveys were also sent to researchers at academic institutions who were or will be conducting falls prevention studies. To uncover policies and programs designed to direct and support falls prevention initiatives throughout the province, surveys were also sent to government departments - at federal, provincial and regional levels – and to non-governmental organizations.

Elements such as challenges, successes, enabling factors, sustainability and next steps in program planning were deemed important to falls prevention initiatives and, as such, were included in the survey. The survey categories included the following:

1. Contact information
2. Regional location
3. Purpose of the initiative
4. Goals and objectives
5. Prevention strategies
6. Target population
7. Program delivery methods
8. Settings
9. Products and resources produced
10. Process and outcome evaluation methods and findings
11. Factors influencing challenges and successes
12. Sustainability goals
13. Funding sources and duration
i. Criteria for Inclusion in the BC Falls Prevention Inventory

To be included in the inventory, falls prevention initiatives (i.e., programs, policies or research) had to meet the following criteria:

- The primary goal had to be falls and fall-related injury prevention
- The initiative had to be primarily targeted to adults aged 65 and older in community and/or institutional settings
- The initiative had to be based in British Columbia
- The initiative had to be operating now or within the last two years, or would be initiated within two years (of survey date: 2004)

A cover letter outlining the inclusion criteria was distributed along with the Inventory data collection form (see Appendix A).

ii. Inventory Data Collection Form

The inventory data collection form was made accessible in a variety of different ways in order to accommodate the difference in computer abilities and accessibility to computers of the target respondents. One form was created that could be accessed and submitted in three ways (see Appendix B):

- Online through the BC Provincial Health Officer’s website
- Downloaded from the BC Provincial Health Officer’s website, printed, completed by hand and then faxed to the contact person.
- Paper copies sent out by mail to be returned by mail or facsimile.

A draft version the inventory form was pilot tested with eight volunteers who are active in falls prevention in community or institutional settings. Findings from this pilot were reviewed by a panel of experts in the field of falls prevention, and reflected in the final version.

iii. Dissemination of the Inventory Form

The goal was to reach all sectors of seniors’ health care and community service within each of the five health authorities as shown in the map in Appendix C. The form was also sent to academic institutions and government departments with known links to seniors’ health and injury prevention issues. To accomplish a broad dissemination a number of strategies were used including a snowball technique with known contacts in the field of falls prevention and seniors’ service delivery, with a request to assist with dissemination using the following methods:

- Newsletters (community, university and health authority)
- Websites (Ministry of Health, Provincial Health Officer and the BC Injury Research and Prevention Unit)
- Email and phone calls to key contacts already active in falls prevention programs
- Access to health authority email distribution lists where possible
Access to the BC Injury Research and Prevention Unit distribution list
A mail-out to individuals in the community who were known champions of senior’s issues
Email tags as signature lines of key project partners

C. Critical Factor Extraction Methods

In order to address the third objective of extracting information on critical factors of successful initiatives, we conducted a limited literature search on social capital and community capacity. Using the literature as a guide, we then conducted in-depth interviews with key informants in five settings where successful models of falls prevention have been implemented. The settings were identified from the 116 completed inventories obtained from the BC Inventory of Fall Prevention Initiatives, using an expert rating screening process. A team of three people rated each of the initiatives using a weighted five-item scale shown in Table 1 as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-factorial best practices employed</td>
<td>3</td>
</tr>
<tr>
<td>Process evaluation conducted</td>
<td>2</td>
</tr>
<tr>
<td>Outcome evaluation conducted</td>
<td>2</td>
</tr>
<tr>
<td>Multi-disciplinary team involved</td>
<td>1</td>
</tr>
<tr>
<td>In operation for 2 or more years</td>
<td>1</td>
</tr>
</tbody>
</table>

Each inventory was given a rating. One top rated initiative was selected in each type of setting: a region-wide initiative, and initiatives based in hospitals, rehabilitation centers, long-term care settings, and community. There was also an effort to select geographically diverse areas (rural and urban). In the case of ties between initiatives in any of the designated categories of settings, we gave an added point if evaluation results had been obtained at the time of the report.

We conducted focus groups with the key informants from each of the five top-rated initiatives, following their informed consent. The numbers and locations of each group are listed in Table 2.1. Participants included: seniors, physiotherapists, physicians, nurses, occupational therapists, evaluators, health educators, data analysts and administrators.
Table 2: Number and Location of Initiatives

<table>
<thead>
<tr>
<th>Type of Initiatives</th>
<th>Regional Health Authority</th>
<th>Number of Focus Group Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional</td>
<td>Central Interior Health Authority</td>
<td>12</td>
</tr>
<tr>
<td>Hospital-Based</td>
<td>Fraser Health Authority</td>
<td>5</td>
</tr>
<tr>
<td>Rehabilitation Centre</td>
<td>Vancouver Coastal HA</td>
<td>4</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>Vancouver Coastal HA</td>
<td>5</td>
</tr>
<tr>
<td>Community</td>
<td>Northern Health Authority</td>
<td>6</td>
</tr>
</tbody>
</table>

Open-ended questions were asked in each focus group regarding how these exemplary programs were developed and sustained, and the climatic conditions conducive to this process. Qualitative data methods were used to transcribe and analyze the interview data. An emerging model of Community Capacity Building was used to guide the development of the interview questions and the analysis of the data (Kelley, 2003). The themes that form the basis of this model are:

1. *Robust community:* What signals that a community is “ready” to commence a fall prevention program? What role do health authorities, provincial governments and Federal government agencies play in this process?
2. *Functional health care resources:* What are the core health services and programs that appear to be necessary?
3. *Individual dedication and social status:* Who emerges as the leaders in this initiative and what are their characteristics, motivations and social positions?
4. *Significant incident:* Have there been any triggering events in the community that sparked the need for a fall-prevention program?
5. *Creating a team:* Who constitutes the planning team and how do they develop trust?
6. *Engaging the community:* How does the wider community get involved and stay informed?
7. *Growing the program:* How does the community decide what program is needed? Do they rely on “best practices” and other proven strategies?
8. *Evaluating and celebrating success:* How is the program being evaluated and do they record and celebrate success?
III. Findings

A. Epidemiological findings

**Epidemiology of Fall-related Deaths and Hospitalizations in British Columbia by Health Authority**

The following epidemiological findings of fall-related deaths and hospitalizations in BC were prepared by the Population Health Surveillance and Epidemiology Branch of the Ministry of Health Services, in consultation with staff from the BC Injury Research and Prevention Unit. They represent analyses of data from BC Vital Statistics Agency and the hospital Discharge Abstract Database of the Canadian Institute for Health Information. These findings examine fall-related deaths and hospitalizations by BC Health Authorities, age group and gender. Compared to the recently published Provincial Health Officer’s Report on the Prevention of Falls and Injuries Among the Elderly (Scott, Peck & Kendall, 2004), the figures below and those in the appendices, provide greater detail by health region and are intended for use as baseline data, on which to compare future trends and patterns for fall-related injuries. These findings will also be of use in identifying areas of need for future falls prevention activities as they reflect shifts in health care delivery and population trends.

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1 A fall-related death refers to a death that occurred because of a fall-injury.

2 A fall-related hospitalization refers to a hospital stay that occurred because of a fall-injury.
i. Deaths due to Fall-related Injuries

According to the Provincial Health Officer’s Report on the Prevention of Falls and Injuries Among the Elderly (Scott, Peck & Kendall, 2004), across BC deaths due to falls have increased in absolute numbers over the past decade due to the increase in numbers of persons aged 65 years and over. However, the rate of deaths’ for males has shown a small but statistically significant decline over the past ten years. Females over the same period show little change. These rates differ considerably by Health Authority.

As shown in Figure 3.1, the rate per 10,000 of the population for deaths directly due to falls for those aged 65 years and older by Health Authority is greatest for Northern and Vancouver Island Health Authorities and the least for the Fraser Health Authority compared to the BC average.

Figure 3.1

Deaths Directly Due to Falls, Ages 65+ Years, by Health Authority, B.C., 1997 to 2001

Health Authority
- Interior
- Fraser
- Vancouver Coastal
- Vancouver Island
- Northern

Age-Standardized Rate Per 10,000*

* With 95% Confidence
Source: B.C. Vital Statistics

3Age-specific fall-related death rates are calculated by dividing the number of deaths due to falls in each age group by the population of that specific age group.
Figure 3.2 shows the differences by gender for deaths directly related to falls, with Northern and Vancouver Island Health Authority having the greatest rate among females and the Interior and Vancouver Island having the greatest rates for males compared to the BC average. The Fraser Health Authority shows the lowest rates for both genders compared to the BC average. While gender differences in mortality were apparent, the differences were not statistically significant.

Also shown in Figure 3.2 are the confidence intervals at the end of each bar by Health Authority – the greatest confidence interval shown for the Northern Health Authority indicates that the range is greater compared to other Health Authorities from the lowest rate to the highest rate. This reflects the small numbers of deaths due to lower overall numbers of seniors in Northern BC compared with other Health Authorities.

**Figure 3.2**

**Mortality Rates, Deaths Directly Due to Falls in Seniors Aged 65+ Years, Males and Females, by Health Authority and Health Service Delivery Area, B.C., 1997-2001**

*With 95% Confidence Intervals.*

Source: B.C. Vital Statistics
ii. Hospitalizations due to Fall-related Injuries

Similar patterns to those of deaths due to falls are seen for the absolute numbers of fall-related hospitalizations, with an overall increase over the past decade for those aged 65 years and over. The greatest contributor to this increase comes from those aged 85 years and older, with a 12 percent increase in fall-related hospitalizations for this age group between 1993 and 2001.

Figure 3.3 shows the rate of hospitalizations per 1,000 of the population by Health Authority and gender, with the highest rates being found in the Northern Health Authority for both females and males compared to the BC average. The rates are much higher for females than for males across all Health Authorities.

Figure 3.3

*Age-specific fall-related hospitalization rates are calculated by dividing the number of hospitalizations due to falls in each age group by the population of that specific age group.*
As shown in Figure 3.4, the rate of hospitalizations per 1,000 of the population for falls for those aged 65 years and older over the past five years differs by Health Authority. Over this time, the Northern and Interior Health Authorities have consistently exceeded the BC average and the Vancouver Island, Vancouver Coastal and Fraser Health Authorities have been consistently below the BC average. However, as shown in Table 3 below only the Interior and Fraser Health Authorities have shown statistically significant declines over the five years for those aged 65 years and over.

Table 3: Linear Regression Analysis

<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Trend</th>
<th>p Value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interior</td>
<td>Decline</td>
<td>0.021</td>
<td>Y</td>
</tr>
<tr>
<td>Fraser</td>
<td>Decline</td>
<td>&lt;0.001</td>
<td>Y</td>
</tr>
<tr>
<td>Vancouver Coastal</td>
<td>Nil</td>
<td>0.357</td>
<td>N</td>
</tr>
<tr>
<td>Vancouver Island</td>
<td>Nil</td>
<td>0.112</td>
<td>N</td>
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<td>Northern</td>
<td>Nil</td>
<td>0.505</td>
<td>N</td>
</tr>
<tr>
<td>BC</td>
<td>Decline</td>
<td>&lt;0.001</td>
<td>Y</td>
</tr>
</tbody>
</table>

Figure 3.4

Falls in Seniors, Hospital Cases Aged 65+ Years, by Health Authority, B.C., 1992/93 to 2000/01

Source: Acute/reab. separations from the 1992/93 to 2000/01 Canadian Institute of Health Information Discharge Abstract Dataset.
**B. Inventory Findings**

In total, 116 inventories were submitted from individuals coordinating or participating in falls prevention initiatives in BC. These initiatives represent various health care, community, policy, research and private settings and are sorted according to the following seven categories:

1. **Acute Care / Geriatric Rehabilitation Services**
2. **Community / Pre-frail and Well-elderly**
3. **Long-term Care / Frail and Cognitively Impaired Elderly**
4. **Cross-Site**
5. **Policy**
6. **Research**
7. **Private Providers**

The results of the inventory are presented in the following ways:

1. **Summary of the findings:** The summary of the findings provides a general overview of regional distribution, prevention strategies, program delivery methods, settings, products and resources produced, process and outcome evaluation methods and findings, and factors influencing challenges and successes that were reported.

2. **Inventory descriptions:** These descriptions include the project title, contact person, a description of the project goals and objectives, the project duration and any evaluation results that were reported.

3. **Appendices of tables:** Each initiative is given a unique number, seen at the top of each initiative on the right hand side. This number is linked to the two tables found in the appendices (C and D), where detailed listings are provided of the main prevention strategies used and the type of outcome evaluation that was conducted for each initiative.

**Summary of the Findings**

1. **Regional Distribution: Percentages by Health Authority and proportion of persons aged 65 years and over**

   The number of falls prevention initiatives varied considerably by Health Authority and in comparison to the percentage of persons aged 65 years and over in each Health Authority. The following table represents the number of initiatives that are located in each Health Authority (see map of Health Authorities below). In addition, the population and percentage of seniors aged 65 years and older in each region is listed.

   As shown in Table 4, the percentage of initiatives exceeds the percentage of those aged 65 years and over for Vancouver Coastal (35.5% to 24%), Northern (8% to 4%) and Interior Health Authorities (23% to 21%). The percentage of initiatives is lower than the percentage of those aged 65 years and over for the Fraser (15% to 30%) and Vancouver Island (10.5% to 21%) Health Authorities. The table excludes any policy, research, or
private provider-funded initiative that is not directly associated with a Health Authority. For instance, any University-based research initiative or provincial policy is not listed in Table 3.1, as they are not associated with a Regional Health Authority.

Table 4: Percentage of initiatives and percentage of population aged 65+ by health authority

<table>
<thead>
<tr>
<th>Health Authority</th>
<th>Number of initiatives</th>
<th>Percentage of initiatives</th>
<th>Population aged 65+</th>
<th>Percentage of those aged 65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraser</td>
<td>16</td>
<td>15%</td>
<td>168931</td>
<td>30%</td>
</tr>
<tr>
<td>Interior</td>
<td>24</td>
<td>23%</td>
<td>116622</td>
<td>21%</td>
</tr>
<tr>
<td>Northern</td>
<td>8</td>
<td>8%</td>
<td>24501</td>
<td>4%</td>
</tr>
<tr>
<td>Vancouver Coastal</td>
<td>37</td>
<td>35.5%</td>
<td>132778</td>
<td>24%</td>
</tr>
<tr>
<td>Vancouver Island</td>
<td>11</td>
<td>10.5%</td>
<td>118459</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>92%</td>
<td>561291</td>
<td>100%</td>
</tr>
</tbody>
</table>

* BC STATS, Service BC, BC Ministry of Management Services
ii. Prevention Strategies

The prevention strategies that predominated among the responses received are reflected in the following nine types of interventions. Many initiatives employed more than one strategy and some employed multiple strategies. The following is a description of each strategy:

- **Clinical Assessment**: includes initiatives that focus on screening for those at high risk of falling or those that employ falls risk assessments and interventions targeted to identified risk factors. This would include initiatives targeting the assessment of gait and balance problems or those that focus on the screening and treatment of osteoporosis. It also includes reviews of services to seniors with a view of reducing fall risk through changes to existing clinical practices.

- **Education**: includes the education of seniors or of health providers who deliver services to seniors at risk of falling.

- **Environment**: includes initiatives that focus on the assessment and/or reduction of fall risk due to environmental contributors. This includes programs that focus on home or facility environmental assessments or those designed to identify and reduce hazards in public places that contribute to falls among seniors.

- **Equipment**: includes initiatives that use equipment designed to reduce the risk of falling, such as grab bars and mobility aids, or programs that use equipment to reduce the risk of fractures, such as the use of hip protectors. A third group of initiatives included under equipment strategies are those targeted to the reduction of equipment that increases the risk of falling, such as least restraint initiatives.

- **Exercise**: includes initiatives that primarily focus on the promotion of exercise or enhanced activity for those at risk of falling. This includes strategies designed to improve balance, strength and gait as well as aerobic exercises.

- **Policy**: these initiatives are grouped under a separate heading and include those initiatives limited to the development and implementation of documented policy, protocols or guidelines regarding falls and/or fall-related injury prevention but NOT the implementation of these activities. These policies could be at the provincial, regional or local level.

- **Medication**: includes initiatives that target the assessment and intervention of fall risk due to the use of medication that increase the risk of falling or those that focus on the reduction of falls and fall-related injuries through the use of bone or muscle enhancing medications.

- **Multifactorial**: includes any initiative that employs three or more of the above strategies.
- **Surveillance**: includes any initiative or research study that is using existing or generated data to better understand the scope and nature of falls and related injuries among a large population group.

Table 5 provides a list of the main falls prevention strategies employed by the initiatives according to the setting. If the initiative employs three or more strategies it is listed as being multifactorial.

<table>
<thead>
<tr>
<th>Main Strategy</th>
<th>Acute n=6</th>
<th>Community n=37</th>
<th>LTC n=35</th>
<th>Cross-site n=13</th>
<th>Policy n=9</th>
<th>Research n=13</th>
<th>Private Providers n=3</th>
<th>Total N=116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multifactorial</td>
<td>0</td>
<td>22</td>
<td>19</td>
<td>7</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Clinical Assessment</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td>Education</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Equipment</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Exercise</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>Policy</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Surveillance</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Environment</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Medication</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

See Appendix E for a detailed list of main strategies used in each initiative (listed by the unique number assigned to each initiative as shown in the Description of Initiatives).

**iii. Program Delivery Methods and Settings**

The method of delivery for most initiatives included a multi-disciplinary team approach for the planning and delivery of their falls prevention program. Professions not reported to be involved include physicians, emergency medical services and pharmacists. Leading professionals and individuals reported to be involved in the planning and/or delivery of the initiative included:

- Nurses (77%)
- Physiotherapists (75%)
- Occupational Therapists (57%)
- Seniors (48%)
- Activation/Recreation Aid or Exercise Trainer (43%).

In addition, most initiatives offered specific falls prevention training or education to health care professionals or other individuals. Leading professionals and individuals to receive falls prevention training for the delivery of their initiatives included:

- Nurses (48%)
- Physiotherapists (45%)
- Seniors (40%)
Occupational Therapists (37%)
Activation/Recreation Aid or Exercise Trainer (37%)

As shown below, the majority of initiatives are offered in Community settings for either the pre-frail or well elderly (n=37 or 32%) or in Long-term Care settings for the frail and cognitively impaired elderly (n=35 or 30%). Acute Care and Geriatric Rehabilitation Services account for 5 percent (n=6) of the total initiatives. Cross-site initiatives (n=13 or 11%) include those that are offered at one or more of the acute care, community or long-term care settings.

Research initiatives are those that are located in academic institutions and account for 11 percent (n=13) of the total number of initiatives. Policy initiatives are those that are not involved with the actual implementation of preventive activities but are associated with guidelines and directives to those who are implementing interventions. Policy initiatives account for 8 percent (n=9) of the total number of initiatives. Private Providers (n=3 or 3%) were not targeted for this inventory, which reflects why only three submissions were received. These findings do not reflect the large number of for-profit organizations that provide falls prevention equipment or services to seniors.

Community / Pre-frail and Well-elderly: n=37 (32%)
Long-term Care / Frail and Cognitively Impaired Elderly: n=35 (30%)
Acute Care / Geriatric Rehabilitation Services: n=6 (5%)
Cross-Site: n=13 (11%)
Research: n=13 (11%)
Policy: n=9 (8%)
Private Providers: n=3 (3%)
iv. Products and Resources Produced

Table 6 provides a list of products and resources that have been produced or modified by the initiatives according to the setting. The table provides a general overview of resources that are available within specific healthcare settings. A total of 212 products and resources have been either produced specifically for the initiative or modified from existing resources. Checklists and fall risk assessment tools were the most common products produced or modified.

<table>
<thead>
<tr>
<th>Products/Resources Produced</th>
<th>Setting</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acute n=6</td>
<td>Community n=37</td>
<td>LTC n=35</td>
<td>Cross-site n=13</td>
<td>Policy n=9</td>
<td>Research n=13</td>
<td>Private Providers n=3</td>
<td>Total N=116</td>
</tr>
<tr>
<td><strong>Checklist</strong></td>
<td>4</td>
<td>15</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>40</td>
</tr>
<tr>
<td><strong>Fall-risk assessment tool</strong></td>
<td>5</td>
<td>7</td>
<td>16</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>38</td>
</tr>
<tr>
<td><strong>Policy/protocols</strong></td>
<td>3</td>
<td>2</td>
<td>17</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td><strong>Fall-risk screening tool</strong></td>
<td>4</td>
<td>5</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>29</td>
</tr>
<tr>
<td><strong>Brochures, publications, guides</strong></td>
<td>2</td>
<td>13</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>28</td>
</tr>
<tr>
<td><strong>Training materials / manual</strong></td>
<td>1</td>
<td>10</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td><strong>Promo package</strong></td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td><strong>Video/DVD</strong></td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td><strong>Internet/website</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Newsletters</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20</td>
<td>62</td>
<td>76</td>
<td>16</td>
<td>25</td>
<td>13</td>
<td>0</td>
<td>212</td>
</tr>
</tbody>
</table>
v. Process and outcome evaluation methods and findings

Table 7 provides a list of process evaluation methods employed by the initiatives according to their setting. Process evaluation is a way to evaluate why an initiative worked or did not work, or to monitor how the initiative is being carried out or how to revise it (BCIRPU, 2001).

The most utilized evaluation methods are the use of client satisfaction surveys (n=28) and the monitoring of program enrollment (n=27). The review of activity logs and minutes of meetings is also commonly used to evaluate the initiative’s process (n=24).

The following tables (7 and 8) represents what was reported as an intended measure of process and outcome evaluation. For those initiatives that provided process and outcome evaluation results, the results are listed with the program descriptions. Also, see Appendices F and G for a list of intended process and outcome evaluations reported by each initiative. More than one type of evaluation method could be selected per initiative so numbers may be greater than 116 inventories in some cases.

**Table 7: Process Evaluation by Setting**

<table>
<thead>
<tr>
<th>Process Evaluation</th>
<th>Setting</th>
<th>Acute n=6</th>
<th>Community n=37</th>
<th>LTC n=35</th>
<th>Cross-site n=13</th>
<th>Policy n=9</th>
<th>Research n=13</th>
<th>Private Providers n=3</th>
<th>Total N=116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client satisfaction surveys</td>
<td></td>
<td>1</td>
<td>14</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td>Program enrollment</td>
<td></td>
<td>1</td>
<td>13</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>Activity logs/minutes of meetings</td>
<td></td>
<td>0</td>
<td>12</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Focus groups/ interviews</td>
<td></td>
<td>2</td>
<td>10</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Team functioning evaluation</td>
<td></td>
<td>1</td>
<td>11</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>5</td>
<td>60</td>
<td>30</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>2</td>
<td>120</td>
</tr>
</tbody>
</table>

\(^1\text{Falls rates are calculated by dividing the number of falls by the resident population}\)
Table 8 provides a list of outcome evaluation methods employed by the initiatives according to their setting. Outcome evaluation is a way to determine if the initiative reached its goals by evaluating the direct effects of the initiative on the target population (BCIRPU, 2001). That is, did the initiative do what it set out to do?

More initiatives are utilizing outcome evaluation (n=166), as compared to process evaluation (n=120). Of all the outcome evaluation methods listed, the most utilized methods are calculation of the difference in fall rates (n=53) and the difference in falls-injury rate (n=50). Few initiatives are employing a cost-benefit analysis (n=10) and an intervention group and control group comparison method (n=11).

Table 8: Outcome Evaluation by Setting

<table>
<thead>
<tr>
<th>Outcome Evaluation</th>
<th>Setting</th>
<th>Acute n=6</th>
<th>Community n=37</th>
<th>LTC n=3</th>
<th>Cross-site n=13</th>
<th>Policy n=9</th>
<th>Research n=13</th>
<th>Private Providers n=3</th>
<th>Total N=116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference in fall rates</td>
<td>5</td>
<td>15</td>
<td>22</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Difference in falls-injury rate</td>
<td>4</td>
<td>12</td>
<td>23</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Before and after measures of risk factors</td>
<td>1</td>
<td>18</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Intervention group and control group comparison</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Cost-benefit analysis</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11</td>
<td>53</td>
<td>57</td>
<td>11</td>
<td>2</td>
<td>30</td>
<td>2</td>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>
vi. Factors Influencing Challenges and Successes

Table 9 provides a list of reported factors that “promoted success”, “posed a problem/challenge” or “had no impact” on initiatives. Each factor that listed provides the number of initiatives that were influenced and to what degree. Obtaining access to outside expertise was cited the most as promoting success (n=53); conducting staff training was another factor that promoted success in initiatives (n=47). For other initiatives, conducting staff training posed a problem/challenge (n=21). Availability of resources within senior’s health (n=21) and obtaining funding (n=21) were other factors that posed a problem/challenge for initiatives.

