HOME CARE UTILIZATION PATTERNS AMONG THE ELDERLY POPULATION:

a Case Study of Ontario, Canada

by

JIE YU

A thesis submitted to the Department of Geography

In conformity with the requirements for the degree of Master of Arts

Queen’s University

Kingston, Ontario, Canada

May, 2011

Copyright © Jie Yu, 2011
Abstract

The demand for home care increased dramatically in Canada in the past decade. This was because more patients were discharged from hospital, more emphasis was put on health care at the home and community levels, the continuing aging of the population, advancements in technology, and the adoption of a more cost-effective strategies. Though home care is still not a part of Canadian Health Act (CHA) and there are no national regulations for home care, people value the significance of home care. Home care is now one of the fastest growing sectors in Canada’s health care system. With a focus on the elderly population in the province of Ontario, this thesis uses data from the Canadian Community Health Survey (CCHS cycle 1.1, 2.1 and 3.1) to examine utilization patterns of home care considering social and geographical factors, the variation within home care service provision, and unmet home care need. The major findings of the thesis are that seniors with poorer health status, older age, female, with lower household incomes, marital status widowed/separated/divorced/single/never married, and living in urban areas are more likely to use home care. At the same time, seniors who are older, with poorer health status, and suffering from chronic condition are in a more vulnerable position to receive the home care they need. A large amount of responsibility was shifted to informal caregivers due to the budget constraints and the policy bias of the government. Access to home care is unequal on a geographical scale. Seniors living in rural and remote areas tend to have more unmet home care
needs than seniors living in urban areas. People living in rural northern regions in Ontario have the least access to home care. Also, seniors living in urban areas have a greater chance of getting government provided care than those living in rural areas. Overall, under the current managed competition model of home care in Ontario, unequal accessibility, insufficient services, an excessive burden on informal caregivers are observed.
Acknowledgements

I want to express the utmost gratitude to my supervisor Dr. Mark W. Rosenberg of the Department of Geography at Queen’s University for his guidance, support and patience. He has given me unique and invaluable instruction in areas from complex research issues to academic writing. As an international student, I have more to learn in this new environment. For this reason, he spends even more time helping me with all kinds of academic questions. His expertise in this area has provided me with both knowledge and perspective. I truly appreciate the chance of working with him not only because of his academic achievements but also his conscientious attitude towards students. I can see my improvement under his supervision within the last two years.

I would also like to express my appreciation to the Geography Department at Queen’s University. I met the nicest people here from faculty, staff to peers. Being a student in the Geography Department at Queen’s University has been a delightful experience. I would like to especially thank to Dr. Audrey Kobayashi, Dr. Dongmei Chen, and Sheila MacDonald for their support, guidance and kind help. Without their support, I would not have been able to make it this far. Also to my peers Andrea, Hannah, Yang, Kym, Nancy Leslie and Paul, thank you for your encouragement and friendship.

To my family and friends, thank you for your love and support. Special thanks to my parents for their love and trust. I would not be able to come to Canada pursuing
degree without such supportive parents. Thanks also to Jun, Chenxi and my housemates for being such good friends. To them, I dedicate this thesis.
# Table of Contents

Abstract............................................................................................................................................ i  

Acknowledgements.......................................................................................................................... iii  

Table of Contents........................................................................................................................... v  

List of Figures................................................................................................................................... vii  

List of Tables.................................................................................................................................... viii  

Chapter 1 Introduction...................................................................................................................... 1  

Chapter 2 Literature Review............................................................................................................ 6  
  
  2.1 Aging and the Geography of Aging........................................................................................ 6  
  
  2.2 Health and the Life Course..................................................................................................... 9  
  
  2.3 Home Care............................................................................................................................... 12  

Chapter 3 Proposing a Conceptual Framework for Home Care Research................................... 27  
  
  3.1 Review of conceptual frameworks on health....................................................................... 27  
  
  3.2 Proposing a conceptual framework for home care research.............................................. 30  

Chapter 4 Methodology................................................................................................................... 36  

Chapter 5 Analysis.......................................................................................................................... 42  
  
  5.1 What are the patterns of home care utilization?................................................................. 42  
  
  5.2 Is there equitable access to home care in Ontario?............................................................. 50  
  
  5.3 The service gap....................................................................................................................... 53  
  
  5.4 The providers’ roles................................................................................................................. 55
5.5 The reasons for unmet health care.............................................................57

5.6 Determinants of home care use.................................................................59

Chapter 6 Discussion and Conclusions.........................................................71

References.......................................................................................................82

Appendix 1.....................................................................................................96
List of Figures

Figure 3.1 Conceptual framework on home care ......................................................... 31
Fig 4.1 Map of Southern Ontario—by Peer Groups .................................................... 38
Fig4.2 Map of Northern Ontario—by Peer Groups .................................................... 39
Figure 5.1 Home care use by household income (cycle 1.1—3.1) ......................... 44
Fig.5.2 Overall home care use by living arrangement (cycle 1.1—3.1) ...................... 43
Fig.5.3 Home care provided by family/neighbours/volunteers (cycle 1.1—3.1) ....... 44
Fig.5.4 Home care use by health status(cycle1.1-3.1) .................................................. 47
Fig.5.5 Home care use by chronic conditions (cycle 1.1—3.1) .................................. 48
Fig.5.6 Home care use by activity restriction (cycle 1.1-3.1) .................................. 49
Fig.5.7 Spatial distribution of home care use (Cycle3.1) ............................................. 51
Figure 5.8 Percentage of people with unmet home care needs (Cycle3.1) ............. 52
Figure 5.9 Distribution of people with unmet home care needs (Cycle3.1) ............. 52
Figure 5.10 Unmet home care services (Cycle 3.1) ..................................................... 54
Figure 5.11 Received home care services provided by government (Cycle 3.1) ....... 54
Figure 5.12 Received home care services provided by a private agency (Cycle 3.1) . 55
Figure 5.13 Received home care services provided by informal caregivers (Cycle 3.1)
                                                                                   .......................................................... 55
Figure 5.14 The providers contacted first by people (Cycle3.1) ............................. 56
Figure 5.15 Services received by different providers (Cycle3.1) ............................. 57
Figure.5.16 Reasons for unmet home care need (Cycle3.1) ...................................... 59
List of Tables

Table 4.1 Peer groups. .............................................................................................................37

Table 5.1 Overall home care use...............................................................................................61

Table 5.2 Government provided home care use.......................................................................63

Table 5.3 Private home care use..............................................................................................66

Table 5.4 Informal home care.... ............................................................................................69

Table 5.5 Unmet home care need.............................................................................................70

TableA-1 Case numbers of Cycle 1.1, 2.1, 3.1. ........................................................................96
Chapter 1

Introduction

In the 1990s, Canada underwent nation-wide health care system reform under the impact of neo-liberalism (Dyck et al., 2005). In a climate of economic restraint, increasing health care expenditure and excess inpatient capacity, the federal government began to cut the funds for health care to the provinces. Provincial governments sought to restructure the organization and financing of hospital services to slow the growth in total health expenditures in response to decreased financial support from the federal government.

As a result, a number of hospitals were closed or merged, more health care processes were moving out of institutional health care sectors and more responsibilities were shifted into community and home care sectors at the local level. As Milligan (2000) stated “it may be creating a blurring of the boundaries between what has traditionally been public/institutional space, and the home space”. The demand for home care increased dramatically in Canada in the past decade. This is because more patients were discharged from hospital, more emphasis was put on preventive health care models, the continuing aging population, advancement in technology, and the
adoption of more cost-effective strategies. Though home care is still not a part of Canadian Health Act (CHA) and there are no national regulations on home care, people value the significance of home care. Home care is now one of the fastest growing sectors in Canada’s health care system. There is, however, debate around what impacts home care services have on population health outcomes as it is claimed, the extent to which the burden of care has shifted from institutions to home and whether home care is actually cost-saving. (Parr, 1996)

In Ontario, concomitant with the growing shift of care to the home, home care services were also increasingly opened to the private sector. The period of change led by the Conservative government from 1995 to 2003 resulted in heated debate around a management competition model of the home care sector. A number of researchers argued that policy makers relied too much on the private sector, and that the private sector could deliver high quality service with the most economic efficiency and reasonable prices. However, studies showed that the management competition model constrained providers, eroded service choices, and reduced access to long-term care in rural areas. (Cloutier-Fisher, 2006) Also, structural barriers like the presence of unionized employees and obstacles to the entry of new providers were observed. (Randalla et al., 2006)

Health geographers are showing growing interest in service-users’ and consumers’
experiences of care services, the concepts of ‘caring’ and ‘care,’ management of bodies and home spaces, and the investigation of the qualities of landscapes of care or therapeutic landscapes (Gleeson and Kearns, 2001; Gesler and Kearns, 2002; Parr, 2003, Dyck et al., 2005). Some studies of home care are focused on paid and informal caregivers working in home spaces (Albert, 2000; Aronson and Neysmith, 1996; Hallman and Joseph, 1999; Wiles, 2003; Williams, 2002) and the geographical variation in home care accessibility (Williams, 2006). Some literature is about utilization of home care (Hall et al., 2001; Forbes et al., 2004; Mitchell et al., 2006). They found geographic location played an important role in home care use, for both the overall frequency of home care use and the preferences of certain types of home care services. There is also a body of literature on management and operational models of home care. (Barabek et al, 1999; Abelson, 2004; Aronson, 2004; Cloutier-Fisher, 2006; and England, 2008.) There is a growing interest in various population groups and home care. Morris et al. (1999) looked at gender variation in home care.

Previous studies have shown that people with chronic health conditions, people in the terminal phase of illness, old people and people with complex medical regimens are the main clients of home care services, (Woodward, 2004) among whom the majority are seniors. Also, Canada faces significant aging of its population as the proportion of seniors is increasing more rapidly than all other age groups (Health Canada, 2002).
However, there is an overall lack of research on the elderly population and home care use. This study will contribute to the understanding of home care utilization pattern and its social and spatial determinants among the elderly population. It is important for future service planning and policy making.

With a focus on the elderly population in the province of Ontario, this paper uses data from the Canadian Community Health Survey public use files from cycle 1.1, 2.1 and 3.1 for the province of Ontario to examine utilization patterns of home care considering social and geographical factors, variation within home care service provision, and unmet home care need. The research questions include:

1. Who are the users of different types of home care among the elderly population? What is the home care utilization pattern by age, sex, health status, location, illness type, marital status, social support, dwelling characteristics and income? Is there equitable access to home care in Ontario?

2. What are the main determinants of different types of home care use (government-funded, private and informal home care) and unmet home care among old people?

3. What are the problems existing in the current home care system in Ontario? What are the policy implications of the research results?
In answering these questions, this thesis will reveal the current pattern and trends in home care use, the demand for home care services, and the relationships among government funded/private and formal/informal roles within the home care sector. It will also reveal the change in patterns of home care use across different geographical regions over time. The research will contribute to policy-making, on whether a national standard for home care is needed and how big and what role home care should play within the Canadian health care system.

