Home Adaptations: Fall Prevention for Seniors Living on-Reserve

by

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P.B.D., Simon Fraser University, 2014
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in the

School of Public Policy
Faculty of Arts and Social Science

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Ethics Statement

The author, whose name appears on the title page of this work, has obtained, for the research described in this work, either:

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or

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Abstract

The policy problem is that Aboriginal seniors living on-reserves have a higher rate of injury hospitalizations due to unintentional falls than the general population. Hospitalization data show that 50% of falls occur inside the home and 14% occur in areas outside the home. Seeing that most Aboriginal seniors would prefer to age in place and in their communities, the research aimed to determine the adequacy of available funding for home adaptations and to learn of any issues and challenges with the eligibility requirements that would prevent access. The programs available to on-reserve communities for home adaptations are the Residential Rehabilitation Assistance for Persons with Disabilities and the Home Adaptations for Seniors Independence program (HASI), which are both delivered by the Canada Mortgage and Housing Corporation (CMHC). Based on the literature review and the results of expert interviews with Housing Managers, Administrators and Coordinators working on-reserves, the recommendation is made to CMHC to increase the funding in the HASI program and to make available a revenue stream for on-reserve communities to build single-level communal living spaces for seniors.

Keywords: Fall prevention; aging in place; Aboriginal seniors; home adaptations; housing on-reserve; Canada Mortgage and Housing Corporation
Dedication

For D-squared; womb mates; my Love McMuffins; my motivation; my incredibly handsome and amazing sons. Daymion and Dallas, because of you, I am.
Acknowledgements

First, I would like to thank my mom and Ruth. You loved me enough to support me through my journey and for this I will forever be grateful and at your service (well, until the boys are old enough to take my place. They owe you, too😊). To my family and friends, I have many missed events to make up to you. To Dr. Sonia Singh and Anne Cochrane, thank you for introducing me to this topic and allowing me to build on your work. To all the Housing Managers and Coordinators who took the time to participate, thank you! This capstone would be a literature review without you. To Olena Hankivsky, thank you for your advice and support. To Doug McArthur, than you for your comments and feedback.
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<th>Acronym</th>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AANDC</td>
<td>Aboriginal and Northern Development Canada</td>
<td></td>
</tr>
<tr>
<td>ASMR</td>
<td>Age-Standardized Mortality Rate</td>
<td></td>
</tr>
<tr>
<td>BC</td>
<td>British Columbia</td>
<td></td>
</tr>
<tr>
<td>BCRPA</td>
<td>British Columbia Recreation and Parks Association</td>
<td></td>
</tr>
<tr>
<td>CCOHS</td>
<td>Canadian Centre for Occupational Health and Safety</td>
<td></td>
</tr>
<tr>
<td>CIHI</td>
<td>Canadian Institute for Health Information</td>
<td></td>
</tr>
<tr>
<td>CMHC</td>
<td>Canada Mortgage and Housing Corporation</td>
<td></td>
</tr>
<tr>
<td>PHAC</td>
<td>Public Health Agency of Canada</td>
<td></td>
</tr>
<tr>
<td>CSC</td>
<td>Correctional Service Canada</td>
<td></td>
</tr>
<tr>
<td>HASI</td>
<td>Home Adaptations for Seniors Independence</td>
<td></td>
</tr>
<tr>
<td>INAC</td>
<td>Indian and Northern Affairs Canada</td>
<td></td>
</tr>
<tr>
<td>INAC</td>
<td>Indigenous and Northern Affairs Canada</td>
<td></td>
</tr>
<tr>
<td>AANDC</td>
<td>Aboriginal Affairs and Northern Development Canada</td>
<td></td>
</tr>
<tr>
<td>NCCAH</td>
<td>National Collaborating Centre for Aboriginal Health</td>
<td></td>
</tr>
<tr>
<td>NFA</td>
<td>National Framework on Aging</td>
<td></td>
</tr>
<tr>
<td>PYLL</td>
<td>Potential Years of Life Lost</td>
<td></td>
</tr>
<tr>
<td>RRAP</td>
<td>Residential Rehabilitation Assistance Program</td>
<td></td>
</tr>
<tr>
<td>RRAP-D</td>
<td>Residential Rehabilitation Assistance Program for Persons with Disabilities</td>
<td></td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal</td>
<td>Canada’s indigenous peoples including First Nations, Metis and Inuit.</td>
</tr>
<tr>
<td>Disability</td>
<td>“A partial or total reduction (resulting from a deficiency) of the ability to undertake an activity in a way or within the limits considered normal for a human being” (WHO, 1981 as cited in CMHC, 2012b, p. iv).</td>
</tr>
<tr>
<td>Elders</td>
<td>“The term &quot;Elder&quot; can refer to anyone who has reached a certain age and in some cases is used interchangeably with the term &quot;senior&quot; as in senior citizen. In both cases, the individual has had enough life experience to have something to offer those behind them. In a sense, Elders are &quot;experts on life.&quot; Their exact expertise may be dependent on the nature of their experience, but in one way or another it involves some aspect of traditional knowledge and culture, or an interpretation of their experience in traditional terms” (Stiegelbauer, 1996, p. 41).</td>
</tr>
<tr>
<td>Fall injury hospitalization</td>
<td>Unintentional falls resulting in acute or rehabilitative hospital care (Jin et al., 2015, p. 4)</td>
</tr>
<tr>
<td>Home adaptations/ modifications</td>
<td>To maintain independence and routine activities and include “rerrangement of furniture or equipment; the installation of a shower seat or grab bars in the bathroom; the installation, replacement or relocation of kitchen cupboards, electrical outlets, handrails, and rods in clothes closets; and the installation of technical devices or other products designed to enhance security or functional capacity” (CMCH, 2012b, p. 1)</td>
</tr>
<tr>
<td>Seniors</td>
<td>Individuals age 65 and over</td>
</tr>
</tbody>
</table>
Executive Summary

Policy Problem

The policy problem is that Aboriginal seniors in British Columbia (BC) have a higher rate of injury hospitalizations due to unintentional falls than the rest of the population in BC (Jin et al., 2015). The leading cause of death for Aboriginal seniors is falls which accounts for 37.6 percent of all injuries (Reading et al., 2011, p. 4). Faced with a higher rate and a higher risk for falls, unhealthy aging is disallowing Aboriginal families, communities, and the nation from reaping the full benefits and contributions of Aboriginal seniors (Edwards and Mawani, 2006, p. VI).

Issues

Between 2006/2007 and 2012/2013, hospitalization data showed that 50 percent of unintentional falls occurred in the home, 17 percent occurred in residential care institutions, 14 percent occurred in a specified place outside the home, and for 19 percent of falls, the location was unspecified or unknown (PHAC, 2014, p. 18). This means that the home and areas outside the home accounted for 64 percent of all fall-related hospitalizations. Falls can lead to institutionalization, death, fear of falling, chronic pain, reduced mobility, restricted activities, and lead to a three time increased risk of future falls (Edward and Mawani, 2006, p. 35). Falls pose an economic burden on health care systems and impede the ability to age healthily and actively. The risk factors for falls are multifaceted and can be biological, medical, behavioural, environmental or socioeconomic. Aboriginal seniors have a higher rate of falls and a higher risk for falls.

In a survey conducted by Habjan et al. (2014), it was found that with adequate services and supports, 69 percent of First Nations people would prefer to live in their communities until their death (p. 214). Aging in place is valued by Aboriginal seniors but it is also a challenge. Aboriginal seniors are more likely to live in inadequate homes that are in need of major repairs and that are unsuitable and overcrowded (AFN, 2013; Senate Committee, 2015). Aging in place is problematic for seniors living on-reserve because not only do they contend with the natural risk of falls brought on by aging, they are more likely to age in homes that increase the risk of injuries and other types of health issues (NCCAH,
Colonial policies that have displaced, marginalized and oppressed Aboriginal peoples are linked to the poor socioeconomic status and the poor state of housing on reserves today. The effects of colonialism are ongoing and have had detrimental impacts on individuals, their families and communities. Consequentially, community leaders would like to shift away from the colonial legacy of displacement and avoid disrupting the lives of seniors - some of whom have experienced the atrocities of residential schools - by keeping them in the community for care (Senate Committee, 2015, p. 18).

One fall prevention strategy is home adaptations or modifications for safe and independent living and for aging in place. The programs available to Aboriginal seniors living on-reserve to assist with home modifications are the Residential Rehabilitation Assistance for Persons with Disabilities (RRAP-D) and the Home Adaptations for Seniors Independence (HASI) program which are both delivered by the Canada Mortgage and Housing Corporation (CMHC). These programs aim to “improve the accessibility of units occupied by low-income seniors and persons with disabilities” (CMHC, 2009 p. 7). On consequence of 64 percent of falls occurring in and around the home environment, the research aimed to determine the adequacy of the available funding in the RRAP-D and HASI program and to learn of any issues and challenges with the eligibility requirements that would prevent access.

Methodology

Using contact information that were accessible in the public domain, emails were sent to housing managers working on-reserves in BC between December 2015 and February 2016. Prospective participants were provided details about the research project and invited to participate. Nine housing experts returned a consent form and participated in the research.

The data was collected in two rounds. First, through semi-structured interviews and second, through feedback on the findings and policy options. The research aimed to have coverage and input from Housing Managers living in all four of the geographic zones identified in the Band Classification Manual. In the end, 6 of the housing experts worked on “urban” reserves; 2 worked on “rural” reserves; and 1 housing expert worked on a
“special access” reserve. There was no input from a housing manager who worked on a “remote” reserve.

Policy Analysis

Based on the literature review and the results of expert interviews with Housing Managers, Administrators and Coordinators working on-reserves, four policy alternatives were identified:

1. Increase the funding of the HASI program to $6,000. Reduce the age of eligibility from 65 to 55. Prioritize the RRAP-D and HASI applications so they are not first-come, first-served and all complete and eligible applications are approved.

2. Increase the funding for RRAP-D to $20,000 in the Southern Areas of BC; to $24,000 in the Northern Areas of BC; and to $30,000 in the Northern or Central Coastal areas where the population is less than 2,500 and do not have year round road, ferry or rail access. Terminate the HASI program. Prioritize the RRAP-D applications so they are not first-come, first-served and all complete and eligible applications are approved.

3. Keep the funding for RRAP-D and HASI the same. Reduce the age of eligibility of HASI from 65 to 55. Make available an additional $5000 for RRAP-D applicants requiring installation of a vertical chair lift. Prioritize the RRAP-D and HASI applications so they are not first-come, first-served and all complete and eligible applications are approved.

4. Create a funding stream for single-level, communal living units for seniors living on-reserve.

To determine the best policy alternative for reducing the rate of injury hospitalizations due to unintentional falls for Aboriginal seniors living on-reserve, four broad societal objectives were used as benchmarks. The objectives were compliance with the National Framework on Aging, physical protection and security, cost effectiveness and stakeholder acceptability. To compare, measure and evaluate the policy options, a 5-point scale based on likelihood of occurrence – 1 being “not at all likely” and 5 being “completely likely” – was used to determine the policy option that best meets the societal objectives.

Recommendations
Based on the results of the policy evaluation, the recommendation is made that CMHC’s long term objective should be to create a funding stream for building single-level, communal living units for seniors living on-reserves. The advantage of this policy is that it will enable seniors to age in their communities as their needs increase, it contributes to reducing the housing shortage on-reserve, increases social connectedness for seniors, and can serve as a hub for intergenerational language and culture transfer. To address the immediate needs of seniors, CMHC should increase the funding of HASI from $3,500 to $6,000, reduce the age of eligibility from 65 to 55, and prioritize all applications. To accommodate the expected increase in the number of applications and the increase in the loan amount, CMHC should double its current program budget and increase the funding periodically to reflect population demand and the increasing cost of goods and services.
Chapter 1. **Introduction**

The Aboriginal population in Canada is generally younger but between 2001 and 2006, the largest increases in age group categories were individuals aged 55 to 64 (a 53.8 percent increase), and individuals aged 65 and over (a 43 percent increase) (Habjan et al., 2010, p. 210). By 2031, the population of Aboriginal seniors is projected to increase from 14.5 percent to 15.4 percent of the total Aboriginal population (Stats. Can., 2011, p. 19). The current life expectancy at birth for Aboriginal males is 73 years and 78 years for Aboriginal females (Stats. Can., 2010).

As have been noted by Kelley and Price (2014), as the Aboriginal population ages, so does the burden of chronic and terminal diseases. As a result, “the home and community care needs of Elders and chronically ill community members have significantly increased in the last ten years” (Kelley and Prince, 2014, p. 2). A current problem faced by reserve communities is accommodating and caring for that aging population. The reserve, as lands set aside by the crown where “Aboriginal people were physically displaced from traditional territories and many were forced to live”, is often located in marginal and isolated areas (Wilson et al., 2011, p. 356). Today, the general state in most reserve communities is that their populations “lack the health services and other supportive community infrastructure to meet the growing demand for home care services for people with complex and high intensity care needs, in particular the very elderly, frail, and people at the end-of-life” (Kelley and Prince, 2014, p. 2).