<table>
<thead>
<tr>
<th>Factors influencing initiative</th>
<th>Degree of Influence</th>
<th>Promoted success</th>
<th>Posed a problem/challenge</th>
<th>Had no impact on initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retaining volunteers</td>
<td></td>
<td>12</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>Recruiting volunteers</td>
<td></td>
<td>17</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td>Securing community buy-in</td>
<td></td>
<td>21</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Locating a physical space</td>
<td></td>
<td>26</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Obtaining funding</td>
<td></td>
<td>29</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>Availability of resources</td>
<td></td>
<td>21</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Availability of senior's health</td>
<td></td>
<td>33</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Availability of a local champion</td>
<td></td>
<td>53</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Obtaining access to outside expertise</td>
<td></td>
<td>47</td>
<td>21</td>
<td>11</td>
</tr>
<tr>
<td>Management support</td>
<td></td>
<td>66</td>
<td>5</td>
<td>9</td>
</tr>
</tbody>
</table>
vii. Funding Sources

Table 10 presents a list of funding sources for the initiatives according to their setting. As the table illustrates, the Health Authorities provide funds to most of the initiatives (n=69). Of all the initiatives, 12 receive no funding in addition to their existing budgets.

The duration of funding varied across the settings; 64% of initiatives reported having no funding expiry date (n=74). Over 76% of cross-site initiatives reported having no funding expiry date (n=10), followed by 70% of initiatives in long-term care settings (n=25) and 43% of community initiatives (n=16).

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Acute N=6</th>
<th>Community n=37</th>
<th>LTC n=35</th>
<th>Cross-site n=13</th>
<th>Policy n=9</th>
<th>Research n=13</th>
<th>Private Providers n=3</th>
<th>Total N=116</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Authority</td>
<td>5</td>
<td>24</td>
<td>26</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>69</td>
</tr>
<tr>
<td>Health Canada/Veterans Affairs Canada</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>No additional funding</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Community fundraising</td>
<td>0</td>
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IV. Critical Factors in Planning and Implementing Successful Falls-prevention Initiatives

This phase of the inquiry was designed to illicit critical factors for success in falls-prevention planning and implementation. The data is based on focus group interviews with five initiatives that were determined through a screening process to be of the highest quality in the province, as described in Section C of this report (pg 6). The results are summarized under the headings of Planning, Implementing, Evaluating and Other Issues. The categories emerged from the data and are therefore a refinement of the original “areas of concern” as outlined in the Methods section of this report.

1.1 Planning

All of the focus group participants talked about the importance of a solid planning phase in developing their initiatives. Data were categorized under the following themes: “Preconditions”, “Identifying the Need and Becoming Involved”, “Local Champions and Leaders” and “Forming Partnerships”.

1.1.1 Preconditions

Many of the groups expressed the view that falls prevention in their setting did not begin in a vacuum. There were elements of robustness in place that created a climate conducive to this initiative. For example, a community-based group expressed this dynamically in the following excerpt:

“There was a sense that we were already a strong community poised for action. We had community action committees in place across the region, with a sub committee on Seniors Health. We had leaders across the region with activism and health promotion under their belts. They knew their communities. They already had experience setting goals and time frames. They all had participated in a region wide survey of seniors. We also had a strong network of volunteers with experience in senior’s issues. We had a Geriatric Outreach program in place as well, so a strong principle of “collective need” was being addressed in our community.”

In one hospital-based center, there was a sense that they do not have a falls prevention program per se. In the mid-80’s, there was an effort to formally address falls. Now, they simply deliver comprehensive geriatric care and regard falls prevention as one of the critical components of care. The cultural norm in this setting was based on giving optimum geriatric care. Their falls prevention work flowed logically from this norm.

For some initiatives, readiness to begin was tied to funding. However, while some of the groups talked about earmarked funding and a pocket of resources to initiate their falls prevention programs, it was remarkable that much of this work is being carried out under existing budgets and expertise. Many of the programs found creative ways to build this into their existing practice mandate with no additional financial resources. This was particularly evident in the hospital-based settings. One group did say that it was initially difficult to amass five to six hundred dollars for the equipment needed to start a balance
class, but once those funds were secured through “creative bookkeeping,” the program was able to run efficiently. Even in the absence of formal institutional supports such as budget commitments, the people in these organizations found ways to create working falls prevention programs. Thus, the initiatives demonstrated the importance of informal institutional knowledge and resourcefulness of personnel.

Falls prevention initiatives in these five settings were not always created formally or from above in the organizational hierarchy. Cultural norms, such as an ethics of comprehensive care, and institutional knowledge, such as knowing how to utilize limited resources, made such initiatives desirable and possible. This suggests that robustness of falls injury prevention programs need more than organizational mandates in order to succeed and be sustained. They also need cultural elements.

### 1.1.2 Identifying the Need and Becoming Involved

We asked if there were any specific events that triggered the development of their falls prevention initiatives. A diverse number of responses were offered. For example, an agency cited the arrival of a new chief physician who provided vision and leadership. An acute care setting stated that the main trigger for them was when the trauma coordinator presented data from a trauma registry, showing the need for attention to the issue in acute care.

One community had applied for “Safe Community” status through the Safe Communities Foundation. They had wide representation from various groups who identified the need for a community falls prevention program. They involved ICBC, the police, a city risk manager and various seniors groups. Falls were identified as one of the main threats to safety in their region.

Another trigger mentioned was a survey of seniors in a region. Twelve per cent of all seniors completed the survey – which asked about falls and injuries. The survey results added weight to the need for a falls prevention program.

A regional group initiated their falls program in conjunction with a region-wide conference on Population Health. “Dr. Vicky Scott spoke on falls, clearly establishing the topic’s relevance and priority in the Population Health context.” Regional data was presented that showed falls in their region was a significant problem. For example, data from the BC Registry showed the number one cause of trauma in the region was falls from less than a meter in height. The Health Authority thus allocated funds for falls projects and put out a Request for Proposals. A Regional network was established and it continues to function well. They also took advantage of a call for proposals by Health Canada-Veterans Affairs to instigate their first round of program planning for falls prevention.

Informants at a long-term care setting said that the trigger for their falls program was audit driven. “The facility had a data system in place – Encon – which gave some good information about numbers and types of falls that were occurring. Four years ago, this had already prompted our initiation of a least restraint policy. But with a least restraint
policy, we realized we also had to address and minimize falls. A new policy was then introduced to implement hip protectors among residents.”

In another setting, the impetus came from a local orthopedic surgeon who was concerned about falls in facilities and recommended the use of hip protectors for all at-risk residents in the area. This prompted others to get involved in the issue. Clinicians were also instrumental in identifying the need for a program related to falls in a rehab setting. “Both in-patient and out-patient rehab patients were observed by our physiotherapist to be terrified of sustaining another fall and were afraid to move about or go outdoors. We needed a program to improve their confidence. Our occupational therapist also got involved. It was important that our administrator had the vision of formalizing the program and forming a logic model.” (This logic model is discussed later in the report.)

Several focus group members identified personal experiences with falls that prompted them to get involved, as exemplified in the following:

“I had a fall myself and realized how very careless I was. I also realized how preventable most falls really are.”

“Mom passed away after a fall so that prompted my interest in carrying on.”

“I got involved with the group who was writing the proposal to Health Canada – Veterans Affairs. It really sparked my interest.”

The impetus for falls prevention programming can come from a range of sources. Clinicians such as nurses, physiotherapists, and physicians can identify issues arising out of their practices. Data from existing sources can highlight the needs in a region or community. Personal experiences of seniors and others can signal that a falls prevention program is needed. The common element for these factors is that an understanding develops that falls are a significant health risk and that doing something about injury from falls is possible. While this may seem obvious, the data suggest that this understanding can come from varied sources and that no single impetus is particularly key. The key is an understanding of the seriousness of falls and injuries from falls, as well as, the magnitude of the problem in their region or client-base.
Many informants identified one local key champion who recognized the needs and showed leadership in getting projects going. They were not necessarily the same people who now operate the initiatives. These champions were for the most part professional health care workers, including nurses, physicians, occupational therapists and physiotherapists.

In a community setting, the Medical Health Officer was thought to be a key force in getting falls prevention off the ground. The Population Health Team - largely made up of non-professionals - was thereby empowered to embrace the issue and move it forward with a mandate to work across sectors of the health care delivery system. “He is clear-thinking, open to innovative ideas, supports people but does not meddle in our affairs, has a strong community development background, is not into empire building but rather recognizes we have many shiny stars in our region and knew how to select a crackerjack team. He paid attention to the evidence – it was there. He realized it was an area where you could make a difference.”

In both rehab and acute care settings, the Chief of Geriatrics was seen to be an important person to advocate for falls prevention and provide support. In one informant’s words, “he believed in the project and really supported us. He helped moved our project through local the Medical Advisory Committee and was a great resource when we were looking for tools to use or when we identified medical or drug-related issues.”

The participants all said it was important that people who wielded the power in their organizations had to be convinced. “Those who got on board were do-ers, people who were not afraid to take risks. They saw that each situation was different and were responsive to the unique features of different areas of our health region. At a grass roots level we have people working who are persistent, stubborn, creative, resourceful, have good will and good problem-solving skills, they have a real desire to make a difference.”

One group claimed that their program instigator really understood the residents and the issues at the practice level. “She understands their need for dignity and respect. She is interested in data and research. She has a natural curiosity to know what works. So she is knowledgeable, but is also willing to be personally involved in solving problems at the practice level. She has hands-on experience and availability.”

Common elements among the programs initiators were the personal characteristics of determination, creativity, resourcefulness and problem-solving. Also common are the social characteristics of authority, status and power. Many of the leaders held a position that allowed them to control or influence organizational resources that could make a difference in a project’s success. The most common element among the leaders was their understanding of the importance of falls and falls-injury prevention as an issue that could be addressed. Together these common elements were seen as enabling the leaders to meet the challenges of a complex, multi-faceted problem that often must be addressed with limited resources. The strength of these elements in the communities was seen as contributing to the success of the projects.
1.1.4 Forming Partnerships

In addition to program initiators, a wide range of local officials and service groups became involved in various ways. A city delegate (an engineer) and a local city counselor (now mayor) were seen to be helpful in developing a community-based program. Various health professionals were also mentioned: public health nurses, occupational therapists, physical therapists and nursing students. In addition to specific persons, a number of organizations lent their support in various ways, including local businesses, Rotary Clubs, Knights of Columbus, Canadian National Institute for the Blind, BC Paraplegic Association, church groups, seniors groups, a health foundation, the HASI program (a federal government home improvement program) and universities.

In an outpatient hospital setting, it was recognized that both outpatient and inpatient services had a vested interest in falls prevention. They partnered with the Parks and Recreation Department, a local health club that had a swimming pool, Seniors Serving Seniors, an assisted living facility and a physician/researcher on staff. They used federal government brochures on falls prevention. They found the Provincial Health Officer’s report on falls useful. Knowledge of demographics was also useful. “Over 23 percent of our population is over 65. We have to plan programs that address the population’s needs. Last week we had 22 people in hospital with hip fractures.” Finally, drawing upon expert knowledge was also important. For example, at the outset of their balance classes they had an exercise physiologist come in and provide some basic instruction. “We wanted to make sure that every exercise counted. We put a lot of time into that.”

A number of focus group members specifically mentioned Dr. Vicky Scott, of the BC Injury Research and Prevention Unit, as a key leader and advocate who helped pave the way for falls prevention in their region. “Vicky connected us directly to the Ministry of Health, to the National Best Practice Guidelines and to other research being done. She created a milieu of understanding and support.” Lillian Baaske of Health Canada was also named as key supporter of fall prevention initiatives. “The timing of the Veterans Affairs Fall Prevention Initiative was pivotal in getting some projects off the ground in our region.” One group mentioned the pioneering work of Marcia Carr as being very useful. University researchers, Dr. Karim Khan and Dr. Elaine Gallagher, were also seen as important contributors.

A community group formed a number of innovative partnerships. For example, they used flu shot clinics to promote falls prevention information. A town council pledged money for sidewalk improvements. They used existing pamphlets, such as “The First Step” booklet developed by Marcia Carr. They have drawn on both the HASI (federal government home improvement program) and the Rotary Club for expenses associated with home modifications and grab bar installation. A Northern University provided assistance in the form of student nurses who were fulfilling practicum requirements.

Successful projects used individuals with status and expertise to provide leadership, legitimacy and resources to enable falls injury prevention projects to begin and sustain their efforts. In addition, existing social organizations, such as charities, volunteer agencies, and government agencies, provided support. While many of these individuals
and organizations were related to health care in some particular way, many were not. A broad-based, multi-disciplinary understanding of the implications of falls and fall-related injuries was indicated by the responses of informants. These successful projects relied upon a wide variety of community resources for support. They also relied upon networks that extend beyond their communities, such as advocates and stakeholders from provincial, federal and university organizations. Finally, sustaining successful projects required the recruitment of other key players. These projects did not simply rely upon champions who took up the cause; they expanded their search and recruited widely.

1.2 Implementing the Initiatives

The data pertaining to implementation of fall prevention strategies was clustered under the following themes: “Housing and Funding”, “Leadership”, “Shared Values and Motives”, “Decision-making”, “Respecting Diversity” and “Gaining Community Buy-In”.

1.2.1 Housing and Funding

We found a wide range of ways that falls prevention programs were housed and financed within organizations and communities. In a community setting, the falls program is now housed in their Council of Seniors and operates as the “Task Group on Falls”.

A rehab centre explained that continuing care initially funded their entire program, which included the falls prevention component. However, this was not considered popular among some of the citizens in the region. It now has base funding in the hospital system, as well as multiple sources of additional funding. The Legion and city council played a hand in getting the falls prevention program off the ground. “We are moving to a renovated hospital building soon which will be a great improvement.”

A hospital-based program is currently housed in a hospital setting but they are looking for opportunities to partner with various community groups. They are also looking at the de-conditioning that occurs with in-patients and are looking to partner more with hospital personnel.

In two regions, falls prevention programs are housed under a broad umbrella of “Health Promotion” with a Seniors Falls Prevention Steering Committee. One region’s informants specified, “This work will receive time-limited special funding. The approach is to broker the efforts – the committee is a transition into best practices work in being implemented in all agencies.” Informants further explained, “the goal is showing what works and getting uptake into everyday practice. We are having our third workshop on sustainability next week. We are looking at how we can fit this in with other initiatives such as the introduction of the Inter RAI data collection system.” This group is thus using the time-limited funding to generate leverage in order to ensure long-term sustainability.

Community groups talked about the challenges of integrating falls prevention into the existing health services system. “We did not start with a clean slate in our region. Many different programs are underway, with different goals and different approaches. It was a
challenge to see how they could fit together under one umbrella and compliment each other.”

Others noted the challenge of competing for time commitments of participants. “People are overworked and stretched in terms of other commitments. If falls prevention is seen as just one more add on, people are reluctant to get involved. Sometimes we helped them see they could let go of something that was not producing results, in order to take on this work.”

The ways in which falls prevention programs have been integrated into previously existing organizations demonstrates the importance of tapping into community social networks in order to create sustainable projects. The informants’ responses suggest that success is dependent upon two elements. First, that existing resources have successfully integrated falls-injury prevention projects into their agendas and provided a space for them in their facilities. Second, falls initiatives have, in return, supported the broader missions of these organizations. In other words, the relationship is reciprocal with the addition of a falls and injury prevention program giving, as well as, receiving.

1.2.2 Leadership

We asked how the program leaders had gone about creating trust and convincing others that this was a worthwhile effort. In a community program, the coordinator generated interest by traveling across the region and giving talks. The program coordinator was thought to have a strong “vision of collective action. He used bottom up verses top down planning. He traveled to other regions and brought back ideas but he never forced them on people. He made sure that an idea would fit here.”

In a rehab centre, the physiotherapists took on the leadership. “They set the direction for identifying causes of client falls and implementing treatment approaches. But issues are multidimensional and multiple professionals need to be involved. Falls are everyone’s business so the whole unit got involved in safety issues.”

Regional program informants had high praise for the program coordinator. “He is forthright, he deals honestly and lays out his expectations. He spends time building relationships and provides people with the needed information. In particular, we have gotten many seniors involved. They had been intimidated by professionals in the past and did not trust the local health authority to have their best interests at heart. Initially he was seen as an outsider, and maybe in part because of this he was able to build the necessary trust. He started by attending to what they said their issues were. Front line workers are also feeling that their work is valued and honored.”

Other team members considered valuable to falls prevention initiatives were volunteers. The community-based program participants spoke highly of the value of volunteers in making their programs work. “We just could not function without them.” Maintaining advisory groups and other volunteers was a challenge, however, as people who volunteer for such groups get older, become ill, die, travel or move away.
Another hospital-based group talked about how hard it was initially to get people across jurisdictions to come together to form working partnerships. They kick-started their efforts by having a cocktail party away from the hospital to break down these barriers and establish some trust and rapport. They also talked about the value of being coerced by the leader to sit down and clearly formulate their goals and strategies. One woman said she had been a “do-er” and the experience of having to write down her goals helped her communicate more clearly what she was doing and why. “It helped me make sure that all the elements were covered, and then she gave us room to grow as we became comfortable with the style of leadership we were using. It really gave us a chance to focus on developing a client-centered model.”

A falls program coordinator talked about her role as a mentor in fostering the strengths of the members of her team. “They were a dynamic group of individuals but were lacking the confidence to take on their own leadership roles. If you believe everyone is an ‘A’ they will be an ‘A’. The old medical model does not foster that. We have been able to introduce this to other programs now as well. It’s a way of role modeling to other managers that there is a different way of doing business.”

Leaders of these successful initiatives have some common attributes. They were described as having a vision of collective action, were honest, were skilled at building relationships, had good listening skills, and honored and valued the work of team members. They paid particular attention to establishing trust. The involvement of seniors was seen to be extremely important, at every level of decision-making. Many groups talked about the importance of having clear articulation of everyone’s goals and strategies. The leaders also described the value of adopting mentoring roles with less experienced team members.

1.2.3 Shared Values and Motives

We asked participants what common values the team members shared in their program. They provided a range of responses including:

- Excellence, effectiveness – making a difference
- Caring
- Community, sharing and cooperation
- Good communication skills: Openness, understanding, listening and validating
- Good problem-solving skills
- Valuing older people and their skills, respecting people’s expertise concerning their lives and issues, anti-ageism.
- Respect, freedom to voice opinions and freedom to disagree
- Honesty
- Patience, persistence and stubbornness
- Resourcefulness
- Professionalism, friendliness and approachability
- Enthusiasm and satisfaction
- Importance of one-on-one communication of messages
Recognizing the need to attend equally to other client’s needs that are not fall-related. “This program could take over my entire practice if I let it.”

Client self-management and ownership

We also inquired as to the personal benefits derived by team members. Again, their responses were diverse including:

- Enjoyment of the people who come to our classes.
- Enjoy seeing people learn how they can apply principles of self-management to other issues in their lives.
- Meeting others who have similar interests. Being part of a group that works collectively and in cooperation, rather than competitively.
- Increased education and awareness.
- “I really felt I learned a lot. All my previous experiences were about asking permission to do things. This whole project has given me a great deal of confidence.”
- Personal benefits for preventing myself from falling as I get older.
- Satisfying to be on the front line of making a difference.
- “It’s given us opportunities to speak to other groups other then the ones in our own area.”
- Satisfying seeing people add years to their lives and life to their years.
- “As a senior, I have a purpose to my life now, a place to go where I feel I am appreciated.”
- “Many of our seniors are isolated and this project has given us a reason to connect with them and to connect them with each other. Benefits go beyond falls prevention.”
- “It’s exciting. There is always something new to work on.”
- Empowering to see the changes that clients undergo. “One man came to our program unable to get out of a chair without help. At three months, he walked into the classes unattended, with the assistance of a walker. We knew we had made a difference. Later on he came back to see us using only a cane. Another woman initially came by handi-dart. Now she walks here from home and even walked in a fund-raiser walkathon. That’s what sustains us.”

Based on the above, it is clear that people are deriving a wide range of personal benefits from their work on falls prevention programs. These include process benefits, such as cohesion and interpersonal rewards, as well as satisfaction from seeing positive outcomes resulting from their efforts. The learning was also seen to be personally beneficial as they age.

Informants’ responses across all the focus groups suggested the need for not only a common goal (to prevent falls and injuries), but also common values. Barriers to developing a working team exist, including the usual difficulties of crossing disciplinary jurisdictions and encouraging overworked staff to make any new project a priority. While the triggering event may help to overcome these barriers, developing a cohesive group identity and encouraging group expansion aid in sustaining successful projects.
Motives of team members were complex and were drawn from their professional ethics, their values of seniors’ health and personal benefits derived from the work. Grass roots efforts were just as important as professional recruitment. The social network that was built within the team indicates an understanding that more was needed than simply addressing the “problem” at hand. Successful projects built upon a grassroots base that encouraged relationships among team members. These relationships became a resource to further sustain the project.

1.2.4 Decision-making

Most of the focus groups described a very egalitarian, bottom-up approach to governance of their falls prevention programs. One group described their decision-making style as “laterally organized, inter-professional, based on social capital investment. We make most decisions by consensus here.”

Another focus group claimed that with limited resources and a specific mandate, they were “always struggling to find the highest leverage points – by putting resources into one activity, getting the highest payout in terms of lasting benefit.” They claimed they had a strong desire for inclusiveness, especially in valuing seniors’ contributions.

Informants from one region claimed that they have a large geographic area so could not use a one-size-fits-all approach in decision-making. “While recognizing the multiple determinants of this health issue, we do use a horizontal process of decision-making. The goal is to empower people at a local level to take charge of this issue and imbed it in their work.” They further noted: “We don’t have a lot of time for advisory meetings. We got seven proposals written in one week. At times it feels we operate by the seat of our pants. We try to red flag issues and those we discuss together. We also use e-groups for discussions. For example, we send out drafts of all new documents and ask for feedback. This is really important in acute and residential care settings as people are already overworked.”

One group considered using photographs of community hazards as “blackmail” to get changes, but decided instead on a quiet, gentle approach. They found it helpful to set realistic goals, taking on only what could be realistically managed. They believed that as a result of starting slowly in this way, they were able to accomplish more. One example was convincing many large stores to put in seating to alleviate fatigue for senior shoppers.

A rehab setting described a concentrated effort to use all of the principles of self-management in working with their clients at risk of falling. This was based on a clear understanding of how this approach differs from traditional top-down approaches to care. They developed a logic model that spoke to issues of community capacity. The overarching goal was envisioned to be enhancing client self-efficacy. They clearly articulated their belief that they could make a difference and the way to do that was by empowering their clients to make the needed changes. Thus “self-management” principles were involved. “This framework became the guiding model for how we relate to our clients. It permeates all of our prevention programs.”
The bottom-up approach outlined by many informants in the various settings was consistent with responses regarding what was valued in leadership and what they believed provides a foundation for sustaining their work. Such approaches will often conflict with the hierarchical nature of many institutional and community settings. Successful projects found ways to overcome these inherent conflicts. The style of decision-making helped to sustain the grass-roots approach to falls prevention. The development of a self-management logical model within one of the settings was an excellent example of how these projects resolved inherent conflicts between the interests of the institutions for which they work and the need for a comprehensive, bottom-up approach to creating effective falls-injury prevention programs.

1.2.5 Respecting Diversity

Several of the programs indicated they did not have any special considerations in place for people of different races, cultures or abilities. They recognized that was a limitation in their current program operations.

There were two exceptions. The Regional Falls Steering Committee had addressed diversity issues in a number of ways. They translated a pamphlet into Russian, in order to accommodate a segment of the population who did not read English. They translated some of their messages into cartoons, for persons who could not read. A group of Native Canadians was helped in setting up unique programs for their people.

A hospital rehab program discussed ways of modifying their balance classes to accommodate people with dementia. They found that if these clients brought a spouse with them to the classes, they would imitate the spouse and carry out the exercises.