The thesis is divided into six chapters. In Chapter Two, a systematic review on aging and home care studies is carried out. Geography of aging, aging theories and studies on aging in place are reviewed. The concept and meaning of home care as a caring space, studies about home care service provision and use, and home care policies are also reviewed. In Chapter Three, a conceptual framework is developed to understand home care research based on other researchers’ frameworks on population health, health care and geography of health. In Chapter Four, the methodology used in this research is described. Data from the Canadian Community Health Survey (CCHS) is used to carry out the analysis in Chapter Five. The analysis is followed by a discussion and conclusions based on the results (Chapter Six). Conclusions on home care use in Ontario, and its policy implications for the province of Ontario are suggested.
Chapter Two

Literature Review

2.1 Aging and the Geography of Aging

First, it is important to clarify the definition of the aged, (also called the elderly, seniors population, etc.) and the ages cohort within the elderly population. Most studies and publications in the world have defined the aged as those 65 years old and above. Within the range of 65 years old and above, there are three age cohorts. Those aged 65-74 are named “old”, the 75-84 cohort “old-old”, and the 85 years old and above cohort “very old”. (McDaniel, 1986) This definition and classification of the aged will be applied to this research.

A second concept is aging. There are generally two aspects of aging. One is individual aging, which refers to biological, psychological and social aspects of growing old. The other is population aging, which means the processes which affect the proportion of the total population who are aged and reflects the increases in their proportion of the total population. (McPherson, 2008)
There are two basic questions within the geography of aging. One is the distribution of the elderly population in a broad geographical area according to census data; whether seniors live in a metropolitan area, city, suburb or rural area and the aging pattern within the geographical areas. The other is a senior’s daily spatial pattern on a community level. (Hodge, 2008) Activity patterns are intertwined with space and time, the activities seniors participate in and the time spent on them structure a senior’s life. (Moore and Rosenberg, 1991) Hodge (2008) lists four types of activities. The first is Activities of Daily Living (ADLs) referring to basic personal maintenance activities like eating, bathing and personal care. This category takes place in a senior’s dwelling. The second is Instrumental Activities of Daily Living (IADLs), like shopping, house work and health care which support daily life. These activities take place around the dwelling. The third is Leisure Activity. This category includes a wide range of activities like social activities, entertainment, etc. The last is work, including both paid and volunteer work. The last two categories take place in various locations.

In addition to types of activities, Rowles (1983) developed seven support spaces for the elderly: home, a surveillance zone, vicinity, community, sub-region, region and nation. Among them, home is the central support zone which provides not only physical needs such as a shelter and activities, but also an emotional attachment and home is a symbol of personal identity. Some researchers add “abroad” as an eighth zone. (Hodge, 2008) Life support spaces set boundaries for activities, and require
Place plays an irreplaceable role in the geography of aging. Researchers have discussed what places mean to the elderly, from institutions and home, to community and city. Places to seniors are constructed of growing attachments over the life course. Rowles (1983) suggested the concept of “insideness”, which refers to the lifelong accumulation of experiences in place. Rowels argued that by exploring the notion of insideness in physical, social, and autobiographical terms, autobiographical insideness is particularly important in maintaining a sense of personal identity and facilitating successful adjustments in old age. Although the attachment to place varies, for those living in the same dwelling for a long period of time through the life course, the attachment to home is usually very strong. The sense of belonging through place-making, community formation, and reminiscence is centered on home places. (McHugh and Mings, 1996) A number of countries and states have adopted “aging in place” as a political objective. Aging in place encourages the ability of older people to remain living in the residences and communities of their choice as long as they want. (Schofield, 2006) Place is more than a shelter, rather, it is somewhere with which the elderly can identify. Cutchin (2003) maintains that institutions like adult day care and assisted living residences are limited in their ability to replicate home or community for the elderly. However, not everyone has the ability to age in place. Schofield et al. (2006) argue that a complex interaction of situational factors (such as location and mobility.
social context) and personal characteristics (such as gender and state of health) affect people’s ability to age in place.

2.2 Health and the Life Course

A number of papers/books are on how different life courses or levels within seniors’ lives affect the care they need and their health. Rowles et al. (1978) maintains that there are three transitional points for the elderly: retirement, bereavement or income collapse, and frailty or chronic illness. Hodge (2008) suggests three basic moves in old age. The first move is away from kin when health and personal resources are still strong; the second move is move back to kin when moderate disability or widowhood come; the third move is to a care facility when a health situation becomes complex.

Another important consideration is social factors in determining senior’s health. Gender, age, culture, income, social interaction and dwelling form a senior’s social location, hence influence a senior’s health. Studies show that seniors who live alone tend to have poorer health than those living with families; income plays an important role in senior’s health; older women are more vulnerable than older man. (McDonald, 2003; Statistics Canada,2006) Seniors who have less accessibility to social contact and support are often restricted in their mobility and social activities, (Finlayson et al., 2002) and also are limited in the informal support they obtain from family members.
and friends. Their ability to provide care to other seniors in need is restricted.

Havens (1995) developed the “continuum of care” model, suggesting different levels of wellness of seniors and what services should be provided to seniors within different levels. The five levels are: the well population who needs community support; the independent but frail population who needs community and informal care; the functionally disabled living in the community who needs home care services; the functionally disabled living in the facilities who need special medical care; and the ill elderly who needs intensive medical care. (Hodge, 2008) By looking at different levels seniors are at, targeted policies and services can be provided to the groups.

Research has also been done on the effect of the environment on senior’s health. Housing is crucial to a senior’s health. Gerontologists in many studies argue that well-being of elderly population is well sustained when they are able to live in their own homes. However, security of housing alone cannot ensure the well-being of a senior. Community and the neighbourhood support and transportation are also fundamental. (Hodge, 2008)

Nahemow (1973) developed an Ecological Theory of Aging. He maintained that five environments that a senior encounters in daily activities are: the personal environment, the group environment, the supra-personal environment, the social environment and
the physical environment. He also demonstrated that each environment makes a
behavioural demand on seniors which he called the “environment press.”

A number of studies are on the quality of life among the elderly. The University of
Regina Education Centre (2000) developed a model of senior’s quality of life factors.
Factors included are housing, health, making life meaningful, income, belonging,
safety and security. Steward et al. (1991) proposed two categories of senior’s quality
of life research outcomes, functioning and well-being. For functioning, factors
included are physical abilities and dexterity, cognition, and the ability to perform
activities of daily living (ADLs). Well-being includes symptoms and bodily states,
emotional well-being, self-concept, and global perceptions related to health and
overall life satisfaction. Shumaker et al. (1990) maintains that health-related quality of
life (HRQL) involves physical functioning, emotional well-being, social functioning,
and role activities, as well as health perceptions and global assessment of life
satisfaction.
2.3 Home Care

First, it is essential to discuss the definition of home care. There is no universal definition of home care. Different scholars and agencies have provided their understanding of home care, from which the scope and meaning can be deduced. The range of services within home care is large, including nursing, social work, physiotherapy, speech language pathology, audiology, occupational therapy, meals-on-wheels and homemaking. (Coyte, 1997) According to the Canadian Community Health Survey (CCHS) questionnaire, services include: nursing care; medical equipment or supplies; personal care (e.g., bathing, foot care); housework (e.g., cleaning, laundry); meal preparation or delivery; shopping; respite care (i.e., caregiver relief); and other health care services (e.g., physiotherapy, occupational or speech therapy, nutrition counselling). As for the service designation, a variety of agencies and providers participate in the provision of services. The most common providers are family and friends, community health centers, community volunteers, commercial retailers and private organizations. (Steward & Lund, 1990; Coyte & Young, 1997)

The purposes of receiving and providing home care usually are: preventing or retarding the deterioration of health and assisting people to maintain independence in the community rather than moving to a new and more costly venue; a preventive
function which invests in client service and monitoring at additional short-run but lower long run costs; and also giving clients more specialized services following hospitalization. (Coyte, 2000, Sharkey et al., 2003)

There are several ways to categorize home care services. When categorized by providers, there are formal and informal health care services. With formal care services defined as those that are government planned, implemented and funded and/or those purchased by individuals from commercial or private agencies. In contrast, informal care is that provided by family, friends, neighbours and many volunteer agencies some of which are partly government funded, and is, by far the most predominant form of care (Lesemann, Martin, 1993). When categorized by different types of services, home care includes both medically oriented services (nursing care and various therapeutic and rehabilitative forms of care) and home support services: personal care and household help like cleaning, food preparation, laundry, shopping etc. (Aronson et al., 2004) When categorized by the way of funding, there is public and private funded home care. Public funded home care is funded through different levels of government and public agencies, like community health centers. Private funded home care includes donations to voluntary organizations, private insurance or benefit plans (e.g., private health insurance), and the individual (e.g., by purchasing services privately).
Within the domain of health geography, home care has been studied from social, cultural and place-centered theoretical perspective and also the equality and management issues associated with the people or organizations that utilize or deliver home care services.

The restructuring of health care systems promotes the change of care site from institutional spaces toward home and community spaces. Some health geographers have discussed the care giving experience in home space. They conceptualize home care as the interaction site of home, work and body spaces, and are interested in the social implication of home care. They also highlight the significance of place in home care provision and receiving. Buttmer (1980) implies that whether important activities are centered in or around the home is important to one’s place identity and attachment, and also home and its surrounding geography are necessary for the maintenance of well-being. Somerville (1997) sees home as a physically, psychologically and socially constructed place in which personal meaning of home can be explicated. Similarly, Dyck et al. (2005) view home as a site for regular long-term health care which has been reconstructed physically, socially and symbolically. They argue that the management of the body as care recipient is crucial to the construction of a home space as a caring space. That is to say, home is not merely a site for material practice of care provision for a body with medical needs, but also a site for securing the “social body”. Williams (2005) analyses home from the
“therapeutic landscape” perspective (Gesler, 1993). She found out that home environment impacts on the care giving experience. However, work needed to be done to adjust the home environment making it more of a therapeutic environment for familial members and caregivers sharing it. Williams (2005) maintains that home is not only a dwelling, but also has multiple meanings like personal identity, security and privacy, which vary according to class, ethnicity and other socio-demographic variables. A number of political-economic issues are raised by care in such home settings. Matthews (2007) concludes that there are three themes within the issue of home as a site of care: territory and boundary; control and cooperation; and the symbolic significance of home. Several researchers address the meaning of home in the context of care.