The aging population has inspired local, national and international considerations of the needs and challenges experienced by seniors and of the social, political and economic implications of aging (Kembhavi, 2012; UNFPA, 2012; CIHI, 2011). Of particular interests are the health of seniors, the future burden on health care systems, and the mitigation of impacts through healthy, active living, in age-friendly communities (PHAC, 2014; CIHI, 2011; CIHI, 2014; Ministry of Health, 2014; Ministry of Community Services,
In a report prepared for the Healthy Aging and Wellness Working Group of the Federal, Provincial, and Territorial (F/P/T) Committee of Officials (Seniors), it is stated:

If we are to reap the benefits of the many contributions that seniors make to their families, communities and nation, and to curb health care costs associated with chronic disease, healthy aging must move to the forefront of the social policy agenda. If left unaddressed, the aging of the population will have far-reaching social, economic and political impacts that will far outweigh the cost of investing in healthy aging now (Edwards and Mawani, 2006, p. VI).

This begets the question, what does healthy aging mean for Aboriginal seniors living on-reserves, and in particular, as it is the focus of this research, in British Columbia (BC)? In BC, falls affect Aboriginal seniors disproportionately. The leading cause of death for Aboriginal seniors is falls which accounts for 37.6 percent of all injuries (Reading et al., 2011, p. 4). Between 1991 and 2010, the injury-hospitalization rate of unintentional falls for Aboriginal people in BC was 60.4 per 10,000 individuals (Jin et al., 2015, p. 8). This was much higher than the rate for Aboriginal people living off-reserve (41.4 per 10,000) and almost two times higher than the rate for the total population (33.6 per 10,000) (Jin et al., 2015, p. 8).

**Figure 1-1: Rate of Injury Hospitalizations for Unintentional Falls, 1991-2010**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Total Population Males</th>
<th>Total Population Females</th>
<th>Aboriginal Males</th>
<th>Aboriginal Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 60-69</td>
<td>34</td>
<td>49</td>
<td>109</td>
<td>152</td>
</tr>
<tr>
<td>Age 70-79</td>
<td>64</td>
<td>119</td>
<td>169</td>
<td>283</td>
</tr>
<tr>
<td>Age 80+</td>
<td>186</td>
<td>241</td>
<td>355</td>
<td>481</td>
</tr>
</tbody>
</table>

Source: Jin et al., 2015
Above, Figure 1-1 shows the rate of fall injury hospitalizations due to unintentional falls across three different senior age group categories. The figure shows that for individuals aged 60-69, the rate of injury hospitalizations for Aboriginal females (152 per 10,000) was much higher than for Aboriginal males (109 per 10,000) and much higher than that of females and males in the total population (49 and 34 per 10,000 respectively). This pattern is consistent for individuals aged 70-79 and 80+. The rate of unintentional falls for both Aboriginal and non-Aboriginal seniors increases for all age groups as age increases but the rate is disproportionately higher for Aboriginal seniors.

With increasing rates of chronic and terminal diseases, with increasing home and community care needs, and with the highest fall injury hospitalization rates, it is safe to say that Aboriginal seniors are not aging as healthily as they could be. Aboriginal families, Aboriginal communities, and the Canadian nation are not reaping the full benefits and contributions of Aboriginal seniors. The colonially constructed reserves which are characterized by geographic remoteness, low population densities, inclement weather conditions, a lack of transportation infrastructure and limited access to information and services (BC Ministry of Health, 2015, p. 1, 19) are not conducive to healthy aging. According to Edwards and Mawani (2006), if healthy aging is not addressed for Aboriginal seniors living on-reserves, the aging of the population “will have far-reaching social, economic and political impacts that will far outweigh the cost of investing in healthy aging now” (p. VI).

The Working Group identified five key areas for Canada to address through the healthy aging strategy – social connectedness, physical activity, healthy eating, tobacco control, and falls prevention – the focus in this paper is on fall prevention for Aboriginal seniors living on-reserves and the implications for aging in place.
Chapter 2.  Background

While the issues around fall injuries and fall prevention are well known and have been well researched, less is known about fall injuries and fall prevention for Aboriginal seniors living on-reserves. Fall prevention strategies have been shown to be essential for keeping seniors healthy, and for reducing the physical impacts and the economic cost of falls. Home adaptation or modification is one of many fall prevention strategies but there are many factors that contribute to falls. This section highlights the risk factors that lead to falls, the consequences of falls and focuses on Aboriginal seniors.

2.1. The Consequences of Falling

Falls impede “independent living, autonomy, mobility, functional ability and health status” (Edwards and Mawani, 2006, p. 35). Falls can lead to institutionalization, death, fear of falling, chronic pain, reduced mobility, restricted activities, and lead to a three time increased risk of future falls (Edward and Mawani, 2006, p. 35). Eight percent of falls result in death (CIHI, 2014, p. 4), and falls are linked to 40 percent of admissions to nursing homes and 90 percent of all hip fractures (Edwards and Mawani, 2006, p. 36-37). Hip fractures are the most serious injuries for seniors. Approximately 50 percent of seniors with hip fracture lose their full walking abilities and approximately 20 percent die within six months of obtaining the injury (CIHI, 2014, p. 2).

Falls are costly to health care systems and the economy. In Canada, the direct annual cost of falls for all age groups is estimated to be over 2 billion dollars and the economic cost of falls – including direct and indirect costs – is estimated to be 6 billion dollars annually (CIHI, 2014; PHAC, 2014; Edwards and Mawani, 2006). For seniors, the cost of falls is 3.7 times higher than the cost for individuals between the ages of 25 and 64, and in 1998, approximately 980 million dollars were spent on health care costs (Edwards and Mawani, 2006, p. 36). The cost of a hip fracture including “hospitalization, medication, and health provider consultants for both treatment and rehabilitation” is estimated to be between $24,400 and $28,000 (Edwards and Mawani, 2006, p. 36). Consequently, “the resulting need for services including physician visits, prolonged
hospital and nursing home care, outpatient clinics, and rehabilitation services″ make falls “a significant burden to the health care system” (CIHI, 2014, p. 9). In 2010/2011, the average length of hospital stay for seniors with fall injuries was 22 days which was 9 days longer than the 12 day average for seniors admitted to the hospital for all other causes (PHAC, 2014, p.16).

There are no statistics to show the direct and indirect cost of falls for Aboriginal seniors; however, the cost for Aboriginal families may be greater as they must travel outside of remote and isolated communities which “disrupts family life and creates emotional, social, spiritual, and economic burdens” (Kelley and Prince, 2014, p. 3). Additionally, end-of-life care and a death outside the community disrupts the grieving process which is important for families and communities and “have negative effects on overall community, social, and economic wellbeing” (Kelley and Prince, 2014, p. 3).

2.2. Risk Factors

There are many known factors that lead to falls and increase the risk of falls for seniors. These factors are shown to be “multi-faceted, interacting with one another synergistically at the biological/medical, behavioural, environmental and socioeconomic levels. Some risk factors are directly related to the health of the individual; others relate directly to the person’s environment” (Edwards and Mawani, 2006, p. 35). Examples of biological and medical risk factors include “age..., diseases (e.g., heart disease, osteoporosis, diabetes and arthritis), physical disability, muscle weakness and poor physical fitness levels” (Edwards and Mawani, 2006, p. 35). Examples of behavioural risk factors include medication use, inadequate diet and exercise, and precarious physical activities. Environmental risk factors are inside and outside the home and include things like furniture, flooring, potholes and poor lighting (Edwards and Mawani, 2006, p. 35-36). Factors contributing to falls in the home include “poorly placed furnishings, scatter rugs and other home hazards that threaten risk of injury...[and] almost half of all seniors’ falls occur at home in the bathroom and on the stairs” (Edwards and Mawani, 2006, p.35). Socioeconomic risk factors are a consequence of low incomes and educational attainment which effects access to housing, access to information and food security (Edwards and Mawani, 2006, p. 36). In a study conducted by Jin et al. (2015), the risk factors shown to
be statistically significant in fall injury hospitalizations for Aboriginal people were income, education, homes needing major repairs, occupation, and being of Aboriginal ancestry. However, for all seniors, the best-known risk factor and predictor of falls is a prior fall or a history of falling (CIHI, 2014, p. 10).

2.2.1. Geography: Rural and Remote Living

In Canada, Aboriginal reserves can be classified into four geographic zones. Zone 1, or the “urban” zone, is defined as a reserve located within 50 km of the nearest service centre and has year-round road access (AANDC, 2015). Zone 2, or the “rural” zone, is a reserve located within 50 and 350 km of the nearest service centre and has year-round road access (AANDC, 2015). Zone 3, or the “remote” zone, is classified as a reserve located over 350 km from the nearest service centre and has year round access (AANDC, 2015). Zone 4, or the “special access” zone, is a reserve that has no year-round access to a service centre and therefore, a higher cost of transportation (AANDC, 2015).

Although outdated, in 1997, of the population of Aboriginal peoples living on-reserves in Canada, 35.9 percent lived in urban zones, 44.4 percent lived in rural zones, 1.8 percent lived in remote zones and 17.9 percent lived in special access zones (CSC, 2013). More recent statistics show that 46.8 percent of Aboriginal people live on reserves, in rural and remote areas (Habjan et al., 2012, p. 210). In BC, a larger proportion of Aboriginal people self-identify as living in rural areas (11.3 percent) compared to urban areas (3.7 percent) (BC, Ministry of Health, 2015, p. 14). In the year 2000, of the 197 First Nations Bands in BC, 40 percent were in urban zones, 38 percent were in rural zones, 6 percent were in remote zones and 16 percent were in special access zones (INAC, 2000, p. 45-58).

Rural living is associated with poorer health status, lower educational attainment, lower income and employment rates, and a greater likelihood of living in crowded and unsafe housing (BC Ministry of Health, 2015, p. 16). Individuals living in rural areas have less healthy behaviours and are more likely to smoke, lack physical activity, have unhealthy diets and have higher obesity rates (BC Ministry of Health, 2015, p. 17). Unhealthy behaviours can lead to chronic diseases and premature death from circulatory
diseases (BC Ministry of Health, 2015, p. 17). The mortality rate for all causes of death, and the “Potential Years of Life Lost to external causes of death” increases in the Canadian population as rurality and remoteness increases (BC Ministry of Health, 2015, p. 17). Consequentially, life expectancy is lower in Canadian rural areas compared to urban areas (BC Ministry of Health, 2015, p. 17). Seeing that a high percentage of Aboriginal people live in rural and remote areas, it is possible they are disproportionately affected due to geography.

2.2.2. Biological and Medical Factors

The average life expectancy for Aboriginal Canadians is lower than the non-Aboriginal population and “on average, Aboriginal people live five to ten years less than Canadians in general” (Habjan, 2012, p.210). This premature aging has led to the belief that Aboriginals should be classified as seniors at age 55 as opposed to age 65 (Habjan, 2012, p.210; Edwards and Mawani, 2006 p. 13). Additionally, “among Aboriginal seniors, the prevalence of certain chronic conditions such as heart problems, hypertension, diabetes and arthritis is often double or triple the rate reported by Canadian seniors (Edwards and Mawani, 2006 p. 13).

In the 2002-2003 First Nations Regional Longitudinal Health Survey, the number of individuals aged 60 and over who lived on-reserve and reported having a disability was 49.7 percent (Health Canada, 2009. p. 13). A physical disability is defined as having a physical condition, a mental condition or a health problem that limits “the kinds or amount of activity [that can be done] at home, work or school, or in other activities such as leisure or travelling” (Health Canada, 2009. p. 13).

Prescribed medication is one medical factor that has been shown to increase the risk of falls and includes “psychotropic drugs such as benzodiazepines, antidepressants, and antipsychotics” (CIHI, 2014, p. 12). That said, it is unclear whether the increase in risk due to prescribed medication is correlated to the use of the medication or the health conditions the medications are intended to treat.
2.2.3. Gender

Females have a higher life expectancy and a higher rate of falls than males in both the Aboriginal and general population (see Figure 1-1). Females are more likely to have inequitable access to resources and opportunities over the life course (UNFPA, 2012, p. 13) which increases the socioeconomic risk factors. Female Aboriginal seniors have lower incomes than female non-aboriginal seniors and in the year 2000, the median income for female Aboriginal seniors was 11 percent less than non-Aboriginal female seniors (Statistics Canada, 2006, p. 238). A lower income has been shown to increase the vulnerability to health problems by limiting “access to essential economic resources such as good housing and healthy food” (Ministry of health, 2004 pg.39-40).