It takes time and effort to adopt programs to people with diverse cultural or functional differences. Such efforts need to take into account the client-base being served and the resources available. Special attention is usually needed to be more inclusive of disenfranchised groups. One way to accomplish this would be to ensure the coordinating group includes representatives of minority persons in the community or client-base.

1.2.6 Gaining Community Buy-in

We asked participants how they have engaged the general public and other key groups or kept them informed of the falls prevention efforts.

Public relations efforts were seen to be a cornerstone of the community-based initiatives. It was critical in promoting a sense of local ownership and pride. Regional groups have taken advantage of a wide range of media and other techniques for communicating information about their projects. They have used print (posters and pamphlets), ads in buses, Shaw cable, CBC radio, health fairs, public talks and professional newsletters. They have widely distributed material provided by Ministry of Health (video and CD). They also relied on personal contacts with physicians to raise awareness. One community group received funding from the local sawmill to run newspaper ads concerning one of their falls prevention activities – distributing salt to treat icy sidewalks. They also talked
of the important alliances they had created with the University, an alliance that would serve as a model for other initiatives.

A member of the regional group described how they attached falls prevention to the flu clinics. They used a passport to falls safety and once all of the stations were visited, the person became eligible for a draw. They claimed that this approach reached 800 of a possible 1000 seniors. They took advantage of Seniors Week to launch an information campaign. They also dovetailed their efforts into the Safe Community initiative. They developed a dynamic web site and employed both internet and intranet.

Another group talked about how they packaged their program in a positive way, to avoid the stigma of labeling people as being “at-risk.” They did this, for example, by naming their program of classes “Balance Improvement”, instead of calling it “Falls Prevention.” They felt that this put a positive spin on the program. “People are happy to come to a program where they are improving their balance. People are reluctant to acknowledge publicly that they are falling.”

By building on outside resources, including written materials and funded programs such as the Safe Community initiative, communities do not have to build public awareness from the ground up. However, it is also important for each community to own local efforts. This speaks to the importance of local leadership and networking outside the local community. Both levels are needed to provide sustainability for these projects.

1.3 Program Evaluation

Participants of each of the programs were asked to describe the nature of their evaluation efforts in relation to their falls prevention activities. None of the programs was using a research-oriented approach to evaluation. For example, no one was randomly assigning clients to control groups and treatment groups. Only one group was systematically using evaluation instruments that were tested for reliability and validity. They talked about the need for different types of outcome measures to address different audiences. They felt strongly that their evaluation methods had to be credible and valid.

Overall, the groups were employing a range of pre-test/post-test evaluation strategies. A hospital-based program participant claimed, “We review client files every week and modify their treatment plans as needed. We have a ‘falls risk’ level recorded on every client. We have a red tag system as well and have used it for people with safety risks. We have had feedback that people appreciate the red tag system. Communication is such an important issue in ensuring client safety.”

In a regional setting, evaluation is tied in with the overall framework for health promotion. “Specific indicators are monitored for falls and related injuries. We use the services of BCIRPU and have a local evaluator. It’s hard to come up with a consistent evaluation approach with so many different types of programs in place. We do have a basic set of standard questions we ask of all program participants, but it is hard to do follow up in every instance.”
Another group noted that they are not doing separate evaluation beyond what they are required to do by the hospital. They said they have a Quality Improvement Committee. “We get client involvement when we can, for accreditation for example. We do client feedback surveys but find they are reluctant to criticize anything. We are hooked into Continuing Care in the community and get feedback from clinicians all the time.”

“We do have a research project underway with a physiotherapist in the community. Falls is one component of that research. However, we would like to evaluate our treatments more systematically.”

One group leader said, “I am a real believer in outcome measures. If you can validate what you are doing, you show you are making a difference to the bean counters. They are the ones driving the system these days. We have to be accountable for what we are doing.”

One group noted that it was difficult to prove that the cost of any of their programs is effective. They claimed that it is hard to provide good outcome measures. “Our clients are so frail that that after you address the risks, they will fall for some other reason. Our goals may be to build confidence, as that may be a long-standing outcome of a fall. In order to address the falls piece, you need to see people up and walking and getting around at home. We don’t have the resources to follow them up once they leave our program.”

Another focus group articulated, “The biggest barrier to showing you made a difference is time. Change does not occur overnight. Money (for evaluation) is always an issue. With an election coming up, funds get frozen, as the government has not set their priorities in terms of spending. The funding for falls prevention as a special initiative will not last forever.”

Most of the groups indicated they had not staged any special events to share evaluation results and celebrate their successes in the area of falls and injury prevention. One group did have a formal celebration at the conclusion of their Health Canada / Veterans Affairs project. The question generated various ideas for how they could share and celebrate their successes more formally. One group thought of having a summer garden party for graduates of the program but noted that that would be dangerous due to the “falls hazards” this would create in their particular setting.

1.4 Other issues
The groups raised some additional issues of interest during the sessions. One group talked of the importance of keeping all staff members up-to-date on the latest research findings. “We support continuing education, as the staff need to be aware of new developments. Every third meeting we have an education session. People who attend conferences present to the group. We also have a file of evidence-based practice so have quick reference for new research findings. We have a lot of students coming through and they are a great resource. They bring up-to-date ideas with them.”
Several of the groups talked about the importance of sustainability of their efforts. It was believed that falls prevention was not merely a “flavour of the day” but was an integral part of good geriatric care. Most of the groups were working hard to have good falls prevention practices integrated into on-going practice.

At the conclusion of one of the sessions, one of the groups discussed what they saw as the most important elements that need to be in place for a successful falls prevention program. They mentioned teamwork, flexibility, having all the partners at the table, administrative support, community support, a little money and the wisdom to know who would benefit most from the program as well as, the freedom to select those people as participants.

These additional issues point to the social nature of these efforts. While funding sources often see these projects in isolation, communities experience them in conjunction to other elements such as good medical practice, addressing stigmatization and being creative and flexible with limited resources. The building of leadership bases, local teams and flexible and sustainable projects can be used for other health concerns in the future. To see these projects as isolated from other concerns for seniors’ health is to ignore a major component of building local projects. These projects do not only build upon existing community capacities, they expand those capacities and provide further opportunities and resources for new projects. Modeling senior’s health concerns and indeed population health concerns as interconnected can create a more efficient and effective local base that will cut costs in the long run because there will be no need to build from the ground up in these communities. New social capital has been created.

1.5 Key Findings

The key findings of factors that underscore success in developing falls prevention initiatives are summarized in Table 12.

<table>
<thead>
<tr>
<th>Domain of Community Capacity</th>
<th>Critical Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pre-conditions</td>
<td>Robust community with experience in setting goals, a track record in senior’s issues, a network of professionals and volunteers, a principle of collective action. Modest start up funds.</td>
</tr>
<tr>
<td>2. Identifying the need and becoming involved</td>
<td>Strong administrative support Use of existing data Use of scientific literature Use of outside experts Tie in with complimentary initiatives</td>
</tr>
<tr>
<td>3. Local Champions</td>
<td>Individuals with perceived status to gain legitimacy and resources Qualities of determination, creativity, resourcefulness, problem-solving skills.</td>
</tr>
<tr>
<td>Domain of Community Capacity</td>
<td>Critical Factors</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td>Comprehensive understanding of importance of issue and strong belief that falls and injuries can be prevented.</td>
</tr>
</tbody>
</table>
| 4. Forming Partnerships      | Cross disciplines  
                               | Public and private partners  
                               | Service groups, media, public officials, universities and colleges.  
                               | Drawing on outside experts |
| 5. Housing and Funding       | Creative opportunities for housing the initiatives  
                               | Goals of existing programs can be reciprocal and complimentary  
                               | Hospital/community partnerships  
                               | Use of funds for leveraging |
| 6. Leadership               | Leaders have vision of collective action, honesty, build relationships, good listening skills, honor and value work of team members  
                               | Establishing trust  
                               | Involvement of seniors  
                               | Clear articulation of everyone’s goals and strategies  
                               | Mentoring roles |
| 7. Shared Values and Motives | Common goals and values  
                               | Many personal meanings derived from participation  
                               | Social networking a key factor |
| 8. Decision-making          | Laterally organized, inter-professional  
                               | Decision by consensus  
                               | Inclusiveness  
                               | Empowering people at local level  
                               | Principles of self-management for clients |
| 9. Respecting Diversity     | Understanding make-up of clientele  
                               | Commitment to reaching disenfranchised  
                               | Power sharing with disenfranchised |
| 10. Gaining Community buy-in| Comprehensive public relations campaign  
                               | Partnering with socially engrained existing health-related initiatives  
                               | Chose positive title for program (i.e., balance improvement) instead of stigma associated with “falls prevention” |
| 11. Evaluating              | Valid and reliable instruments  
                               | Minimum pre-post design.  
                               | Randomized control design ideal but often impractical. |
| 11. Sustainability          | Make falls prevention an integral part of work, not an add-on. Have a mix of older and younger persons on advisory group. |
V. Recommendations

The following are recommendations to be employed by groups and/or individuals in order to reduce falls and fall-related injuries by healthcare setting and provider. Anyone who is involved in the direct care or contact with seniors should consider the following recommendations. Additionally, it is recommended that seniors and seniors’ organizations have an active role in the development, implementation and evaluation of prevention strategies. Seniors’ participation in all aspects of a falls prevention initiative will enhance an initiative’s effectiveness and increase compliance, as seniors will feel that they have “ownership” of the initiative and be more willing to make the necessary changes to reduce their risk.

Acute Care / Geriatric Rehabilitation Facilities

Recommendation 1: Upon a patient’s admission, acute care and geriatric rehabilitation facilities should perform a falls-risk assessment to determine the patient’s level of risk and, where appropriate, implement appropriate prevention strategies. Findings of the risk assessment and prevention strategies should be communicated to all staff.

Recommendation 2: Surveillance of patients’ falls and fall-related injuries that are occurring in the facility should be recorded and maintained on a regular basis. In particular, the location of the fall and activity at the time of the fall should be recorded and regularly reviewed. Surveillance findings will direct appropriate interventions at both the individual and facility-wide level.

Community / Pre-frail and Well-Elderly Service Providers

Recommendation 3: Community health workers, home care nurses and other providers of in-home services to seniors should conduct a thorough falls-risk assessment and health screening, which includes a falls history, current medications, vision problems and level of mobility of every first-time client. Appropriate prevention strategies should be developed and implemented in collaboration with the client or their caregiver.

Recommendation 4: A thorough environmental assessment of the client’s home should be conducted upon the first meeting with the client. This assessment should focus on the client’s interaction with their surroundings and their assistive devices. A home environment that is identified as having fall-related risk factors should be modified with appropriate measures, utilizing resources available such as a national assistance program.

Recommendation 5: Falls prevention initiatives targeted to the active seniors in the community should include consideration of safe pedestrian routes, building codes that reflect the needs of seniors when using public environments, accessible transportation systems and a process for reporting and repairing hazardous elements that contribute to falls and injuries.
Long-Term Care Facilities

**Recommendation 6:** Universal falls prevention should be in place for all residents of long-term care facilities. This includes, documented policies and standards for falls prevention protocols, on-going surveillance, fall risk assessment, best practices plan for prevention tailored to surveillance and assessment findings, and a process for evaluation and quality improvement that reflects new evidence for effective prevention.

**Recommendation 7:** Surveillance of falls and fall-related injuries should occur on a regular basis and recorded in an organized way (i.e., a user-friendly database). The records should be reviewed and any significant findings communicated to staff. Appropriate prevention strategies can then be considered and developed. Additionally, the resident activity at the time of the fall and the location of falls within the facility should be particularly noted and, consequently, appropriate interventions and facility improvements made.

**Recommendation 8:** Falls-risk assessments should occur on a regular basis for each resident at times that are well-established among all staff members. Times at which a falls-risk assessment should occur are (1) upon the resident’s admission to the facility, (2) when a resident’s health changes and (3) at regular intervals. Appropriate interventions should be considered and implemented after each assessment.

**Cross-Site**

**Recommendation 9:** Any falls prevention program or strategy should employ a multi-disciplinary team in the development, implementation and evaluation of its initiative. The team could include any combination of healthcare professionals including nurses, occupational therapists, physicians, community health workers, pharmacists, geriatricians, researchers, medical equipment suppliers, activation or recreation aids, volunteers and seniors.

**Recommendation 10:** Evaluation is a critical component of any falls prevention program. In order to determine the effectiveness of a falls prevention strategy, process, impact and outcome evaluation should be incorporated into every falls prevention initiative.

**Recommendation 11:** Allow time for planning of initiative or program; build on local strengths and resources. Invite input from a variety of experts and healthcare professionals.

**Recommendation 12:** Attend to the needs of persons who are disadvantaged because of language barriers, economic hardship or physical or mental limitations.

**Recommendation 13:** Identify a local champion and make falls-prevention a clear mandate in the description of their roles and responsibilities.
Regional Health Authorities

**Recommendation 14:** Regional Health Authorities should provide an appropriate number of falls prevention initiatives that represent a cross-section of healthcare settings. The number of initiatives should match the regional need, in particular, the population of seniors present in the region.

**Recommendation 15:** Regional Health Authorities should partner with municipal jurisdictions to promote safety in the design of public places, public transportation and infrastructure that is appropriate to seniors’ needs and abilities. Veterans Affairs Canada/Health Canada should also be consulted with respect to their experience in community-based initiatives.

**VI. Summary and Conclusions**

Falls and related injuries among older adults is a problem that impacts all those who provide health services to seniors and is a problem that will continue to grow in magnitude if interventions are not put in place. The evidence and tools are in place for bringing about change. The challenge is to integrate this into existing health care practices.

Based on vital statistic and hospital separation data, we are beginning to see a slight downward trend in rates for some age groups, in some regions of the province. However, due to the aging of the population the actual numbers are climbing steeply. In BC, we have had a 13 percent increase in hospital separations for falls between 1992/93 and 2000/01 among those age 65 years and over.

Regional differences in deaths and hospitalizations are apparent. In the Northern Health Authority, the rates for death are the highest in the province, particularly for females. Death rates are also high for the Vancouver Island Health Authority and this region has the highest rates of deaths due to falls in the province for males.

Hospitalization rates are highest in the Northern Health Authority, and together with the Interior Health Authority, the rates have consistently exceeded the BC average between 1996/97 and 2000/01, while the other three Health Authorities have been below the BC average. However, only the Interior and Fraser Health Authorities have shown statistically significant declines in their hospital rates for falls over this period.

Given these regional differences and the growing magnitude of the problem of falls, it is important to set regional and provincial priorities to address this issue. This includes setting targets for reduction and plans for implementing and evaluating prevention initiatives. This environmental scan is a positive first step in this process. Through the
inventory of existing initiatives we are able to see that much is being done and progress toward reductions are being made.

Between February 2004 and April 2004, the BC Falls Prevention Initiatives Inventory survey form was made available for completion and submission on the Ministry of Health Services’ website and through paper copies sent by mail or email. A total of 116 survey forms detailing BC-specific falls prevention initiatives were completed and returned, resulting in a nine-fold increase in falls prevention initiatives from the previous scan in March 2001.

Despite the cross-sectional and inter-regional representation of initiatives, not enough seniors’ falls prevention initiatives exist to match the need, particularly compared to the percentage of seniors in some health authorities and the number of initiatives offered. Obtaining permanent funding is also a challenge for initiatives, as this inventory demonstrates that just over half of initiatives receive permanent funding. While many initiatives reported using some type of evaluation, there were few that were able to provide evaluation results. Evaluation support may need to be made available if more programs are to incorporate an evaluation component into their program.

There are several conclusions and implications arising from the in-depth inquiry of selected initiatives that warrant highlighting. First is the finding that in order to be successful, fall prevention programs require strong leadership and commitment, good information on local risk magnitude, and a cultural shift in the organization that will support both individual as well as population based health promotion efforts.

Falls injury prevention projects provide an excellent opportunity for taking a holistic approach to population health challenges. Falls are a complex phenomenon that requires multidisciplinary approaches (Scott, Peck and Kendall, 2004). Furthermore, prevention of falls and related injuries are a tangible result of efforts. This means that community members can assess their own successes concretely. These elements, as participants pointed out, push communities into considering multiple points of view and inviting multiple stakeholders to the table. Such communication builds communities across disciplinary and social status lines and strengthens their community capacities.

The importance of administrative support for these initiatives cannot be overstated. In every successful initiative, there was a strong and committed senior manager or administrator who was dedicated to the cause of falls prevention and sanctioned the team to conduct this work. The administrators also encouraged flexibility and creativity so that people developing and delivering the program could in essence experiment with ideas that appeared promising for their clientele.

How sustainable are these “experimental” fall prevention programs? All of the initiatives used scientific literature and reviews to select “best practices” and all fundamentally changed their practice to incorporate fall prevention efforts. They adopted new assessment tools, introduced new educational opportunities, revised their treatment protocols and engaged in various forms of evaluation.
Feedback from evaluation is important, as it provides the evidence that a team’s efforts are making a difference. This is an area that needs work, if falls prevention initiatives are to be sustained. Although little extra money was being used to finance the programs, they were placing strain on other aspects of clinician’s work. Thus, without good data concerning efficacy, efforts to continue the falls prevention work may diminish or be replaced with new areas of programming. Several of the initiatives had partnered with university or community researchers for help with their evaluation. Such partnerships should be fostered and expanded upon. Information, products and resources are in abundance throughout the Health Authorities. Rather than devoting resources to creating and testing new tools and checklists, resources should be shared and tailored for each site. To continue to move falls prevention forward in British Columbia, a seamless collaboration across all sectors is needed.

VII. References


Appendix A: BC Falls Inventory Cover Letter

NOTE: Link for inventory form can be found below. Please read this letter before proceeding to the link.

From: Drs. Vicky Scott, Elaine Gallagher, and Mariana Brussoni.
Re: Older Adults Fall Prevention Inventory, February 2004

Dear Health Care Practitioner, Researcher, Community Leader and Health Authority Administrator:

You are invited to participate in an inventory on falls prevention initiatives for older adults in British Columbia. The British Columbia Injury Research and Prevention Unit is conducting this project in collaboration with the Ministry of Health Services and Health Canada. The present inventory will:

- Improve on existing falls prevention inventories.
- Be specific to British Columbia falls initiatives.
- Capture the many new fall prevention programs taking place across health regions.
- Provide an update on falls research in BC.
- Create a practical insightful guide for services and programs to use in developing and promoting fall prevention initiatives.
- Generate a network for falls prevention planning across health authorities and research centers.

Criteria for participation: Initiatives, policies, protocols and research (herein known as initiatives) must have as their primary purpose the prevention of falls and fall-related injuries among community or facility-dwelling older adults in British Columbia. Initiatives must be operating now or completed within the last two years and target adults primarily aged sixty-five and older. If a planning process is in place to develop any of the above in the next two years you are also eligible to complete this survey. It is important to fill out a separate form for each initiative.

Please forward this letter to others so that we can capture the efforts taking place in all health regions at all levels. The results from this inventory will be presented in a practical
insightful guide for communities, agencies and health authorities to use in developing and promoting fall prevention programs. The quality of this guide depends upon your response so please take the time to complete the inventory and spread the word among colleagues. Results from this inventory will be shared online.

Instructions:

1. Online option.
   a. Go to: [http://www.healthservices.gov.bc.ca/exforms/fallssurvey/4730.html](http://www.healthservices.gov.bc.ca/exforms/fallssurvey/4730.html) and complete the Falls Inventory form. The form is automatically submitted online.

2. Paper option.
   a. Go to: [http://www.healthplanning.gov.bc.ca/pho/pdf/fallsform.pdf](http://www.healthplanning.gov.bc.ca/pho/pdf/fallsform.pdf) Print the form. Once completed fax or mail to the contact people below.

The falls inventory form should be completed and returned by March 19th, 2004.
Appendix B: Data Collection Form: BC Falls Prevention Inventory

An Inventory of British Columbia Falls Prevention Initiatives

Criteria for participation: Programs, policies, protocols and research (herein known as initiatives) must have as their primary purpose the prevention of falls and fall-related injuries among community or facility-dwelling older adults in British Columbia. Initiatives must be operating now or completed within the last two years and target adults primarily aged sixty-five and older. If a planning process is in place to develop any of the above in the next two years you are also eligible to complete this survey. Please fill out a separate form for each initiative.

Most falls prevention initiatives are designed to bring about change using targeted activities and approaches. This category would likely cover the majority of initiatives occurring in British Columbia. However, we are also interested in initiatives that exist outside of the front-line approach to falls prevention, such as the development of policy and guidelines. If you are developing policy and guidelines for falls prevention at the provincial, regional or local level (e.g., facility) please also fill out this form.

~~This survey should take approximately 15 minutes to complete.~~

1. Falls Prevention Initiative Title:
   ______________________________________________________________________

2. Initiative start date: _______________(dd/mm/yy)
   End date: _______________(dd/mm/yy)
   No projected end date ☐

3. Key contact for initiative:
   (name)___________________________(title)____________________________
   (address/tel/fax/email)________________________________
   (website/url)__________________________

4. What Health Authority/Region are you located in (check one only)?
   Fraser ☐   Interior ☐   Vancouver Island ☐   Vancouver Coastal ☐
   Northern ☐   Provincial Health Services ☐   Unknown ☐
5. Briefly list the goals and objectives of your falls/injury prevention initiative.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

6. Is the goal of your initiative to develop/implement policies or protocols for falls prevention? YES ☐ NO ☐
   If yes, answer part a. then skip to question 13.
   a. Is the policy/protocol initiative being offered locally? YES ☐ NO ☐
   b. Regionally? YES ☐ NO ☐
   c. Provincially? YES ☐ NO ☐

7. Is the goal of your initiative to implement falls prevention activities? YES ☐ NO ☐
   -or-
   To conduct falls prevention research? YES ☐ NO ☐

8. Does your initiative offer specific falls prevention training/education to any healthcare and/or other professional workers? YES ☐ NO ☐ (If yes, pop-up window appears with same choices as those found in question #10 check all that apply).

9. Indicate the approximate number of seniors and/or other people who receive your fall or fall-injury prevention strategies (check all that apply): (need larger boxes for numbers)
   □ Seniors □ Un-paid caregivers □ General public (e.g., media campaign) □ Veterans
   Other (specify)____________________
   If yes to seniors, check all that apply:
   □ Active/Community Seniors □ Frail/Community Seniors
   □ Resident of LTC Facility □ Resident of Assisted Living Complex
   □ Resident of Acute Care/Geriatric Rehabilitation Services □ Seniors with Dementia

10. Are these strategies being conducted weekly ____Y/N monthly____Y/N
    ongoing____Y/N
    one time only _Y/N

11. What fall or fall-injury prevention strategies do you use in your initiative (check all that apply).
    □ Education □ Exercise □ Behaviour change (e.g., appropriate footwear).
    □ Environment modifications (e.g., grab bars) □ Clinical assessments (e.g., gait and balance test).
    □ Medical assessments (e.g., blood pressure check) □ Medication Use
12. Have you created new products or resources as a result of your fall or fall-injury prevention initiative?