Home as a caring space is the intersection of work and life, public and private. This sets up conceptual boundaries where wage and burden come into a place with “love, duty and need”. (Prugel et al, 1996) Various researchers have discussed the boundaries between home and work, work and elderly care, family networks, informal, formal home care and other public-sector services. (Milligan, 2006; Keeling etc, 2007; Mahmood, 2007; Phillips, 2007)

As for home and work, Mahmood et al. (2007) argue that the boundary blurs when one’s home becomes the site of another person’s work when formal homecare
delivery happens. As Dyck et al. (2005) imply, the important issues are the room for negotiation, an individual’s ability to maintain some control over the home environment, integrity of self and assurance of security of person, and the maintenance of material and social identity. Also, the relationship between the care workers and the elderly receiving care is a professional relationship based in a familial context. (Mears et al., 2007) How much distance should be kept between the worker and care receiver is a question to be considered. According to Mahmood’s study, some older clients experience a disruption of meaning of home as a place of control, independence, and security. However, others see the support provided by home care workers as enhancing the meaning of home as control, independence and social space. For home care workers, the boundary issues include invisibility of the work they provide in terms of lack of credibility, the role ambiguity and variability in the work and the extra unpaid work in the realm of home and work. The study concludes that the manifestation of boundaries between home and work is tied to the social, spatial and temporal context within which home work is embedded. Other researchers agree that home care work is not only dependent on the elderly person being cared for physical attending, but also an emotional labor. (Craib, 1995; Duncombe et al., 1993; Jackson, 1993; Mears, 2007)

Another blurred boundary is the one between working life and eldercare by informal caregivers. Eldercare roles are largely unplanned, gradually or critically developed, so
the general concern of informal caregivers is time management. (Stewart et al., 1996)

In Keeling and Davey’s (2007) work, they discussed caring and working rearrangements of caregivers as employer’s attitude toward employee’s responsibility to the elderly at home, formal leave from work, or catching up work on weekends. A number of papers focus on caregiver’s burden. Research has recognized the multi-dimensionality of the caregiver’s burden; variables include age, gender, socio-economic status, and the relationship with the care receiver. (Williams, 2006)

Aranda and Knight (1997) discussed the “spillover” effect of caregiving into other domains of the caregiver’s life, like family and work. Other studies focus on the gender role in caregiving burden. Family care has been traditionally taken as women family member’s responsibility. As Joseph and Hallman (1998) observed, in communities, the availability of family care may be particularly problematic because of the increased involvement of women family member in the paid workforce and the increasingly complex geography of the family. A vulnerable space exists now in home care. Morris et al. looked at gender variation in home care. Women family members are expected to supplement home care services without complaint but at a great personal expense to their own health, incomes, benefits, careers, and pension accumulation. (Morris et al., 1999) What is more, the move from institutional care to home care led to an overworked, underpaid isolated female labour force. Much of the research paints a homogeneous portrait of caregiving provided by female individuals.
who are motivated by attachment and norms of filial obligations. (Pyke, Bengston, 1996)

Another boundary is set within the family network. When care giving and receiving occur within the family network, the relationships with family members are widely discussed. Mothers, fathers, mothers-in-law, and fathers-in-law are the main care recipients. (Keeling et al., 2007) Creedon (2007) assumes that many of the elderly will care for their frail spouses over time. However, Keeling’s study shows that no respondents gave their spouse elderly care. In terms of the relationships between siblings who provide care, there always is a responsible one, and conflict exists as to how to share the health care responsibility. (Davey et al., 2004) The relations between family care giver and care recipient can be complex and stressful. (Keeling et al., 2007) Another circumstance is when family members live a certain distance away from the elderly who need care. Key strategies are obtaining help from family member or friends who live near the older adult, engaging formal services, the caregivers making regular visit to provide care directly to the elderly and moving parents closer to where they live. (Neal et al., 2007) Ley and Waters (2004) imply “spatial stickiness”, meaning the longer the distance the less likely people are to provide care. Studies also show that distance from the care recipient influences the decision about who is the primary care giver. (Phillipson et al., 2001) In other studies, research shows that income, employment and gender affect the provision of
long-distance care. (Neal e al., 2007) A more extreme situation is when the younger generation immigrates to another country, which leaves the provision of informal care more complicated. Baldock (2000) did research about transnational migrants in Australia, finding that distant carers contribute to the care of parents through letters, telephone calls and return visits. She also maintains that care at such distance can be constrained by financial limitations, social implications and political concerns. Policies and new system are needed to support the long-distance carers. (Neal et al., 2007)

A group of studies are on the relations and boundaries between informal home care, formal home care and institutional care, which has strong political implications. Informal home care is seen as a function of commitment and affection. (Abel & Net-son 1990; Graham, 1983) The uniqueness of informal care is its proximity, long-term commitment and rich knowledge of the elderly. (Walker et al., 1995) On the other hand, formal home care is with more resources and expertise, and more effective for care receivers. (Litwak, 1985; Walker et al., 1993) Many researchers agree that informal and formal home care cannot substitute for each other; that caregiving is a joint function shared by the informal and formal systems. (Bould et al., 1989; Litwak, 1985) The attempts to reduce or deny services to the elderly with families in order to reduce the cost of government expenditure have been observed in some jurisdictions. Hooyman (1990) argues that caregiving is the responsibility of
both the family and society. Political interventions between formal and family caregivers are important issues. (Archbold et al., 1995; Harvath et al., 1994) Formal interventions are especially important to families at transition points, when decisions or new skills are needed in order to continue to provide care. (Walker et al., 1995)

In the discussion of home care and institutional care, some researchers find one is more advantageous than the other, while others maintain that both forms of care are needed. In Keeling’s study (2007) in New Zealand, it is found that a number of family members commented that many older people and their families considered admission to long-term residential care as the “last resort”. Mehta’s research (2007) on Singapore reveals that in some cultures, sending older people to institutional care equals abandonment. Brown, Davis and Martens (1990) found that both patients and their family members prefer palliative care at home to institutions since home environment relates to normalcy, sustenance relationships and reciprocity. (as cited in Williams, 2005) Bonsang (2009) argues informal care is an effective substitute for long-term care as long as the needs of the elderly are low and require unskilled care that any policy encouraging informal care to decrease long-term care expenditures should take it into account to assess its effectiveness. Some studies found that institutionalization of the elderly family member does not signify an end to family caregiving. Family caregivers whose aging relatives live in nursing homes often continue their care-giving work and remain involved in the care process (Bowers,
1990; Moss, Lawton, Kleban, & Duhamel, 1993; Zarit & Whitlatch, 1992). Thus, the potential for the boundary conflict between staff and family members increases with level of family involvement. (Walker et al., 1995)

Another of literature is about utilization of home care. Forbes et al. (2004) and Mitchell et al. (2006) compared home care use in urban and rural areas in Canada and the indicators of home care use. They found geographic location played an important role in home care use, as for both the overall frequency of home care use and the preferences for certain types of home care services. Coyte (2003) argues that access to home care depends on where you live. Huge variation was observed between remote rural communities and urban communities. Also, eligibility requirement, service hours and payment vary among different provinces and countries. Some researchers observe a rural/urban discrepancy in home care use. Joseph and Martin-Matthews (1993) noticed that in some small rural towns in Canada in which the proportion of the elderly was large and growing, community care translated into elderly neighbours or family members.

The Canadian Home Care Association (CHCA, 2006, 2008b) describes a number of challenges that rural home care programs face. The most important are lack of health human resources (e.g., doctors, nurses, home support workers) as well as limited number of informal/family caregivers in rural and remote communities. Forbes and
Edge (2009, p. 121) also maintain that how the absence of intermediary services (e.g., Meals on Wheels, caregiver respite programs, supportive housing), specialty services, and long-term care beds in rural and remote communities often result in premature admission to acute care and long-term care facilities. (cited in Kitchen et al., 2011?) Similarly, Mitchell et al. (2007) did a study in Manitoba on the indicators of home care use in urban and rural settings. They found geographic location plays an important role in utilization. Urban residents are significantly more likely to use home care or certain home care services than small town or rural residents. Physical functioning is the strongest predictor of home care use regardless of place. However, urban residents with fewer years of education are less likely to use home care than those with more education, while the result is reversed in rural areas.

Hellström et al. (2001) relate the dependency on home care of people 75 years and older to the quality of life. They found that care mainly came from informal caregivers, who provide all Instrumental Activities of Daily Living (IADLs) and Personal Activities of Daily Living (PADL) tasks with the exception of house cleaning and bath/shower providing. Children are the main caregivers. Formal care normally deals with medical matters. A small number of care receivers are also care providers, but wives provide significantly more care than husbands. One third of people reported very low quality of life, which related to both physical and mental illnesses.
Liu et al. (2000) track the use of home care by disabled elderly in United State from 1982 to 1994. They found out that the disabled elderly with lower level of Activities of Daily Living (ADL) or IADL dependencies tend to pay for their own home care. When the dependency increases, Medicare and insurance played a more important role. Also, the proportion of those using both formal and informal care increases. Katz et al. (2000) did research on receipt of home care among the disabled elderly population in the United States. Their study shows a large gender difference in receipt of informal and formal home care. Disabled women received about one third fewer hours of care than their male counterparts. Married women with disabilities received many fewer hours of care than their male counterparts. They also showed that children, largely daughters, daughters-in-law, and granddaughters, were the dominant caregivers of disabled women whereas wives were the dominant caregivers of disabled men. Kemper (1992) showed that the probability of receiving informal care at home increases with all measures of need for care, the number of ADL disabilities, availability of immediate family, age, and being African American or Hispanic; and that it decreases with the presence of a state home care program, income, being female and recent changes for the worse. He also showed that informal caregivers are not only the most common providers of care in the community, but they also provide the greatest amounts of care.
Another body of literature deals with management and operational models of home care. Much of the research is about the Managed Competition Model of the home care sector in Ontario, Canada. Barabek et al. (1999) analysed the reform of community-based long-term care services in Ontario from 1985 to 1999. The debate was around the role of government, individual families and the place of home care (see Abelson, 2004; Aronson, (2004; Cloutier-Fisher, 2006; England, 2008). Managed Competition rests on a belief in the cost-efficiency of applying a business model to public service delivery (Means, Morbey and Smith 2002). Researchers criticized the model that constrained providers, eroded service choices, and reduced access to long-term care in rural areas specifically. (Cloutier-Fisher, 2006) Aronson et al. (2004) describe the managed competition model in Ontario as "market-mimicking" (see Jenson and Phillips, 2000) or a "contractual" (see MacAdam, 2000) approach to home-care policy, where all direct services are contracted out to non-governmental agencies on a business-modelled basis. They further argue that the issue is about government’s responsibility in coordinating services, funds, and employment. Randall et al. (2006) examine the model’s effect on rehabilitation home care services in Ontario. The result shows instead of what political rhetoric promised as reducing costs and improving quality, the managed competition model resulted in higher per-visit costs and reduced accessibility to the services. Cloutier-Fisher (2006) studied the effect of the model on rural areas in Ontario. The research showed an increasing uncertainty in service provision and patients, which led some elderly people living
in rural areas to have less choice, and accessibility to home care service, and made them more vulnerable to institutionalization. Also, challenges for the voluntary sector serving in rural places were observed.

Williams (2006) concluded there were several negative impacts of the managed competition model on the home care sector, including practitioner turnover, continuity of care, quality of care and future health care expenditure issues. She also pointed out that there is a demographic trend pointing to a decrease in informal caregivers and a growing need for formal care practitioners, but under the current model, the supply will be hard to ensure.

On the more positive side, Doran et al. (2007) found the contract character of the managed competition model is not largely related to the consistency of principal nurse visits or client outcomes. What is more, the clients cared for by for-profit agencies reported slightly higher satisfaction with care and better mental health outcomes than clients using not-for-profit agencies. Despite the debate on the managed competition model in Ontario, some governments now have policies on financing informal caregivers and researchers have started on studying support for family carers as to provide more scientific evidence for policy making. (Stoltz et al., 2004)
In all, the discussion on home care serves as an important angle for population aging and any solutions for serving an aging population. The discussion also, has critical policy implications. Debate is continuing on whether home and community care is cost-efficient or not, whether it will improve health care quality, and is beneficial to both caregiver and care receiver. However, there remains limited research on the utilization patterns of home care from physical, social and spatial perspectives among elderly population.
Chapter Three

Proposing a Conceptual Framework for Home Care Research

The existing literature on home care and the elderly population, and conceptual frameworks on population health, determinants of health and geography of health have helped in the development of a conceptual framework for this specific research on home care use and the elderly population.