The proportion of Canadian seniors living alone increases with age and females are more likely to live alone than males (CIHI, 2011, p. 71). For seniors aged 85 and older, females are twice as likely (59 percent) to live alone than males (29 percent) (CIHI, 2011, p. 71). These differences are attributed to a higher life expectancy for women, lower age differences at the time of marriage, and a higher rate of widowhood (CIHI, 2011, p. 71). Living alone affects a senior’s financial status, which has consequences for housing affordability, food security and increases isolation, which in turn has negative consequences for their wellbeing (CIHI, 2011, p. 72). Although Aboriginal females have a higher life expectancy than males, it is unclear if Aboriginal female seniors are more likely to live alone than their male counterparts. Research shows that Aboriginal seniors are more likely to live with family members than non-aboriginal seniors. In 2001, 84 percent of Inuit seniors, 71 percent of First Nations seniors and 65 percent of Metis seniors lived with family members compared to 69 percent in the non-Aboriginal population (Statistics Canada, 2006, p. 240)

The rate of osteoporosis – a disease that decreases the density and increases the fragility of bones – is higher for Canadian females than for Canadian males. In a survey conducted by Statistics Canada in 2009, the data showed that of those age 50 and older, 19.2 percent of females and 3.4 percent of males reported having a diagnosis of osteoporosis by a health professional (Garriguet, 2015). At age 71 and older, the percentage of those with osteoporosis increased to 31.1 percent for females and 6.4 percent for males (Garriguet, 2015). The data also showed that “in addition to age and
sex, diagnosed osteoporosis was significantly associated with Aboriginal status, low household income, alcohol consumption in the previous 12 months, high nutritional risk, low body mass index and the use of calcium or vitamin D supplements” (Garriguet, 2015). Aboriginal status, as a statistically significant variable for a diagnosis of osteoporosis, indicates a higher rate of osteoporosis in the Aboriginal population which may account for the higher rate of fall injury hospitalizations.

Additionally, females are more likely to report having a disability than males and Aboriginal females are more likely to report having a disability than non-Aboriginal females (Health Canada, 2009, p. 14). The percentage of Aboriginal and non-Aboriginal males who reported having a disability in 2002/2003 was 25.7 and 23.2 respectively (Health Canada, 2009, p. 14). The percentage of Aboriginal and non-Aboriginal females who reported having a disability was 31.3 and 28.2 respectively (Health Canada, 2009, p. 14). As previously mentioned, a physical disability is a risk factor for falls.

The information presented above shows that the risk factors that lead to falls are interrelated and complex, and that Aboriginal seniors are disproportionately affected and have a higher risk for falls. This paper focuses on home modifications as a fall prevention strategy however, that is only one of many strategies. Reducing the rate of fall injuries demands a holistic approach that adequately addresses all of the risk factors that contribute to falls.
Chapter 3.  **Rationale: Aging in Place**

Between 2006/2007 and 2012/2013, hospitalization data showed that 50 percent of falls occurred in the home, 17 percent occurred in residential care institutions, 14 percent occurred in a specified place outside the home, and for 19 percent of falls, the location was unspecified or unknown (PHAC, 2014, p. 18). The home and areas outside the home accounted for 64 percent of all fall-related hospitalizations. Aboriginal seniors in Canada are more likely to live in inadequate homes needing major repairs and overcrowded homes than the rest of the population (Statistics Canada, 2006, p. 241). The Assembly of First Nations (2013) has reported that between 2008 and 2010, 37.3 percent of First Nations’ homes on-reserve were in need of major repairs, 33.5 percent were in need of minor repairs, and 29.2 percent were in need of regular maintenance (p. 1). In addition, 50.9 percent of adults living on-reserve reported the presence of mold and mildew, and 23.4 percent of adults lived in overcrowded homes (AFN, 2013, p. 2). To enable seniors to age healthily and actively, and to reduce the rate of falls, it is not only imperative to decrease the inequities in the risk factors that contribute to falls but to ensure that the home is a secure place that seniors can live in and age into.

In a survey conducted by Habjan et al. (2014), it was found that with adequate services and supports, 69 percent of First Nations people would prefer to live in their communities until their death (p. 214). Ending life in the community allows seniors the opportunity to die surrounded by family, friends, and their culture instead of the alternative of “distant regional and urban hospitals and long term care homes” (Kelley and Prince, 2014, p. 3). As previously mentioned, end-of-life care outside of the community has been shown to be disruptive of “family life and creates emotional, social, spiritual, and economic burden” on families and communities (Kelley and Prince, 2014, p. 3).

Given the experiences of residential schools and the detrimental effects it has had on Aboriginal peoples, enabling seniors to age in place is significant for community members and leaders. Some seniors were victims of the residential school system and community leaders would like “to avoid sending seniors into care outside of their communities, particularly given the experience of so many of these same individuals with
being sent out of their communities to residential schools” (Senate Committee, 2015, p. 18).

Aging in the home or in the community is defined by a sense of place. This is associated with “the identity, significance, meaning, intention, and felt value that are given to places by individuals as a result of experiencing it over time” (Williams, 1998, p. 1197). Places have meaning as a consequence of “feelings of security, as settings for family life and employment, [and] as locales for aesthetic experience" (Williams, 1998, p. 1197). Psychological rootedness to place “is usually achieved through a long-standing and possibly ongoing relationship” with that place (Williams, 1998, p. 1198). Psychological rootedness is associated with healing and health and “such an environment is understood to be an individual's ‘personal home’ [which provides] an integrative network of physical, spiritual and psychological factors merging together to promote the creation of a healing and/or healthy place” (Williams, 1998, p. 1198).

Aging in place is particularly important for this population given the colonial policies that have served to sever their traditional relationship with their land. The land is significant for Aboriginal people as it “shapes all aspects of their lives: the cultural, spiritual, emotional, physical and social lives of individuals and communities” (Wilson, 2003, p. 87). The land is also connected to Aboriginal health and healing (Wilson, 2003, p. 85). A connection to “the land is not just seen as shaping or influencing identity, but being an actual part of it. The land simultaneously contributes to physical, emotional, mental and spiritual health in a variety of ways" (Wilson, 2003, p. 88). Keeping Aboriginal seniors psychologically rooted and connected to their lands and family involves policies that will enable aging in place.

As things stand, aging in place is a challenge for seniors living on-reserves. Not only do seniors contend with the natural risk of falls brought on by aging, they are more likely to age in poor quality homes that increase the risk of injuries and other types of health issues. Research shows that “housing quality and accessibility are important determinants of health status. Poor housing conditions such as mold, lack of safe drinking water, and overcrowding have been associated with increased risk of morbidity from infectious disease, chronic illness, injuries, poor nutrition and mental disorders” (NCCAH,
Overcrowding has also been linked to family tensions and violence (Statistics Canada, 2006, p. 241).

The problems of housing are compounded when we consider that Aboriginal people living in rural, remote and special access zones are more likely to have limited access to primary care, medical care and surgical services (BC Ministry of Health, 2015, p. 18). While aging in place is highly valued amongst Aboriginal and non-Aboriginal seniors (Habjan et al., 2014; Shiner et al., 2010), the challenges are greater for Aboriginal seniors. When we consider the issues of limited access to health care, to caregivers and to services, the importance of healthy aging, of decreasing the rates of falls and injuries, and of providing safe adequate homes for seniors is perfectly clear.


Aboriginal people living on-reserves have access to housing funding through the department of Aboriginal Affairs and Northern Development Canada and CMHC. It is said that “while [INAC/Aboriginal Affairs] operates at the community level by funding housing-related infrastructure and capacity development, CMHC delivers specific housing programs to fund the construction, renovation, and management of social housing” (Senate, 2015, p. 10). The objectives of CMHC’s programs are to “repair or rehabilitate units occupied by low-income households to address major deficiencies to the structure and systems; preserve and add to the stock of affordable housing; and improve the accessibility of units occupied by low-income seniors and persons with disabilities” (CMHC, 2009 p. 7). Assistance can be “provided to Band Councils for the repair and modification of Band owned housing units, and to Band members whose housing is located on an Indian Reserve when the Band Member has a certificate of possession issued by the Band or has been granted right to the housing by a Band Council resolution” (CMHC, 2003, p. 141). Three programs offered by CMHC that can be used for home adaptations for fall prevention on-reserve are the Residential Rehabilitation Assistance Program for Persons with Disabilities (RRAP-D), the Home Adaptation for Seniors Independence program (HASI), and the Secondary and Garden Suite Residential Rehabilitation Assistance Program.
The RRAP-D program “was established in 1981 in response to the International Year of the Disabled. It provides financial assistance for the repair, improvement or modification of existing housing to better meet the needs of people with disabilities” (CMHC, 2005 p. 10). The maximum assistance available for individual homeowners is $16,000 in Southern Areas of Canada, $19,000 in Northern Areas of Canada and $24,000 in North West Territories, Yukon, Labrador and Northern Quebec (CMHC, 2016). The assistance is “a forgivable loan of up to 100% of total costs, to the maximum allowable for the zone in which the disabled individual lives” (CMHC, 2005, p. 10).

The HASI program “provides assistance up to $3,500 for minor home adaptations to help low-income seniors with daily living activities in the home” (CMHC, 2005 p. 10). Assistance is for persons aged 65 and over and can include “handrails, easy to reach work and storage areas, lever handles on doors and grab bars. Adaptations must be permanent and improve access to basic facilities” (CMHC, 2005 p. 10).

The third option is to create a secondary or garden suite on an existing residential property. This program was developed “as a means of providing affordable rental housing for low-income seniors and adults with disabilities. The maximum amount ranges between $24,000 and $36,000” (CMHC, 2009, p.5).

In addition to the programs that are specifically geared towards seniors for home adaptations, the Residential Rehabilitation Assistance program (RRAP) for homeowners is also significant. RRAP funding is used to address the structural, electrical, plumbing, heating, and fire safety needs with the purpose of extending the useful life of the home for an additional 15 years (CMHC, 2016; CMHC, 2009, p. 4). Similar to the RRAP-D program, funding ranges from $16,000 to $24,000 and the loan is forgivable for up to 100 percent of the total costs.

Based on data collected from CMHC’s annual reports, Figure 3-1 shows the annual funding for renovation programs on-reserve in Canada and British Columbia between 2006 and 2014. Renovation funding includes RRAP-D and HASI and all of the other renovation programs that are available on-reserve. The figure shows that CMHC’s annual budget is on a slight decline. It is unclear whether the fluctuation in annual spending in BC is due to budget allocations or variation in the number of applications.
Figure 3-1: Renovation Funding on-Reserves in BC and Canada, 2006-2014

Below, Figure 3-2 shows the number of new renovation loans for Canada and BC between 2004 and 2014. The data reflects all of the renovation programs delivered on-reserve which includes RRAP, RRAP-D, HASI, Secondary and Garden Suites as well as other home renovation programs.

Figure 3-2: New RRAP Loans, 2004 – 2014
In 2008, CMHC reported that 57 percent of RRAP-D applications and 57 percent of HASI applications were not processed due to insufficient program funding; however, it is unclear what percentage of these unprocessed applications applied to homes on-reserve (CMHC, 2009, p. 9). CMHC also reported that the most common types of disabilities in both the RRAP-D and HASI applications concerned issues of mobility, seeing, cognitive, allergies, hearing and other (CMHC, 2009, p. 15). Below, Table 3-1 summarizes the classifications of disabilities and the frequencies in which they appeared in applications.

**Table 3-1: Summary of Most Commonly Reported Disabilities, 2008**

<table>
<thead>
<tr>
<th>Disability</th>
<th>RRAP-D</th>
<th>HASI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility</td>
<td>81.7%</td>
<td>79.2%</td>
</tr>
<tr>
<td>Seeing</td>
<td>13.0%</td>
<td>17.4%</td>
</tr>
<tr>
<td>Cognitive</td>
<td>12.1%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Allergies</td>
<td>9.3%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Hearing</td>
<td>8.4%</td>
<td>17.7%</td>
</tr>
<tr>
<td>Other</td>
<td>34.4%</td>
<td>23.3%</td>
</tr>
</tbody>
</table>

Source: Canada Mortgage and Housing Corporation, 2009, p. 15

3.2. **The Significance of Elders in Aboriginal Cultures**

In thinking about aging in place, fall prevention and fall injury hospitalizations for seniors living on-reserves, it is imperative to think about the significance of elders in Aboriginal cultures. Elders are role models; teachers of values, language, history and medicine; they are law-givers; dispensers of justice and recorders of history (Stiegelbauer, 1996, p. 39). As Stiegelbauer elaborates:

The term "Elder" can refer to anyone who has reached a certain age and in some cases is used interchangeably with the term "senior" as in senior citizen. In both cases, the individual has had enough life experience to have something to offer those behind them. In a sense, Elders are "experts on life." Their exact expertise may be dependent on the nature of their experience, but in one way or another it involves some aspect of traditional knowledge and culture, or an interpretation of their experience in traditional terms (Stiegelbauer, 1996, p. 41).
Expanding the health and quality of life of Aboriginal seniors is important for their families, communities, cultures and future generations. As keepers of traditional knowledge, teachers, healers and role models, seniors/elders are instrumental figures in Aboriginal cultures. Considering the current post-residential school context and the detrimental effects colonialism has had on Aboriginal people, their languages and their cultures, Aboriginal people’s need for language revitalization, cultural revitalization and healing must be respected and supported. Aboriginal seniors are more likely to subscribe to traditional values, over 70 percent are able to understand and 67 percent are able to speak a traditional language (Habjan et al., 2014, p. 210). To ensure the continuation of Aboriginal’s traditional values and traditional languages, and to reap the benefits of the contributions that Aboriginal seniors make to their families and to their communities, the health and safety of Aboriginal seniors should be made paramount.