YES ☐ NO ☐

a. If yes, please list (check all that apply)

☐ Checklist  ☐ Brochures  ☐ Protocols/guidelines  ☐ Videos
☐ Fall-risk screening tools  ☐ Fall-risk assessment tools
☐ Promotional Package (e.g., logo, media material)  ☐ Training materials/manuals
☐ Other (specify) ________________________________

13. Where are the primary activities of the falls prevention initiative being performed? (check all that apply)?

☐ Community (e.g., Senior centre or Recreation centre)

Publicly Funded Community Support Services: ☐ Home support  ☐ Adult day centre

Hospital or facility: ☐ Long-term care Rehabilitation  ☐ Acute care
☐ University  ☐ Unknown
☐ Other (specify) ______________________________________________________

14. Source of committed funding for your initiative (check all that apply).

☐ Research Foundation  ☐ Health Authority  ☐ Ministry of Health

☐ Health Canada/Veterans Affairs Canada  ☐ Community fund-raising

☐ Non-government organization (e.g. Arthritis Society)
☐ Other _________

15. Total amount of committed funding (not including in-kind contributions, e.g., office space)

____________________________________  ☐ Not applicable

16. Are funds in place to continue your initiative when current funding expires? YES ☐ NO ☐

17. Please indicate if the following people are included in the planning and/or delivery of the initiative (check all that apply):

☐ Occupational Therapist  ☐ Physiotherapist  ☐ Pharmacist
18. How have you shared what you have learned or produced from the initiative?
□ Newsletters □ Local media coverage □ Workshops/conferences
□ Publications/guides □ Health/wellness events □ Internet/Web sites
□ Distribution/sale of products
□ Other (specify)________________________________________

19. For each of 19 below under ‘yes, please list’, if yes, pop up should ask:
   1. How did you measure this? And 2, have you shown a reduction in the number or rates? YES □ NO □
   Are you using any of the following methods to evaluate your initiative: (if yes, pop-up menu for each)
   □ Process evaluation (e.g., Which program activities were implemented? How was the program delivered? How was it received? What worked and why?) YES □ NO □
   If yes, please list (check all that apply):
   □ Client satisfaction surveys □ Program enrollment (e.g., counting system) □ Team functioning evaluation
   □ Activity logs and/or minutes of meetings □ Focus groups and/or interviews
   □ Other (specify)________________________________________
   □ Outcome evaluation (e.g., Results of the initiative? What made a difference? What does the difference look like? Did the program achieve what you expected it to achieve?) YES □ NO □
   If yes, please list (check all that apply):
   □ Before and after measures of risk factors such as balance, strength
   □ Falls rates □ Fall-injury
   □ Fall-risk factors □ Cost-benefit analysis □ Intervention and control group comparisons
   □ Other________________________________________

20. There are many issues that enable or challenge successful falls and fall-related injury prevention initiatives.
   a. How much is your initiative influenced by the following, on a scale of 1 to 5, with 1=no impact and 5=a lot of influence. Your response will help others build a foundation for developing and maintaining falls prevention initiatives.
<table>
<thead>
<tr>
<th>Conducting staff training</th>
<th>Obtaining access to outside expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruiting and retaining volunteers</td>
<td>Securing community buy-in</td>
</tr>
<tr>
<td>Securing management support</td>
<td>Locating a physical space</td>
</tr>
<tr>
<td>Successfully competing with other priorities within senior’s health (e.g., diabetes, mental health).</td>
<td></td>
</tr>
<tr>
<td>Having a local champion</td>
<td>Obtaining adequate funding</td>
</tr>
<tr>
<td>Securing a competent program manager</td>
<td></td>
</tr>
</tbody>
</table>

These same influences can pose as challenges/barriers. If these or other influences adversely impacted your initiative, please list_________________________________________________________

21. Do you have plans in place to continue this initiative beyond the present projected end date? Yes [ ] No [ ]
   No projected end date [ ]
   If no, prompt to ask why not?__________________________________________

22. If yes, what are you doing to ensure the initiative continues?
   - [ ] Funding renewal
   - [ ] Lobbying government
   - [ ] Media campaign
   - [ ] Cost recovery
   - [ ] Workshops and conferences
   - [ ] Public awareness
   - [ ] Sale of materials
   - [ ] Other (specify)__________________________ Not applicable [ ]

23. What, if any, do you see as the next steps in developing, modifying or sustaining your program?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

24. Additional comments:
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
Thank you for your time
Appendix C: Falls Prevention Initiatives

Table 13 lists each falls prevention initiative by Health Region. The unique numbers are not in chronological order; rather, they are presented in alphabetical order under each Health Region. Research and private provider initiatives are listed under “Other Providers.”

Table 13: Falls Prevention Initiatives by Health Region

<table>
<thead>
<tr>
<th>Initiative Name</th>
<th>Unique No.</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fraser Health Region</strong></td>
<td></td>
<td></td>
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<tr>
<td>Balance Class Program</td>
<td>79</td>
<td>108</td>
</tr>
<tr>
<td>Burnaby Fall Prevention Society</td>
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<td>59</td>
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<td>Dufferin Care Centre Falls Prevention Plan</td>
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<td>Fall Indicators of Risk for Community Dwelling Seniors</td>
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<tr>
<td>Fall Prevention Initiative – Burnaby/Ridge Meadows Communities: HC/VAC Initiative</td>
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<td>Fall-Risk Assessment Tool in the Geriatric Acute Program</td>
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<td>Falls: Harm Reduction</td>
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<tr>
<td>Falls with Serious Injury</td>
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<td>84</td>
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<td>The First Step: Fall Prevention Starts with You – Burnaby</td>
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<tr>
<td>Hip Fracture Prevention Program</td>
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<tr>
<td>Least Restraint and Falls Management Program</td>
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<tr>
<td>Management of Persons at High Risk for Falling</td>
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<td>86</td>
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<tr>
<td>NetCARE-Falls Clinic</td>
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<td>Seton Villa Falls Prevention</td>
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<tr>
<td>The Use of Hip Protectors in the Prevention of Hip Fractures from Falls</td>
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<td><strong>Interior Health Region</strong></td>
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<td>Balance Class</td>
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<td>Balance Program and Safety at Home Education</td>
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<td>Creston Valley Falls Prevention Program</td>
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<td>Determining the Potential of Paramedics for Early Intervention of Seniors at Risk for Injury Due to Falls</td>
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<tr>
<td>Development of Standardized Falls Risk Assessment and Interventions</td>
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<tr>
<td>East Kootenay Regional Hospital Acute Care Falls Prevention Program</td>
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<tr>
<td>Falls Prevention Program</td>
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<tr>
<td>Falls Program: Ponderosa Lodge</td>
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<tr>
<td>Interior Health Falls Prevention Initiative</td>
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<td>Kamloops Injury Prevention Network</td>
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<td>Kootenay Boundary Falls Prevention Program</td>
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<td>Nelson Falls Prevention Program</td>
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<td>66</td>
</tr>
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<td>North Okanagan Falls Prevention Project: HC/VAC Initiative</td>
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<td>North Okanagan Falls Prevention Project: HC/VAC Initiative</td>
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<td>Program</td>
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<td>Okanagan Band Falls Prevention Program</td>
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<tr>
<td>Penticton-Area Falls Prevention Program</td>
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Description of Falls Prevention Initiatives by Healthcare setting

The following is a detailed description of each initiative listed by the setting (acute care, long-term care, community, cross-site, research, policy and private providers) and by the Health Authority. The initiatives are presented in alphabetical order under each Health Authority, which are also listed alphabetically. The following descriptions include the project title, contact person, a description of the project goals and objectives, the project duration and any evaluation results that were reported.

Acute Care / Geriatric Rehabilitation Services

Initiatives operating within acute care hospitals, emergency departments or those conducted through in-patient rehabilitation services.

Fraser Health Region

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<th>Fall-Risk Assessment Tool in the Geriatric Acute Program at Royal Columbian Hospital</th>
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<tr>
<td>Contact:</td>
<td>Anne Earthy, Clinical Nurse Specialist</td>
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<td></td>
<td>Queen's Park Care Centre</td>
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<tr>
<td></td>
<td>315 McBride Blvd</td>
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<td>New Westminster, BC V3L 5E8</td>
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<tr>
<td></td>
<td>Ph: 604-517-8613</td>
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<td></td>
<td>Fax: 604-517-8651</td>
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<tr>
<td></td>
<td>E-mail: <a href="mailto:anne.earth@fraserhealth.ca">anne.earth@fraserhealth.ca</a></td>
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Description: In November 2003, a fall-risk assessment tool was introduced to the new Geriatric Acute Program (GAP) Unit at Royal Columbian Hospital. The assessment tool is completed at admission and discharge, and is utilized independently of existing acute care initiatives in Fraser North Acute Care. Prior to the fall risk assessment tool, Clinical Nurse Specialists primarily focused their efforts in the extended care unit. Members of the interdisciplinary staff are educated on least restraint policy, identification of risk factors and implementation of alternatives. The next step is to obtain research support to share the indicators that were developed and results from the use of the assessment tool.

Duration: Began November 2003 with no projected end date

Evaluation Results:  
- Demonstrated reduction in fall risk factors
- Further results pending
Project Title: **Falls: Harm Reduction**

Contact: Marcia Carr, Clinical Nurse Specialist, Acute Geriatrics  
Burnaby Hospital  
3935 Kincaid St  
Burnaby, BC V5G 2X6  
Ph: 604-434-4211, extension 3446  
Fax: 604-412-6170  
E-mail: marcia.carr@fraserhealth.ca

Description: The goal of **Falls: Harm Reduction** is to screen, assess and manage falls that have the potential to cause harm in the acute and sub-acute care setting, utilizing clinical practice guidelines for acute care. A proposal has been submitted to FHA on an integrated program for the prevention and management of falls, fall-related injuries, fractures, and osteoporosis. The program will include a fall/fracture/osteoporosis clinic, as well as, a referral response system across the continuum of care. Additionally, a screening tool, which triggers the need to refer to an appropriate health care professional, is planned for implementation in the Emergency Department.

Duration: Began January 1998 with no projected end date

Evaluation Results:  
- Demonstrated reduction in falls  
- Burnaby Emergency Department data indicates that fall-related injury rate has remained the same for past 5 years, despite aging population

Project Title: **Least Restraint and Falls Management Program**

Contact: Eileen Coles, Manager, East 5 Geriatrics  
Surrey Memorial Hospital  
13750 96th Ave  
Surrey, BC V3V 1Z2  
Ph: 604-585-5666, extension 2564  
Fax: 604-585-5695  
E-mail: eileen.coles@fraserhealth.ca

Description: The **Least Restraint and Falls Management Program** at Surrey Memorial Hospital assesses all acute care patients’ falls risk and potential interventions. Prior to considering the use of restraints,
non-restraint interventions are used. The program uses a risk screening tool that triggers the next step in the fall assessment process as articulated in clinical practice guidelines. Next steps include further evaluation and education.

Duration: Began June 2000 with no projected end date
Evaluation Results: Results pending

**Interior Health Region**

Project Title: **East Kootenay Regional Hospital Acute Care Falls Prevention Program**
Contact: Surrena Lemay
East Kootenay Regional Hospital
13-24th Ave North
Cranbrook, BC V1C 3H9
Ph: 250-426-5281, extension 495
Fax: 250-426-5285
E-mail: surrena.lemay@interiorhealth.ca

Description: The East Kootenay Regional Hospital recognized that falls were occurring among their residents at a high rate on the medical/palliative care ward and, therefore, a need to be pro-active. The goal of the **Acute Care Falls Prevention Program** is to decrease falls and fall-related injuries in the acute care. The program is set to launch in September 2004 and, thus far, staff education has been conducted. The program provides an educational packet that is given to caregivers upon discharge of patient which includes educational material on environmental changes, diet, nutrition, local resources, ways to identify fall risks, info on hip protectors and an “Eyes to Toes Review”.

Duration: Began June 2004 with no projected end date
Evaluation Results: Results pending

Project Title: **Quick Response Team (QRT)**
Contact: Judy Douglas, Registered Nurse
Description: Within the Vernon Jubilee Hospital community, the **Quick Response Team** is an in-hospital community program that frequently assesses the elderly at-risk of falls and those who have a history of falls to determine fall-related risk factors. If necessary, patients are referred to fall prevention programs through Seniors Information and Resource Bureau (SIRB), in-hospital and community rehabilitation, and Occupational Therapy/Physiotherapy for recommendations.

Duration: Ongoing with no projected end date

Evaluation Results: None reported

**Vancouver Coastal Health Region**

Project Title: **Hip Fracture Clinical Path: UBC and VGH Hospitals**

Contact: Valerie MacDonald  
1010 Chamberlain Dr  
North Vancouver, BC  V7K 1N9  
Ph: 604-980-0268

Description: As part of routine care, UBC and VGH Hospitals aim to prevent in-hospital falls and fractures and prevent readmission of patients post-hip fracture. Audits have been designed and utilized to describe practice and evaluate the use of tools. Next steps include establishing links with "Hip Health" community supports and family physicians, in addition to, sending out recommendations for osteoporosis follow-up to General Practitioners.

Duration: Began June 2002 with no projected end date

Evaluation Results:  
- Increased number of call bells in place  
- Increased number of bed checks applied  
- Preliminary results show a 40% decrease in falls  
- Further results pending
Community / Pre-frail and Well-Elderly

Initiatives offered to seniors living in the community, including seniors who are attending adult day care centers or those receiving home support services. This includes initiatives offered to community-dwelling seniors living in their own homes and those in supportive or assistive housing units.

Fraser Health Region

Project Title: Burnaby Fall Prevention Society

Contact: Gladys Brundrett, Fall Prevention Coordinator
         7978 Lakefield Dr
         Burnaby, BC V5E 3W8
         Ph: 604-525-5298
         Fax: 604-525-5480
         E-mail: gladbrundret@yahoo.com
         Website: www.fallsprevention.ca

Description: The goal of the Burnaby Fall Prevention Society is to reduce the number and severity of falls among seniors living independently in BC Housing and other senior housing complexes. Objectives of the society include:
- Volunteer teams to create awareness about the risk for falls and how to minimize the risks through education
- Volunteer teams will facilitate multi-faceted risk reduction workshops covering exercise, behavior modification and environmental safety at home and in the community

The next step for the society is to apply for a bingo license.

Duration: July 2004 – January 2005

Evaluation Results: Results pending

Project Title: Fall Indicators of Risk: Screening Tool for Community Dwelling Seniors

Contact: John Tully, Case Manager, Long Term Care
         Home Health Care
         #200-22722 Lougheed Highway
         Maple Ridge, BC V2X 2V6
         Ph: 604-476-7113
Fax: 604-476-7126
E-mail: john.tully@fraserhealth.ca

Description: The goal of **Fall Indicators of Risk: Screening Tool for Community Dwelling Seniors** is to support health professionals in quickly identifying seniors most at-risk for falling and making a referral to the appropriate agency. The screening tool will be utilized upon review of a client, if there is a change of condition or a call of concern. At this time, the project is educating its professional staff and has not yet begun implementation in the home health care offices.

Duration: Began March 2004 with no projected end date

Evaluation Results: None reported

Project Title: **Fall Prevention Initiative – Burnaby/Ridge Meadows Communities: Health Canada/Veterans Affairs Canada Initiative**

Contact: Gladys Brundrett, Coordinator
7978 Lakefield Dr
Burnaby, BC V5E 3W8
Ph: 604-525-5298
Fax: 604-525-5480
E-mail: gladbrundret@yahoo.com
Website: www.fallsprevention.ca

Description: The goal of the **Fall Prevention Initiative** is to deliver a sustainable, community-based, multi-faceted fall risk reduction program to reduce the number of falls and fall-related injuries among seniors, veterans, and caregivers in Burnaby and Ridge Meadows. Objectives include:

- Ensure seniors, veterans and caregivers play an integral role in planning, implementing, monitoring and evaluating risk-reduction programs
- Collaborate with the community in developing and delivering falls prevention programming that is sustainable over the long-term
- Support and motivate seniors to self-manage a long-term falls reduction program
- Assess the effectiveness of a multi-faceted risk abatement and social marketing program
Duration: April 2001 – March 2004

Evaluation Results:
- Program demonstrated a significant reduction in mean risk score with a pre-program mean risk score of 44 to an end-of program mean risk score of 41
- Statistically significant mean improvements for home hazard control in Living Area, Halls and Stairs, Bathrooms and Total Score were demonstrated
- Program demonstrated an increase in the mean community hazard awareness score from 9.9 at baseline to 10.2 at follow-up. A t-test of the means was not significant.

Project Title: The First Step: Fall Prevention Starts with You – Burnaby site

Contact: Marcia Carr, Clinical Nurse Specialist, Acute Geriatrics
Burnaby Hospital
3935 Kincaid St
Burnaby, BC V5G 2X6
Ph: 604-434-4211, extension 3446
Fax: 604-412-6170
E-mail: marcia.carr@fraserhealth.ca

Description: The First Step: Fall Prevention Starts with You is a program that seeks to:
- Prevent falls and harmful injuries among community dwelling seniors in Burnaby and Ridge Meadow communities
- Raise awareness on fall-related risks and falls prevention
- Provide a community-based program that all seniors can access
It will be necessary to convince Health Authorities that sustainability is essential to maintain current fall prevention levels and to prevent overall falls and fall-related injury rates throughout Fraser Health Authority.

Duration: No projected end date

Evaluation Results:
- Program delivery had a significant impact on whether or not participants used the planning sheet or contacted organizations
- The impact of the booklet as a stand-alone tool is as significant as the booklet accompanied by an event
- In general, participants were very satisfied with the booklet format, layout and readability
Project Title: **NetCARE-Falls Clinic**

Contact: Belinda Parke, Clinical Nurse Specialist, Geriatrics  
Parkholm Place  
Chilliwack Health Services  
9090 Newman Rd  
Chilliwack, BC  V2P 3Z8  
Ph: 604-703-2016  
Fax: 604-792-0262  
E-mail: belinda.parke@fraserhealth.ca

Description: The goals, objectives and settings of the clinic are currently under development. As part of the NetCARE community response to frail community-dwelling older adults, a falls prevention clinic will be developed with the goal of implementing falls prevention activities.

Duration: Began March 2004 with no projected end date

Evaluation Results: None reported

---

**Interior Health Region**

Project Title: **Balance Class**

Contact: Lorraine Douglas, Physiotherapist  
Kootenay Lake Hospital  
3 View St  
Nelson, BC  V1L 3M5  
Ph: 250-354-2313  
E-mail: lorraine.douglas@interiorhealth.ca

Description: **Balance Class** is an educational class promoting falls prevention within Kootenay Lake Hospital’s outpatient department. The class is offered twice weekly for eight weeks. Client assessments are completed pre-program and post-program. Participants learn how exercise, aids and equipment can reduce fall risk factors. Additionally, a presentation of available community programs is offered at the end of the 8-week class.

Duration: January 2004 – March 2004

Evaluation Results: Results pending
Project Title: **Balance Program and Safety at Home Education**

Contact: Linda Bridgeman, Occupational Therapist  
Enderby Geriatric Day Program  
Box 610, 712 Granville Ave  
Enderby, BC V0E 1V0  
Ph: 250-838-6420  
Fax: 250-838-9530  
E-mail: linda.bridgeman@interiorhealth.ca

Description: The **Balance Program and Safety at Home Education** is a balance program that is offered to seniors twice weekly in an Adult Day Care and home support services setting. Objectives of the educational program include:
- Improve balance
- Improve strength and endurance
- Reduce falls
Upon discharge, seniors receive an assessment of balance and strength.

Duration: Began July 2003 with no projected end date

Evaluation Results:  
- Balance improvement noted  
- Further results pending

Project Title: **Creston Valley Falls Prevention Program**

Contact: Simon Lazarchuk, Recreation Coordinator  
Swan Valley Lodge  
Bag 1880, 818 Van St  
Creston, BC V0B 1G0  
Ph: 250-428-2283, extension 206  
Fax: 250-428-9318  
E-mail: simon.lazarchuk@interiorhealth.ca

Description: The **Creston Valley Falls Prevention Program** aims to develop and implement a falls prevention program for the Creston Valley Health Service area. The program also addresses other areas in the community that relate to falls prevention, for instance, nutrition, home and community safety, education and awareness. The program is first targeting its efforts toward frail elderly in the community and will later expand its services community-wide.
Duration: Began April 2003 with no projected end date
Evaluation Results: None reported

Project Title: Development of Standardized Falls Risk Assessment and Interventions
Contact: Lynnda Swan, Clinical Practice Consultant
Community Rehabilitation
1340 Ellis St
Kelowna, BC V1Y 9N1
Ph: 250-868-7881
Fax: 250-868-7809
E-mail: lynnda.swan@interiorhealth.ca
Description: Community Rehabilitation seeks to provide a more consistent method for assessing falls risk and, in turn, implement falls prevention activities among seniors when being seen by Community Rehabilitation Therapists. Veterans and un-paid caregivers are likewise included in the education of falls prevention. Community Rehabilitation is present in settings of seniors housing/assisted living, publicly funded home support services and in the homes of communities.
Duration: Began March 2002 with no projected end date
Evaluation Results: None reported

Project Title: Kamloops Injury Prevention Network
Contact: Cathy Shether, Chair
Kamloops Injury Prevention Network
Public Health
519 Columbia St
Kamloops, BC V2C 2T8
Ph: 250-851-7413
Fax: 250-851-7301
E-mail: cathy.shether@interiorhealth.ca
Description: The Kamloops Injury Prevention Network actively works toward reducing the rate of injuries in Kamloops by partnering with local, provincial and national injury prevention groups that already exist
in the community. The result will be a safety culture that is part of
the value system and lifestyle of the community. Therefore, there
will be fewer incidents resulting in injuries and death. The goals of
the Kamloops Injury Prevention Network are to:
• Reduce the incidence of fall-related injuries in people 65+
• Reduce the incidence of recreation-related injuries in children
and youth, to equal, or less than, the BC Provincial average
• Empower individuals, groups and the community to share the
burden of safe disposal of used needles
• Develop financial sustainability

Duration: Began June 2004 with no projected end date
Evaluation Results: Results pending

Project Title: Kootenay Boundary Falls Prevention Program
Contact: Denise Uhrynuk, Coordinator
622 Gordon Road
Nelson, BC V1L 3L6
Ph: 250-352-2727
Fax: 250-352-2727
E-mail: denise.uhrynuk@interiorhealth.ca
Description: The Kootenay Boundary Falls Prevention Program aims to
reduce the risk of falling in community dwelling seniors through
the use of a multi-factorial strategy. In doing so, in-service
education is provided on Falls Risk Reduction to Rehabilitation
Health Care Professionals, who will, in turn, incorporate the
training as a best practice strategy targeting frail elderly in the
community. Suggestions to receive a clinical assessment from a
physician/home care nurse are made, as one way to reduce falls
risk. Falls fairs were offered twice this year, in addition to,
monthly seniors’ wellness events that offer blood glucose, blood
pressure checks and balance assessment. Next steps include:
• Continue to support the community group who has agreed to
continue with the project and promote the program
• Advocate for the seniors as a health professional and as an
informed citizen on falls prevention
• Continue to educate the public and local government through
meetings and media

Duration: January 2004 – March 2004
Evaluation Results: • 1 out of 3 identified risk factors have been reduced in the home safety check
• Improved time on the “Timed Up and Go” test
• Further results pending

Project Title: **Nelson Falls Prevention Program**

Contact: Carol-Joy Kaill, Nelson and District Seniors Coordinating Society  
503 Front St  
Nelson, BC V1L 4B4  
Ph: 250-505-5384  
Fax: 250-505-5397  
E-mail: sencoord@netidea.com  
Website: www.seniors.kics.bc.ca

Description: The **Nelson Falls Prevention Program** seeks to implement falls prevention activities in adult day care, community and home support services settings. Strategies include home safety checks, falls prevention workshops and a walking program. The program was taken over from Interior Health Staff and will require the ongoing support of Health Care Staff and community volunteers to succeed.

Duration: Began April 2004 with no projected end date

Evaluation Results: Results pending

Project Title: **North Okanagan Falls Prevention Project: Health Canada/Veterans Affairs Canada Initiative**

Contact: Louise Eichinger, Enderby Coordinator  
Box 104  
Enderby, BC V0E 1V0  
Ph: 250-546-6735  
E-mail: pe63lm@telus.net

Description: The goal of the **North Okanagan Falls Prevention Project** was to determine if a locally presented falls prevention program reduced the number of fall-related injuries in Vernon and Enderby. This project is a continuation of the Health Canada / Veterans Affairs initiative in Vernon and Enderby, which included workshops and health fair events. Enderby volunteers will continue to present the
workshops twice a year and promote falls prevention at three health fair events in the area. If funding is available, the project will be presented to other communities.