3.1 Review of conceptual frameworks on health

There are a number of bodies of literature on conceptual frameworks for health research. Generally speaking, the themes of the models include: general population health; health utilization; social capital and networks; health and policies; health promotion; globalization; and health.

Evans et al. (1990), Hertzman et al. (1994), WHO (World Health Organization), the University of Ottawa and Etches et al. (2006), among others have developed models of population health. Evans et al. (1990) developed the Canadian Institute for Advanced Research (CIAR) model of health determinants. The goal is to understand the health of a population by determinants beyond the bounds of health care system.
The models designed by Hertzman et al. (1994) and WHO are more focused on health equity issues. They judge the equity of health both on social and political factors. University of Ottawa (1998) developed a population health model as well. Their initial idea was to describe a vision of population health as a transdisciplinary academic field. They see population health as a multidisciplinary goal. Etches et al. (2006) suggest a conceptual framework developing indicators in order to cover all the domains of population health. Indicators incorporate principles of justice, transparency, and effectiveness.

At a more focussed level, Anderson (1995) designed a framework for health care utilization and population health. This framework assists in the understanding of health services utilization, measurement of equitable access, population health status and policies to promote equitable use of health services. (Anderson, 1968)

Several models place the emphasis on social determinants of health. Berkman et al. (2000) present an Upstream-Downstream model on how social networks impact health. The model begins with macro-social networks in which upstream forces are seen to condition network structure and ends with the micro psychobiological processes. Helliwell’s (2001) model correlates social capital, human capital and health. Brunner and Marmot (2004) also developed a model on links between social structures and health outcomes.
Numerous models illustrate how policy influences health. Health Canada presented a population health framework within "Strategies for Health Promotion" (Health Canada, 1994). The document notes "At the top of the pyramid is population health status, the ultimate purpose for our actions". The model includes collective factors that influence health, and finally generate interventions to address the determinants. Green et al. (1999) designed the Precede-Proceed framework for health program planning and evaluation, which helps planners to decide what health issues to address and how to address them. Determinants contain social assessment, epidemiologic assessment, behavioural and environment factors, educational and ecological assessment, and key administrative and policy factors. Starfield (2001) views political forces and primary care as the key elements of health services, so he developed a model based on various political factors.

Several models are intended to address health promotion programmes. Ottawa-Carleton Health Department built a model in the mid 1980s. The goal was to build population self care capacity and optimum health. Included in the model were three strategies: promoting individual and family action, influencing the environment and building partnership. The Ottawa Charter (1986) also included a health promotion model. The goal was to enable people to increase control over their health, create supportive environments, strengthen community action, develop personal skills and reorient health services.
Health researchers have also observed the effect of globalization on health. Huynen et al. (2005) developed a framework by first identifying the main determinants of population health and the main features of the globalisation process. The resulting conceptual model visualises how globalisation affects the institutional, economic, social-cultural and ecological determinants of population health.

There remains a need for a conceptual framework for home care utilization which takes into account factors and issues raised in the above frameworks and the literature from Chapter Two.

3.2 Proposing a conceptual framework for home care research

The conceptual frameworks reviewed above seek to explain population health, access, and health inequality. Each framework brings up several important points: Anderson’s equity in health care access, health choice and health care use, and the innovative concept of population characteristics; Starfield’s systematic differences in determining health; Etcher’s life course approach and geographical inequality; WHO’s cohesive system of all factors, and intermediate and structural determinants. Some models are applicable to certain areas in health research, while others are restrictive. Above all, Anderson’s population health model fits home care research better than the others, but should be modified. Some ideas from the other three models
should also be incorporated into Anderson’s framework to form a conceptual framework for home care research.

Fig 3.1 shows the revised framework based on Anderson’s population health model. Not only some factors and correlations are changed, but also the definitions of certain terms are expanded.

![Figure 3.1 Conceptual framework on home care](image-url)
The first component is environment. It contains three levels of policies and social, economic, environment context. The broadest level is the external environment. It refers to the physical, social, political, and economic environment in a society. From a policy perspective, it also includes environmental, social, economic and related policies. The medium level is the health care system. A health care system in this framework refers to national health policy, resources available in the health system and the system organization. It is influenced by the broader social and political environment and it will in turn have impacts on the upper level policy orientation. For example, the health system reform taking place in Canada in the 1990s was under the circumstances of economic restraint, increasing health care expenditure and excess inpatient capacity. The third level is the home care system. The home care sector includes public and private funded home care, and formal/ informal home care. The home care system means the organization and management model of the home care sector. The health care system affects the home care system through funding and planning, while the changes in the home care sector will reflect the overall health care system.

The second part is population characteristics and health need. The first component within this part is predisposing characteristics. This term is drawn from Anderson’s population health model. In the new model, the term is expanded. The concepts of structural and intermediate social determinants of health are borrowed from the WHO
health equity model. Here predisposing characteristics include structural and intermediate determinants, social structure and health beliefs. To be more specific, factors such as age, gender, marital status, ethnicity, education, occupation, income, living and working condition, personal ability coping with community and physical environment, culture, social networks and interactions, health beliefs, etc. are included. All of the above factors are important for home care. Home care utilization patterns vary based on different structural health determinants; living conditions are a big concern for home care service performance; personal ability coping with the community and the physical environment determine the need for home care; social networks are largely to do with informal home care providers; health beliefs and culture influence health care choice.

The second component is enabling resources, which contains two meanings. One is the available personnel, facilities and other health providers. For home care, it refers to informal care givers like family, friends, neighbours, volunteer agencies and formal care providers that are from government planned or profitable private home care facilities. The availability of personnel and facilities may vary significantly between urban and rural areas. The other one is to know the means of how to get home care services. Normally, people living in remote rural areas have less information on how to get or use home care services provided by facilities.
The third component is health need. It means a person’s self-evaluated need for home care. The home care services provided might not meet the self-perceived need.

The third part of this framework is personal health behaviour and utilization. Personal health behaviour means the behaviours in daily life that are related to health, such as diet, physical exercise, self-care, etc. Behaviours are influenced by population characteristics and they will have large effects on health outcomes. Utilization has different levels of meanings. It can refer to the type, site, purpose and coordinated services of a single time use of a health service; it can also refer to how utilization patterns vary by age, gender, ethnicity and geography. Different people may have various levels of accessibility to home care, which generate the idea of inequitable accessibility to home care. Understanding how to evaluate inequitable accessibility has far-reaching implications for reforming home care.

The final part of this framework is health outcomes, which contains health status and consumer satisfaction. Including health status in this framework helps researchers to evaluate the effectiveness of home care and home care’s influence on population. Thus, decision makers can discuss the cost-effectiveness of home care within the health care system. Since home care has not maturely developed yet, consumer satisfaction has a significant role to play in service planning and reform.
The four parts of the conceptual framework are closely related. Environmental factors have impacts on social structures, health beliefs, enabling resources and self-evaluated home care need. Population characteristics and health needs determine health behaviours and utilization, and environment works on utilization through population. In turn, health behaviours and use affect the population. Health outcomes are determined by all the other three parts directly. Health outcomes then can be used in judging the health system and policies, and provide evidence for policy reforms.

Finally, the terms, inequality and inequity have to be differentiated as they underpin the conceptual framework. Health inequality refers to health disparities, including all types of variation of health and health care among different groups of the population. Health inequity means a systematic inequality in health between more or less advantaged social groups. That is to say, not all health inequalities are unjust while health inequity stands for the unfair distribution of health resources among population. (Braveman et al., 2003)
Chapter Four

Methodology

This study uses data from Canadian Community Health Survey (CCHS) public use files cycle 1.1, 2.1 and 3.1 for the analysis. CCHS is a cross-sectional survey that collects information related to health status, health care utilization and health determinants for the Canadian population. It collects responses from persons aged 12 or older, living in private occupied dwellings in health regions covering all provinces and territories, excluding individuals living on Indian Reserves and on Crown Lands, institutional residents, full-time members of the Canadian Forces, and residents of certain remote regions. (Statistics Canada, 2001) CCHS contains complete information of the respondents, including socioeconomic status, geography, and health condition etc. For questions on home care, the respondents were asked whether received home care services in the past 12 months. Questions on specific services received and needed, service providers, unmet home care needs and the reasons were asked as well. The three cycles were done in 2001, 2003 and 2005 separately.

The three cycles have 130880, 134072 and 132221 cases and include 614, 1068 and 1284 variables respectively. In this research only those cases where there is an individual aged 65 years old and over living in Ontario are included. The unweighted sample sizes are 7729, 9434, and 8998. (See Appendix 1 - TableA-1)
The geographic unit using in this research are Health Unit and peer group. There are 36 health units in Ontario, which are official health agencies established by a group of urban and rural municipalities to provide health programs on a community level. A peer group is a cluster of health units with similar social and economic factors. The initial creation of the concept “peer group” was the consideration of the impact of social and economic factors on health outcomes. There are in total 9 peer groups set in Canada based on 24 socio-demographic and economic variables including basic demographics, living conditions and working conditions. Not all nine peer groups are necessarily found in each province. Based on the geographical character each health unit in Ontario, they are categorized into only six of the nine peer groups: Urban/Rural Mix, Urban Centres, Sparsely Populated Urban-Rural Mix, Mainly Rural, Metro Centre and Rural Northern Regions. The study compares home care users, home care accessibility and home care provision based on peer group level, to determine the spatial pattern of home care service in Ontario.

<table>
<thead>
<tr>
<th>Peer group</th>
<th>Principal characteristics</th>
</tr>
</thead>
</table>
| A          | Urban-rural mix from coast to coast  
            | Average percentage of Aboriginal population  
            | Low male population  
            | Slow population growth from 1996 to 2001 |
| B          | Mainly urban centres with moderately high population density  
            | Low percentage of government transfer income  
            | Rapid population growth from 1996 to 2001 |
| C          | Sparsely populated urban-rural mix from coast to coast  
            | Average percentage of Aboriginal population  
<pre><code>        | Negative population growth |
</code></pre>
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
</table>
| **E** | Mainly rural regions in Quebec, Ontario and the Prairies.  
High proportion of people recently moved to or within these regions since 1996.  
Average percentage of Aboriginal population.  
Moderate population growth. |
| **G** | Largest metro centres with an average population density of 3,934 people per square kilometre.  
Low Aboriginal population.  
Moderate percentage of government transfer income.  
High female population. |
| **H** | Rural northern regions.  
High Aboriginal population.  
High male population.  
Negative population growth. |

**Table 4.1** Peer groups

![Map of Southern Ontario](image)

**Fig 4.1** Map of Southern Ontario---by Peer Groups
The first step is descriptive analysis of those 65 years and older in Ontario. The basic socio-demographic and health characteristics of the home care users (≥ 65 years) in Ontario is identified including age, gender, marital status, household income, living arrangement, chronic condition, activity etc. The data are weighted throughout the analysis using sample weights supplied by Statistics Canada to produce population estimates. Some of the variables can only be found in two of the three cycles and this is noted in the text and it should be assumed that if a cycle is missing in a figure or table it is because the variable was missing unless otherwise noted.
Cross-tabulations are used to examine the health status of different age cohort using home care, the spatial pattern of home care utilization and the inequality of home care accessibility. The equity of home care accessibility is examined as well. The gap between home care needed and received is revealed, and the reasons for unmet home care are identified on a spatial level. Then, the data shows the received home care services provided by different providers and their share in the home care sector.