The causes of fall injuries, strategies for fall prevention, and the deplorable state of housing on-reserves are well researched and well known. Less known is the meaning of healthy aging for Aboriginal seniors living on-reserves, how communities are coping with the aging population and what services and supports are available to families, care providers and seniors to enable aging in place. At a time when the focus is on the aging population, this research aims to move Aboriginal seniors living on-reserves to the forefront of the policy agenda, and to begin to fill the gap in understanding the processes, issues and challenges with accessing resources that will enable fall prevention and aging in place.
Chapter 4. **Methodology**

Ethics approval was attained from Simon Fraser University in December of 2015, and the study was limited to the use of publicly accessible information for participant recruitment. The study design was qualitative with the purpose of describing and explaining the application process for CMHC’s programs, evaluating the adequacy of the funding, and learning of the issues and challenges with eligibility and access.

I acknowledge that research involving Aboriginal communities should be beneficial to Aboriginal people and their communities, should help develop capacity, should increase control over information and the research process, should respect the rights of Aboriginal people, and should support self-determination, cultural preservation and development (Boffa et al., 2011, p 733). While this project cannot claim to have fulfilled all of these objectives, the research supports self-determination by proposing the policy recommendations that were forwarded by the research participants, and supports cultural preservation and development by promoting aging at home and in communities. Aging in place supports cultural preservation by recognizing the psychological and cultural rootedness that Aboriginal people have to their lands, and supports development by moving healthy aging for Aboriginal seniors living on-reserves to the forefront of the social policy agenda.

Study participants were Housing Managers, Coordinators and Administrators working on-reserves in BC who were knowledgeable of on-reserve housing policies and of the RRAP-D and HASI program. Due to limited time and the study parameters, interviews were not conducted with elders. Using publically-accessible email addresses from the Band’s websites, emails were sent to the housing experts between December 2015 and February 2016. Prospective participants were informed of the details of the study and were invited to participate if the project was thought to be of interest.

To be systematic about the approach and to ensure full coverage of all four geographic zones in BC, the Band Classification Manual was used to target Housing Managers in all four geographic areas. After much communication, nine consent forms were returned. Six of the participants worked on “urban” reserves, two worked on “rural”
reserves, and one housing expert worked on a “special access” reserve. Unfortunately, there was no input from a “remote” reserve which may be attributed to the fact that of the 200 reserves in BC, only 11 are remote and therefore, the likelihood of a response was much lower.

The data was collected in two rounds. The first round was the “interview round” and consisted of semi-structured interviews with eight participants. Five of the interviews were telephone interviews ranging from 25 minutes to an hour. Two of the interviews were written responses forwarded by email and one interview was in-person and on-reserve. The second round was the “feedback round” where a summary of the results and policy options was sent to all nine participants who returned a consent form asking for additional input and feedback to ensure accuracy and representativeness. Additional input was received from three participants including the missing interviewee in the first round.

The interview questions were designed to generate thick description that would enable understanding of housing policies on-reserves and learning of the issues and challenges experienced in accessing program funding. The interview questions addressed issues such as fall injury rates, fall prevention, housing policies, the application process, construction and labour costs, and pathways forward. (For a complete list of interview questions please refer to Appendix A). The data was analyzed using a question-by-question approach to generate themes from the study.
Chapter 5.  Results

Below is the result of the interviews with housing experts working on-reserves. The findings are descriptive and explanatory and are presented based on the themes generated from the interview questions and the broad research goals that guided the data collection process. Study participants and their communities are not identified and direct quotations are cited using codes.

5.1. Falls: Injury Rates and Prevention

The housing experts were experienced in facilitating home adaptions for seniors, and were knowledgeable of the RRAP/RRAP-D and HASI program. Collectively, examples of home modifications that were administered included: installation of handrails, exterior ramps, exterior lighting, walk-in showers, grabs bars for the shower and toilet, elevator lifts, stair lifts, lowering of counters and cabinets, moving laundry services to the main level of the house, and creating secondary suites.

Seeing that records of fall incidents are collected and stored by the Health Department, the housing managers had no direct knowledge of the percentage or rates of falls in their communities. In communities where falls did occur, the falls took place inside and outside the home and were a consequence of poor use and quality of walking aids; getting in and out of bath tubs; getting in and out of bed; and navigating interior and exterior stairs. As one expert said, “many elders have other family living with them so they are somewhat cared for. However, there are a small number of elders who reside here in two (2) level homes. Falls that I am aware of have occurred navigating interior stairs” (OR).

In most cases, the Health Department will identify and evaluate the need for safety features in the home and will then contact the housing manager to facilitate the work plan. In other cases, the elder or family member will alert the community nurse to the needs of the elder or the housing manager will identify those needs while conducting home inspections.
5.2. Housing Policies on-Reserve

Each First Nation has its own housing policy and housing subsidies can be accessed through AANDC and renovation funding can be accessed through both CMHC and AANDC upon a member’s request. In some communities, houses were constructed with both CMHCs pre-1997 Non Profit Housing Program and its post-1996 program. In other communities, houses were built from the pre-1997 program and new houses have not been built for 25 years.

In order to qualify for social housing or homes built or renovated from the (Section 95) On-Reserve Non-profit Rental Housing Program through CMHC, a Housing Society, Committee or Authority is mandatory. (In the feedback round, this being a requirement from CMHC was disputed). It is optional for Chief and Council members to be appointed onto the Society, Committee or Board. In most cases, a Housing Manager, Administrator or Coordinator reports to the Housing Committee and decisions and recommendations are then forwarded to Chief and Council for final approval or rejection. In other cases, housing is governed through strong policies and a Housing Department which eliminates the need for a Housing Authority, Committee or Board.

Some issues and challenges that arise from the current housing policies are that lower subsidies are received for pre-1997 homes compared to post-1996 homes. Homes that are subsidized by CMHC (social housing units) that are still under a mortgage do not qualify for RRAP renovation funding. You can use RRAP-D and HASI for housing with a mortgage but you cannot use RRAP. This creates a funding shortfall that Bands and elders cannot cover and family members are unwilling to assist with the costs. Other issues identified related to homes (social housing) being built on lands where the homeowner does not have title to the house; evicting tenants and collecting rents from individuals who are friends, brothers, family members etc., and competing with other Bands for funds that are disseminated on a “first-come, first-served” basis. For others, as the following quote indicates, the problem is a lack of financial resources because, “the reality is we have a high population of aging members and do not have the financial means to address the adaptations that are needed” (GR).
5.3. Housing Models on-Reserve

Housing on-reserve consisted of a mixture of rental housing, privately-owned homes, band-owned housing and social housing. For social housing, at the time of construction, the Certification of Possession is transferred to the Band. After 25 years or once the home is paid off, ownership can then be transferred from the Band back to the home/landowner. Once the home is transferred, the homeowner is responsible for maintenance and repairs. Some Bands have just transferred ownership or are in the process of transferring ownership of these social housing units to the homeowner. For owners of these homes, waiting for RRAP and RRAP-D funding to be approved can be challenging and the available funding may not be adequate. With Band-owned housing, modifications are approved based on the availability of budget and need. Assistance from the RRAP program is not available for rental properties.

It is recommended that a greater role must be played by CMHC to emphasize the creation of single level units where elders can live in a communal setting.

5.4. Resources Available for Home Modifications

To address the needs of the aging individuals living on-reserve, Bands have access to CMHC’s RRAP-D and HASI program. Some Bands have a separate elder’s policy to ensure the availability of a yearly budget that can be used in combination with the RRAP-D and HASI program dollars. Others have access to own source revenue from tobacco taxes, fishing revenues, and sales revenues from gas stations and the like. In some communities, a lot of the Band’s own source revenue is spent on housing.

5.4.1. The Application Process

Feelings were mixed about the application process for RRAP-D and HASI. Some thought the process went fast without many problems while the majority felt it was a lengthy, complicated, time-consuming process with a lot of paperwork. The general ethos is exemplified in this statement, “It’s a lot of paperwork and it’s really hard to get your money afterwards. I’m still fighting for dollars. They don’t make it as clear as they could
and the process could talk up to a year to complete. You need to have a lot of time to deal with that” (PUR). In some cases, photographs are also required in the application and most of the housing experts reported that the process can take up to a year from the time the paperwork is submitted to the time the work is completed and the money is received.

Recently, CMHC has been following stricter guidelines by requiring income verification documents from the homeowner or tenant. This lengthens the process as it takes time to find and submit the paperwork to the housing manager in order to complete the application. The income verification step can be very inconvenient for the elders and explaining the importance of the document to them can be a challenge. (In the feedback round, it was brought to attention that CMHC has modified the income testing requirements for the programs. Now, income testing is not required for each application but CMHC will randomly pick applications and ask for income verification.)

The budget is limited. Funding is capped at capacity and is approved on a first-come, first-served basis. If some of the required information is not received on time, the likelihood of getting funding decreases. Elders do not understand why they must go through the process, they get frustrated with the paperwork, families do not assist, and there are limited housing staff to help with the applications.

Overall, the types of documentation that CMHC require are complicated and any updates to the forms without training further complicates the application process. However as was stated by one participant, “every year CMHC sends out a package with all the standard forms. Last year the best package was sent. They sent examples of how the forms should be filled out and highlighted where there’s a new item” (GR). That said, there were mixed reviews about the quality of service received from CMHC staff when calling in for assistance but most agreed that things are much better than they were before.

The housing experts recommended that CMHC should make the application process simpler and take into consideration that the average Band Manager does not have a high academic background. They also noted that the wait for seniors to try to find their income tax papers is challenging. CMHC should hire more staff to provide information and handle the applications. They should also have a RRAP package, offer training, and notify the housing managers of any changes to the application process. CMHC should
send out more workers in the field to see what the application process is really like and demand less bureaucratic paperwork. There is also a need to hire more inspectors to reduce the length of the application process.

The research participants also recommended that CMHC should disseminate more information. CMHC has a lot of good information that is not spread around. An 80 year old is not likely to call in to ask for a workshop but they will go to see it. Additionally, training manuals should be available for new housing managers with details outlining all of the programs and the application requirements, and more education and employment opportunities should be created.

5.4.2. RRAP-D

To apply for RRAP-D funding, you must be on a list. (During the feedback round, it was disputed that this is a requirement from CMHC. It is suggested that the variances in experience may be attributed to differences in housing policies between First Nations. However, CMHC does allocate the number of applications a Band can apply for each year). That said, if you are not on the list in the previous year, you cannot apply for funding the following year. If the community is eligible for funding, they will receive a call letter in February that outlines the number of applications the Band can apply for. This allotment is dependent on the size of the community and can be used for RRAP or RRAP-D renovations. It is possible to combine RRAP and RRAP-D funding on the same home in the same year as the programs address different renovation needs.

In order to receive approval for funding, the senior’s income must be verified and income tested against a threshold. If the household income is greater than the threshold, the home will not be approved for funding. (During the feedback round it was brought to attention that the income limit varies by geographic area and that there has been recent changes to the eligibility requirements. As of writing, this information is not available on CMHC’s website; however, the 2016/2017 household limits for BC is $39,000 for the Lower Mainland, $36,000 for Vancouver Island, $37,000 for the Southern Areas of BC and $41,000 for the Northern Areas of BC). The funding is received as a homeowner’s loan but as long as the homeowner lives in the home and does not sell the home within five
years of completing the home modifications (the forgivable period of the loan is five years), the loan does not have to be repaid.

Once the application is submitted and funding is approved, the application is sent to CMHC’s technical department. A CMHC inspector then visits the home to do a home inspection, which initiates a “work description/invitation to bid” report that outlines all of the repairs that is required on the home in order for funding to be received. The funding maximum in BC is: $16,000 in the Southern Areas of BC, $19,000 in the Northern areas, and $23,750 in Northern or Central Coastal areas with population less than 2,500 that do not have year round road, ferry or rail access. Consequentially, the housing experts often find themselves waiting a long time for the home inspection to be conducted with wait times for an available inspector ranging from two weeks to two months. This stage can also involve a lot of back and forth dialogue between CMHC, the contractors and the housing managers, which lengthens the process.

The Band or homeowner does not get the choice of selecting which repairs get addressed and CMHC will not allow for only the most important things associated with the disability needs to be addressed. The requirement is that every item outlined by the CMHC inspector on the bid sheet or report has to be completed in order to receive the funding. This creates another challenge in renovating the houses as the funding is not a lot and additional costs beyond the maximum has to be paid for by the Band or the Homeowner. If the Band or homeowner does not have the funding to cover the additional costs, the home cannot be renovated.

Three quotes or bids are required from three different contractors and CMHC will select the contractor with the lowest bid to complete the renovations. (However, this point has been disputed. Instead, it has been said that the Band or homeowner has the final say on who completes the project. If the Band or homeowner chooses to go with the highest Bid, the portion paid by the Band or homeowner just increases). If the Band has a construction company and wants to utilize the company to complete the project, then only the company’s bid is required. The housing renovations must be started and completed within six (four months for some areas) months of gaining approval. Once the project is completed, a request is sent to CMHC for the return of the home inspector who will ensure
that every item on the bid sheet has been completed, do a final report, and facilitate the release of the funding to the Band or homeowner.