Duration: April 2001 – March 2004

Evaluation Results:
- 66% of participants (n=436) involved in the evaluation reported at least one fall prior to the workshops
- Of the 153 participants contacted after one year, there was a 75% reduction in falls
- Of the target group, 46% had some form of injury due to their original fall prior to the program. One year later only 7% of the same sample reported an injury from a fall, with 3% requiring hospitalization (reduced from 10%)

Project Title: North Okanagan Falls Prevention Project: Health Canada/Veterans Affairs Canada Initiative

Contact: Mike Vanderbeck, Project Manager
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Vernon, BC V1T 2H2
Ph: 250-545-1791
Fax: 250-545-0091
E-mail: nofalls@socialplanning.ca
Website: www.socialplanning.ca/falls

Description: Utilizing a multi-factorial approach, the North Okanagan Falls Prevention Project seeks to reduce falls and fall-related risks among seniors by overcoming the barriers to participation and change, with a focus on informing and supporting seniors to make changes. The project objectives are:
- Raise awareness of falls risks among workshop participants by 50% and gain commitment from 20% of participants to address at least one of their personal fall risks
- Attract 100 workshop participants to have medications reviewed
- Reduce one or more home hazards among 50% of clients of the Home Intervention Service in Vernon and Enderby by October 2003

Duration: August 2001 – March 2004

Evaluation Results:
- 350 consumers attended medication workshops to have medications reviewed
- 46% of participants reported at least one behaviour change
• 75 home safety checks were completed
• At the 3 month follow-up, 78% of the 49 seniors contacted addressed at least 1 safety hazard
• 66% of the education workshop participants reported at least one fall in the past year
• Of the 153 education workshop participants contacted after one year, there was a 75% reduction in falls by that focus group

Project Title: **Okanagan Band Falls Prevention Program**

Contact: Ramona Mary Louis, Community Health Worker
RR #7 Site 8 Compartment 20
Vernon, BC V1T 7Z3
Ph: 250-542-5094
Fax: 250-542-3083
E-mail: okibhealth@okanagan.org

Description: The **Okanagan Band Falls Prevention Program** seeks to develop a culturally specific falls prevention program for the Okanagan Indian Band community, including seniors and un-paid caregivers. The falls prevention program has yet to be implemented, as community buy-in must be obtained and an assessment on past fall rates in the community needs to be completed. Additionally, the program’s goals and objectives will be reviewed, as well as, the program will be modified to fit the needs of the community.

Duration: Began November 2003 with no projected end date

Evaluation Results: Results pending

Project Title: **Penticton-Area Falls Prevention Program**

Contact: Harald Simmerling, Program Coordinator
Penticton Health Centre
2nd Floor, 740 Carmi Ave
Penticton, BC V2A 8P9
Ph: 250-770-3483
Fax: 250-770-3470
E-mail: harald.simmerling@interiorhealth.ca
Website: www.interiorhealth.ca
Description: The goal of the **Penticton-Area Falls Prevention Program** is the reduction of falls and fall-related injuries in Penticton-area seniors. The program is utilized in community and home support settings. Objectives of the program include:
- Increase knowledge of falls and falls prevention
- Assist with development of action plans
- Act as a liaison for community resources
- Promote adoption of exercise habits
- Increase balance, both objectively and subjectively
- Promote responsibility for and ability to continue risk-reduction activities post-program

Duration: Began February 2003 with no projected end date

Evaluation Results: In the planning stages of a post-program assessment of change, including an interview and analysis of hospital data.

Project Title: **Step Wise – Central Okanagan Falls Program**

Contact: Wendy Miller, Program Manager
Community Health/Residential Services
2255 Ethel St
Kelowna, BC V1Y 2Z9
Ph: 250-862-4300, extension 7547
Fax: 250-862-4101

Description: The purpose of **Step Wise – Central Okanagan Falls Program** is to reduce the number of falls for high-risk, community-dwelling seniors by targeting home safety; diet and nutrition; and motivation, loneliness and isolation. Objectives of the 8-week program are as follows:
- Increase seniors' awareness and knowledge of the fall-related risk factors
- Reduce seniors' risk factors for falls and near falls
- Reduce the number of seniors' falls and near falls
- Reduce the number of medical costs associated with falls

The next step is to use data to support the need to offer the Step Wise program more frequently and engage in further research initiatives.

Duration: Ongoing with no projected end date
Evaluation Results: Efficacy of program was evaluated from January 2004 – March 2004. Results pending

Project Title: **Strategies and Actions for Independent Living (SAIL): Falls Prevention for Clients of Home Support Services – 100 Mile House site**

Contact: Gail Dryden, On-site Coordinator  
Home and Community Care Services  
South Cariboo Health Centre  
Bag 399  
100 Mile House, BC V0K 2E0  
Ph: 250-395-7676  
Fax: 250-395-7675  
E-mail: gail.dryden@interiorhealth.com

Description: Located in 100 Mile House, the goal of SAIL was to develop and pilot test a course in best practices for falls prevention that was specifically designed for Community Health Workers (CHW). The program educated Community Health Workers on fall-related risks and increased their awareness of fall risks among seniors. The CHWs were, in turn, able to assess the home environment and lifestyle of clients and address any fall-related risks, thereby reducing the risk of falling and sustaining a fall-related injury.

Duration: May 2003 – November 2003

Evaluation Results:  
- Rate of falls increased from 5.2 per 1000 person days to 6.3 per 1000 person days over the six-month intervention compared to six months prior  
- Rate of fallers (those who fell once or more) decreased from 3.0 per 1000 person days to 2.6 per 1000 person days over the six month intervention compared to six months prior

Project Title: **Strategies and Actions for Independent Living (SAIL): Falls Prevention for Clients of Home Support Services – Castlegar site**

Contact: Denise Uhrynuk, On-site Coordinator  
622 Gordon Road  
Nelson, BC V1L 3L6  
Ph: 250-352-2727
Description: Located in Castlegar, the goal of SAIL was to develop and pilot test a course in best practices for falls prevention that was specifically designed for Community Health Workers (CHW). The program educated CHWs on fall-related risks and increased their awareness of fall risks among seniors. The CHWs were, in turn, able to assess the home environment and lifestyle of clients and address any fall-related risks, thereby reducing the risk of falling and sustaining a fall-related injury.

Duration: March 2003 – November 2003

Evaluation Results:
- Rate of falls decreased from 6.4 per 1000 person days to 2.0 per 1000 person days over the six-month intervention compared to six months prior
- Rate of fallers (those who fell once or more) was decreased from 2.9 per 1000 person days to 1.1 per 1000 person days over the six month intervention compared to six months prior

Northern Health Region

Project Title: The First Step: Falls Prevention Starts with You

Contact: Alan Leatham or Cheryl Block
Home and Community Care
3412 Kelum St
Terrace, BC V8G 4T2
Ph: 250-638-2219 or 250-638-2225
Fax: 250-638-2264

Description: The First Step: Falls Prevention Starts with You is facilitated though Home and Community Care. In this program, Community Rehabilitation Therapists provide an assessment of seniors and veterans on fall-related risk factors. Additionally, falls prevention information and resources are provided to seniors. The program is presented to groups/seniors on an as-requested or as-required basis within adult day care, assisted living and community settings.

Duration: Ongoing with no projected end date

Evaluation Results: None reported
Project Title: "Let's Talk" Falls Prevention

Contact: Donna Holeczi
Registered Nurse
Rainbow Adult Day Centre
1000 Liard Drive
Prince George, BC V2M 3Z3
Ph: 250-563-9966
Fax: 250-563-4376
E-mail: christine.james@northernhealth.ca

Description: “Let’s Talk” Falls Prevention is an educational program presented by a staff nurse to adults and seniors attending Rainbow Adult Day Centre. The program educates clients on being aware of risk factors and ways to minimize their risks. In addition to the falls prevention presentations, ongoing counseling is available and part of the program.

Duration: Began October 1996 with no projected end date

Evaluation Results: • Observation of improved footwear among participants

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Project Title: Northern Health Authority’s Seniors Falls Prevention: Health Canada/Veterans Affairs Canada Initiative

Contact: Mike Gumpel, Coordinator
9985 Prodahl Rd
Prince George, BC V2K 5M3
Ph: 250-967-4002
E-mail: mike_gumpel@telus.net

Description: The goal of the Northern Health Authority’s HC/VAC Seniors Falls Prevention program is to implement strategies that identify and reduce areas of risk in the public environment that contribute to falls and fall-related injuries among seniors and veterans in the Northern Interior Health region. Additionally, the program seeks to enhance the capacities of individuals, groups and communities to reduce the risk of falls occurring in public locations. Objectives of the program include:

• Conduct a media campaign to increase public awareness in the target region with a focus on seniors & veterans at-risk of falling
• Actively engage community stakeholders in reducing falls and fall-related risk factors
• Reduce overall falls and fall-related injuries by 20% and the number of self-reported risk factors by 30% among targeted group of seniors
• Increase confidence in performing daily activities as indicated by a 25% improvement on the ABC scale over 1 year
• During the project, staff/PAC/stakeholders to develop guidelines for sustainable falls prevention practices

Next steps include:
• Obtain bridge funding to develop a region-wide sustainable plan
• Develop realistic goals and objectives aimed at reducing risks for falling
• Develop a community plan that is not just a plan for seniors

Duration: April 2002 – March 2004

Evaluation Results:
• 70 individuals aged of 65+ that had previously sustained a fall and remained living independently were tracked for 10 months and educated on falls-related topics
• 63% of “fallers” reported experiencing less serious falls than prior to their involvement in the project
• 38% of individuals reported being less fearful of falling after being involved in the project

Vancouver Coastal Health Region

Project Title: Community and Family Health Seniors' Falls Prevention Program

Contact: Karen Stephen, Community Health Nurse
Richmond Health Department
7000 Westminster Highway
Richmond, BC V6X 1A2
Ph: 604-233-3145
Fax: 604-233-3198
E-mail: karen.stephen@vch.ca

Description: The goal of the Community and Family Health Seniors' Falls Prevention Program is to increase individual, family and community capacity to prevent falls by way of home support workers. Additionally, the program seeks to increase self-care,
mutual aid and promote a safe environment utilizing a multifactorial approach. Next steps include the development of a logic model and the evaluation component of the program. The planning of further program details is in progress.

Duration: Began April 2004 with no projected end date

Evaluation Results: Results pending

Project Title: Community-Based Program in Stroke

Contact: Janice Eng, Associate Professor
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University of British Columbia
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Vancouver, BC V6T 2B5
Ph: 604-714-4105
Fax: 604-714-4168
E-mail: janicee@interchange.ubc.ca
Website: www.rehab.ubc.ca/jeng

Description: The Community-Based Program in Stroke aimed to reduce falls in people who suffered a stroke, as they are at high risk for a fall. Utilizing exercise and clinical assessments, this was a 10-week program that was offered 3 times per week to frail and pre-frail seniors. Program was shown to be effective for people that suffered a stroke. Publication is currently under review with a journal and, once published, collaboration with other community organizations will begin to determine how to implement the program. Next step of the program is to develop a knowledge translation step.

Duration: January 2002 – January 2004

Evaluation Results: • Demonstrated reduction in fall risk factors
• Demonstrated reduction in falls

Project Title: Falls Prevention

Contact: Deirdre Webster, Physiotherapist
Evergreen Community Health Centre
3425 Crowley Drive
Evergreen Community Health Centre targets seniors, veterans and unpaid caregivers through its multi-factorial Falls Prevention activities by:
- Increasing awareness of fall-related risk factors
- Decreasing risks of falling
- Improving balance

The next steps are to incorporate falls risk assessment into basic assessments for all clients receiving community home services, standardize outcome measurement for physiotherapy intervention, and address and assess confidence with regard to falls.

Duration: Began October 2001 with no projected end date

Evaluation Results: • Approximately 80% of clients responded to advice to remove scatter rugs and install grab bars/rails for outdoor steps
• Berg balance scores improved from 3-10 points
• Further results pending

Project Title: The First Step

Contact: Leanie Eksteen, Occupational Therapist
Box 220
1140 Hunter Pl
Squamish, BC V0N 3G0
Ph: 604-892-2293
Fax: 604-892-2327
leanie.eksteen@cg.bc.ca

Description: Utilizing a multi-factorial approach, The First Step is a community and home support-targeted program for seniors, veterans and the general public that is coordinated by an Occupational Therapist. The program’s purpose is to prevent falls and raise awareness of falls prevention in the community. The next step is to measure the impact and outcome as a result of the program.

Duration: Began January 2002 with no projected end date

Evaluation Results: Results pending
Project Title: **Functional Fitness Exercise Class**

Contact: Nancy Jackson, Program Coordinator  
Chown Adult Day Centre  
3519 Cambie St  
Vancouver, BC  V5Z 2W9  
Ph: 604-879-0947  
Fax: 604-879-0121  
E-mail: njchown@shaw.ca

Description: The **Functional Fitness Exercise Class** seeks to reduce falls and fall-related injuries among seniors at Chown Adult Day Centre. Utilizing components of functional mobility, including cardiovascular endurance, muscular strength, muscular endurance, flexibility, balance coordination and body composition, the class aims to improve functional ability. The end goal of the class is to prevent falls and allow seniors to remain in their homes. Staff members have been inspired to continue the class because clients have shown improvement. Next steps include:  
- Re-examine clients for improvement and balance  
- Increase amount of weight and repetitions  
- Continue education for staff

Duration: Began February 2002 with no projected end date

Evaluation Results:  
- Lifting more weight  
- Improved balance  
- Clients are on a higher level of functional fitness

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Project Title: **Keeping Afoot: A Falls Prevention Workshop**

Contact: Julie Cheng, Physiotherapist  
Ward 9B, St. Paul's Hospital  
1081 Burrard St  
Vancouver, BC  V6Z 1Y6  
Ph: 604-682-2344, extension 63464  
Fax: 604-806-8390  
E-mail: jcheng@providencehealth.bc.ca

Description: Within the Geriatric Outpatient Clinic at Saint Paul’s Hospital, **Keeping Afoot** is a workshop on falls prevention activities that is presented to seniors and caregivers. In March 2004, the program
was combined with St. Vincent’s Hospital to provide further falls prevention activities to its Day Hospital patients.

Duration: Began February 1998 with no projected end date

Evaluation Results: None reported

Project Title: **Slips, Trips and Falls Education and Exercise Program**

Contact: Alison Dennis, Fitness/Wellness Services Coordinator
City of Richmond
6911 No. 3 Rd
Richmond, BC V6Y 2C1
Ph: 604-718-8009
Fax: 604-718-8007
E-mail: adennis@city.richmond.bc.ca
Website: www.city.richmond.bc.ca

Description: **Slips, Trips and Falls** is an education and exercise program developed to assist seniors living in the community to:
- Reduce the risk of falls in the home by identifying potential risks
- Improve balance, strength and endurance through a fun exercise circuit
- Provide a resource listing of all community services clients might wish to access on falls prevention
- Promote social interaction for seniors

Functional assessments are completed at pre-program and post-program. The program is offered in recreation facilities/community centres and recreation fitness leaders provide the instruction of the program.

Duration: Ongoing with no projected end date

Evaluation Results:
- Data collected shows that strength, balance and flexibility among seniors has improved during the program
- Follow-up with participants is not conducted and, therefore, once they leave the program, unable to determine whether or not their participation reduced risk factors
Project Title: Strengthen Training Program in Chieng's Adult Day Program

Contact: Pet Ming Leung, Physiotherapist
Simon K.Y. Lee Seniors Care Home
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Vancouver, BC V6B 2J8
Ph: 604-608-8829
Fax: 604-408-6728
E-mail: petmingl@success.bc.ca

Description: Chieng’s Adult Day Centre, within the Simon K.Y. Lee Seniors Care Home, provides day care for seniors with various needs who are being cared for at home by family members. The day centre offers a Strength Training Program to clients. The goals of the program are to:
- Decrease number of falls resulting in injury
- Maintain or increase resident's mobility
- Maintain or increase resident's ability to do Activities of Daily Life (ADL)

Objectives of the program are to:
- Increase or maintain muscle strength
- Increase or maintain the resident's balance
- Maintain or increase time for test

Duration: Began January 2003 with no projected end date

Evaluation Results: A demonstrated reduction in:
- Fall-related risk factors
- Falls
- Fall-related injuries

Project Title: Watch Your Step!: Health Canada/Veterans Affairs Canada Initiative

Contact: Leila Jensen, Project Manager
411 Seniors Centre
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Vancouver, BC V6B 1X4
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E-mail: ljensen@411seniors.bc.ca
Website: www.411seniors.bc.ca
Description: The goal of **Watch Your Step!** is to facilitate change in attitudes around falls prevention and personal health practices to reduce fall-related risks in community-dwelling seniors and veterans. Objectives of the program are to:

- Increase the capacity of active seniors, veterans and caregivers to make informed decisions and choices in order to prevent falls
- Raise the awareness of volunteer counselors around fall risks and to work with them to develop strategies to assist their clients in assessing and managing personal risk factors
- Raise public awareness around the importance of falls, risk factors for falls and prevention of falls in the community in support of the above objectives

Duration: May 2001 – March 2004

Evaluation Results:

- Goals included raising awareness about fall risk factors and prevention among multicultural seniors' groups and informing volunteer counselors on how to reach more frail people in these populations who are at risk of falling.
- This was accomplished by bringing information and exercise demonstrations to approximately 1,200 seniors and volunteer counselors at workshops throughout the Vancouver area, targeting Chinese and Punjabi seniors.

**Vancouver Island Health Region**

**Project Title:** South Island Falls Prevention Project: Health Canada/Veterans Affairs Canada Initiative

**Contact:** Laurie Mueller, Project Coordinator
Laurie Mueller & Associates
540 Hoffman Ave
Victoria, BC V9B 5W4
Ph: 250-744-4338
Fax: 250-744-5696
E-mail: lbmueller@shaw.ca
Website: www.victoriafallsproject.com

**Description:** The **South Island Falls Prevention Project** aims to reduce falls among seniors and veterans through a community development process by developing, testing and sharing a falls prevention model that may be replicated elsewhere.
By encouraging falls prevention within the community, the program seeks to:
- Increase the capacity of stakeholders at participating residential facilities and veterans’ centres to address falls prevention in a sustained way
- Decrease the number and severity of falls through physical and personal changes in homes and community areas
- Increase awareness and knowledge of the causes and prevention of falls among seniors, veterans and service providers
- Increase awareness of, and interest in, community development methods for falls prevention initiatives

The VIHA may continue the program. In addition, the Royal Canadian Legion has developed a Speakers Bureau to keep awareness raised in the community.

Duration: April 2002 – March 2004

Evaluation Results:
- 45% reduction in self-reported falls from the six months prior to the program to the 3-month follow-up
- 43% reduction in falls that caused injury from the six months prior to the program to the 3-month follow-up

Project Title: **Strategies and Actions for Independent Living (SAIL): Falls Prevention for Clients of Home Support Services – Victoria site**

Contact: Judith Hodgson, On-site Coordinator
South Victoria Home Care Society
198 St. Charles St
Victoria, BC V8S 3M7
Ph: 250-370-0087
E-mail: judith8@telus.net

Description: Located in Victoria, the goal of SAIL was to develop and pilot test a course in best practices for falls prevention that was specifically designed for Community Health Workers (CHW). The program educated CHWs on fall related risks and increased their awareness of fall risks among seniors. The CHWs were, in turn, able to assess the home environment and lifestyle of clients and address any fall related risks, thereby reducing the risk of falling and sustaining a fall-related injury.

Duration: May 2003 – November 2003
Evaluation Results:  
- Rate of falls decreased from 6.5 per 1000 person days to 3.2 per 1000 person days over the six-month intervention compared to six months prior  
- The rate of fallers (those who fell once or more) was decreased from 4.4 per 1000 person days to 2.4 per 1000 person days over the six-month intervention compared to six months prior

Project Title:  
**Tools for Living Well: Promoting the Use of Assistive Devices to Prevent Falls in Seniors and Veterans**

Contact:  
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University of Ottawa  
Room 3021 C  
451 Smyth Rd  
Ottawa, ON K1H 8M5  
Ph: 613-562-5800  
Fax: 613-562-5658  
E-mail: dlockett@uottawa.ca

Description:  
Occurring in Nanaimo, this program sought to promote the use of assistive devices to prevent falls in seniors and veterans. The goals of the program were to:  
- Increase acceptance of assistive devices by seniors, veterans, caregivers and community stakeholders  
- Increase visibility and availability of assistive devices in the community  

Objectives of the program included:  
- Increase ability of seniors and veterans to make informed choices about assistive devices  
- Encourage retailers to actually promote sales of assistive devices  
- Encourage hoteliers, builders and retailers to model/display correctly installed bathroom devices  

The next step is to continue community education on fall prevention using assistive devices to alter the frame of reference from "aids for disability" to "aids for ability and independence."

Duration:  
January 2003 – February 2004

Evaluation Results:  
Results pending
Project Title: **Vancouver Island Health Authority Falls Prevention**

Contact: Laurie Mueller, Coordinator  
Laurie Mueller & Associates  
540 Hoffman Ave  
Victoria, BC V9B 5W4  
Ph: 250-744-4338  
Fax: 250-744-5696  
E-mail: lbmueller@shaw.ca

Description: The **Vancouver Island Health Authority Falls Prevention** program seeks to prevent falls in community-dwelling seniors through falls prevention programming as developed by the South Island Falls Prevention Project. Objectives include:
- Run 4 programs
- Support and organize volunteers speaking to community organizations on the subject of falls
- Build community capacity and penetration throughout the VIHA
- Maintain training to volunteers running the Falls Inquiry Line

Duration: September 2004 – March 2005

Evaluation Results: None reported

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**Provincial Health Services Region**

Project Title: **Osteofit**

Contact: Jan Finch, Program Director  
BC Women's Hospital & Health Centre  
E204-4500 Oak St  
Vancouver, BC V6H 3N1  
Ph: 604-875-2727  
E-mail: jfinch@cw.bc.ca

Description: With the aid of fitness instructors, an exercise specialist and nutritionist, Osteofit provides falls prevention activities through exercise, lifestyle management and education. The class is offered
2 times per week for 10 weeks or 2 times per week for 16 weeks in a community setting. Currently, outcome measures are being developed using a logic model.

Duration: Began September 1996 with no projected end date

Evaluation Results: Results pending

Project Title: Osteoporosis Program at BC Women's Hospital and Health Centre

Contact: BC Women's Hospital & Health Centre
E204-4500 Oak St
Vancouver, BC V6H 3N1
Ph: 604-875-2018
Fax: 604-875-3738

Description: The Osteoporosis Program provides assessment, treatment, and education to clients that have received a doctor’s referral to the program. A consultation with all new patients is available to help clients identify:
- Client’s osteoporosis risk
- Potential lifestyle changes that can be made to improve bone health
- Medical therapies that are most appropriate for the client

A falls risk-assessment portion, in conjunction with UBC researchers, is being considered. The falls assessment would include gait and balance testing.

Duration: No projected end date

Evaluation Results: None reported
Long-Term Care / Frail and Cognitively Impaired Elderly

Initiatives located in institutional settings for full-time residents with long-term care needs due to chronic illnesses, disabilities and/or cognitive impairments.

Fraser Health Region

Project Title: **Dufferin Care Centre Falls Prevention Plan**

Contact: Lynette Smith, Physiotherapist
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1131 Dufferin St
Coquitlam, BC V3B 7X5
Ph: 604-552-1166
Fax: 604-552-3116
E-mail: lsmith@dufferincare.com

Description: The Dufferin Care Centre has produced a **Falls Prevention Plan** for seniors within the facility. The plan includes the following objectives:
- Risk identification
- Individualized response plans to falls risk
- Collect falls data
- Education to staff, families and residents about identification and prevention of fall risk factors
- Future goal setting

Strategies to implement the Falls Prevention Plan include walking programs, least restraint policy, continuous risk assessment and individualized response plans.

Duration: Began September 2002 with no projected end date

Evaluation Results:
- Demonstrated reduction in fall risk factors
- Demonstrated reduction in falls

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Project Title: **Falls with Serious Injury**

Contact: Diane Field, Resident Care Coordinator and Clinical Nurse Educator
Fraser Hope Lodge
Description: Fraser Hope Lodge implemented a falls prevention program targeting serious fall-related injuries. The goal of the **Falls with Serious Injury** program is to ensure that residents will experience freedom of mobility and will not experience a serious injury related to a fall. Preventative, contingency and recovery strategies are utilized and described below:

- Preventative: refer to falls management guidelines, OT/PT assessment, individualized care plans, least restraint policy, falls algorithm, safe equipment, safe environment and staff education
- Contingency and Recovery: utilize Encon reporting system, investigation and tracking of falls, OT/PT assessment, care conferences, education

Next step of the program is to continue contact with the focus group using comparative analysis.

Duration: Began January 2004 with no projected end date

Evaluation Results:
- Demonstrated reduction in fall-related risk factors
- Demonstrated reduction in falls
- Demonstrated reduction in fall-related injuries

Project Title: **Hip Fracture Prevention Program**

Contact: Tanya Snow, Director of Care
New Vista Society
7550 Rosewood St
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E-mail: tanyas@newvista.bc.ca
Website: www.newvista.bc.ca

Description: In January 2003, the **Hip Fracture Prevention Program** was implemented in the long-term care facility to educate seniors, caregivers and family members. The goal of the program is to reduce the number of hip/pelvis/femur fractures related to falls by
50% by implementing falls prevention initiatives focusing on the prevention of hip fractures.