The second step is logistic regression analysis of the data. The data is processed using SPSS. The purpose is to measure the determinants of home care use provided by different agents, (government, private agency, informal caregiver, and others) and unmet home care need. The first model only includes self-perceived health status as an independent variable. Since chronic conditions and activity restrictions are closely related to health status, the study only adopts health status as an independent variable. People who report excellent, very good or good health are recoded into a “Good health” category. The other two categories, fair and poor health remain as separate categories. In the second model, socio-economic variables are added as independent variables including: age, household income, and marital status. Marital status married or common-law is recoded into a group labelled “with partner” and those who are widowed, separated, divorced, single and never married are grouped into “without partner”. The third model adds a geographical variable, peer group. Peer groups are regrouped by their level of urban and rural attributes. Peer group A, B and G are
recoded into “urban” and peer groups C, E and H are recoded into “Rural” for the analysis. By looking at odds ratios and the Rho-square measures generated in SPSS one can identify statistically significant determinants of home care use and unmet home care need and the overall fit of the models.
Chapter Five

Analysis

5.1 What are the patterns of home care utilization?

According to the data from CCHS cycle 1.1 to 3.1, 3.4% of the people in Ontario used home care in 2001, and the percentage increased to 7% and 6.8% in 2003 and 2005 respectively. Among the home care users, the majority are people above 65 years old and women. People above 65 years old make up 78.9%, 71.9% and 71.5% of the home care users in 2001, 2003 and 2005 respectively. Within the elderly group of home care users, around half of the users are part of the oldest old group (above 80 years old). Among home care users above 65 years old in the three cycles of CCHS home care users above 65 years old, 80.2%, 81.8% and 79.9% are women. People with household incomes ranging from $15000-$29999 are the main home care users followed by the income group with household incomes of $30000-$49999 (Figure 5.1). People with household incomes between $15000-$29999 tend to use more government provided care and informal care than private agency provided care and they are the main users of public home care and informal care. The low income group’s use of home care decreased in each cycle year. The higher income group uses
the least percentage of home care, but their share of private care use is greater compared to public and informal care use (30%, 35.5% in 2003 and 2005).

For marital status, the three cycles show a consistent result that people who are widowed, separated or divorced are the main users of home care. (73.9%, 72.4% and 79.4% in 2001, 2003 and 2005) compared to the other group who are married who receive a greater amount of care from their partners (15.3%, 20.3%, and 12.2% in 2001, 2003 and 2005).

As for living arrangements (Figure 5.2), on average 45.1% (47.8%, 44.1% and 43.4% in 2001, 2003 and 2005) of people using home care are living with a spouse or partner in contrast to people who are unattached alone (29.7%, 18.1% and 29.5% in 2001,
Data show that informal care provided by family, neighbours or volunteers contributes significantly to home care use among people living with spouses and partners (Figure 5.3). For people unattached alone, on average 35% of the home care services are provided by private agencies (31%, 41% in 2003 and 2005).

Fig. 5.2 Overall home care use by living arrangement (cycle 1.1—3.1)
In 2001, 71.1% of the home care users reported fair or poor health. The number went down to 65.4% and 62.6% in 2003 and 2005 respectively, but the proportions are still large (Figure 5.4). People reporting excellent, very good or good health status obviously increased. Among those reporting poor health, people above the age of 80 years old make up almost half of the users reporting poor health. (47%, 43% and 42% in 2001, 2003 and 2005.)

The top five chronic condition home care users have are, arthritis, high blood pressure, heart diseases, cataracts and back problems (Figure 5.5). A slightly increasing trend of chronic condition can be observed as well. Also, more that 10% of the home care users reported urinary incontinence and diabetes.
Around 60% of home care users reported often having difficulties with activities of daily living (Figure 5.6). Help is most often need for mobility. The data also show that help is most needed for getting to appointments, doing housework and heavy household chores.
Fig. 5.4 Home care use by health status
Fig. 5.5 Home care use by chronic conditions (cycle 1.1—3.1)
Fig. 5.6 Home care use by activity restriction (cycle 1.1-3.1)

The spatial distribution of home care use shows that people from urban centers use home care most often, followed by people from urban/rural mixed areas and mainly rural areas (Figure 5.7). These areas are all in more populous Southern Ontario. While people from sparsely populated urban/rural mixed areas and rural northern areas use the least amount of home care. People from urban centers tend to use more private home care and people living in urban/rural mixed areas and mainly rural areas use more government and informal home care. People living in rural northern areas use the least amount of private home care.

In all, people who are older, women, people with household incomes between $15000-$29999, people whose marital status is widowed/separated/divorced, people
living with a spouse, people with fair/poor health status, have a chronic condition such as arthritis, high blood pressure, heart diseases, cataracts or back problems, having difficulties with Instrumental Activities of Daily Living (IADLs), and living in urban centers tend to use more home care.

5.2 Is there equitable access to home care in Ontario?

The data above show relatively consistent results in home care utilization patterns among cycle 1.1 to cycle 3.1. Also, cycle 3.1 is the most recent data available and has the most complete variables. In this part, the research only uses data from cycle 3.1.

Among all the people above 65 years old in Ontario, 2% of people reported unmet home care needs. Among people who use home care, 5.8% of people still reported unmet home care needs. People from Rural Northern regions and sparsely populated rural/urban mixed areas have higher chances of unmet home care. Also, rural northern regions have a higher ratio of those who need home care but never receive any followed those from the metro center and urban centers. People from remote places with very low population density have the least accessibility to home care. For people living in metro and urban centers, they tend to receive home care, but amount is insufficient (Figure 5.8). When taking population into consideration, among those who reported unmet home care needs, more people are from urban/rural mix areas, rural areas and urban centers (Figure 5.9).
Fig. 5.7 Spatial distribution of home care use (Cycle 3.1)
Figure 5.8 Percentage of people with unmet home care needs (Cycle3.1)

Figure 5.9 Distribution of people with unmet home care needs (Cycle3.1)
5.3 The service gap

Figure 5.10 shows the services needed among those who have unmet home care needs. It shows that 52% of the individuals have unmet meal delivery needs followed by housework, shopping and respite care. It suggests a large service gap between home care provided and home care received.

When looking at the services provided, it shows that most of the government provided services are housework, meal and nursing care (Figure 5.11). Private agencies tend to provide more housework and personal care services (Figure 5.12). For informal care givers, they provide care like housework, shopping, meal delivery and personal care (Figure 5.13). It appears that government provided care emphasises comparatively more professional medical services while informal care givers provide more non-medical services. In this case, informal caregivers provided a large portion of the most needed care, especially meal delivery and shopping. Both public and private home care provides substantial amounts of housework, but the gap is still great. There are 10.3% of respondents reporting unmet respite care. Informal caregivers give most of the respite care while government and private care givers provide the least respite care among the other services.
Figure 5.10 Unmet home care services (Cycle 3.1)

![Bar chart showing types of care needed]

- Meal: 52%
- Housework: 26.70%
- Shopping: 15.60%
- Respite care: 10.30%
- Nursing care: 7.40%
- Other: 4%
- Med. equip/supplies: 3.40%
- Health service: 2.70%
- Personal care: 1.30%

Type of care needed

---

Figure 5.11 Received home care services provided by government (Cycle 3.1)

![Bar chart showing received services by government]

- Housework: 29.50%
- Meal: 28.20%
- Nursing care: 25.20%
- Shopping: 7.30%
- Health service: 6.70%
- Personal care: 5.20%
- Other: 2.80%
- Med. equip/supplies: 1.90%
- Respite care: 1.90%

Received services by government
Figure 5.12 Received home care services provided by a private agency (Cycle 3.1)

Figure 5.13 Received home care services provided by informal caregivers (Cycle 3.1)
5.4 The providers’ roles

Most respondents tend to contact government for the solution of their unmet home care needs (Figure 5.14). The data show that 31.3% of the elderly with unmet home care needs contacted the government, and only 7.1% and 5.3% of them contacted informal caregivers or a private agency respectively. However, when looking back at the data of the share of home care between public, private and informal caregivers, 51.4% of the elderly users use informal care and 46% of them use public home care (Figure 5.15). People contact the government first, but they normally end up taken care of by family and friends. So people tend to rely on public service, but the government does not meet all the need meaning the burden has been shifted to informal care givers.

![Figure 5.14 The providers contacted first by people (Cycle3.1)](image-url)

Figure 5.14 The providers contacted first by people (Cycle3.1)
5.5 The reasons for unmet health care

The data show that the top reasons for unmet home care services among the elderly population in Ontario are: still waiting for the service, cost too high, other, didn’t know where to go, did not want to bother, and not available in the area (Figure 5.16). Barely anyone reported too busy, language barrier and family responsibility as obstacles to accessing home care. Elderly people living in rural northern regions encounter more barriers such as high cost, not available in the area, still waiting, and didn’t know there to go than the other people in Ontario. Elderly people living in urban centers identify waiting time too long and not available for the time required as the barriers to home care more that the other regions. For those living in sparsely
populated urban-rural mixed areas and mainly rural areas, didn’t know where to go and high costs are the main reasons. Urban/rural mixed areas show a higher percentage of elderly people who did not qualify the service and did not want to bother to use the service. Elderly people from the metro centre region also think that did not know where to go and high cost are the main barriers.

In all, a large number of patients are still waiting for service, among which rural northern regions have the highest percentage of people waiting. High cost, and did not know where to go are the major barriers for all the people but more severe for remote, rural, and metro centre residents than urban residents. While those who live in urban centres think time is the major concern. For more remote rural northern areas, it shows that service is not available in some places. A certain number of people also think the procedure is complicated and that they did not want to bother to get the service.
Having identified the users of home care and barriers to home care accessibility on a spatial level, the next step is to examine the complexity of the determinants and their relationship to home care use using binary logistic regression analysis. Since the results from the first research question indicate that the home care utilization patterns throughout the three cycles of CCHS remain similar, logistic regression is only carried out using the unweighted data from CCHS cycle 3.1. Five logistic regression analyses are performed (Table 5.2 to Table 5.6) on overall home care use, public home care use, private home care use, informal care use and unmet home care need separately. Each regression contains three models. The first model includes only health status as an independent variable. Socioeconomic variables are added in for the
second model including age, sex, household income, marital status variables. The third model includes geographical variables. Peer groups Metro Centre, Urban Centres and Urban/Rural Mix are grouped into “urban” in the analysis. Peer groups Sparsely Populated Urban-Rural Mix, Mainly Rural, and Rural Northern Regions are grouped into “rural” in the model.