In the past, one could apply for the RRAP, RRAP-D or HASI every 8 years for a home but this has been recently changed to every 15 years once the maximum funding is reached. (During the feedback round, the 8 year application cycle was questioned). If a RRAP-D application is approved on a home and the cost of the home adaptations fall under the maximum subsidy, the balance can be carried forward and used at a future date. CMHC tracks RRAP/RRAP-D/HASI applications not by the name of the homeowner but through the house’s hydrometer. There is a general understanding that once you have been approved for RRAP funding, it will be another 3 to 5 years before the Band will be eligible to apply for funding again.

Some areas have unique transportation challenges that increases the cost of labour and materials. Because the process can take a long time to complete, Bands are often approved for funding in the fall/winter months at a time when there is heavy rainfall or snow which makes construction a challenge.

A challenge for remote communities with the application process is getting the applications in on time. In some areas, the mail goes out by bush plane and will often be bounced for passengers. Getting quotes in to apply for funding with a short deadline is almost impossible.

The recommendation is made that it cannot be “all or nothing”. CMHC’s requirement that all of the housing repairs identified on the bid list must be completed in order to receive the funding is like holding a gun to your head. The Band cannot be expected to incur debt to cover the cost of renovations. If the Band is being fiscal and does not have the money, then the community losses repairs on up to five houses (depending on the Band’s annual allotment).

5.4.3. HASI

HASI is not included in the call letter. It is available separately and cannot be combined with the RRAP-D dollars.
Most housing managers reported that they do not bother applying for HASI because the funding is not enough and you cannot build anything with it. For the amount of time and effort it takes to verify the income and submit the application, it is not worth it. Most seniors do not like sharing their banking information and do not like people knowing how much they make. Seeing that the definition of a disability is flexible and is inclusive of diseases such as diabetes which impedes ones’ ability to sit and stand for too long and allergies, it is better to apply for the RRAP-D. Additionally, through the Health Department, some Nations have Elder’s programs that will supply small things like grab bars and hand rails that can be easily installed.

HASI’s requirement that the elder must be age 65 to apply also poses a barrier for communities that define an elder as age 55 to 60. These adaptations are needed before the elder is 65 and the elders in some communities are not old enough to apply. One advantage is that a home inspection is not required for HASI. The occupational therapist fills out the paperwork that is included in the application and submits the application. The process moves fairly quickly and anyone who needs it gets it.

The funding only allows for cosmetic alterations such as user-friendly doors, cabinets and drawers; lowering the countertops, cupboards, poles in the bathroom, raised toilet seats, rails and walk in showers. However, the cost for installing a walk-in shower alone is reported to be around $2300 to $2400.

It was suggested that the criteria for HASI and RRAP-D are too close to each other and if you are using one there is no need for the other so CMHC should get rid of HASI and add it to RRAP-D. Seeing that one’s physical condition can change and their body will further deteriorate, the 15 years should also be reduced. For urban areas, RRAP-D should be increased to $20,000.

It has also been said that the amount of HASI is too low. $3,500 does not cover the cost of a walk-in shower, the cost of a contractor, supplies, and labour. In urban areas, HASI should be increased to at least $6,000. Others have suggest to increase HASI to $5,000.
5.5. Construction and Labour Costs

For most Bands, the requirement to have three quotes or bids is not problematic; however, getting skilled labourers who can do the work within the budget can be a challenge. As one expert stated, “where do they get these figures from and are they ever going to increase? We’re lucky because we have a contractor here but it’s getting to the point where contractors no longer want to do these jobs because with $16,000 it’s barely making it. Contractors are sacrificing their time and labour because they care and they want to help but you’re not going to find that always” (GR). Some people in the city cannot find contractors to do the job because it’s just not worth their time. The contractor is only going to do the work for a certain price and if the Band cannot meet the price then the contractor will not do it. The contractor must also be able to carry the costs of the renovations all the way to end when the project is completed, the final inspection is conducted, the invoice is received, and CMHC releases the funding.

The cost of materials and labour is very expensive and it is getting more challenging to do all of the repairs that are required. In some cases, the $16,000 just covers the cost of the vertical lift. According to one respondent, “CMHC has their own ideas about how much things cost. If you put in a quote of $6000 for the cupboards they’ll send it back to say it should only cost $4500 but quality materials costs if you want to put things in there that’s going to last. Twice we submitted and twice they said you had to take the costs down and where the costs came down was in the labour” (LB). Because of the limitations placed on how often funding can be applied for, if the poor quality materials don’t last and falls apart then the Band pays for damages. Some Bands minimize their cost by utilizing labourers within the community as opposed to hiring contractors who are a lot more expensive. However, that can also be a challenge as there is not enough work in the community to attract and sustain local labourers and they often move away in search of employment.

In some areas, contractors must travel into the community to do the work. For their effort they expect a much higher rate. The Band is expected to pay for room and board, travel and food and CMHC does not recognize any of these costs. The Band must also pay for transporting the resources the contractor brings into the community. If the Band
does not have own source revenue to top off the costs, the available money is useless because you cannot complete the scope of the work.

Furthermore, most bands cannot ensure quality assurance. To do so would require an inspection that the work is in fact being done correctly and with limited budgets, Nations cannot afford to hire their own housing inspector. Compounded with a current shortage of housing inspectors, ensuring quality is a challenge.

5.6. Band versus Private Ownership

Though most people cannot afford to build or fix their homes, they are less likely to put money into it if they do not own it. If the Band owns the home, it is very difficult to get families to assist with the costs.

While homeowners can initiate the application for RRAP-D and HASI, they cannot do this independently of the Band. The Band must do a Band Council Resolution (BCR) to support the individual in the process. Proof of homeownership is needed which must be certified through “lands”. If multiple persons own the home, then all the homeowners must sign the document which can be challenging when all the homeowners do not reside in the community.

If you live in Band-owned housing and the Band does not put you on the list, no matter how desperate you are, you cannot apply. You must go through the Band and through a process that is subjective to favouritism. It is possible that if you have the wrong Chief and Councillor in power, and if they do not like you, they will not do a BCR and the person in need will never get a fair chance with their application. As one expert stated, “I could really see it where… I mean what if chief and council... Say maybe there is people on council that don’t like somebody? And you know this happens. And they don’t want that person to get a RRAP so they won’t do a BCR for them” (PUR).
5.7. Higher Costs on-Reserves in Remote Areas

Reserves in remote areas can be four hours in the middle of nowhere. It can take up to four hours to pick up groceries, and then another four hours waiting in town for a ferry to return home. A person on social assistance gets a $370 budget for food regardless of if they 0 kids or 17 kids. Pensioners receive $800-$900 a month and none of them could afford to pay for renovations after hydro, cable, phone and food. The price of food is also really high. The average cost for heating a home with a diesel generator is $1200 a month and there are no subsidies to cover the cost of heating.

In most communities, all of the elders are on social assistance or collecting a pension but in some communities, a small percentage of elders could afford to pay for their home modifications.

The recommendation was made to CMHC to consider income and need. Instead of looking at just the household income, look at the household’s need. Consider things like the cost of fuel. It is unfair to assume that because someone’s income is a dollar over $40,000 they have $20,000 available for home renovations. The income testing level should increase to $50,000. Also, the program budget should increase with regional budgets to address regional needs. In urban areas, the cost is more expensive. Budget increases should be adjusted with the area you live in. The increases should also adjust with inflation. The funding has not increased since the programs have started which is not reflective of the changing costs of living.

5.8. Lack of Trust from CMHC

The application process has led some to the belief that there is a lack of trust from CMHC of First Nations. The requirement for photos, for an inspection before and after the work is completed and the payment of funds after the inspector signs off on the project are the cause of those beliefs.
5.9. Limited Budgets for Housing Managers

Some Bands have own source revenue but not all Bands can afford to pay for a housing manager. A source of funding does not exist that Bands can utilize for capacity building. Some Bands try to hire a maintenance person who can also do the housing but it is hard to keep the costs within a reasonable budget. Housing managers often find themselves in multiple roles which can be difficult and time-consuming. The complicated application process makes applying for RRAP, RRAP-D and HASI a horrible experience for most.

5.10. High Rates of the Young Elder Population

On-reserve, there is a higher rate of a young elder population that starts around the age of 40-50. People get visibly older and suffer from debilitating conditions such as rheumatoid arthritis, Parkinson’s disease, obesity and diabetes. For that reason, the age of an elder is much lower on-reserve (between 55 and 60 depending on the community) than the age of 65 which defines seniors living off-reserve.

5.11. The Implications for Elders

Elders feel there is too much bureaucratic rules and delays in acquiring program funding that prevents timely installation of security features in the home. The process is long and can be frustrating for those who are in immediate need. As stated, “when it comes to Elders, families do not want to follow a Policy. Elders should get what they want/need immediately. This creates challenges as the need always outweighs the available funding and budget limits. We try to have families accountable as well, and this causes issues as there is a mentality that the Band is responsible” (GR).

A successful RRAP-D or HASI application necessitates a good relationship with the homeowner. Sometimes the applicant can change their minds, they may want certain people to do the work, to manage the money themselves, and sometimes they don’t want anybody coming into their homes. Sometimes an elder must leave their home while it is
under construction. This can be challenging when they do not want to leave, they have nowhere to go, and there is no budget to house them elsewhere.

A home with a poor layout that cannot be redesigned to suit the needs of the elder leads to the only solution which is to remove the elder from the home to reduce the risk. However, elders do not want to leave their homes, there are limited units available and if they move they are often faced with paying rents they cannot afford.

The health condition of the elder also changes as they wait. The elder must wait months or years to have their homes initially adapted and another 15 years to apply again with no solutions if their condition deteriorates.

The recommendations were made that Elders should be able to apply for themselves and should not have to go through the Band to apply. Homeowners should be given the responsibility of managing the programs themselves. There is too much emphasis on young kids and not enough emphasis on the elders. Families should also be more willing to assist with the costs.
Chapter 6. **Policy Options**

The policy problem is that Aboriginal seniors living on-reserves have a higher rate of injury hospitalizations due to unintentional falls than the rest of the population. Seeing that 64 percent of falls are likely to occur in and around the home, the research aimed to determine the availability and adequacy of resources that are currently available to Aboriginal seniors living on-reserves for fall prevention and aging in place. Based on the literature review and the results of the interviews with housing experts working on-reserves, four policy alternatives have been identified and are as follows:

1. Increase the funding of the HASI program to $6,000. Reduce the age of eligibility from 65 to 55. Prioritize the RRAP-D and HASI applications so they are not first-come, first-served and all complete and eligible applications are approved.

2. Increase the funding for RRAP-D to $20,000 in the Southern Areas of BC; to $24,000 in the Northern Areas of BC; and to $30,000 in the Northern or Central Coastal areas where the population is less than 2,500 and do not have year round road, ferry or rail access. Terminate the HASI program. Prioritize the RRAP-D applications so they are not first-come, first-served and all complete and eligible applications are approved.

3. Keep the funding for RRAP-D and HASI the same. Reduce the age of eligibility of HASI from 65 to 55. Make available an additional $5000 for RRAP-D applicants requiring installation of a vertical chair lift. Prioritize the RRAP-D and HASI applications so they are not first-come, first-served and all complete and eligible applications are approved.

4. Create a funding stream for single-level, communal living units for seniors living on-reserves.

### 6.1. Status Quo

The status quo is the default option and will be compared against the policy alternatives. The status quo is:

- HASI: $3,500 with the age of eligibility at 65
- RRAP-D: $16,000.00 in the Southern Areas of BC, $19,000.00 in the Northern areas, and $23,750.00 in Northern or Central Coastal areas with
population less than 2,500 that do not have year round road, ferry or rail access. Applications are processed on a first-come, first-served basis.

6.1.1. Policy Option #1: HASI

Increase the funding of the HASI program to $6,000. Reduce the age of eligibility from 65 to 55. Prioritize all RRAP-D and HASI applications so they are not processed on a first-come, first-served basis and all complete and eligible applications are approved.

The first policy option considers the higher rate of young elders living on-reserve, the urgency of the aging’s health care needs, the increasing costs for installing walk-in showers and other adaptations, and the increasing cost of hiring contractors.

Housing managers are deterred from applying for HASI because the amount of paperwork and the time it requires seems to be unworthy of the effort. RRAP-D is the more attractive option because there are no age requirements (young-elders qualify), the amount of funding is greater, and the definition of a disability is flexible enough that all those in need will qualify. By increasing the funding for HASI and reducing the age of eligibility from 65 to 55, the HASI program could become the first choice for housing managers for modifying the homes of elders with difficulties brought on my aging. Additionally, a lower age will reduce the rate of injuries by adapting the home before falls occur. By prioritizing these applications, the homes can be adapted in a timely manner and reduce the fall injury hospitalization rates.