Duration: January 2003 – December 2004

Evaluation Results: • Reduction in the number of falls through the use of strength training programs and environmental assessments
• Increase in the number of fractures
• Further results pending

Project Title: Least Restraint Program

Contact: Robin Livingston, Clinical Resource Nurse
Charles Barham Pavilion
Surrey Memorial Hospital
13750 96th Ave
Surrey, BC V3V 1Z2
Ph: 604-585-5666, extension 2847
Fax: 604-585-5525
E-mail: robin.livingston@fraserhealth.ca

Description: The Charles Barham Pavilion, located at Surrey Memorial Hospital has implemented a Least Restraint Program in its facility that seeks to do the following:
• Utilize alternatives to restraints
• Respect the dignity and personhood of each individual
The program uses multi-factorial strategies that include nutrition, pain management, and elimination care. When a resident is admitted at the facility, the Least Restraint Program is initiated. The next step of the program is to develop a formal evaluation plan which includes refresher education.

Duration: August 2001 – September 2003

Evaluation Results: Results pending

Project Title: Management of Persons at High Risk for Falling

Contact: Anne Earthy, Clinical Nurse Specialist
Queen's Park Care Centre
315 McBride Blvd
New Westminster, BC V3L 5E8
Description: The Queen’s Park Care Centre is a continuing care facility that services older adults in New Westminster. The centre has implemented falls prevention activities among seniors, caregivers and families through a program called Management of Persons at High Risk for Falling. The objectives of the centre’s program are to:

- Develop an evidence-based Clinical Practice Guideline to assist staff in identifying residents who are at risk for falls
- Implement resident-specific interventions
- Establish consistent guidelines and documentation standards within facilities in Fraser North

Next steps of the program include:
- Continuous review of outcomes to determine trends
- Update supportive equipment as needed
- Ongoing education in orientation
- Chart audits for compliance with Clinical Practice Guideline

Duration: Began July 1999 with no projected end date

Evaluation Results:
- Demonstrated reduction in fall-related risk factors
- Demonstrated reduction in fall-related injuries

Project Title: Seton Villa Falls Prevention

Contact: Beverlee Birce, Recreation Director
Seton Villa
6744 Burns St
Burnaby, V5C 1M2
Ph: 604-291-0650, extension 311
Fax: 604-291-1871
Website: www.setonvilla.com

Description: Seton Villa is an assisted living complex that is implementing falls prevention activities among its residents. The Seton Villa Falls Prevention program seeks to raise awareness of falls, falls-related risk factors and fall prevention strategies among its residents. At this time, health care professionals are not trained; however, the next step of the program includes a "Train the Trainer" workshop to train a nurse and a recreation therapist.
Duration: June 2003 – October 2004

Evaluation Results: • Increased falls risk awareness among residents
  • Further results pending

Project Title: The Use of Hip Protectors in the Prevention of Hip Fractures from Falls

Contact: Gloria Hunter, Director of Care
Kinsmen Retirement Centre
5410 10th Ave
Delta, BC V4M 3X8
Ph: 604-943-0155
Fax: 604-943-1542
E-mail: gloria@dccnet.com

Description: The goal of the Kinsmen Retirement Centre is to reduce the incidence of hip fractures from falls. Safety measures utilized include the use hip protectors, proper seating, falls assessments and minimal use of medications with potential side affects leading to falls. The use and effectiveness of an alternate type of hip protector is currently being evaluated.

Duration: Began October 2003 with no projected end date

Evaluation Results: Results pending

Interior Health Region

Project Title: Falls Prevention Program

Contact: Cydney Higgins, Care Coordinator
Mount St. Francis Hospital
1300 Gordon Rd
Nelson, BC V1L 3M5
Ph: 250-352-3531, extension 247
Fax: 250-353-6942
E-mail: cydney.higgins@interiorhealth.ca

Description: Mount St. Francis Hospital is an extended care hospital located in Nelson. The objectives of the Falls Prevention Program include:
• Track number of resident falls
• Identify residents at-risk for falls
• Identify residents who fall more than once
• Increase awareness of staff regarding fall prevention
• Increase staff awareness of risk factors
• Implement effective fall prevention strategies
• Reduce the number/severity of falls

The next steps of the program are the ongoing fine tuning of the incident report form, policy tracking information and informal in-services with staff, as program is in its development stages.

Duration: Began January 2003 with no projected end date

Evaluation Results: Results pending

Project Title: Falls Program: Ponderosa Lodge

Contact: Rhonda Chisholm, Occupational Therapist
Occupational Therapy Department
Royal Inland Hospital
311 Columbia St
Kamloops, BC V2C 2T1
Ph: 250-314-2459
Fax: 250-314-2339
E-mail: rhonda.chisholm@interiorhealth.ca

Description: Ponderosa Lodge is a continuing care facility located at Royal Inland Hospital servicing older adults that are not in need of acute care. The Falls Program at Ponderosa Lodge seeks to educate staff, decrease falls and prevent hip fractures. Individual assessments are done as needed. Due to the pending closure of Ponderosa Lodge, the program is to be complemented at Oberlander Residential Care.

Duration: Began November 2002 with no projected end date

Evaluation Results: • Decrease number of hip fractures for residents wearing hip protectors
• Further results pending

Project Title: Physiotherapy Program

Contact: Sue McInnis, Manager of Rehabilitation Services
AES Health Services  
Enderby Community Health Centre  
Box 610, 707-3rd Ave  
Enderby, BC V0E 1V0  
Ph: 250-838-6420, extension 141  
Fax: 250-838-9530  
E-mail: sue.mcinnis@interiorhealth.ca

Description: The Enderby Community Health Centre introduced a **Physiotherapy Program** for older adults living in residential care. The goal of the program is to stimulate balance reactions, strengthen muscles of locomotion and reduce the incidence of falls and hip fractures from falls utilizing hip protectors, a walking and balance program. The program is offered 2 – 4 times per week in Armstrong and Enderby. Next steps are to form the evaluation component, develop clinical guidelines and obtain equipment.

Duration: Began August 2001 with no projected end date

Evaluation Results: None reported

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Project Title: **Residential Falls Prevention**

Contact: Cindy Kozak-Campbell, Community Administrator  
Swan Valley Lodge  
818 Vancouver St  
Creston, BC V0B 1G0  
Ph: 250-428-2283 #203  
Fax: 250-428-9318  
E-mail: cindy.kozak-campbell@interiorhealth.ca

Description: Swan Valley Lodge has begun a **Residential Falls Program** to implement falls prevention activities among Creston residents. Objectives of the program include:

- Decrease falls in residential care facilities in Creston
- Decrease fall-related injuries in residential care facilities in Creston

Strategies used include alarm devices, bed or chair checks and extra low beds. The use of hip protectors was recently added to the list of interventions to be used with individuals. Need to reassess consistent application of program across units and sites (evaluate process).

Duration: Began January 1997 with no projected end date
Evaluation Results:
- On average, a 20% reduction in falls across the various units
- 5-10% reduction in fall-related injuries

Project Title: **Stepping In: Falls Prevention in Long-term Care Project – Cranbrook site**

Contact: Cindy Burrows, Clinical Practice Consultant  
1212 2nd St N  
Cranbrook, BC V1C 4T6  
Ph: 250-420-2248  
Fax: 250-426-1324  
E-mail: cindy.burrows@interiorhealth.ca

Description: The “**Stepping In: Falls Prevention in Long-term Care Project**” seeks to provide valuable information for a long-term action plan in falls prevention in Residential Care Facilities by utilizing a standard falls surveillance form. Objectives of the program include:
- Enhance the knowledge of falls prevention among facility staff, residents, families and other health care professional
- Substantially reduce the number of falls in Residential Care Facilities in the next 3-5 years
- Develop and implement a comprehensive Falls Prevention Plan in all East Kootenay Residential Care Facilities
- Develop a protocol for a Fall Risk Assessment tool and provide an assessment and an individualized fall prevention care plan for all high-risk fallers

Duration: October 2002 – March 2004

Evaluation Results:
- Decrease in falls from 15.3 falls / 1000 bed days over 180 days of the surveillance phase to 11.9 falls / 1000 beds days over 180 days of the intervention phase
- Increase in fallers (those who fell once or more) from 5.0 fallers / 1000 bed days over 180 days of the surveillance phase to 5.3 fallers / 1000 beds days over 180 days of the intervention phase
- Little change in falls over the 180 days of the intervention phase from 43 over the first 30 days, to 43 over the middle days, to 42 over the final 30 days
- Decrease in minor injuries from 151 over 180 days of the surveillance phase to 186 over 180 of the intervention phase
Increase in major injuries (requiring emergency medical treatment in the facility or transfer to hospital) from 9 over the 180 days of the surveillance phase to 10 over the 180 days of the intervention phase

Northern Health Region

Project Title: **Stepping In: Falls Prevention in Long-term Care Facilities – Quesnel site**

Contact: Barb Herringshaw, Physiotherapist and Coordinator
Dunrovin Park Lodge
361 Murphy St
Quesnel, BC V2J 3S3
Ph: 250-992-5263
Fax: 250-992-5263
E-mail: barb.herringshaw@northernhealth.ca

Description: Dunrovin Park Lodge has implemented falls prevention activities through its “Stepping In: Falls Prevention in Long-term Care” program. Strategies of the program include:
- Data collection of each fall prior to and after fall prevention strategies were implemented
- Data sharing with staff and other health care workers in the Northern Health Region
- Instead of the fall report surveillance form, the Encon form is used to track serious falls and fall-related injuries
- Education of staff and seniors about falls
- Assessment of risk factors and strategy planning, as requested Each fall is tracked to reveal trends of where, when and why the majority of falls occur. In turn, strategies to reduce falls are implemented.

Duration: October 2002 – March 2004

Evaluation Results:
- Decrease in falls from 8.0 falls / 1000 bed days over 180 days of the surveillance phase to 7.0 falls / 1000 bed days over 180 days of the intervention phase
- Increase in fallers (those who fell once or more) from 3.0 fallers / 1000 bed days over 180 days of the surveillance phase to 3.2 fallers / 1000 bed days over 180 days of the intervention phase
• Decrease in falls over the 180 days of the intervention phase from 43 over the first 30 days, to 27 over the middle days, to 23 over the final 30 days
• Decrease in minor injuries from 98 over 180 days of the surveillance phase to 84 over 180 of the intervention phase
• Decrease in major injuries (requiring emergency medical treatment in the facility or transfer to hospital) from 10 over 180 days of the surveillance phase to 8 over 180 of the intervention phase

Vancouver Coastal Health Region

Project Title: **Fall Prevention Program**

Contact: Jadwiga Cichon, Nurse Manager
Kopernik Lodge
3150 Rosemount Dr
Vancouver, BC V5S 2C7
Ph: 604-438-2474, extension 231
Fax: 604-438-5344
E-mail: jcichon@kopernik_lodge.bc.ca

Description: Kopernik Lodge is a continuing care facility that provides intermediate care to seniors, in addition to, a special care unit for patients with Alzheimer’s disease or other dementia. The **Fall Prevention Program** at Kopernik Lodge seeks to:

• Limit the frequency of falls among its residents
• Prevent fall-related injuries
• Decrease the severity of falls
• Prevent fractures
• Eliminate environmental risk factors
• Decrease falls related to side effects of medications

All new employees receive an orientation package that includes falls prevention strategies, in addition to, ongoing training. Kopernik Lodge realizes that falls are very common in the elderly population and caused mainly by health problems influencing gait and balance. Keeping that in mind, the facility provides an obstacle-free, safe environment.

Duration: Began January 2002 with no projected end date

Evaluation Results:

• Demonstrated reduction in fall risk factors
• Further results pending
Project Title: **Fall Prevention Program**

Contact: Steven Jiro, Clinical Nurse Manager  
Fair Haven United Church Homes  
2720 E48th Ave  
Vancouver, BC V5S 1G7  
Ph: 604-433-2939 ext 2232  
Fax: 604-433-4547  
E-mail: sjiro@fairhaven.bc.ca

Description: Fair Haven United Church Homes is a long-term care facility serving the elderly in Vancouver and Burnaby. The goal of the facility’s **Fall Prevention Program** is to maintain the number of falls and fall-related injuries within a reasonable range. After each occurrence of a fall, mental status and care needs are assessed to identify unmet needs in each resident. Strategies of the Fall Prevention Program include utilizing a bedside care plan form, half hour checking flow sheet and clinical practice guidelines. It is recognized that fear of falling is a documented predictor of future falls in community living seniors; the next step is to identify fear of falling in residents and, in turn, create support for residents to abate their fear.

Duration: Began August 2002 with no projected end date

Evaluation Results:  
- Most walkers have been replaced with wheeled walkers  
- Fall rate decreased by approximately 40%  
- Further results pending

Project Title: **Fall Prevention Program**

Contact: Christine Lam, Director of Care  
Villa Cathay  
970 Union St  
Vancouver, BC V6A 3V1  
Ph: 604-215-3540  
Fax: 604-215-3530  
E-mail: chrislam@villacathay.ca

Description: Villa Cathay Care Home is a full-service care home servicing the Chinese Community in Vancouver. A **Falls Prevention Program** was implemented to:  
- Prevent falls and fall-related injury
• Implement fall prevention activities
• Identify high-risk cases of falls
• Perform walking exercises and supervision in mobility
• Identify risk factors for falls and intervene accordingly
If a fall does occur, an individualized fall prevention strategy is developed. Evaluation of the fall prevention strategy is later measured.

Duration: No projected end date
Evaluation Results: • Decreased incidence of falls
• Decrease incidence of fall-related injuries

Project Title: Fall Reduction and Subsequent Injuries through Improved Assessment Techniques and Effective Fall Management Strategies
Contact: Donna Dougan, Chief Executive Officer
German Canadian Care Home
2010 Harrison Drive
Vancouver, BC  V5P 2P6
Ph: 604-713-6555
Fax: 604-713-6548
E-mail: sstevens@gcch.ca

Description: The German Canadian Care Home seeks to implement falls prevention activities by utilizing the following objectives:
• Research and review fall assessment tools
• Select a fall assessment tool for implementation
• Establish effective intervention strategies
• Provide fall prevention education to caregivers, families, volunteers and residents, where appropriate
• Evaluate effectiveness of the program
• Develop relevant policies and procedures

Duration: Will begin February 2005 with no projected end date
Evaluation Results: None reported

Project Title: Falls Prevention - An Interdisciplinary Approach
Contact: Joyce Nolin, Resident Services Manager
St. Jude’s Anglican Home
810 W. 27th Ave
Vancouver, BC  V5Z 2G7
Ph: 604-874-3200, extension 227
Fax: 604-874-3459
E-mail: joycen@stjudes.bc.ca

Description: The Falls Prevention program at St. Jude’s Anglican Home is an in-house program that seeks to:
• Provide the newest safety measures for residents
• Reduce incidence of falls
• Increase bone density using exercise and dietary supplements
• Reduce risk factors related to falls
• Provide a falls risk-assessment upon admission
• Allow residents to remain independent, though at-risk
The program will be maintained through continued education to current and new staff, families and residents.

Duration: Began January 2001 with no projected end date

Evaluation Results: • Decrease in the number of hip fractures

Project Title: Falls Prevention as Part of a Least Restraint Initiative

Contact: Joey Lijauco, Physiotherapist
Purdy Pavillion
2211 Westbrook Mall
UBC Hospital
Vancouver, BC  V6T 2B5
Ph: 604-822-7199
Fax: 604-822-7829
E-mail: jlijauco@vanhosp.bc.ca

Description: Purdy Pavillion is an extended care facility located at UBC Hospital. Their program, Falls Prevention as Part of a Least Restraint Initiative, seeks to implement falls prevention activities among its residents, caregivers and family members. Objectives of the program include:
• Develop risk assessment tool that can be used to identify residents who are at risk of falling
• Develop multi-intervention strategy program that will help to manage residents who are at risk of falling
The program includes ongoing assessment for falls risk among residents, as well as, continuous updating of the management plan.
Next steps of the program include ongoing completion of audits and continued feedback to staff.

Duration: January 2003 – February 2004

Evaluation Results: Results pending

Project Title: Falls Prevention Planning

Contact: Annette Garm, Clinical Nurse Specialist
Louis Brier Home and Hospital
1055 West 41st Ave
Vancouver, BC V6M 1W9
Ph: 604-261-9376, extension 264
Fax: 604-266-8772
E-mail: agarm@louisbrier.com

Description: The Louis Brier Home and Hospital is a long-term care facility serving Jewish seniors in Vancouver. The facility has begun Falls Prevention Planning to implement falls prevention activities. Current literature and Best Practices Guidelines have been utilized to producing a comprehensive falls prevention and safe practices program. Objectives of the program are to:
- Reduce the number of falls among residents
- Reduce number of injuries sustained during a fall
- Increase staff awareness for vigilance in falls prevention
- Reduce number of ED admissions due to injuries sustained by a fall
- Identify fall risk factors in elderly and educate all staff, residents and families

Duration: Began January 2002 with no projected end date

Evaluation Results: • Demonstrated reduction in fall-related risk factors

Project Title: Falls Prevention Program, Residential Care and Seniors Program

Contact: Elaine Kidd, Clinical Nurse Specialist, Residential Care
Evergreen House
231 E.15th St
North Vancouver, BC V7L 2L7
Description: The North Shore Residential Care has implemented a **Falls Prevention Program** in its Cedarview, Kiwanis and Evergreen long-term care facilities. Objectives of the program include:

- Reduce falls by 25%
- Reduce serious injuries (fractures, head injuries) by 50%
- Minimize fall-related risks and maintain a safe environment
- Promote the residents optimal level of independence using a least restraint approach.

Encon incident reports are used to track falls and provide clinical indications of degree of injury, number of repeat falls for each resident, number of falls for each 2-hour time interval in a 24 hour period, number of falls related to a specific location, number of falls related to a contributing factor and number of falls from a specific sub-type. Next steps of the program are to audit pre-printed care plans to determine the most common interventions used by staff and to develop a comprehensive profile of the repeat faller using MDS info. Because resident populations change on the units, rates are variable and falls prevention activities are continually adapting to residents with challenging risk problems. Seniors in residential care facilities are at a high risk for falls, pose a number of challenges and require creative falls prevention strategies using an interdisciplinary approach.

Duration: Began October 2001 with no projected end date

Evaluation Results:

- 100% reduction in the use of bed side rails, scatter rugs, and unsafe furniture in resident rooms
- Reduction in the use of floor mats
- Increased use of hip protectors
- Demonstrated reduction in falls
- Demonstrated reduction in serious fall-related injuries

Project Title: **Falls Reduction Project**

Contact: Thelma Friesen, Team Leader
Haro Park Centre
1233 Haro St
Vancouver, BC V6E 3Y5
Ph: 604-687-5584
Fax: 604-687-0645
E-mail: tfriesen@haropark.org  
Website: www.haropark.org

Description: The **Falls Reduction Project** has been implemented at Haro Park Centre, a long-term care facility and seniors housing/assisted living facility. Using a multi-factorial approach, the project’s objectives include:
  - Reduce the number of preventable falls
  - Improve mobility among seniors
  - Reduce the number of residents dependant on a wheelchair for mobility

Duration: Began July 2003 with no projected end date

Evaluation Results: Results pending

Project Title: **Preventing Falls and Reducing Hip Fractures**

Contact: Doris Whalen, Director of Resident Care Program  
City Centre Care Society  
415 West Pender St  
Vancouver, BC V6B 1V2  
Ph: 604-639-8249  
Fax: 604-681-5546  
E-mail: dwhalen@ccares.org

Description: The City Centre Care Society has implemented activities to prevent falls and reduce hip fractures. The objectives of the activities are to:
  - Increase rehabilitation focus in the facility to reduce falls and hip fractures
  - Increase use of exercise programs, strength training and passive/active exercise equipment
  - Increase calcium supplement in diets
  - Utilize strength training with weights and parallel bars

The next step of the program is to obtain funding for equipment.

Duration: No projected end date

Evaluation Results: Results pending
Project Title: Residential Care Clinical Practice Guideline for Fall Prevention

Contact: Kathy Wong, Program Manager, or Brian Lam, Senior OT
Minoru Residence
6111 Minoru Boulevard
Richmond, BC V6Y 1Y4
Ph: 604-244-5300
Fax: 604-244-5305
E-mail: kathy.wong@vch.ca/brian.lam@vch.ca

Description: Minoru Residence is an extended care facility that provides service to residents that need a high level of care. The goals of their Residential Care Clinical Practice Guideline for Fall Prevention include:
• Incorporate least restraint policies
• Minimize falls
• Minimize fall-related injuries
• Recognition of injury patterns
Currently, there is no funding for the current initiative. When funding is available, the next step is to conduct formal research.

Duration: Began January 1992 with no projected end date

Evaluation Results: None reported

Project Title: Royal Arch Masonic Home

Contact: Christie Lusk, Director of Care
Royal Arch Masonic Homes Society
7850 Champlain Crescent
Vancouver, BC V5S 4C7
Ph: 604-437-7343
Fax: 604-437-7373

Description: Royal Arch Masonic Home is a continuing care facility that provides care to seniors and residents with Alzheimer’s disease or other form of Dementia. The facility has implemented falls prevention activities geared towards its residents. The goals of the activities are to decrease fall-related injuries and support all related falls prevention in the facility.

Duration: April 2002 with no projected end date
Evaluation Results: None reported

Project Title: **South Granville Park Lodge**

Contact: Zdenka Votruba, Director of Nursing
South Granville Park Lodge
1645 West 14th Ave
Vancouver, BC V6J 2J4
Ph: 604-732-8633
Fax: 604-732-9833

Description: The South Granville Park Lodge is a long-term care facility that serves seniors in Vancouver. The lodge has implemented falls prevention activities that target its residents and family members. The goals of the activities are falls and injury prevention, in addition to, developing a database for accurate evaluation. The lodge would like to continue education and develop standards/guidelines for long-term care facilities.

Duration: Approximately 1994 with no projected end date

Evaluation Results: None reported

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Project Title: **Standard Protocol at Three Links Care Centre**

Contact: Rita Steeple
Three Links Care Centre
2934 E. 22nd Avenue
Vancouver, BC V5M 2Y4
Ph: 604-434-7211
Fax: 604-438-7563

Description: The Three Links Care Centre is a long-term care facility that serves seniors in Vancouver. Falls prevention is part of the standard protocol at Three Links Care Centre. Objectives of the protocol include:
- Reduce fall-related injuries
- Assess falls risk based on past history, medical diagnosis and gait assessment
- Family safety education

There is a recognized need for the purchase of additional equipment.
Duration: No projected end date

Evaluation Results:
- Demonstrated reduction in fall-related risk factors
- Demonstrated reduction in fall-related injuries

Project Title: Stepping In: Falls Prevention in Long-term Care Project – Sechelt site

Contact: Betty Owen, Coordinator
Shorncliffe Care Home
PO Box 1580
5847 Medusa St
Sechelt, BC V0N 3A0
Ph: 604-885-5126, extension 223
Fax: 604-885-5140
E-mail: betty.owen@cgh.bc.ca

Description: Shorncliffe Care Home is an intermediate care facility serving seniors on the Sunshine Coast. The “Stepping In: Falls Prevention in Long-term Care Project” was implemented in the facility to reduce the number of falls and fall-related injuries to residents. The facility identifies risk factors and develops and implements falls prevention strategies to become part of the care home’s best practices protocols.

Duration: October 2002 – March 2004

Evaluation Results:
- Increase in falls from 14.9 falls / 1000 bed days over 180 days of the surveillance phase to 17.5 falls / 1000 beds days over 180 days of the intervention phase
- Increase in fallers (those who fell once or more) from 4.0 fallers / 1000 bed days over 180 days of the surveillance phase to 6.8 fallers / 1000 beds days over 180 days of the intervention phase
- Decrease in falls over the 180 days of the intervention phase from 83 over the first 30 days, to 64 over the middle days, to 45 over the final 30 days
- Increase in minor injuries from 152 over 180 days of the surveillance phase to 186 over 180 of the intervention phase
- Decrease in major injuries (requiring emergency medical treatment in the facility or transfer to hospital) from 12 over the 180 days of the surveillance phase to 6 over the 180 days of the intervention phase
Project Title: **Strength Training Program at Simon K.Y. Lee Senior Care Home**

Contact: 
Pet Ming Leung  
Simon K.Y. Lee Senior Care Home  
555 Carrall St  
Vancouver, BC V6B 2J8  
Ph: 604-608-8829  
Fax: 604-408-6728  
E-mail: petmingl@success.bc.ca

Description: The Simon K.Y. Lee Care Home is a multi-level care facility located in Vancouver. A **Strength Training Program** was implemented with the following objectives:
- Decrease number of falls resulting in injury
- Decrease number of mechanical lifts needed for transfer
- Decrease number of skin breakdowns
- Maintain or increase resident's mobility
- Increase or maintain muscle strength
- Increase or maintain resident's balance
- Maintain or increase time for test

Three strength training classes were added this year to accommodate 25 additional residents to the program.