Table 5.1 shows three models for overall home care use. The first model explores the relation between health status and overall home care use. It shows that seniors who have fair health are 1.765 times more likely to use home care, and seniors who report poor health are almost 5 times more likely to use home care. With respect to socioeconomic status, the odds ratios indicate that the likelihood of using home care increases when the age is older, sex is female, household income is lower and marital status is widow/separated/divorce/single/never married. For example, compared to those between the ages of 65-69, those aged 70-74 are 54.9% more likely to use home care, and seniors within age cohorts 75-79 and 80 and over, are 102% and 400% more likely to use home care. Women are 26% more likely to use home care than men. For those within the lowest household income group (less than $15000) are 36% more likely to use home care than those whose household incomes are $50000 and over, and the income group $15000 to $49999 is 24% more likely to use home care than $50000 and more household income group. Relative to those who are single, the odds ratios show that individuals who are married are less likely to receive home care. This finding is consistent with previous analyses that a clear home care utilization pattern is displayed by health status, age, sex, household income and marital status. The inclusion of the socioeconomic variables results in a higher rho-squared value as compared to the previous model (0.165 compared to 0.093). The third model
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1 (^a)</th>
<th>Model2 (^b)</th>
<th>Model3 (^c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
</tr>
<tr>
<td>Good Health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Health</td>
<td>1.017</td>
<td>0.068</td>
<td>2.765***</td>
</tr>
<tr>
<td>Poor Health</td>
<td>1.787</td>
<td>0.085</td>
<td>5.969***</td>
</tr>
<tr>
<td>Age 65-69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 70-74</td>
<td>0.438</td>
<td>0.113</td>
<td>1.549***</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>0.705</td>
<td>0.111</td>
<td>2.023***</td>
</tr>
<tr>
<td>Age 80 and over</td>
<td>1.628</td>
<td>0.103</td>
<td>5.095***</td>
</tr>
<tr>
<td>Sex Male</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex Female</td>
<td>0.232</td>
<td>0.076</td>
<td>1.262**</td>
</tr>
<tr>
<td>Household Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50000 and more</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15000-$49999</td>
<td>0.218</td>
<td>0.094</td>
<td>1.244*</td>
</tr>
<tr>
<td>Less than $15000</td>
<td>0.310</td>
<td>0.127</td>
<td>1.363*</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/common-law</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window/separated/divorce, single/never married</td>
<td>0.258</td>
<td>0.080</td>
<td>1.295**</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Sample size, 8972; Percentage Correct, 83.2; Rho-squared, 0.093; Significance *p<0.05; **p<0.01; ***p<0.001  
\(^b\) Sample size, 7200; Percentage Correct, 89.6; Rho-squared, 0.165; Significance *p<0.05; **p<0.01; ***p<0.001  
\(^c\) Sample size, 6940; Percentage Correct, 84.1; Rho-squared, 0.167; Significance *p<0.05; **p<0.01; ***p<0.001
includes geographical variable. The table shows that seniors living in rural areas are 18.7% less likely to use home care than seniors living in urban areas in Ontario. The inclusion of the geographical variable results in a slightly higher rho-squared value as compared to the previous model (0.167 compared to 0.165).
### Table 5.2 Government provided home care

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated</td>
<td>Standard</td>
<td>Estimated</td>
<td>Standard</td>
<td>Estimated</td>
<td>Standard</td>
</tr>
<tr>
<td></td>
<td>Coefficient (β)</td>
<td>Error</td>
<td>Coefficient (β)</td>
<td>Error</td>
<td>Coefficient (β)</td>
<td>Error</td>
</tr>
<tr>
<td>Good Health</td>
<td>-.2635</td>
<td></td>
<td>1.053</td>
<td>0.082</td>
<td>2.866***</td>
<td></td>
</tr>
<tr>
<td>Fair Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.976</td>
<td>0.095</td>
<td>2.654***</td>
<td>1.018</td>
<td>.097</td>
<td>2.768***</td>
</tr>
<tr>
<td>Poor Health</td>
<td>1.879</td>
<td>0.094</td>
<td>6.524***</td>
<td>1.823</td>
<td>0.112</td>
<td>6.193***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 65-69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 70-74</td>
<td>.345</td>
<td>0.138</td>
<td>1.412*</td>
<td>.326</td>
<td>.140</td>
<td>1.385*</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>.551</td>
<td>0.137</td>
<td>1.734***</td>
<td>.519</td>
<td>.139</td>
<td>1.681***</td>
</tr>
<tr>
<td>Age 80 and over</td>
<td>1.532</td>
<td>0.123</td>
<td>4.628***</td>
<td>1.515</td>
<td>.125</td>
<td>4.551***</td>
</tr>
<tr>
<td>Sex Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex Female</td>
<td>0.175</td>
<td>0.091</td>
<td>1.191</td>
<td>0.208</td>
<td>0.093</td>
<td>1.231*</td>
</tr>
<tr>
<td>Household Income $50000 and more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15000-$49999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $15000</td>
<td>0.183</td>
<td>.113</td>
<td>1.201</td>
<td>0.158</td>
<td>0.115</td>
<td>1.171</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/common-law</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window/separated/divorce, single/never married</td>
<td>0.148</td>
<td>0.095</td>
<td>1.160</td>
<td>0.112</td>
<td>0.097</td>
<td>1.118</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>-.262</td>
<td>.084</td>
<td>0.769**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

* Sample size, 8972; Percentage Correct, 89.4; Rho-squared, 0.057; Significance *p<0.05; **p<0.01; ***p<0.001

  | Sample size, 7200; Percentage Correct, 83.6; Rho-squared, 0.114; Significance *p<0.05; **p<0.01; ***p<0.001

  | Sample size, 6940; Percentage Correct, 89.6; Rho-squared, 0.167; Significance *p<0.05; **p<0.01; ***p<0.001
Table 5.2 shows the three models of government provided home care use. The first model indicates that People with fair health status are almost twice as likely as seniors with good health to use government provided home care. People with poor health status are 5.5 times more likely to use home care provided by government.

The likelihood of using government provided home care increases when age increases, with odds ratios 4.628, 1.734 and 1.412 for age group 80 and over, 75-79, and 70-74. Those with household incomes less than $15000 are 37.4% more likely than the income group $50000 and over to use government provided home care. When the geographical variable is added, the income variables become insignificant, while females shows a 23.1% higher chance of receiving government provided home care than for males. The model also indicates that seniors living in rural areas are 23.1% less likely to receive government provided home care than those residing in urban areas. The lack of significance of some socioeconomic variables might be explained by the management and policies of the home care sector in Ontario. CCACs are responsible for the assessment eligibility and needs for clients. However, there is no assessment standard and regulations on a legislative level in Ontario. Health status is the only need criterion. Also, Ontario is one of the three provinces in Canada that does not have a formal income assessment process for home care services. (Provincial and Territorial Home Care Programs: A Synthesis for Canada, Health Canada) The inclusion of the socioeconomic and geographical variables has results in higher rho-squared values as compared to the previous models (0.167 compared to 0.114 and 0.057). It stands that the third model fits the best for assessing government provided home care and the geographical factor plays an important role in explaining public home care utilization pattern in Ontario.
Table 5.3 assesses the use of home care provided by private agencies. For all the three models tested, the only significant variable significant is marital status. The rho-squared value appears low as well. This is because the sample size is small for private home care use since private home care takes up a comparatively small share of home care provision. Table 5.4 analyses informal home care utilization. The first model shows that seniors with poor health status are 80% more likely to use informal home care. The second model includes socioeconomic variables, and the results indicate that low income and marital status of married or common-law increase the likelihood of informal home care use in addition to poor health status. For those with household incomes less than $15000, they are more likely to receive informal home care (Odds ratio=1.88). While being widowed, separated, divorced, single or never married are 44.2% less likely to receive informal home care than seniors married or with common-law partners. The Rho-squared value is slightly higher than the first model. The third model includes the geographical factor. In this model, low income is no longer related to informal home care use. Also, geographical variables are not significant. In general, the sample size is small for informal home care use. However, it explains that people with higher income and those who are not married or without common-law partners are less likely to receive informal home care.
Table 5.3 Private home care use

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
</tr>
<tr>
<td>Good Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Health</td>
<td>-0.084</td>
<td>0.180</td>
<td>0.919</td>
<td>0.007</td>
<td>0.207</td>
<td>1.007</td>
</tr>
<tr>
<td>Poor Health</td>
<td>-0.341</td>
<td>0.212</td>
<td>0.711</td>
<td>-0.240</td>
<td>0.252</td>
<td>0.787</td>
</tr>
<tr>
<td>Age 65-69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 70-74</td>
<td>0.034</td>
<td>0.360</td>
<td>1.035</td>
<td>-0.022</td>
<td>0.364</td>
<td>0.978</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>0.399</td>
<td>0.340</td>
<td>1.490</td>
<td>0.371</td>
<td>0.344</td>
<td>1.449</td>
</tr>
<tr>
<td>Age 80 and over</td>
<td>0.455</td>
<td>0.310</td>
<td>1.577</td>
<td>0.385</td>
<td>0.313</td>
<td>1.470</td>
</tr>
<tr>
<td>Sex Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex Female</td>
<td>-0.017</td>
<td>0.210</td>
<td>0.983</td>
<td>0.010</td>
<td>0.215</td>
<td>1.010</td>
</tr>
<tr>
<td>Household Income $50000 and more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15000-$49999</td>
<td>-0.318</td>
<td>0.252</td>
<td>0.727</td>
<td>-0.334</td>
<td>0.254</td>
<td>0.716</td>
</tr>
<tr>
<td>Less than $15000</td>
<td>-0.510</td>
<td>0.327</td>
<td>0.600</td>
<td>-0.431</td>
<td>0.330</td>
<td>0.650</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/common-law</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window/separated/divorce/single/never married</td>
<td>0.474</td>
<td>0.221</td>
<td>1.606*</td>
<td>0.492</td>
<td>0.226</td>
<td>1.636*</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Sample size, 841; Percentage Correct, 72.7; Rho-squared, .005; Significance *p<0.05; **p<0.01; ***p<0.001
* Sample size, 666; Percentage Correct, 74.5; Rho-squared, .031; Significance *p<0.05; **p<0.01; ***p<0.001
* Sample size, 648; Percentage Correct, 74.5; Rho-squared, 0.114; Significance *p<0.05; **p<0.01; ***p<0.001
Table 5.5 tests unmet home care need using the three models as well. The first model shows that seniors with poorer health status have higher chance of having unmet home care need. Seniors with fair health status are almost as twice as likely than those with good health to have unmet home care needs. (Odds ratio=2.899) The chance increases by 5 times with senior who reported poor health status. (Odds ratio=6.325) When one adds the socioeconomic variables into the model, it shows that the oldest old age cohort (80 and over) has the highest likelihood of having unmet home care needs. (Odds ratio=1.768) Being female increases the likelihood by 74.7% of having unmet home care needs. When household income decreases, the likelihood of having unmet home care need increases. The income group who have less than $15000 is more than 2.5 times more likely to have unmet home care needs than the income group with more than $50000 and the income group $15000-$49999 is almost twice more likely than the income group more than $50000 to have unmet home care needs (Odds ratio= 3.544; Odds ratio=2.862). Being widowed/separated/divorced, single/never married increases the chances of having unmet home care needs by 67.4% as well. The rho-squared value for this model is higher than the first model (0.124 compared to 0.068), which means the second model explains more of the variance for unmet home care need than the first one. The third model includes geographical variables. The geographic variables are not significant in this model. The cross-tabulation results indicate a geographical variation in unmet home care needs. However, when taking into account health status and socioeconomic factors, the geographical variable is no longer significant. It means the geographic variable is not as strong as the socioeconomic and health status variables in affecting unmet home care need, but geographical variation still exists for unmet home care need.
In general, determinants are identified for overall home care use, public home care use, informal home care use and unmet home care need. The results for private home care were less robust likely because of the small sample size. For overall home care use, seniors are with poorer health status, older age, female, with lower household income, marital status widowed/separated/divorced/single/never married and living in urban areas are more likely to use home care. For home care use provided by government, the likelihood of using government provided home care increases when the senior’s health status is poor, age increases, sex is female, and living in urban areas. The income and marital status variables are not significant. Age and sex are not related to informal home care use while poor health, low income and marital status increase the likelihood of use of informal home care use. For unmet home care needs, the likelihood of having unmet home care needs increases with poorer health status, older age, being female, lower income, and being widowed/separated/divorced, single/never married. Especially for seniors reporting poor health status and income group less than $15000, the likelihood of having unmet home care increases significantly.
### Table 5.4 Informal home care use