6.1.2. Policy option #2: RRAP-D

Increase the funding for RRAP-D to $20,000 in the Southern Areas of BC; to $24,000 in the Northern Areas of BC; and to $30,000 in the Northern or Central Coastal areas where the population is less than 2,500 and do not have year round road, ferry or rail access. Terminate the HASI program. Prioritize all RRAP-D applications so they are not processed on a first-come, first-served basis and all complete and eligible applications are approved.
The second policy option considers the increasing cost of labour and materials in urban and rural communities, the decreased likelihood of housing managers to apply for HASI, and the urgency of the aging’s health care needs.

By increasing the funding for RRAP-D, more of the home renovation needs will be completed without creating a burden on the Band or homeowner. In situations where the cost of the repair needs identified by CMHC and the housing manager are greater than the maximum funding of RRAP-D, and where the Band or the homeowner cannot afford the additional costs, the “all or nothing” approach can be avoided. By prioritizing these applications, the homes can be adapted in a timely manner to reduce the fall injury hospitalization rates.

6.1.3. Policy option #3: Vertical Lifts

Keep the funding for RRAP-D and HASI the same. Reduce the age of eligibility of HASI from 65 to 55. Make available an additional $5000 for RRAP-D applicants requiring installation of a vertical chair lift. Prioritize all of the RRAP-D and HASI applications so they are not processed on a first-come, first-served basis and all complete and eligible applications are approved.

The third policy option considers the higher rate of young elders living on-reserves, the additional expenses associated with installing vertical lifts, and the urgency of the aging’s health care needs.

By lowering the age of eligibility to 55, the rate of injuries will be reduced if a home can be adapted before falls occur. By prioritizing these applications, the homes can be adapted in a timely manner to reduce injury hospitalization rates for falls. The most costly adaptation was reported to be the installation of vertical chair lifts. Making extra funding available for these types of adaptations will minimize the cost to the homeowner or Band and will avoid the “all or nothing approach” where the renovation exceeds CMHC’s funding and the homeowner or Band cannot pay the additional costs.
6.1.4. Policy option #4: Communal Living Spaces

Create a funding stream for building single-level, communal living units for seniors living on-reserve.

The fourth policy option considers the changing and growing health care needs of seniors, and the importance of safe living spaces that are fully adapted to accommodate the full range of home modifications that will enable safe and independent living. This option avoids discrimination based on age and is a proactive approach that will reduce the fall injury hospitalization rates.
Chapter 7. **Policy Objectives, Criteria and Measures**

To reduce the rate of injury hospitalizations from unintentional falls for Aboriginal seniors living on reserve through home modifications, changes to the RRAP-D and HASI program should meet broad societal objectives. These objectives are consistency with the National Framework on Aging (NFA), physical protection and security, cost-effectiveness and stakeholder acceptability. This can be achieved through specific objectives such as implementing policies that are consistent with the vision outlined in the NFA; reducing the injury-hospitalization rates; decreasing the length of hospital stay; decreasing Potential Years of Life Lost (PYLL); increasing the level of functional capacity; and increasing quality-adjusted life years per dollar spent.

To compare, measure and evaluate the policy options described above, and to assess the extent to which the options meet the broad societal objectives, a 5-point scale based on likelihood of occurrence is utilized. Scores are tallied with the expectation that the highest scoring option will point to the best policy option. Below, Table 7-1 shows that a scale rating of 1 means that the policy option is “not at all likely” to fulfill the policy objective and a scale rating of 5 means the policy option is “completely likely” to fulfill the policy objective.

**Table 7-1: Evaluation Criteria for Policy Options and Objectives**

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Scale Rating</th>
<th>Percentage of Likelihood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all likely</td>
<td>1</td>
<td>0 – 20%</td>
</tr>
<tr>
<td>Slightly Likely</td>
<td>2</td>
<td>20 - 40%</td>
</tr>
<tr>
<td>Moderately Likely</td>
<td>3</td>
<td>40 – 60%</td>
</tr>
<tr>
<td>Very Likely</td>
<td>4</td>
<td>60 – 80%</td>
</tr>
<tr>
<td>Completely Likely</td>
<td>5</td>
<td>80 – 100%</td>
</tr>
</tbody>
</table>
7.1. Compliance with the National Framework on Aging

The National Framework on Aging has outlined five principles that promote the health and wellbeing of seniors through the creation of age-friendly environments that enable older Canadians to make healthy choices that enhance their quality of life (Edwards and Mawani, 2006, p.12). These principles include dignity, independence, participation, fairness and security, and will serve as the criteria to measure how the policy alternatives comply with the NFA.

Dignity can be defined as “being treated with respect, regardless of the situation, and having a sense of self-esteem” (Health Canada, 1998, p. 12). Independence includes “being in control of one’s life, being able to do as much for oneself as possible and making one’s own choices” (Health Canada, 1998, p. 14). Participation means “getting involved, staying active and taking part in the community, being consulted and having one’s views considered by government” (Health Canada, 1998, p. 16). Fairness is “having seniors’ real needs, in all their diversity, considered equally to those of other Canadians” (Health Canada, 1998, p. 18). The last principle is security and is defined as “having adequate income as one ages and having access to a safe and supportive living environment” (Health Canada, 1998, p. 20).

While the NFA is not Aboriginal specific, there is no reason to believe that these principles are not equally important and applicable to Aboriginal and non-Aboriginal populations. To improve the outcomes for Aboriginal people and to reduce the inequities between the Aboriginal and non-Aboriginal population, it is necessary to take into consideration the needs of aboriginal people living on-reserves and to account for how their lives are affected by policies. Too often, differences in jurisdictional responsibilities lead to fragmented service delivery, statistics and information on off-reserve versus on-reserve populations, and the needs of and implications for Aboriginal people are ignored and left missing from the literature. By using the NFA, the goal is to include on-reserve seniors in a framework that promotes the health and well-being of all seniors.

Below, Table 7-1 is a summary of the criteria used to measure compliance with the NFA.
Table 7-2: Criteria for Compliance with the National Framework on Aging

<table>
<thead>
<tr>
<th>Societal Objectives</th>
<th>Specific Objectives/Impacts</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistency with the National Framework on Aging</td>
<td>Dignity</td>
<td>Promoting respect, self-esteem and self-worth in the life of seniors</td>
</tr>
<tr>
<td></td>
<td>Independence</td>
<td>Increasing control, choice and the ability to do for oneself</td>
</tr>
<tr>
<td></td>
<td>Participation</td>
<td>Promoting community involvement and participation</td>
</tr>
<tr>
<td></td>
<td>Fairness</td>
<td>Accommodating the changing needs of seniors</td>
</tr>
<tr>
<td></td>
<td>Security</td>
<td>Promoting access to a safe and supportive living environment</td>
</tr>
</tbody>
</table>

7.2. Physical Protection and Security

Protection and security pertains to the right of seniors to live in a safe home that promotes healthy living and decreases the likelihood of bodily harm that lead to serious injuries and possibly death. This can be realized through a reduction in injury rates, improved health outcomes and an increase in functional capacity.

Statistics available on the Age-Standardized Mortality Rate (ASMR) for the Aboriginal population in BC for unintentional falls are outdated; however, during the period of 1992 to 2002, the ASMR was 1.9 per 10 person-years compared to 0.7 per 10,000 person-years for the rest of the population in BC (Jin et al., 2015, p. 2). This results in PYLL for individuals under the age of 75 was 2.3 per 1,000 person-years for the Aboriginal population compared to 0.5 per 1,000 person-years for the rest of the population in BC (Jin et al., 2015, p. 2). Reducing injury rates and improving health outcomes involves reducing the ASMR and the PYLL of Aboriginal seniors.

As stated by the Canadian Institute for Health Information (2011), “functional capacity is an indicator of one’s ability to carry out everyday tasks. It provides a measure of independence, which is of particular concern to seniors’ health and quality of life. Functional capacity takes into account both basic activities of daily living (ADLs)—walking, bathing, toileting, eating and dressing—and instrumental activities of daily living (IADLs)—
shopping, housekeeping, food preparation, etc.” (p. 17). Below, Table 7-2 summarizes the criteria for measuring physical protection and security.

**Table 7-3: Criteria for Physical Protection and Security**

<table>
<thead>
<tr>
<th>Societal Objectives</th>
<th>Specific Objectives/Impacts</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Protection and Security</td>
<td>Reducing injury rates</td>
<td>Reducing the injury-hospitalization rate due to unintentional falls</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decreasing the length of hospital stay</td>
</tr>
<tr>
<td></td>
<td>Improving health outcomes</td>
<td>Decreasing Potential Years of Life Lost</td>
</tr>
<tr>
<td></td>
<td>Increasing functional capacity</td>
<td>Increasing the ability to walk, bath, toilet, eat, dress, housekeep and prepare food</td>
</tr>
</tbody>
</table>

**7.3. Cost Effectiveness**

A cost effective policy would reduce the rate of injury-hospitalizations for Aboriginal seniors living on-reserve for the lowest possible costs per quality-adjusted life year (QALY) gained. A QALY “takes into account both the quantity and quality of life generated by healthcare intervention” (Phillip, 2009, p. 1). It may be the case that the policy option that is most effective at increasing QALYs may not be the least-cost method and the least-cost method may not be the most effective at increasing QALYs. Below, Table 7-3 summarizes the criteria used to measure cost-effectiveness.

**Table 7-4: Criteria for Cost-Effectiveness**

<table>
<thead>
<tr>
<th>Societal Objectives</th>
<th>Specific Objectives/Impacts</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Effectiveness</td>
<td>Lowest-cost method</td>
<td>The highest increase in quality-adjusted life year per dollar spent</td>
</tr>
</tbody>
</table>
7.4. Stakeholder Acceptability

The stakeholders are the housing managers, seniors living on-reserves, and CMHC. Acceptability can be measured through policy implementation by CMHC and acceptance by the Housing Managers who also act as the representatives for seniors. For CMHC, the policy option that is most likely to be accepted is the one that does not lead to a budget increase. For the housing managers, the policy option that is most likely to be accepted is the one that leads to more funding, with the least complicated application process. Seeing that elders were not included in the research, there is no direct way of knowing which policy option is most likely to be accepted without their participation. Table 7-4 is a summary of the criteria used to measure stakeholder acceptability.

Table 7-5: Criteria for Stakeholder Acceptability

<table>
<thead>
<tr>
<th>Societal Objectives</th>
<th>Specific Objectives/Impacts</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder Acceptability</td>
<td>Approval of the policy option</td>
<td>Policy implementation by CMHC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acceptance from Housing Managers and elders</td>
</tr>
</tbody>
</table>

7.5. Measures

Using the 5-point likelihood scale, below Table 7-5 to 7-8 summarizes the criteria measured against the policy options.
Table 7-6: Measures for Compliance with the National Framework on Aging

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status quo</th>
<th>Option 1: HASI</th>
<th>Option 2: RRAP-D</th>
<th>Option 3: Vertical Lifts</th>
<th>Option 4: Communal Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting respect, self-esteem and self-worth in the lives of seniors</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Increasing control, choice and the ability to do for oneself</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Promoting community involvement and participation</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Accommodating the changing needs of seniors</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Promoting access to a safe and supportive living environment</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>19</td>
<td>19</td>
<td>17</td>
<td>25</td>
</tr>
</tbody>
</table>
### Table 7-7: Evaluation of the Policy Objectives for Physical Protection and Security

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status quo</th>
<th>Option 1: HASI</th>
<th>Option 2: RRAP-D</th>
<th>Option 3: Vertical Lifts</th>
<th>Option 4: Communal Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reducing the injury-hospitalization rate due to unintentional falls</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Decreasing the length of hospital stay</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Decreasing Potential Years of Life Lost</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Increasing the ability to walk, bath, toilet, eat, dress, housekeep and prepare food.</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>20</td>
</tr>
</tbody>
</table>

### Table 7-8: Measure of Cost-Effectiveness

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status quo</th>
<th>Option 1: HASI</th>
<th>Option 2: RRAP-D</th>
<th>Option 3: Vertical Lifts</th>
<th>Option 4: Communal Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>The highest quality-adjusted life year per dollar spent</td>
<td>N/A</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 7-9: Evaluation of Policy Options for Stakeholder Acceptability

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Status quo</th>
<th>Option 1: HASI</th>
<th>Option 2: RRAP-D</th>
<th>Option 3: Vertical Lifts</th>
<th>Option 4: Communal Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy implementation by CMHC</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Policy acceptance by housing managers and elders</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>
Chapter 8.  

**Policy Evaluation**

8.1. Compliance with the National Framework on Aging

8.1.1. Dignity: Promoting respect, self-esteem and self-worth in the lives of seniors

| Status quo: 2 | Option 1: 5 | Option 2: 5 | Option 3: 5 | Option 4: 5 |

Respect, self-worth and self-esteem have been shown to have a positive effect on senior’s psychological wellbeing and physical health (Botek, 2016). A healthy self-esteem is important for seniors as self-esteem tends to drop as the death of family and friends take its toll on their emotional wellbeing (Botek, 2016). Strategies for increasing self-esteem include social connectedness, the promotion of feelings of independence, positive messaging around aging, and support in coping with major life changes (Botek, 2016).