Duration: Began January 2003 with no projected end date

Evaluation Results: 
- Minor decrease in number of falls
- 85% change in TUG test – residents either improved or stayed the same

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Project Title: **Youville Residence Fall Prevention Guidelines**

Contact: 
Liz Ball, Physiotherapist  
Youville Residence  
4950 Heather St  
Vancouver, BC V5Z 3L9  
Ph: 604-877-3299  
Fax: 604-261-9047  
E-mail: lball@providencehealth.bc.ca

Description: Youville Residence is a multi-level facility that cares for both intermediate and extended care residents. Under the supervision of a Physiotherapist and an Occupational Therapist, the facility
implemented **Fall Prevention Guidelines** to achieve the following objectives:
- Decrease internal and external risks for falls
- Decrease incidence of falls and fall-related injuries

Strategies are reviewed as needed by team, but at least annually.

**Duration:** Began September 2003 with no projected end date

**Evaluation Results:**
- Demonstrated reduction in use of medication associated with fall-related risk factors

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**Vancouver Island Health Region**

**Project Title:** *Clinical Practice Guidelines at the Lodge at Broadmead*

**Contact:**
Maureen Jones, Physiotherapist  
4579 Chatterton Way  
Victoria, BC V8X 4Y7  
Ph: 250-658-3232  
Fax: 250-658-0835  
E-mail: maureenjones@gems5.gov.bc.ca

**Description:** For seniors and veterans residing at the Lodge at Broadmead, **Clinical Practice Guidelines** have been established with the following objectives:
- Minimize the number of falls that result in injury
- Reduce the total number of falls occurring by assessing falls risks

The Clinical Practice Guidelines have an interdisciplinary focus. Within the facility, falls are tracked weekly on a daily falls report and interventions are implemented as needed. A policy on hip protectors was also developed. Next steps include the analysis of outcomes and refining data collection and analysis.

**Duration:** Began September 2001 with no projected end date

**Evaluation Results:**
- Demonstrated reduction in fall-related risk factors
- Further results pending
<table>
<thead>
<tr>
<th>Project Title:</th>
<th><strong>Falls Prevention Activities at Anderson Manor</strong></th>
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<tbody>
<tr>
<td>Contact:</td>
<td>Dily Hull, Director of Care</td>
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<td></td>
<td>Anderson Manor</td>
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<tr>
<td></td>
<td>90 Linden Ave</td>
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<td></td>
<td>Victoria, BC V8V 4C8</td>
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<td></td>
<td>Ph: 250-385-5321</td>
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<td>Fax: 250-385-5312</td>
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<td></td>
<td>E-mail: <a href="mailto:andersonmanor@shaw.ca">andersonmanor@shaw.ca</a></td>
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<tr>
<td>Description:</td>
<td>Anderson Manor is a long-term care facility</td>
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<td>that provides intermediate care, pre- and</td>
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<td>post-hospital care and temporary stays</td>
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<td>to its residents. As part of daily protocol,</td>
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<td>Anderson Manor has engaged in **Falls</td>
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<td>Prevention Activities** for residents under</td>
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<td>and over the age of 65. Objectives of the</td>
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<td>activities include:</td>
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<td>• On all shifts, identify areas of high</td>
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<td>falls risk within the facility</td>
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<td>• Assess adequate staff mix in order to</td>
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<td>ensure safe staffing</td>
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<td>• Reduce the rate of falls among residents</td>
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<td>Evaluation Results:</td>
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<tr>
<th>Project Title:</th>
<th><strong>Falls Prevention Committee</strong></th>
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<td>Contact:</td>
<td>Jan Bolton, Director of Care</td>
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<td>Central Park Lodges Retirement</td>
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<td>Residence</td>
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<td>1230 Balmoral Rd</td>
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<td>Victoria, BC V8T 1B3</td>
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<td>Ph: 250-383-2323</td>
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<td>Fax: 250-383-6359</td>
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<td>E-mail: <a href="mailto:janbolton@cplodges.com">janbolton@cplodges.com</a></td>
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Evaluation Results: Results pending

Project Title: **Glacier View Lodge Safe Mobility Initiative**

Contact: Mya Ambrose, Charge Nurse  
R.R. #5  
2450 Back Rd  
Courtenay, BC  V9N 9GB  
Ph: 250-338-1451  
Fax: 250-338-1115  
E-mail: mambrose@sjgh.hnet.bc.ca

Description: Glacier View Lodge is a long-term care facility that implemented a **Safe Mobility Initiative** among its residents and staff. Glacier View Lodge recognizes that each fall is an opportunity to learn how other falls can be prevented. At time of admission, patient’s mobility and fall risk are assessed. All falls are recorded on incident reporting forms and reviewed with an assessment and intervention focus. Furthermore, residents are assessed daily and results are then communicated to staff; a more comprehensive review occurs monthly. A wall was built to deflect residents from high fall site at entry to unit and all walls were repainted to increase brightness and contrast. Effective team communication, education to staff and promotion of exercise to increase ambulation and activity on the unit all aided in reducing falls. It was informally noted that now most residents only fall once or twice, as compared to residents that fell several times weekly.

Duration: Began November 1998 with no projected end date

Evaluation Results:  
• Demonstrated reduction in fall-related risk factors  
• Reduction in the frequency of individual falls

Project Title: **James Bay Lodge Fall Prevention and Reduction Program**

Contact: Mae Meller, Director of Clinical Nursing Practices  
James Bay Lodge  
336 Simcoe St  
Victoria, BC  V8V 1L2  
Ph: 250-388-6457  
Fax: 250-862-4101  
E-mail: maemeller@cplodges.ca
Description: James Bay Lodge has implemented a **Fall Prevention and Reduction Program** in its facility and has identified the following objectives:

- Identify residents at high risk for falls
- Initiate preventive measures and evaluate their effectiveness
- Accurately identify intrinsic/extrinsic risk factors that increase potential for falls
- Use multidisciplinary prevention to reduce/eliminate resident specific risks
- Improve the methods of assessment, care planning, documentation and monitoring falls
- Enhance overall environmental safety for residents and staff
- Promote autonomy and functional independence among residents.

The TaiChi Organization offers weekly sessions at no cost to residents at the lodge. Additionally, calcium and vitamin D supplements are given to the residents. The lodge is the only pilot site west of Ontario for Tactex Med Motion Sensor pads. Next steps of the program are to improve the implementation component for consistent practices and to develop an ongoing evaluation component.

Duration: Began January 2003 with no projected end date

Evaluation Results:

- Demonstrated reduction in falls
- Demonstrated reduction in fall-related injuries
Cross-Site

Initiatives that include the implementation of falls prevention activities in more than one of the listed settings.

Fraser Health Region

Project Title: Balance Class Program

Contact: Kathleen Friesen, Manager
Elder Health Rehabilitation Services
1552 Russell Ave
White Rock, BC V4B 2R4
Ph: 604-535-4577
Fax: 604-535-4587

Description: The Balance Class Program seeks to identify individuals at-risk for falling and prevent/reduce their risk of injury from falls by improving stability, balance and safety awareness in a rehabilitation/acute care setting. The program utilizes exercise and education and is offered five times per year. Objectives of the program include:
- Improve clients' strength, stability and balance
- Increase clients' self-knowledge of correct positioning and posture
- Increase knowledge of home safety and strategies to prevent falls
- Encourage healthy behaviours regarding exercise

As a compliment to the Balance Class Program, White Rock Leisure Services conducts a follow-up class.

Duration: Began July 2002 with no projected end date

Evaluation Results:
- Decreased use of adaptive equipment
- Individuals were more active

Northern Health Region

Project Title: Best Practices for Nursing Care of the Older Adult – Fall Prevention
Contact: Judy Lett, Clinical Nurse Educator, Gerontology
Geriatric Assessment Unit
Prince George Regional Hospital
#G004-145 Edmonton St
Prince George, BC V2M 1S2
Ph: 250-565-7492
Fax: 250-565-7452
E-mail: judy.lett@northernhealth.ca

Description: Utilizing an inter-disciplinary team, Prince George Regional Hospital has developed Best Practices for Nursing Care of the Older Adult in Falls Prevention. The guidelines will be expected to produce an overall improvement in the approach to falls prevention among care staff across all sectors of care for the elderly. Objectives include:
• Take a leading role in the prevention and reduction of falls and fall-related injuries in the older adult
• Be proactive in identifying seniors at high risk for falls in acute, residential and community care
• Decrease risk factors for patients, residents and clients and, thereby, reduce the incidence of falls
Thus far, the guidelines are in the developmental stage and have been pilot-tested in one site. The next steps include education and dissemination of the guidelines. Eventually, the Best Practices Guidelines will be presented as orientation education for those working with elderly.

Duration: March 2003 – November 2003

Evaluation Results: Results pending

Project Title: Falls Prevention Committee

Contact: Deborah Peck, Physiotherapist, & Caroline Dunford, Occupational Therapist
Peace Liard Community Health Services Society
10115-110th Ave
Fort St. John, BC V1J 6M9
Ph: 250-787-3355
Fax: 250-787-3486
E-mail: caroline.dunford@northernhealth.ca
Description: By providing in-services and workshops in home care, hospital and community settings, the Falls Prevention Committee is a team of professionals that is targeting their efforts to:
- Raise awareness of falls prevention in facilities and around the community
- Develop falls prevention policies
- Increase physical activity and decrease falls
- Produce falls prevention materials
- Promote education/workshops on falls prevention

The committee will continue with workshops and innovative initiatives to stimulate interest each year. Better evaluation techniques and client satisfaction surveys will be developed.

Duration: Began January 1998 with no projected end date

Evaluation Results: None reported

Project Title: Northern Health Authority’s Clinical Practice Guideline - Prevention of Falls

Contact: Mary Lou Harrigan, Owner
Harrigan Consulting
#53-4900 Cartier St
Vancouver, BC V6M 4H2
Ph: 604-266-3572
Fax: 604-266-3540
E-mail: mlharrigan@shaw.ca

Description: The goal of the Northern Health Authority’s Clinical Practice Guidelines - Prevention of Falls is to provide nurses with skills that will enable them to assess fall risk factors and reduce the number of falls and fall-related injuries for senior patients, clients and residents in acute, community and residential care. The guidelines have been tested in Burns Lake and Vanderhoof and will be fully implemented throughout the Northern Health Authority later this year. When full implementation is undertaken, evaluation activities will be conducted.

Duration: Began October 2003 with no projected end date

Evaluation Results: Results pending
Vancouver Coastal Health Region

Project Title: **The First Step: Fall Prevention Starts with You: Vancouver**

Contact: Nancy Cho, Rehabilitation Consultant  
South Community Health Office  
Vancouver Coastal Health Authority  
6405 Knight St  
Vancouver, BC  V5P 2V9  
Ph: 604-301-2247  
Fax: 604-321-5108  
E-mail: nancy.cho@vch.ca

Description: **The First Step: Fall Prevention Starts with You** is a falls prevention educational tool for clients, families and the general public that is utilized in rehabilitation, acute care and community settings. The tool can be used for self-assessment or jointly with a health care provider to evaluate fall-related risk factors, vision, hearing and continence. A list of community resources is also included in the booklet. The booklet is available at Vancouver General Hospital’s Patient and Family Learning Centre or by emailing: learn@vanhosp.bc.ca.

Duration: January 2001 – January 2004

Evaluation Results: None reported

Project Title: **Holy Family Hospital Falls Prevention Program**

Contact: Keith Tam, Physiotherapist  
7801 Argyle St  
Vancouver, BC  V5P 3L6  
Ph: 604-321-2661, extension 22334  
Fax: 604-322-2657  
E-mail: khtam@providencehealth.bc.ca

Description: The **Holy Family Hospital Falls Prevention Program**, administered in a rehabilitation setting, educates seniors, veterans and the general public to be aware of the risk factors and consequences associated with falls and to identify those that affect him/her. Additionally, each participant of the program is asked to
identify solutions to prevent falls and appropriate community resources for further contact.

Duration: Ongoing with no projected end date

Evaluation Results: Results pending

Project Title: **Inter-Regional Interdisciplinary Orthopaedic Working Group**

Contact: Nancy Cho, Rehabilitation Consultant
South Community Health Office
Vancouver Coastal Health Authority
6405 Knight St
Vancouver, BC V5P 2V9
Ph: 604-301-2247
Fax: 604-321-5108
E-mail: nancy.cho@vch.ca

Description: The **Inter-Regional Interdisciplinary Orthopaedic Working Group** consists of a group of health professionals that meet every other month to provide a forum for information sharing, work on areas of mutual interest, and present educational topics from all disciplines. Examples of educational venues include hip protectors, falls prevention, universal design, vestibular disturbances and restraining. Objectives of the working group are:

- Include health care provision using a collaborative, interdisciplinary approach over the continuum of care for acute, rehab and community settings
- Incorporate evidence-based practice to deliver more effective quality care
- Better utilize existing resources

This year, the focus of the group will be on falls prevention.

Duration: Began January 1994 with no projected end date

Evaluation Results: None reported

Project Title: **Is There a Cane in Your Closet? A PSA to Promote Positive Use of Assistive Devices by Canadian Seniors & Veterans**

Contact: James Watzke, Associate Director, Human Factors
BCIT Technology Centre
Description: Under the HC/VAC Falls Prevention Initiative, this project was one of three national projects to promote the appropriate use of assistive devices (ADs) to seniors and Canadians. The primary goal of the project was to make and disseminate a 30 second Public Service Announcement (PSA) for TV. The PSA ran on approximately 50 TV stations across Canada. Other fall prevention partners are encouraged to use the PSA for their fall prevention activities and initiatives.

Duration: November 2002 – March 2004

Evaluation Results: None reported

Project Title: Short-Term Assessment & Treatment Centre

Contact: Heather Wright, Manager
Vancouver General Hospital
715 West 12th Ave
Vancouver, BC V5Z 1M9
Ph: 604-875-4117
Fax: 604-875-5593
E-mail: hwright@vanhosp.bc.ca

Description: Employing a multi-factorial approach, the Short-Term Assessment & Treatment Centre at Vancouver General Hospital seeks to:
- Provide an interdisciplinary assessment of falls and fall-related risks
- Improve mobility, balance and strength with the use of mobility aids and individualized exercise programs
- Reduce individual risk of falls and fall-related injuries through the management of medical issues, implementation of home safety strategies and use of appropriate equipment, as per assessment
Seniors, veterans, unpaid caregivers and students are included in the fall prevention assessment and implementation. Obtaining funding to test a risk reduction tool is needed.

Duration: No projected end date
Evaluation Results: Evaluation component in progress

Project Title: **Targeted Falls Prevention Education Program with Special Attention to Survivors of Poliomyelitis**

Contact: Elizabeth Dean, PhD, Professor and Coordinator of the UBC Post-Polio Clinic
School of Rehabilitation Sciences
University of BC
T325-2211 Wesbrook Mall
Vancouver, BC V6T 2B5
Ph: 604-822-7708
Fax: 604-822-7624
E-mail: elizdean@interchange.ubc.ca

Description: The post-polio clinic at UBC targets survivors of polio and seeks to:
- Track/monitor stumbling, falls and fear of falling
- Identify unique falling issues in survivors of polio
- Develop effective fall prevention strategies

This is a fee-for-service clinic. Next steps for the clinic include more targeted development and evaluation.

Duration: No projected end date
Evaluation Results: Results pending

Project Title: **Western Regional Osteoporosis Board-Fracture Prevention Project**

Contact: Dr. Alan Low, Clinical Assistant Professor and Health Science Advisor
UBC Faculty of Pharmaceutical Sciences/Procter & Gamble Pharmaceuticals
4018 Fir Street
Burnaby, BC V5G 2D8
Ph: 604-439-6770  
Fax: 604-439-6771  
E-mail: alanlow@interchange.ubc.ca

Description: The **Western Regional Osteoporosis Board** has begun a **Fracture Prevention Project** serving Western Canada (Western Canada - Manitoba, Saskatoon, Alberta and BC) that is aimed at seniors and the general public. The goals of the project include:
- Provide education to persons at risk of fractures
- Help provide links to support for those with fractures or osteoporosis
- Prevent facility fractures and sequelae

Educational pamphlets are sent to respondents who mail in a request form.

Duration: Began February 2000 with no projected end date

Evaluation Results: Results pending

**Vancouver Island Health Region**

Project Title: **Parkinson's Program-Victoria Epilepsy & Parkinson's Centre**

Contact: Maureen Matthew, Program Coordinator  
Victoria Epilepsy & Parkinson's Centre  
813 Darwin Ave  
Victoria, BC V8X 2X7  
Ph: 250-475-6677  
Fax: 250-475-6619  
E-mail: mmatthew@vepc.bc.ca  
Website: www.vepc.bc.ca

Description: The **Parkinson's Program** aims to increase the quality of life of those that are affected by Parkinson’s disease by maximizing functional capacity through health promotion education. An individual assessment is conducted if a client’s balance or gait changes. Falls prevention activities are tailored to individual needs and, if necessary, a referral is made to VIHA for a home safety assessment by a Physiotherapist or Occupational Therapist. Additionally, falls prevention is presented through community in-services that take place in care facilities and home care agencies, upon request.
Duration: Began January 1983 with no projected end date

Evaluation Results: None reported

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**Provincial Health Services Region**

Project Title: **BC Ambulance Service: ADAPT Program (draft title)**

Contact: Ron Yee, Project Manager  
BC Ambulance Service  
5th floor, 712 Yates St  
Victoria, BC V8W 9P1  
Ph: 250-953-3163  
Fax: 250-953-3119  
E-mail: ron.yee@gems6.gov.bc.ca

Description: The BC Ambulance Service is developing a falls initiative that targets older adults. Potential objectives of the ADAPT Program include:

- Provide educational materials to elders who have a fall-related ambulance call
- Examine the benefit of conveying fall-related risk factors to appropriate health care providers
- Continue partnership with agencies/groups that have an interest in falls prevention
- Identify fall-related risk factors to be added to the BCAS Patient Crew Report for analysis and planning
- Evaluate the financial impact of implementing various fall reduction strategies
- Ascertain viability of adopting the falls prevention infrastructure already in place in other emergency medical services

Duration: Began January 2004 with no projected end date

Evaluation Results: None reported
Policy

Initiatives targeting policy development and implementation at a local, regional or provincial level. These initiatives include documented policies or guidelines but do not include the actual implementation of prevention activities. This category excludes policy developed in long-term care or acute care settings, as these initiatives are typically a part of front-line implementation of preventive strategies.

Project Title: **BC Senior Advisor on Falls Prevention**

Contact: Dr. Vicky Scott, Senior Advisor, Falls Prevention
BC Injury Research and Prevention Unit
Ministry of Health Services
1515 Blanshard Street 4-2
Victoria, BC V8W 3C8
Ph: 250-952-1520
Fax: 250-952-1570
E-mail: vicky.scott@gems1.gov.bc.ca
Website: www.injuryresearch.bc.ca

Description: The role of **BC Senior Advisor on Falls Prevention** provides education, consultations, data reports, guidelines, regional networking, program planning, data and evaluation support in the area of falls prevention. Activities include:

- Consultation and expertise in the area of falls prevention to Health Authorities and other organizations concerned with falls and injury prevention
- Leadership in developing and implementing BCIRPU falls related research for BCIRPU
- Participate, with the Director of the Office of Injury Prevention, Ministry of Health Services, in service delivery planning, monitoring, and evaluation related to falls and injury prevention

Next steps of the Advisor include the following:

- Develop falls prevention 'Tool Kits' targeted to acute care, residential care, home care and community settings
- Develop a National Canadian Falls Prevention Curriculum for all those wishing to design and implement falls prevention programming for seniors at-risk in all settings
- Facilitate a provincial forum to develop a BC Blueprint for Falls Prevention Plan Among the Elderly in collaboration with all stakeholders responsible for the health and safety of BC seniors

Duration: Began January October 2001 with no projected end date
Evaluation Results:  
- Interim measures are demonstrated through successful implementation of a number of supported projects, workshops and forums conducted in each of the five Health Regions  
- Outcome to be measured through hospital discharge data over 10 years

Project Title: **Falls Prevention: BC Medical Association Recommends Easy Steps for Seniors**

Contact: Linda Munro, Communications Manager  
BC Medical Association  
115-1665 W. Broadway St  
Vancouver, BC V6J 5A4  
Ph: 604-638-2881  
Fax: 604-733-7317  
E-mail: lmunro@bcma.bc.ca  
Website: www.bcma.org

Description: The BC Medical Association recognizes that, among seniors, lack of exercise, poor lighting in the home, obstacles on the floor, wet bathroom floors, poor diet, poor sight and/or hearing and moving too quickly all contribute to a high risk of experiencing a fall. The BCMA, through a news release and tips sheets, raised awareness of falls as a health issue for seniors; this was a provincial-wide strategy. The media coverage garnered from the falls news release on September 15, 2003 was monitored.

Duration: September 2003

Evaluation Results: None reported

Project Title: **Falls Prevention Clinical Practice Guidelines**

Contact: Nancy Cho, Rehabilitation Consultant  
South Community Health Office  
Vancouver Coastal Health Authority  
6405 Knight St  
Vancouver, BC V5P 2V9  
Ph: 604-301-2247  
Fax: 604-321-5108  
E-mail: nancy.cho@vch.ca
Description: Within the Vancouver community, **Falls Prevention Clinical Practice Guidelines** have been developed to standardize falls prevention across group homes in this region. The goal of the clinical practice guidelines are to:
- Provide information on best practices
- Guide assessment and treatment intervention
- Recommend screening tool use

Duration: January 2003 – January 2005

Evaluation Results: None reported

Project Title: **Fractured Hip Working Group**

Contact: Camille Rozon, Leader of Regional Health Services Project
Vancouver Coastal Health Research Institute
1107-601 W. Broadway St
Vancouver, BC  V5Z 4C2
Ph: 604-875-4111, extension 61245
Fax: 604-875-4388
E-mail: camille.rozon@vch.ca
Website: www.vchri.ca

Description: The goal of the **Vancouver Coastal Hip Fracture Project** is to develop an integrated, standardized approach to hip fracture service delivery in the Vancouver Coastal Health region for various community and care facility settings. The project will include the coordination and monitoring of:
- Primary and secondary prevention services
- Transportation/Ambulance Services
- Emergency services
- Perioperative care
- Services for the elderly
- Research and teaching

The initiative will generate new/different systems and, once the systems are in place, the project will terminate. The next step of the project is to develop quality indicators and an evaluation component.

Duration: January 2004 – October 2004

Evaluation Results: Results pending
**Project Title:** Interior Health Falls Prevention Initiative

**Contact:** Mike Vanderbeck and Kelly Wilson, Falls Prevention Managers  
Social Planning Council  
3205 35th Ave  
Vernon, BC V1T 2H2  
Ph: 250-545-8572  
Fax: 250-545-0091  
E-mail: seniors@socialplanning.ca  
Website: www.socialplanning.ca

**Description:** The Social Planning Council manages the **Falls Prevention Strategy** for the Interior Health Authority by developing partnerships, providing training opportunities to staff, providing resources for best practices and including seed funding to support strategies within sub-sectors. The **Falls Prevention Strategy** promotes strategies using a multi-factorial approach in various community and care facility settings.

**Duration:** Began October 2003 with no projected end date

**Evaluation Results:** None reported

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**Project Title:** Northwest of the Northern Health Authority Falls Prevention Activities

**Contact:** Ester Brisch, Injury Prevention Coordinator  
3412 Kalum St  
Terrace, BC V8G 4T2  
Ph: 250-638-2241  
Fax: 250-638-2264  
E-mail: ester.brisch@northernhealth.ca

**Description:** The **Falls Prevention Activities in the Northwest of the Northern Health Authority** aims to:  
- Standardize a falls prevention package for front-line workers in North West Northern Health Authority  
- Refine existing Falls Prevention assessment tools  
- Increase falls awareness in the new health centre (hospital and health unit) in Kitimat  
- Inform seniors about falls prevention using targeted media that seniors would access (e.g. church bulletins)
• Strength link between community and practice and target falls prevention to all ages
• In the development stage of a falls prevention strategy
  The next step of the program is to test the strategies to determine feasibility and sustainability (home support training initiative and falls prevention general awareness through church bulletins). Linking the falls prevention initiative in the rehabilitation department with the chronic disease management program was helpful in promoting falls in NW of NHA.