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1 a</th>
<th></th>
<th>Model 2 b</th>
<th></th>
<th>Model 3 c</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
</tr>
<tr>
<td><strong>Good Health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Health</td>
<td>0.254</td>
<td>0.173</td>
<td>1.290</td>
<td>0.316</td>
<td>0.202</td>
<td>1.372</td>
</tr>
<tr>
<td>Poor Health</td>
<td>0.588</td>
<td>0.207</td>
<td>1.801**</td>
<td>0.535</td>
<td>0.245</td>
<td>1.708*</td>
</tr>
<tr>
<td><strong>Age 65-69</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 70-74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 75-79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 80 and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sex Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex Female</td>
<td>0.063</td>
<td>0.202</td>
<td>1.065</td>
<td>0.034</td>
<td>0.207</td>
<td>1.035</td>
</tr>
<tr>
<td><strong>Household Income $50000 and more</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15000-$49999</td>
<td>0.354</td>
<td>0.243</td>
<td>1.425</td>
<td>0.404</td>
<td>0.245</td>
<td>1.497</td>
</tr>
<tr>
<td>Less than $15000</td>
<td>0.631</td>
<td>0.317</td>
<td>1.880*</td>
<td>0.592</td>
<td>0.322</td>
<td>1.808</td>
</tr>
<tr>
<td><strong>Marital status Married and common-law</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widow/separated/divorce, single/never married</td>
<td>-0.583</td>
<td>0.213</td>
<td>0.558**</td>
<td>-0.563</td>
<td>0.218</td>
<td>1.674**</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Sample size, 841; Percentage Correct, 68.0; Rho-squared, 0.015; Significance *p<0.05; **p<0.01; ***p<0.001

* Sample size, 666; Percentage Correct, 71.8; Rho-squared, 0.042; Significance *p<0.05; **p<0.01; ***p<0.001

* Sample size, 648; Percentage Correct, 84.1; Rho-squared, 0.114; Significance *p<0.05; **p<0.01; ***p<0.001
### Table 5.5 Unmet home care need

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
<td>Estimated Coefficient (β)</td>
<td>Standard Error</td>
<td>Odds ratio, significance</td>
</tr>
<tr>
<td><strong>Health Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Health</td>
<td>1.064</td>
<td>0.132</td>
<td>2.899***</td>
<td></td>
<td>1.015</td>
<td>0.149</td>
</tr>
<tr>
<td>Poor Health</td>
<td>1.845</td>
<td>0.140</td>
<td>6.325***</td>
<td></td>
<td>1.733</td>
<td>0.164</td>
</tr>
<tr>
<td><strong>Age 65-69</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 70-74</td>
<td>0.104</td>
<td>0.203</td>
<td>1.110</td>
<td></td>
<td>0.102</td>
<td>0.205</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>0.320</td>
<td>0.197</td>
<td>1.377</td>
<td></td>
<td>0.354</td>
<td>0.199</td>
</tr>
<tr>
<td>Age 80 and over</td>
<td>0.570</td>
<td>0.186</td>
<td>1.768**</td>
<td></td>
<td>0.559</td>
<td>0.188</td>
</tr>
<tr>
<td><strong>Sex Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex Female</td>
<td>0.558</td>
<td>0.154</td>
<td>1.747***</td>
<td></td>
<td>0.561</td>
<td>0.156</td>
</tr>
<tr>
<td><strong>Household Income $50000 and more</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$15000-$49999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $15000</td>
<td>1.052</td>
<td>0.254</td>
<td>2.862***</td>
<td></td>
<td>1.043</td>
<td>0.254</td>
</tr>
<tr>
<td><strong>Marital status Married and common-law</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widow/separated/divorce, single/never married</td>
<td>-0.515</td>
<td>0.157</td>
<td>1.674**</td>
<td></td>
<td>0.535</td>
<td>0.158</td>
</tr>
<tr>
<td><strong>Urban</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.077</td>
<td>0.131</td>
<td>1.080</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Sample size, 8970; Percentage Correct, 96.2; Rho-squared, 0.06; Significance *p<0.05; **p<0.01; ***p<0.001

Samples sizes and percentage correct are consistent with the model used; Rho-squared is the proportion of variance explained by the model.

Sample size, 7201; Percentage Correct, 96.3; Rho-squared, 0.124; Significance *p<0.05; **p<0.01; ***p<0.001

Sample size, 6941; Percentage Correct, 96.2; Rho-squared, 0.126; Significance *p<0.05; **p<0.01; ***p<0.001
Chapter Six

Discussion and Conclusions

The goals of the thesis as defined in Chapter One were to identify and analysed the users of home care in Ontario and their unmet needs. Underlying this analysis was the question of geographic variation in both the characteristics of the users and their unmet needs guided by a conceptual framework defined in Chapter Three.

From the cross-tabulation analysis in Chapter Five, it can be concluded that seniors who are older, women, with household incomes between $15000-$29999, whose marital status is widowed/separated/divorced, living with spouse, with fair/poor health status, have chronic conditions such as arthritis, high blood pressure, heart diseases, cataracts and back problems, having difficulties with Instrumental Activities of Daily Living (IADLs), and living in urban centers tend to use more home care services. Based on the logistic regression analysis, those with poorer health status, older age, female, with lower household income, marital status widowed/separated/divorced/single/never married and living in urban areas are more likely to use home care. Especially seniors who belong to the age cohort 80 and over, and with poor health status, they tend to use more home care. So seniors with such characteristics are the ones who need home care most.
When looking at unmet home care need, seniors with poor health status, lower income, older age, female, with marital status widowed/separated/divorced/single/never married and living in rural and remote areas tend to have more unmet home care needs. These people are those who are in most need, while their chance of having unmet home care is higher. To understand the reasons behind it, we need to look at each of the variables in determining unmet home care need and the home care providers who are currently active in the home care sector.

It is interesting to see from the results that people with lower incomes have a much higher chance of having unmet home care need, while income plays no role in determining public home care use; at the same time, people with low income tends to use more informal home care. It is obvious that seniors with low incomes have the most difficulty in getting home care. If the government does not pay enough attention to this group, they are most likely to end up either unattended or receiving care from informal care providers. High cost ranks second among the reasons for unmet home care needs. This result does not come from nowhere. As mentioned earlier in the thesis, the home care sector is managed under a "contractual model" where each CCAC assesses individuals' eligibility for service and refer them to contracted agencies that provide the service (Williams et al. 1999) The home care service assessment system of Ontario is unique in Canada for its blind to income levels. (Gray, 2000) The eligibility criteria for residence of Ontario is based on the assessment of care required and the suitability of the home environment, which means the only
criteria for government to determine home care delivery is need. (Le Goff, Government of Canada, 2002) For now, Ontario, Yukon and Northwest Territories are the remaining three provinces that do not have a formal income assessment for the home care sector. (Provincial and Territorial Home Care Programs: A Synthesis for Canada, Health Canada, 1999) What is more, when assessing the need of potential care recipients, the CCAC case managers have no uniform assessment tools to reference and are not governed by any regulations. (Gray, 2000) Even worse is the shortage of the home care budget which has always existed in Ontario. When budget runs out, home care services cannot be provided. So the truth is there are always unmet home care needs in Ontario due to the budget restraints and income as an important consideration of home care provision is overlooked by the government. Thus the responsibility for home care shifts to informal caregivers and some seniors under the poverty line are likely left underserved or even unattended. On the other hand, under the current privatized home care system, for those who are within the high income group, they are able to purchase home care provided by private agencies or other types of elder care, and the system becomes in the economic interests of private businesses and government. (Aronson et al., 2004) Including income as a home care assessment criterion for seniors is especially important since seniors have lower average incomes than the rest of population and around 20% of them are below the poverty line. (Statistics Canada, 2005)
Senior whose marital status is widowed, separated, divorced or single have a higher chance of having unmet home care need. This group of people have less accessibility to informal home care than people who are married or with common-law partners. Result shows seniors who are married or common-law receive a great amount of informal home care from their partners while marital status is not a significant variable in determining public home care use. This also partly reflects that Ontario government lack of uniform regulations in the decision making process of home care. Marital status is also related to gender. Women tend to live longer than man, so when it comes to home care, they have less chance to receive help from partners. It is consistent with the result that women have more home care needs than men while they have higher chance of having unmet home care needs. Women tend to take more responsibility than men when it comes to home care, and sometimes they are care providers and receivers at the same time. Studies have found a gendered space exists in home care. When it comes to gender and marital status, it is important to recognize the importance of the partner. What is more important is that governments should take more responsibility for those who do not have partners and provide respite care for those elderly who provide care to their partners.

Results consistently indicated that seniors with poor health status and within in the oldest old group are those who need home care most, while they also encounter more unmet home care needs since their demand for service is the highest among all groups. Among this group of people, a large number of them are suffering from chronic
conditions and long-term activity restrictions. However, services are given priority to those who are recently discharged from hospital and have most acute medical care need. (Aronson, 2004; Gary, 2000) CCAC case managers see acute medical care as most needed. Since the services provided by the CCACs are constrained by their budgets, when budgets are used up, no more available services will be provided to the frail elderly who need long-term supportive home care. The result also points to the overlook of age factor in the home care assessment procedure. The resource limitation and policy bias has put those who are older and suffering from chronic condition in a more vulnerable position.

Access to home care is unequal based on geographic region. People living in rural northern regions in Ontario have the least access to home care. Seniors living in urban centers have less barriers to home care services. Also, seniors living in urban areas have higher chance of getting government provided care than those living in rural areas. When looking at the reasons for unmet home care needs, rural northern regions have the highest percentage of people on the waiting lists. High cost, and accessibility are the major barriers for all the people but are more severe for remote, rural and metro centres residents than urban residents. While those live in urban centers think time is the major concern. For more remote rural northern areas, services may not be available in some places. The result also closely relate to the managed competition model of home care sector in Ontario. First of all, home care is controlled by the local CCAC. Each CCAC sets its own rules and regulations on service type, response
time, the service time, the care recipients, and care providers. This system in itself creates inequality of service quantity and quality among the regions. (Williams, 2006)

Second, with the privatization of the home care sector in Ontario, the management, administration, and contracting processes continue to become more akin to private sector principles (Armstrong et al., 2002). While in rural areas, especially remote northern areas with less developed market environments and limited resource available, the managed competition model or contractual model may not be a suitable solution to home care delivery. Rural areas and remote areas deserve more attention also because rural Canadians tend to be older. Home care programs should be fit better in different regions with different home care needs, and more support needs to be provided to the most vulnerable areas in the home care system.