As indicated above, the status quo rated 2, and all 4 policy options rated 5. While the status quo and all four policy options promote independence, the status quo scored lowest because in the current context, elders are frustrated with the length and requirements of the application, the first-come, first-served process makes no guarantee that the application will be approved and their needs will be responded to in a timely manner. The lack of control also leave some feeling like they are not being heard. The first, second and third policy option scored 5 because a system that prioritizes the health care needs of elders is completely likely to promote a sense of self-worth, self-esteem and leave a senior feeling respected in contrast to an option that does not. Option 4 also scored 5, or completely likely, because the state of living in a communal environment has the added benefit of creating a social connected, supportive environment for seniors.
8.1.2. Independence: Increasing control, choice and the ability to do for oneself

<table>
<thead>
<tr>
<th></th>
<th>Status quo: 4</th>
<th>Option 1: 5</th>
<th>Option 2: 5</th>
<th>Option 3: 5</th>
<th>Option 4: 5</th>
</tr>
</thead>
</table>

For seniors, independence can be understood “not only in terms of self-reliance and avoiding dependency but also as retaining functional ability, reciprocity, autonomy, meaningful activity, valued role and continuity of identity” (Schwanen and Ziegler, 2011, p. 721). Furthermore, “autonomy and a sense of control are important in that minor increments in control of personal activities and social contacts can give substantial positive impacts while the loss of such control can have negative impacts” (Phillips et al., 2005, p.158). Studies have shown the loss of control to be associated with “poorer adjustment, activity and physical health among persons living in a wide range of settings…” (Phillips et al., 2005, p.158).

For the independence criteria, the status quo and all four policy options rated 5, or completely likely. Regardless of the timeliness of the application process, the end result is a home adapted with safety features that will increase independence and empower seniors to do for themselves. The status quo scores 4 because with the “all or nothing” approach, there may be cases where the application is not approved because funding is not available to cover all of the repair needs.

8.1.3. Participation: Promoting community involvement and participation

<table>
<thead>
<tr>
<th></th>
<th>Status quo: 1</th>
<th>Option 1: 1</th>
<th>Option 2: 1</th>
<th>Option 3: 1</th>
<th>Option 4: 5</th>
</tr>
</thead>
</table>

Overall, this is a low scoring criteria. While home adaptations can lead to independence for seniors, there is no reason to believe that option 1, 2 and 3 will lead to community involvement, participation or consultation. However, with option 4, this is completely likely. Seniors should be consulted about their aging needs, the design of the home and the location of the building. Seeing that some seniors will have to leave the
comfort of their homes to move into this space, it should be acceptable and attractive to them. Also, considering the cultural traditions in aboriginal communities and the role elders play in decision-making, there is no reason to believe that seniors will not be consulted and participate in the implementation of communal living spaces.

8.1.4. Fairness: Accommodating the changing needs of seniors

| Status quo: 2 | Option 1: 4 | Option 2: 4 | Option 3: 2 | Option 4: 5 |

It is expected that as the elder or senior gets older, their health condition will worsen and their needs will increase. A fair policy will accommodate the diverse and changing needs of seniors and will consider those needs equally to those of other Canadians. However, the extent to which the lived experiences of seniors living on-reserves can be compared to the lived experiences of other Canadians is debateable. While social policy aims to reduce the gaps between Aboriginal peoples and the rest of the Canadian population, there are real inequities in Aboriginal communities and in the social outcomes of Aboriginal people that are rooted in the colonial history that deserve special consideration. As already mentioned, Aboriginal seniors are at a greater risk for falls and are more likely to live in homes that are in need of major repairs. In addition, the remote and isolated location of reserves make labour and materials more expensive and care outside of the community difficult.

In BC, seniors living off-reserve and in urban areas have access to up to $20,000 through BC housing for home modifications. A fair policy would ensure that seniors living on-reserve have access to the minimum funding that is available to other Canadians with additional funding to reflect the deplorable housing conditions and the distance of reserves. A fair policy would also consider the transportation needs and additional living expenses of those living in remote areas and adjust the funding to accommodate those differences.

The status quo scores 2. As things stand, funding is $500 less in urban areas ($16,000 plus $3,500) than the $20,000 that is available off-reserve and the first-come, first-saved policy balances the needs of all applicants; however, the 65 year eligibility
requirement for HASI does not consider the high rate of the young-elder population on reserves. Option 1 scores 4 because it allows for an additional $2000 for the home adaptations and the call to prioritize the needs of seniors does not balance the needs of other applicants; however, the call for the age reduction to 55 distinguishes the needs of the young-elder population. Option 2 scores 4 because the funding allows for an additional $500, $1500 or $3000 depending on the geographic zone; the call to reduce the age of eligibility recognizes the young-elder population; however, the call to prioritize the applications for seniors does not balance the needs of other applicants. Option 3 scores 2 because the funding remains the same unless a vertical lift is required; the call to reduce the age of eligibility to 55 acknowledges the needs of the young-elder population; however, the call to prioritize the needs of seniors does not balance the needs of other applicants. Option 4 scores 5 because it allows for supportive housing like in off-reserve communities and empowers housing managers to balance the needs of all the members in their community as best seems fit.

8.1.5. Security: Promoting access to a safe and supportive living environment

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

While the RRAP-D and HASI programs do not address financial security, the status quo and all four policy alternatives promote access to a safe living environment for seniors. Option 4 scored the highest because not only does it promote a safe living environment, the communal setting has the added benefit of providing social support.

8.2. Physical Protection and Security

8.2.1. Reducing the injury-hospitalization rate due to unintentional falls

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
To reduce the injury-hospitalization rate, home adaptations should be proactive and not reactive. The home should be equipped to accommodate the changing needs of the elder before an accident occurs and when home adaptation needs are recognized, this should be dealt with in a timely manner.

While the status quo and all 4 policy options are more likely than not to reduce the injury-hospitalization rate of unintentional falls, the status quo scores lowest. The lower score is due to the fact that RRAP-D applications are not prioritized and some elders wait a long time before their homes are modified. With CMHC’s “all or nothing” approach, some seniors may never receive full support. The lower score is also due to the 65 year eligibility requirement for HASI which does not consider the needs of the young-elder population on-reserve. Options 1, 2, and 3 scores 4 because although these policy options call to reduce the age eligibility of HASI and to prioritize the applications, the process will still involve a waiting period for processing the paperwork and adapting the home. Option 4 scores 5. As a prebuilt home that is equipped to accommodate the needs of seniors, this proactive approach is the most likely to prevent falls and serious injuries.

8.2.2. Decreasing the length of hospital stay

| Status quo: 5 | Option 1: 5 | Option 2: 5 | Option 3: 5 | Option 4: 5 |

A decrease in the length of hospital stay implies that for those seniors who do fall and are hospitalized, the fall leads to a minor as opposed to a major injury hence the reason for a shorter hospital stay. Overall, this criteria scores high since all policy options lead to the same endpoint. Once the home is adapted with safety features, these features should work to not only to prevent falls but to mitigate the impacts in the event of a fall.

8.2.3. Decreasing Potential Years of Life Lost

| Status quo: 5 | Option 1: 5 | Option 2: 5 | Option 3: 5 | Option 4: 5 |
Similar to the decrease in the length of hospital stay, the impacts of falls should be less severe and therefore the PYLL should be reduced to a level comparable to that of the population off-reserve. Once the home is adapted with safety features, the status quo and all four policy options are comparable.

8.2.4. **Increasing the ability to walk, bath, toilet, eat, dress, housekeep and prepare food.**

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

The goal in home adaptations for seniors is to increase their independence or their functional capacity so they can age in place and independently. It is expected that once the home is adapted with safety features, these features should work to increase functional capacity. The status quo and all four policy options score 5 as they are all completely likely to increase functional capacity.

8.3. **Cost-Effectiveness**

8.3.1. **Generating the highest quality-adjusted life year per dollar spent**

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

In this context, a cost effectiveness analysis (CEA) would require a comparator for determining the option that is most likely to increase the number of QALYs for the lowest cost. Here, the status quo will be used as the comparator against the four policy options.

Option 1, 2 and 3 are rated to be moderately likely. All three options call for a lower age of eligibility and a priority in application that will see safety features in homes sooner which may lead to a reduction in injuries and an increase in the quality of life years. However, as we know, the factors that contribute to falling are complex and can be biological, medical, behavioural, environmental or socioeconomic. While the rate of falls
may be reduced, the increase in quality of life years may be more complicated. All 3 options call for an increase in funding that is fairly comparable. Option 1 calls for an increase of $2,500; option 2 calls for an increase of $500, $1500, or $3000 depending on geographic location; and option 3 calls for an increase of $5,000 depending on if a vertical lift is needed. While option 3 is the most expensive, not all applications will require a vertical lift.

Option 4 scores slightly likely. While there is an advantage to housing seniors much earlier which may reduce the rates of fall, again, the factors that contribute to falling are complex. This option is also expected to be the most costly.

8.4. Stakeholder Acceptability

8.4.1. Policy implementation by CMHC

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Acceptability from CMHC will most likely depend on budget and costs. The status quo scores 5 because it is the current policy and is already accepted by CMHC. Options 1, 2 and 3 are rated to be moderately likely because all three options call for similar funding increases. Options 4 is rated to be slightly likely because this would require large transfers of funds to the Bands and will be the most costly option.

8.4.2. Acceptability from Housing Managers and Elders

<table>
<thead>
<tr>
<th>Status quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

The measures for acceptability by housing experts and elders are combined because housing experts see themselves as representing the interest of the elders/seniors.
The status quo is the least likely to be accepted. Option 1 scores 4 because the funding increase is consistent in all geographic zones and did not score 5 because there are concerns that lowering the age of eligibility will create more competition for funding that is already inadequate. Option 2 scored 3 because the funding increase is not consistent for all geographic zones and again, there were concerns that the lower age of eligibility would only create more competition. Option 3 scored 1 because the funding limits would essentially remain the same unless a vertical lift is required. Two housing experts also expressed concerns over safety to seniors and children living in the homes, and the resulting liability with installing vertical lifts. Again, the call for the reduction in the age of eligibility also raised concerns over increased competition. Option 4 scored 4 for its potential in addressing the housing shortage in communities as seniors can move into these communal homes enabling families on waitlists to move into larger homes. Option 4 did not score 5 because while it may be a long term solution it does not address the inadequacy in the current funding structure and the immediate needs of seniors.

8.5. Summary of the Policy Evaluation

Below, Table 8-1 summarizes the evaluation of the policy options. The results show that communal living spaces are the most likely option to fulfill the policy objectives. The second best policy option is to increase the funding for the HASI program.
Table 8-1: Summary of Criteria, Measures and Policy Evaluation

<table>
<thead>
<tr>
<th>Societal Objectives</th>
<th>Status quo</th>
<th>Option 1: HASI</th>
<th>Option 2: RRAP-D</th>
<th>Option 3: Vertical Lifts</th>
<th>Option 4: Communal Living</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance with the National Framework on Aging</td>
<td>13</td>
<td>19</td>
<td>19</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Physical Protection and Security</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Cost Effectiveness</td>
<td>N/A</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Stakeholder Acceptance</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>48</td>
<td>47</td>
<td>43</td>
<td>53</td>
</tr>
<tr>
<td>Maximum possible score</td>
<td>55</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Adjusted Total as a percentage of Likelihood</td>
<td>67%</td>
<td>80%</td>
<td>78%</td>
<td>72%</td>
<td>88%</td>
</tr>
</tbody>
</table>
Chapter 9. **Recommendations**

9.1. **Increased Funding for HASI – Immediate Objective**

Though communal living spaces were shown to be the best policy option for fall prevention and aging in place, this option is being recommended as a future program for CMHC. Before communal living is tabled as a policy option, communities, including elders, families, leaders, and the housing and health departments should be consulted to determine if this policy option is feasible and desired. If this is determined to be the case, the next step is to determine the types of services and supports that are practical in a communal living setting, and the resources and policies that will enable effectiveness and success in policy implementation and program delivery. To address the immediate needs of seniors, the second best policy option is forwarded.

The recommendation is being made to CMHC to increase the funding of the Home Adaptations for Seniors Independence program from $3,500 to $6,000, to reduce the age of eligibility from 65 to 55, and to prioritize all HASI and RRAP-D applications so that all completed and eligible applications are approved. The increase in funding, the reduction in the age of eligibility, and the prioritization of all applications will lead to a greater number of annual applications and will demand an increase in the overall program budget for on-reserve renovation programs.

The increase to $6,000 should not lead to a reduction in the number of new loans for HASI and CMHC’s other renovation programs (RRAP-D, RRAP etc.) that are processed and approved annually. Additionally, the increase in program budget should be large enough to accommodate the increase in the number of new applications that will be submitted each year.

CMHC’s annual budget for programs on-reserve has been shown to be on a slight decline (see Figure 3-1). This is not reflective of the fact that the senior population and the general population are growing on-reserves. In 2008, CMHC reported that 57 percent of RRAP-D applications and 57 percent of HASI applications were not processed due to insufficient program funding (CMHC, 2009, p. 9). This clearly shows a need for an increase
in budget as the needs of the majority of applicants are not being addressed. CMHC needs to double the current funding for its renovation programs and increase the budget annually to reflect the rate of inflation, increasing demands of a growing population, and increasing prices of goods and services. In order to improve the health outcomes of Aboriginal seniors living on-reserves, and to reduce the fall injury hospitalization rates and the inequities between on- and off-reserve populations, CMHC needs to re-examine the reasons for allowing a downward trend and increase the program funding on-reserves.