Duration: Began January 1998 with no projected end date

Evaluation Results: Results pending

Project Title: Provincial Health Officer’s Report: Prevention of Falls and Injuries Among the Elderly

Contact: Dr. Shaun Peck, Deputy Provincial Health Officer, and Dr. Vicky Scott, BCIRPU and Ministry of Health Services
Ministry of Health
4th Floor, 1515 Blanshard St
Victoria, BC V8W 3C8
Ph: 250-952-1330
Fax: 250-952-1362
E-mail: shaun.peck@gems9.gov.bc.ca
E-mail: vicky.scott@gems1.gov.bc.ca
Web address: www.healthservices.gov.bc.ca/pho

Description: The Office of the Provincial Health Officer developed this publication to provide a comprehensive report on the evidence and recommended actions for the prevention of falls and injuries among the elderly. The PHO Special Report on the prevention of falls and injuries among the elderly is intended to complement the many activities being carried out across BC to reduce falls and the resultant injuries. It has been developed with input from many professionals and seniors and is intended as a blue-print to encourage the health care system and those living in the community to address this important issue.

Duration: Produced in January 2004

Evaluation Results: None reported
**Project Title:** Seniors Falls Prevention Project  

**Contact:** Bonnie Lillies, Community Developer and Seniors Falls Prevention Coordinator  
1293 Hornby St  
Vancouver, BC  V5Z 1W2  
Ph: 604-633-4222  
Fax: 604-681-1894  
E-mail: blillies@vrhb.bc.ca  

**Description:** The goal of the Seniors Falls Prevention Project is to develop a strategy to prevent falls and fall-related injuries among seniors residing in communities, residential care, and acute care facilities across the Vancouver Coastal Health region. In doing so, the project will identify, promote, utilize and integrate seniors falls prevention theory and best practices into clinical practice. The following are objectives of the project:  
- Identify current falls prevention activities and gaps across the VCHA  
- Increase capacity of staff to:  
  - Identify seniors at risk of falls  
  - Develop or expand evidence-based prevention programs to reduce risk factors, falls and injuries  
- Promote a culture where falls prevention is recognized as an important component of practice  

This initiative has just begun; the next steps will be to analyze the current falls prevention initiatives in VCH, identify gaps, and work with staff in VCH to develop protocols from best practices to address these gaps. In addition, outcome indicators also need to be developed.  

**Duration:** January 2004 – January 2005  

**Evaluation Results:** Results pending  

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**Project Title:** Workplace Hazard Prevention Program (WHPP)  

**Contact:** Bill Lynd, Safety Officer  
Canada Post  
P.O. Box 2110 STN Terminal  
Vancouver, BC  V6B 4Z3  
Ph: 604-662-1405  
Fax: 604-662-1712
The **Workplace Hazard Prevention Program** is an employee initiative supported by Canada Post management to reduce falls and fall-related injuries while working; the program incorporates best practices among all Canada Post facilities. The objectives of the program include:

- Raise awareness to all employees to avoid and report hazardous stairways and walkways
- Raise awareness among customers with regards to questionable walkways and the need to repair them
- Reduce the number of falls and fall-related injuries among employees and other visitors
- Reduce the number of days lost due to fall-related injuries by asking customers to clear paths of obstacles, slime, ice/snow, gloss paint, etc.

Mail delivery will be withheld until the customer repairs the hazard that is a fall risk to Canada Post employees. The next step of the program is to expand the prevention teams to more Canada Post offices.

**Duration:** Began January 2003 with no projected end date

**Evaluation Results:** Demonstrated reduction in falls
Research

Initiatives designed for the purpose of generation of new knowledge about the scope or nature of falls among the elderly, the effectiveness of prevention strategies and/or the review of existing evidence on prevention. These initiatives include those with a goal of publication in peer-reviewed journals and/or the attainment of an academic degree.

Project Title: Action Seniors!: A 12-Month Randomized Controlled Trial of a Home-Based Strength and Balance-Retraining Programme in Reducing Falls

Contact: Meghan Donaldson, PhD candidate, and Dr. Karim Khan
Department of Family Practice
Suite 211-2150 Western Parkway
University of British Columbia
Vancouver, BC V6T 1V6
Ph: 604-225-2562
Fax: 604-225-2557
E-mail: kkhan@interchange.ubc.ca

Description: This research study seeks to determine if a home-based strength and balance-retraining program delivered to older persons presenting to the emergency department with a fall or related injury:
- Reduce falls compared to the semi-structured interview group after 12 months?
- Reduce fall risk factors compared to the semi-structured interview group after 12 months?
- Reduce fall-related injuries compared to the semi-structured interview group after 12 months?
- Increase the time to first fall compared to the semi-structured interview group after 12 months?

Utilizing exercise, clinical and medical assessments, the home-based strength and retraining program is done in the home of the individual. Next steps of the research are to determine if the program is successful in reducing falls in the ED population and if so, is it cost-effective? If results are found to be reducing falls and the program is cost-effective, then it provides strong evidence to implement the program on a larger scale

Duration: May 2004 – October 2005

Evaluation Results: Results pending
**Project Title:** Biomechanics of Falls and Hip Fractures in the Elderly

**Contact:** Dr. Stephen Robinovitch, Associate Professor and Director of Injury Prevention and Mobility Lab  
School of Kinesiology  
Simon Fraser University  
8888 University Dr  
Burnaby, BC V5A 1S6  
Ph: 604-291-3566  
Fax: 604-291-3040  
E-mail: stever@sfu.ca  
Website: http://www2.sfu.ca/ipml

**Description:** The purpose of this research is to develop improved methods for preventing falls and fall-related injuries. Safe experiments with living humans are conducted, in combination with, mathematical models to assess how age-related decline alters the ability to prevent falls and avoid injury during the fall. Engineering tools are used to develop and evaluate specific fracture prevention strategies which include exercise training, falls prevention, hip pads and energy absorbing floors for attenuating impact forces. The next step, within the lab environment, is to develop a primary focus on basic and applied research. In the future, it will be important to team with community partners to develop and test new interventions (exercise programs, environmental modifications). Collaborations with Dr. Karim Khan's group at UBC are starting. The researchers see the need and welcome the opportunity for "bench to bedside" translation of research.

**Duration:** No projected end date

**Evaluation Results:** None reported

---

**Project Title:** Centre for Hip Health: A Lifespan Approach

**Contact:** Dr. Tom Oxland, Associate Professor  
#566 - 828 W. 10th Ave  
Vancouver, BC V5Z 1L8  
Ph: 604-875-5475  
Fax: 604-875-4376  
E-mail: toxland@interchange.ubc.ca
| Description: | The research being conducted at the **Centre for Hip Health** seeks to decrease hip fractures and hip osteoarthritis. The research includes primary preventative programs for children, early detection of disease in adults, intervention programs for at-risk elderly and improved surgical treatments all utilizing a multi-factorial approach. |
| Duration: | Will begin April 2006 with no projected end date |
| Evaluation Results: | Results pending |

| Project Title: | **Cognitive Inconsistency as a Predictor of Falls in the Elderly** |
| Contact: | Dr. David F Hultsch, Director of UVIC Centre on Aging  
PO Box 1700 STN CSC  
University of Victoria  
Victoria, BC V8W 2Y2  
Ph: 250-721-6350  
Fax: 250-721-6499  
E-mail: dfh@uvic.ca  
Website: www.uvic.ca/psyc/hultsch |
| Description: | In this research, short-term fluctuations in response-time performance as a predictor of injuries and falls in older adults will be evaluated. In order to evaluate older adults, available longitudinal data on cognition need to be linked with physician and hospital databases. This is a planned project that depends on obtaining access to relevant information from the hospital and physician health databases. If successful, this pilot project will form the basis of a larger grant submission. |
| Duration: | Will begin January 2005 with no projected end date |
| Evaluation Results: | Results pending |

| Project Title: | **Determining the Potential of Paramedics for Early Intervention of Seniors at Risk for Injury Due to Falls** |
| Contact: | Maynard Robinson, Trauma Coordinator  
Trauma Services  
Royal Inland Hospital |
Description: The BC Ambulance Service often responds to seniors who have fallen but are uninjured and, therefore, not seen at the hospital. Some of these seniors have frequent falls, but their physicians and community health nurses are unaware of the situation or their increasing frequency. The Trauma Services at Royal Inland Hospital reviewed Kamloops’ ambulance records from 12/2003 to 02/2004 and developed a database of falls-related ambulance calls. The costs of ambulance call-outs and hospital admissions were calculated for the period reviewed. Furthermore, the data obtained will be reviewed to determine benefits of developing training, policies and procedures that include Paramedics in identification and referral of seniors at-risk of injuries due to falls. This is a preliminary study.

Duration: January 2004 – March 2004

Evaluation Results: None reported

Project Title: Effects of 3 Training Regimes on Body Balance and Bone Mineral Mass and Structure in Post-Menopausal Women with Osteoporosis: A 6-Month RCT

Contact: Dr. Teresa Liu-Ambrose, Post-doctoral Fellow, & Dr. Karim Khan Department of Family Practice Suite 211-2150 Western Parkway University of British Columbia Vancouver, BC V6T 1V6 Ph: 604-822-0178 Fax: 604-225-2557 E-mail: kkhan@interchange.ubc.ca

Description: The primary objective of this research study was to compare the effects of a 6-month resistance training, agility training or general stretching program (sham exercise) on falls risk and bone health in 75-84 year-old women with low bone mass. The secondary objective was to compare the fall risk between those three experimental groups at 12 months post-intervention (e.g., post exercise cessation). The results from this study have been incorporated into "Osteofit II", building on the Osteofit program
that is delivered across the province that targets individuals with osteoporosis. Also, the South Slope YMCA began to offer "Osteofit-Balance" as a direct result of our research study.

Duration: March 2002 – August 2003

Evaluation Results: • 50% reduction in fall-related risk factors in the agility and the strength training group

Project Title: Falls Risk Assessment in Elderly, Community Dwelling Women with Visual Impairment

Contact: Shelagh Szabo, MSc candidate, and Dr. Karim Khan
Departments of Health Care & Epidemiology/Ophthalmology
Section B-2550 Willow St
University of British Columbia
Vancouver, BC V5Z 3N9
Ph: 604-875-5733
Fax: 604-875-4243
E-mail: kkhan@interchange.ubc.ca

Description: The purpose of this research study is to determine, through the use of a multidimensional fall risk screening tool, if elderly women with severe visual impairment are at higher risk of falls than other elderly women. Objectives of the study are to:
• Describe the yearly incidence of falls in those with severe visual impairment
• Test the validity and accuracy of the fall screening tool in those with visual impairment
• Determine which physiologic risk factors predict falling in those with visual impairment

Beginning the recruitment of study subjects and continuing to apply for graduate studentships/research funding are the next steps.

Duration: March 2004 – May 2006

Evaluation Results: Results pending
Project Title: **Investigation of the Effect of Floor Stiffness on Risk of Hip Fracture**

Contact: Andrew Laing, PhD candidate and Recipient of MSFHR Senior Student Studentship & NSERC Postgraduate Scholarship
Simon Fraser University
8888 University Drive
Burnaby, BC  V5A 1S6
Ph: 604-268-6679
E-mail: aclaing@sfu.ca

Description: The overall goal of this research is to design and evaluate the potential of low stiffness flooring to reduce the risk of fall-related hip fractures in high-risk environments (e.g. nursing homes and hospitals). To achieve the goal, the following specific aims will be addressed:
- Test the hypothesis that reductions in floor stiffness will reduce the peak force applied to the hip during a fall
- Develop corresponding mathematical models that accurately predict the effect of floor stiffness on impact force under various falling conditions
- Test the hypothesis that a range of floor stiffnesses exists below which there are degrees of impairment in balance maintenance and balance recovery in young and elderly subjects

Flooring systems will be developed and high-risk elderly populations will likely be targeted. The laboratory-based intervention development phase is currently underway and the next steps will be intervention and implementation.

Duration: Began September 2003 with no projected end date

Evaluation Results: Results pending

Project Title: **Management and Outcome after a Fall: A Prospective Study of 50 Older Men and Women Presenting to the Emergency Department**

Contact: Allison Salter, MSc candidate, and Dr. Karim Khan
Department of Family Practice
Suite 211-2150 Western Parkway
University of British Columbia
Description: As the second of three research studies, the purpose of this study is to identify if the guidelines established by the American Geriatrics Society for the care of elderly fallers are employed in emergency department settings. If the guidelines are not employed, what are the barriers to providing this care? Once initiated, the third study will investigate providing fall intervention strategies to fallers presenting to the emergency department.

Duration: September 2002 – June 2004

Evaluation Results: Results pending

Project Title: **OT Assessment Tools for Predicting Falls in the Elderly**

Contact: Chris Dixon, Occupational Therapist
Vernon Jubilee Hospital Residential Care
2101-32nd St
Vernon, BC V1J 5L2
Ph: 250-558-1200, extension1320
Fax: 250-558-1281
E-mail: chris.dixon@interiorhealth.ca

Description: A group of five Occupational Therapists collaborated to review available falls literature and write an article describing assessment tools that assist OTs when evaluating falls risk in the elderly. In turn, relevant, clinical assessment tools that have evidence-based effectiveness in predicting falls in the elderly in both community and care facility settings were selected. The article will be submitted to the National Occupational Therapy journal, *Canadian Association of Occupational Therapists*.

Duration: January 2003 – January 2004

Evaluation Results: Results pending
Project Title: **Stepping In: The Long-term Care Facilities Project**

Contact:  
Dr. Vicky Scott, Senior Advisor, Falls Prevention  
BC Injury Research & Prevention Unit  
Office for Injury Prevention  
4th Floor, 1515 Blanshard St  
Victoria, BC V8W 3C8  
Ph: 250-952-1520  
Fax: 250-952-1578  
E-mail: vicky.scott@gems1.gov.bc.ca  
Website: www.injuryresearch.bc.ca

Description: **Stepping In: The Long-term Care Facilities Project** aims to reduce falls and fall-related injuries among residents of Canadian Long-term Care Facilities (3 sites in BC, 1 site in Ontario and 1 site in Nova Scotia) through a collaborative intervention model using principles of community development. Next steps of the project include:

- Develop a software system that enables each site to be self-sufficient with data entry and on-site generated analyses
- Modify the existing Falls Surveillance Form to reduce the amount of time it takes front-line staff to report on a form
- Combine elements of the form to include fall reporting and fall risk-screening

Duration: November 2002 – March 2004

Evaluation Results: Pooled results from the five sites:

- Decrease in falls from 8.4 falls per 1000 bed days over 180 days of the surveillance phase to 7.8 falls per 1000 beds days over 180 days of the intervention phase  
  Increase in fallers (those who fell once or more) from 3.1 fallers per 1000 bed days over 180 days of the surveillance phase to 3.4 fallers per 1000 beds days over 180 days of the intervention phase
- Decrease in falls over the 180 days of the intervention phase from 263 over the first 30 days, to 209 over the middle days, to 174 over the final 30 days  
  Decrease in the rate of injuries from 3.4 per 1000 bed days over 180 days of the surveillance phase to 2.5 per 10000 bed days over 180 of the intervention phase
- Decrease in severe injuries (requiring emergency medical treatment in the facility or transfer to hospital) from 7.1% over the 180 days of the surveillance phase to 4.3% over the 180 days of the intervention phase
Project Title: **Strategies and Actions for Independent Living (SAIL): Falls Prevention for Clients of Home Support Services**

Contact: Dr. Vicky Scott, Senior Advisor, Falls Prevention  
BC Injury Research and Prevention Unit (BCIRPU)  
Office for Injury Prevention  
4th Floor, 1515 Blanshard St  
Victoria, BC V8W 3C8  
Ph: 250-352-1520  
Fax: 250-352-1578  
E-mail: vicky.scott@gems1.gov.bc.ca  
Website: www.injuryresearch.bc.ca

Description: The SAIL project was a pilot-study developed to reduce falls, fall-related injuries and fall risks among seniors receiving publicly funded home support services. Objectives of the project include:  
- Track the rate of falls over six months and compare it with a six-month baseline of falls  
- Test the impact of a 1-day training session for Community Health Workers and 6-month multi-factorial intervention, using a Checklist and Action Plan, designed to reduce falls, fall-related injuries and falls risk

Duration: January 2003 – November 2003

Evaluation Results:  
- Where risk was self-identified, most clients made changes to reduce the risk were often taken  
- Reduced falls by 43% from baseline to post-intervention (6 months)  
- Injuries were decreased by 39% between baseline and intervention, but there was a slight increase in injury rate of injury per fall between baseline and post-intervention. There was a 44% reduction in the number of fall-related injuries that required a visit to the emergency department between baseline and intervention

Project Title: **Unintentional Fall-Related Injuries and Deaths Among Seniors in British Columbia: Trends, Patterns and Future Projections, 1987-2012**

Contact: BC Injury Research & Prevention Unit  
L408 – 4408 Oak Street
Vancouver, BC  V6H 1Z4
Ph: 604-875-3776
Fax: 604-875-3569
E-mail: injury@cw.bc.ca
Website: www.injuryresearch.bc.ca

Description: Utilizing 2 data sets, BC Vital Statistics Mortality data and BC hospital separation data, this report outlines the epidemiology of unintentional fatal and non-fatal falls in older adults in BC, with projections of rates to 2012. Additionally, the report assesses and presents the burden of injuries and deaths due to falls, and examines some of the available evidence related to risk factors and risk conditions surrounding falls among the elderly. Future projections are conducted based on current trends in hospitalizations.

Duration: Report published in September 2002

Evaluation Results: None reported
Private Providers

Initiatives conducted by for-profit organizations.

Project Title: Heartfitt Studio, Inc.

Contact: Flo Bongiovanni-Russell, Program Director
Heartfitt Studio, Inc
940 Forshaw Rd
Victoria, BC V9A 6L9
Ph: 250-361-9149
Fax: 250-361-9149
E-mail: flobon@pacificcoast.net

Description: Heartfitt Studio aims to create a safe environment where individuals learn to exercise effectively and functionally. Clients are seniors from a variety of settings and are seen under the supervision of a Registered Kinesiologist. This is a fee-for-service program.

Duration: Began November 2000 with no projected end date

Evaluation Results: • Demonstrated reduction in fall risk factors
• Further results pending

Project Title: Providing Falls Prevention and Fitness Brochures

Contact: Pamela Fischer
1051 Farewell St
Trail, BC V1R 4S9
Ph: 250-364-8785
Fax: 250-364-1556
E-mail: pfischer@lifelinesys.com
Website: www.lifelinesystems.com

Description: Lifeline provides medical alarms and personal response services to its clients. In addition to the medical alarm, they provide self-help material and in-services, upon request.

Duration: No projected end date

Evaluation Results: None reported
Project Title: Under the Mattress Bed Occupancy Sensor/Early Warning

Contact: Terry Rachwalski  
Vice President of Marketing  
Tactex Controls  
240 Bay St  
Victoria, BC V9A 3K5  
Ph: 250-480-1132, extension 212  
Fax: 250-480-1142  
E-mail: trachwalski@tactex.com

Description: Tactex Controls, Inc. is a company that develops and manufactures a fiber optic pressure-sensing product called Kinotex. Tactex has completed a pilot study in 4 long-term care homes in Victoria, BC and is currently engaging in a pilot study in Burlington, ON and Boulder, CO to test their bed sensors. Additionally, a bed sensor is being developed for their American partners that works with existing alarm systems used to alert caregivers when a resident at risk of falling is exiting their bed. The goal is to create an algorithm that will predict bed exit; currently, data logging to gather enough data to start the processing work is occurring. Tactex is also developing a bed sensor that will monitor and trend activity/agitation in the frail elderly both in the home and in long-term care, as part of a tele-health wellness indicators concept for elderly. The bed sensor will monitor 'quality of sleep' and trend changes over time.

Duration: March 2004 with no projected end date

Evaluation Results: None reported
Appendix D: Main Strategies Utilized by Each Initiative by Initiatives’ Unique Number

The following table provides a list of the main falls prevention strategies employed by each initiative, listed by the unique number assigned to each initiative as shown in the Description of Initiatives. If the initiative employs three or more strategies, it is listed as being multifactorial.

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**Acute Care / Geriatric Rehabilitation Services**

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**Main Strategy Utilized**

**Long-term Care / Frail and Cognitively Impaired Elderly**

**Cross-Site**

**Policy**

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Appendix E: Process Evaluation by Initiatives’ Unique Number

Process evaluation is the evaluation of the implementation, operation and functions that are carried out. What worked and why? How was it received?

The following table represents what each initiative reported as an intended measure of process evaluation. For those initiatives that provided process evaluation results, the results are listed with the initiative descriptions.

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Acute Care / Geriatric Rehabilitation Services

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**Policy**

**Research**

**Private Providers**
Appendix F: Outcome Evaluation by Initiatives’ Unique Number

Outcome evaluation is the evaluation of the initiative’s impact and results. What did the initiative achieve? Did it make a difference? What is the measurable evidence that the initiative had an impact?

The following table represents what each initiative reported as an intended measure of outcome evaluation. For those initiatives that provided outcome evaluation results, the results are listed with the initiative descriptions.

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**Long-term Care / Frail and Cognitively Impaired Elderly**

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**Private Providers**

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Appendix G: Table of Factors Influencing Initiatives by Initiatives’ Unique Number

The following table demonstrates which factors promoted success, posed a challenge or had no impact on the initiatives. For instance, 47 initiatives reported that conducting staff training promoted their success, 21 initiatives reported that it posed a problem/challenge and 11 felt that it had no impact on their initiative.

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<td>Obtaining funding</td>
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Appendix H: Table of Products Created by Initiatives’ Unique Number

The following table provides a list of the products created or modified by each initiative, listed by the unique number assigned to each initiative as shown in the Description of Initiatives.

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<th>Checklist</th>
<th>Brochures, publications, guides</th>
<th>Video/DVD</th>
<th>Policy/protocols</th>
<th>Fall-risk screening tool</th>
<th>Fall-risk assessment tool</th>
<th>Promo package</th>
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**Long-term Care / Frail and Cognitively Impaired Elderly**

**Cross-Site**

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### Private Providers

- Team Action Plan (14)
- Exercise List (32)
- In-services and workshops (45)
- Public Service Announcement for TV (50)
- Poster (53)
- Mobility Assessment Tool (58)
- Booklet using Morse falls scale and 24-hour falls log (66)
- Educational sessions for families (69)
- Bedside care plan form, half hour checking flow sheet, clinical practice guideline (71)
- Osteoporosis Risk-Assessment Tool (74)
- Falls prevention practice guideline and pre-printed care plan (77)
- Manual with QI forms and lesson plans (91)

### Other products created:

- Reports and guidelines (92)
- Flooring systems (108)
- Decals indicating frequent faller resides in room (111)
- Under-the-bed mattress sensor (116)
Appendix I: Table of Funding Sources by Healthcare Setting

The following table provides the source of funds by healthcare setting. Each cell represents the number of initiatives in each healthcare setting that are funded by the various funding sources. For instance, 5 initiatives located in Acute Care are funded by the Health Authority.

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</tr>
<tr>
<td>Partnership funding</td>
<td>0 2 1 0 0 3 0 6</td>
</tr>
<tr>
<td>Other</td>
<td>0 0 2 1 1 0 2 6</td>
</tr>
</tbody>
</table>
Appendix J: Table of Funding Duration by Healthcare Setting

The following table provides the number of initiatives by healthcare setting that have continued, on-going funding. Not all initiatives reported duration of funding.

<table>
<thead>
<tr>
<th>Setting</th>
<th>No projected end date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute n=6</td>
<td>6</td>
</tr>
<tr>
<td>Community n=37</td>
<td>21</td>
</tr>
<tr>
<td>LTC n=35</td>
<td>27</td>
</tr>
<tr>
<td>Cross-site n=13</td>
<td>11</td>
</tr>
<tr>
<td>Policy n=9</td>
<td>4</td>
</tr>
<tr>
<td>Research n=13</td>
<td>5</td>
</tr>
<tr>
<td>Private Providers n=3</td>
<td>3</td>
</tr>
<tr>
<td>Total N=116</td>
<td>77</td>
</tr>
</tbody>
</table>