In addition to the recommendations made above, CMHC needs to simplify the application process. The process should not be so complicated that housing managers are deterred from applying for programs that are beneficial to seniors. CMHC should create a training manual for housing managers working on-reserves to make the application process less daunting. This will also eliminate all inconsistencies in the housing managers’ understanding of the requirements, and create transparency about the programs and the application process.

9.2. Communal Living Spaces – Long Term Objective-

Stemming from the results of the policy evaluation, the recommendation is being made to CMHC that its long term objective for seniors living on-reserves should be to provide a funding stream for building communal living spaces. While we can expect some cost-sharing between CMHC, the Band or homeowner, and possibly INAC, CMHC’s minimum contribution should reflect the amount it would have provided per application. For instance, if we assume a communal home built for 6 seniors in an urban area will last for 30 years, that an application can be approved for the same home every 15 years, and only RRAP-D dollars are needed for the renovation, then this amounts to a total of $192,000 [$16,000 RRAP-D x 6 homes x 2 applications] for a home in an urban area. That is a minimum of $192,000 in RRAP-D renovation funding that CMHC should supply for building the home. (Based on the same logic, this will amount to $228,000 in Northern areas and $288,000 in Northern or Central Coastal areas.)

Based on the results of the interviews, most housing managers apply for the RRAP funding in combination with the RRAP-D funding to repair structural, electrical, plumbing,
heating, or fire safety issues in addition to the disability needs. Considering the fact that 70.8 percent of homes on-reserves have been reported to be in need of major or minor repairs (AFN, 2013, p. 1) it is safe to assume that the average home adaptation project in an urban area will cost more than $16,000 and will include both RRAP-D and RRAP funding. Using the same logic as above, if we assume that all the homes are in need of the maximum RRAP and RRAP-D funding, then this amounts to $384,000 \([\left(16,000 \text{ RRAP} + 16,000 \text{ RRAP-D}\right) \times 6 \text{ homes} \times 2 \text{ applications}]) for Southern or urban areas. (Based on the same logic, this totals to $456,000 in Northern areas and $576,000 in Northern and Central Coastal areas). CMHC’s minimum contribution to homes in Southern or urban areas for building communal homes should be between $192,000 and $384,000.

As mentioned above, consultation with seniors on all aspects of building, design, supports and services is a necessity for acceptability. The size of the building and the number of living spaces could depend on factors such as the size of the community and the rate of population growth; however, those details should be left to the community. The design of the building should also be left to the community as there is much diversity in Aboriginal art and culture that may be reflected in the housing projects. That said, for smaller communities that do not have the capacity or the resources to design a unique communal space, models should be made available by CMHC that Bands can utilize.

It is crucial that elders do not experience financial hardships and increased living costs when moving into these communal living spaces. The funding structure and policies should be cognizant of the fact that seniors living on-reserves have lower incomes and limited access to resources than the rest of the population. This option will not be feasible for Bands without the human capacity and financial resources to build communal housing spaces; however, it is a practical solution for those that can and want to care for seniors within the community (Senate Committee, 2015, p. 18).

The disadvantage of a communal living space is that some seniors may not want to move out of their homes. A home is linked to a person’s history and memories and elders may be psychologically rooted to their homes. Consulting with seniors to design a space that they would want to live in would mitigate against this problem.
The advantage of communal housing is that while some seniors may not age in their home, they will age in their community. A home care attendant or nurse can provide care for seniors living in communal housing much easier as they are in one home versus multiple homes. If there is an emergency, someone will be around to know and can call for help. Other advantages include opportunities for social support, social connectedness and recreation. When seniors live alone, they have minimal opportunities for social interaction but when they live amongst other elders, this will create a guard against social isolation and loneliness.

Research shows that Aboriginal seniors are more likely to live with family members than non-aboriginal seniors (Statistics Canada, 2006, p. 240). Research also shows that Aboriginal communities tend to have a high number of older and younger people living in the community and a high number of working-age adults living and working outside the community which reduces the availability of informal caregivers (Rosenburg et al., 2008, p. 14). Communal housing may not be ideal for individuals who already have support from friends and family members but would be ideal for seniors living alone.

Communal homes may also contribute to reducing the housing shortage. The Senate Committee (2015) has reported that “the lack of seniors’ housing means that some seniors continue to live in homes they cannot properly maintain, and in homes which might be too large for their current needs. Meanwhile, other families continue to be on a waiting list for housing in the community” (Senate, 2015, p. 18). From the research, it was also reported that some seniors live alone in two-level homes. By building communal spaces for seniors/elders and freeing up the larger homes for families on waitlists, CMHC can contribute to reducing the housing shortage on-reserve.

One example that CMHC and interested communities can draw upon is the Stó:lō Elders Lodge in Chilliwack, BC. It is stated that “the Elders Lodge is an Assisted Living partnership between the Stó:lō Nation and Fraser Health… The core principles of Stó:lō Assisted Living are choice, privacy, individuality, independence, dignity and respect” (Fraser Health, 2008/09, p. 12). While the lodge was quite costly and took $5 million in provincial funding and $600,000 in First Nations funding to build (Hernandez and
Khayatte, 2015), the programs and services can serve as examples of what is possible in communal housing for elders.

Stó:lō Elders Lodge is a 15-unit home where residents have access to their own room; common areas; food service (lunch, dinner, snacks and meals); social and recreational programs; housekeeping and laundry; assistance with personal care and medications; and a 24-hour emergency response system (Fraser Health, 2008/09, p. 12; stolonation.bc.ca). Residents have choices in “meals, activities, and services, including traditional cultural activities such as drumming, singing, and Elders meetings and field trips” (Fraser Health, 2008/09, p. 12). Residents also have access to staff who are of Aboriginal ancestry and the home is located within the Stó:lō Nation.

The programs and activities that are provided will ultimately depend on the community and its members but seniors’ housing have the added advantage to serve as a hub for cultural programming and intergenerational language and culture transfer. Seniors’ housing can serve as a space where young children can meet and interact with the elders to learn their language and culture and share knowledge.
Chapter 10. Conclusion

This research aimed to move healthy aging for Aboriginal seniors to the forefront of the social policy agenda. As advised by the Working Group for seniors, “If we are to reap the benefits of the many contributions that seniors make to their families, communities and nation” healthy aging must be addressed (Edwards and Mawani, 2006, p. VI). Aboriginal seniors in Canada are not aging as healthily as they could and have a higher rate of fall injury hospitalizations and a higher risk for falls. Like non-Aboriginal Canadians, Aboriginal seniors would like to age in their communities (Habjan et al., 2014; Shiner et al., 2010). However, aging in place is a challenge for Aboriginal seniors living on-reserves because not only do they contend with the natural risk of falls brought on by aging, they are more likely to age in inadequate, poor quality homes that increase the risk of injuries and other types of health issues. These conditions are inextricably linked to the ongoing effects of colonialism which includes isolation and a lack of services and support and poses a challenge for communities wanting to provide end-of-life care within the community.

After utilizing a 5-point likelihood scale to evaluate the policy options against the policy objectives, a funding stream for building communal living spaces was thought to be the best policy option for aging in place and reducing fall injury hospitalizations for Aboriginal seniors living on-reserves. Considering the complexity of this policy option, and the need for seniors’ input in determining the services and supports that are necessary for aging in place, this option was recommended as the future objective for CMHC. Instead, the second best policy objective was recommended. The immediate objectives for CMHC is to increase the amount of the loan for the HASI program as well as the overall program budget to support that increase. It is also recommended for CMHC to lower the age of eligibility from 65 to 55, prioritize all HASI and RRAP-D applications, and ensure that all completed and eligible applications are approved so that the health needs of seniors are addressed in a timely manner.

As the Working Group has also suggested, “If left unaddressed, the aging of the population will have far-reaching social, economic and political impacts that will far outweigh the cost of investing in healthy aging now” (Edwards and Mawani, 2006, p. VI). CMHC should listen to the recommendations made by the housing managers, implement
the recommendations, and give consideration to the importance of aging in place for Aboriginal seniors living on-reserves. CMHC should include in its objectives the need to provide housing for seniors that will enable them to receive end-of-life care in their communities so seniors can remain psychologically rooted to place. Care outside the community “disrupts family life and creates emotional, social, spiritual, and economic burdens” (Kelley and Prince, 2014, p. 3). Additionally, end-of-life care and a death outside the community disrupts the grieving process which is important for families and communities and “have negative effects on overall community, social, and economic wellbeing” (Kelley and Prince, 2014, p. 3). Policy should aim to mitigate the impacts on families and communities and increase well-being.

10.1. Study Limitations and Future Research

The intention of this study was to shed light on the higher rate of fall injury hospitalizations for Aboriginal seniors living on-reserve, and to fill a gap in our understanding of the resources available for home adaptations for fall prevention on-reserves and for aging in place. The information provided in this study are the views of the individuals who participated in the study and may not be generalizable to all of the First Nations in BC or beyond.

This study was limited to housing experts but future research should include the voices of Aboriginal seniors with the objective of deepening the understandings of the housing needs of seniors living on-reserves, and of the types of resources and housing models that will enable aging in place and accommodate end-of-life care in communities. Future research should also aim to explain, quantify and monetize the social, economic and political impacts for Aboriginal seniors and society if healthy aging is left unaddressed.

The knowledge generated from this study will be shared with the stakeholders and other relevant parties, and a document will be created that can be distributed to Aboriginal communities on the workings of CMHC’s programs.
References


Fiessel, Wanda; Mary Rose Kulyk; Bev Peel; Stacy Pfeifer; Jo-Ann Robert & Kim Statler (2013). Aging in Place: A Saskatchewan Perspective. SIHL Group Project


Ziersch, Anna M.; Gilbert Gallaher; Fran Baum; & Michael Bentley (2011). Responding to Racism: Insights on How Racism Can Damage Health from an Urban Study of Aboriginal People. Social Science and Medicine, Vol. 73, p. 1045-1053
Appendix A.

Semi-Structured Interview Guide

Falls/injury rates/fall prevention:

1. What can you tell me about the rates of falls amongst seniors in your community?
2. Where do seniors fall/are more likely to fall?
3. What can you tell about home modifications for fall prevention for seniors in your community?
4. Is there a home assessment program for fall prevention? (Who evaluates/determines the home modifications needed for fall prevention? occupational therapist, housing manager, nurse?)

Housing policy

1. Have the _____ FNs opted into the 1996 on-reserve non-profit housing policy or does the band apply for subsidies for each housing project? (Why not? What does that mean in terms of funding projects?)
2. How is housing managed? (Chief and Council, Housing Board, Housing Authority?)
3. Any known issues and challenges from existing policies?

Types of housing: band owned, private ownership, rental, social?

1. Are there any distortions in home ownership/rental/social housing models that leave some seniors without any way of modify their homes? (The eligibility requirements is that homeowners or landlords must approve these modifications is that a problem?)
2. What percentage of seniors do you think are in need of the necessary home adaptations for fall prevention?

Available resources

1. To your knowledge, what kinds of programs are available to seniors for home repairs/modifications/adaptations?
2. What is the application process like?
3. How long does the process take from the start of the application to a finished project?
4. The eligibility requirements are as follows…
<table>
<thead>
<tr>
<th>HASI</th>
<th>RRAP-D</th>
<th>RRAP</th>
</tr>
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</table>
| • is 65 and over;  
• has difficulty with daily living activities brought on by ageing;  
• total household income is at or below a specified limit for your area;  
• dwelling unit is a permanent residence. | • low-income  
• persons with disabilities. |
|  | Maximum total loan |  |
| Zone 1: Southern Areas of Canada | $16,000 |  |
| Zone 2: Northern Areas of Canada | $19,000* |  |
| Zone 3: NWT, Yukon, Labrador and Northern Quebec | $24,000* |  |

- Structural  
- Electrical  
- Plumbing  
- Heating or  
- Fire safety

Assistance may also be available to address a problem with overcrowding. Dwellings must be a minimum of five years old.

How many seniors meet the requirements? Do some seniors get denied? Why?

5. What are some of the challenges and barriers to accessing the programs/funds?

6. Are there any types of indoor or outdoor adaptations/modifications that seniors need but are not covered under the eligibility requirements?

7. Are the funds adequate? How many dollars do you think would be adequate? (How many more dollars would have been needed to complete the project?)

8. How many seniors could afford to pay for the modifications without financial assistance?

9. How many times can one apply for RRAP/RRAP-D/HASI for the same home or the same person? Are there restrictions?

Construction

1. What can you tell me about the cost of labour and materials for home adaptations on reserve?

2. Are there any challenges and barriers to getting the work done and the resources needed? If yes, what are they?
Moving forward

1. In your opinion, how can the programs be made better?
2. In your opinion, how can the housing needs of individuals best be addressed?

If I think of other questions, is it okay to contact you again?