Home care includes a broad range of services, so it is necessary to look at the specific services when discussing home care needs and provision. Meal delivery, housework, shopping, respite care, nursing care are the top five unmet services according to the analysis in Chapter Five. The results also show government provided care are comparatively more medical-oriented while informal care givers provide more non-medical services. Informal caregivers provided a large portion of most needed care, especially meal delivery and shopping. This can be traced back to 1999 when the government required CCACs to give priority to those post-acute patients being discharged from hospitals since resources are limited. These people tend to need more medical care. (Aronson, 2004) Home support services on the other hand become a
“grey area,” less well understood than care deemed medically necessary. (Twigg, 2000; Aronson, 2004)

Debate has been going on around the relationship and governmental role in home-support home care and medically-oriented home care. Home support services are important to elderly people as these services enable them to continue living securely in their own homes. (Clark et al., 1998) Also, without the provision of basic home support services, medical care cannot be provided at home. Home support services are not only overlooked in term of care provision, but also in the working conditions for the workers. Home support workers tend to have low social regard and poor employment conditions. (Neysmith et al., 1996) In this way, less and less people are willing to work in this sector. This contributes to the shift from government to informal caregivers. Family members, friends and neighbours have to shoulder the care provider role at home despite the pressure they already have outside home. One result shows that when seniors have home care needs, they tend to contact government first for solutions. However, a large percentage of the elderly end up in informal home care since government cannot meet their needs.

It seems that informal caregivers are able to take the care responsibility, but there are risks within this pattern. First, it is not a long-term solution for the elderly. The caregiver can be a care recipient at the same time; women family members are more involved in the workforce; children can be distant from parents and have other job
commitments; caregivers especially for those working at the same time need respite care. The availability cannot be ensured. Second, there is a hidden cost for informal caregivers as well. The caregiver may suffer from decreased physical, emotional, and social well-being, from the fatigue of care and lost opportunities in the social and employment spheres. Also, employers suffer from the cost for rescheduling the employee’s work. (Gary, 2000) Though some argue that informal caregivers provide more compassionate and private care, the over burden of caregivers can be a serious issue. As the study shows, respite care is one of the most needed care services but without enough provision. This partly reveals the fact that some informal caregivers are in great need of relief and break.

The top reasons for unmet home care are long waiting list, high cost, no accessibility, no availability and complex procedures according to the research. These can be attributed to the home care model in Ontario. Ontario limits the hours and costs of services, and availability is based on the available funds in the yearly budget. (Gary, 2000) As Williams’ research (2006) mentioned, a home care worker put it “We'll run out of dollars before we run out of calendar year”. Budget can be even more limited in remote rural areas, so the availability and accessibility cannot be ensured. Budget limitation also gives rise to workforce shortages, so patients have to be on the waiting list until services and human resources are available. (Gary, 2000) At the same time, applying for home care through a CCAC is a complicated procedure with
high thresholds and long waiting lists, so some seniors just search for alternative care methods.

Overall, providing home care is complex because of both the characteristics of those who need services and the geography of Ontario. Under the current model of home care in Ontario, unequal accessibility, insufficient services, excessive burden on informal caregivers and the creation of a three-tiered system (public, private and informal) are observed. However, demographic trends point to the increasing need for home care at the same time. The emphasis should be on government provided services.

There are several limitations to the thesis. First, CCHS only includes people living in the community and excludes people living in institutional settings, the Aboriginal population, the military and those in prison. Second, CCHS does not take into account the volume, the types or quality of the services that are available in the health units. Third, CCHS does not take into account whether those who cite unmet needs are eligible for services. Fourth, the most recent CCHS cycle 4.1 data are not used because unlike cycles 1.1 to 3.1, these data are not in the public use micro data files used in this thesis, can only be accessed through the master files from a Statistics Canada Research Data Centre. Unfortunately, it is a time consuming process to gain access and due to the time constraint this was not possible for this thesis. Given how
few differences there were in cycles 1.1 to 3.1, it is highly unlikely the analysis of 4.1 would affect the main findings of this thesis.

In Chapter Three, a conceptual model was proposed. Reflecting on what has been analysed, the thesis provides insights into population characteristics, health needs and status, behaviour, and utilization. It has little to say about the actual supply of home care services (defined as the environment in the conceptual model) and consumer satisfaction. Future research should take advantage of both quantitative and qualitative methodologies to examine the conceptual model in more detail and consider refinements to it.

Future research is needed in terms of more in-depth and a broader understanding of home care within the complex system of health care delivery. It is important to look at the growing role home care will play in the future as the Ontario and Canadian population age. The meaning of home may change for the elderly when home becomes a caring space. The characteristics of those who need home care need to be better valued. The management model and policies largely shape the utilization pattern of home care among the elderly population. Future research should include the most recent data and consider policy changes to both the home care sector and the whole health care system. In recent decades, each government has had its own reforms and policies toward home care and the health care system. It will be interesting to see how home care will change under new and different models in the
future. Lastly, home care issues need to be approached within different geographical levels, from home space, community, municipality, province, country to the global level. With the future growth of the elderly population, all countries with aging populations will need to understand the complexity of home care if we want to deliver equitable services.
References


### Appendix 1

<table>
<thead>
<tr>
<th>Health Region</th>
<th>Cycle1.1 All ages</th>
<th>Cycle1.1 65 and over</th>
<th>Cycle2.1 All ages</th>
<th>Cycle2.1 65 and over</th>
<th>Cycle3.1 All ages</th>
<th>Cycle3.1 65 and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTR. ALGOMA HU</td>
<td>812</td>
<td>164</td>
<td>862</td>
<td>238</td>
<td>832</td>
<td>249</td>
</tr>
<tr>
<td>BRANT COUNTY HU</td>
<td>756</td>
<td>158</td>
<td>854</td>
<td>203</td>
<td>798</td>
<td>198</td>
</tr>
<tr>
<td>DURHAM REG HU</td>
<td>1383</td>
<td>233</td>
<td>1715</td>
<td>278</td>
<td>1579</td>
<td>278</td>
</tr>
<tr>
<td>ELGIN-ST THOMAS</td>
<td>742</td>
<td>157</td>
<td>704</td>
<td>163</td>
<td>708</td>
<td>154</td>
</tr>
<tr>
<td>GREY BRUCE HU</td>
<td>860</td>
<td>223</td>
<td>917</td>
<td>264</td>
<td>1011</td>
<td>270</td>
</tr>
<tr>
<td>HALDIMAND-NORF.</td>
<td>723</td>
<td>168</td>
<td>774</td>
<td>194</td>
<td>729</td>
<td>166</td>
</tr>
<tr>
<td>HAL/KAWPINE DHU</td>
<td>967</td>
<td>242</td>
<td>830</td>
<td>230</td>
<td>990</td>
<td>257</td>
</tr>
<tr>
<td>HALTON REG. HU</td>
<td>1257</td>
<td>258</td>
<td>1408</td>
<td>347</td>
<td>1399</td>
<td>299</td>
</tr>
<tr>
<td>CITY HAMILTON HU</td>
<td>1326</td>
<td>234</td>
<td>1663</td>
<td>374</td>
<td>1683</td>
<td>387</td>
</tr>
<tr>
<td>HASTINGS/P.E CNT</td>
<td>889</td>
<td>240</td>
<td>935</td>
<td>245</td>
<td>908</td>
<td>249</td>
</tr>
<tr>
<td>HURON/PERTH HU</td>
<td>1242</td>
<td>271</td>
<td>1277</td>
<td>314</td>
<td>1206</td>
<td>315</td>
</tr>
<tr>
<td>CHATHAM-KENT HU</td>
<td>1059</td>
<td>227</td>
<td>775</td>
<td>197</td>
<td>794</td>
<td>146</td>
</tr>
<tr>
<td>KING/FRO/LEN/ADD</td>
<td>938</td>
<td>171</td>
<td>996</td>
<td>248</td>
<td>1001</td>
<td>208</td>
</tr>
<tr>
<td>LAMBTON HU</td>
<td>866</td>
<td>215</td>
<td>873</td>
<td>244</td>
<td>840</td>
<td>221</td>
</tr>
<tr>
<td>LEEDS-GREN-LAN.</td>
<td>901</td>
<td>239</td>
<td>918</td>
<td>224</td>
<td>997</td>
<td>246</td>
</tr>
<tr>
<td>MIDDLESEX-LONDON</td>
<td>1282</td>
<td>231</td>
<td>1597</td>
<td>316</td>
<td>1418</td>
<td>305</td>
</tr>
<tr>
<td>NIAGARA REG. HU</td>
<td>1275</td>
<td>290</td>
<td>1602</td>
<td>422</td>
<td>1544</td>
<td>393</td>
</tr>
<tr>
<td>N.BAY/TIMIS. HU</td>
<td>1484</td>
<td>306</td>
<td>1315</td>
<td>337</td>
<td>1416</td>
<td>368</td>
</tr>
<tr>
<td>NORTHWESTERN HU</td>
<td>710</td>
<td>164</td>
<td>663</td>
<td>156</td>
<td>624</td>
<td>136</td>
</tr>
<tr>
<td>CITY OTTAWA HU</td>
<td>1936</td>
<td>274</td>
<td>2047</td>
<td>370</td>
<td>1975</td>
<td>351</td>
</tr>
<tr>
<td>OXFORD COUNTY HU</td>
<td>713</td>
<td>141</td>
<td>773</td>
<td>176</td>
<td>753</td>
<td>158</td>
</tr>
<tr>
<td>PEEL REGIONAL HU</td>
<td>1837</td>
<td>227</td>
<td>2290</td>
<td>284</td>
<td>2126</td>
<td>267</td>
</tr>
<tr>
<td>PETERBOROUGH HU</td>
<td>842</td>
<td>243</td>
<td>854</td>
<td>239</td>
<td>846</td>
<td>227</td>
</tr>
<tr>
<td>PORCUPINE HU</td>
<td>755</td>
<td>140</td>
<td>828</td>
<td>157</td>
<td>694</td>
<td>118</td>
</tr>
<tr>
<td>RENFREW HU</td>
<td>722</td>
<td>173</td>
<td>761</td>
<td>188</td>
<td>753</td>
<td>184</td>
</tr>
<tr>
<td>EAST ONTARIO HU</td>
<td>982</td>
<td>194</td>
<td>1785</td>
<td>234</td>
<td>1032</td>
<td>240</td>
</tr>
<tr>
<td>SIMCOE MUSKOKA</td>
<td>2101</td>
<td>452</td>
<td>1448</td>
<td>553</td>
<td>1753</td>
<td>411</td>
</tr>
<tr>
<td>SUDSURY DHU</td>
<td>979</td>
<td>192</td>
<td>1062</td>
<td>260</td>
<td>1120</td>
<td>247</td>
</tr>
<tr>
<td>THUNDER BAY DHU</td>
<td>959</td>
<td>197</td>
<td>967</td>
<td>212</td>
<td>976</td>
<td>242</td>
</tr>
<tr>
<td>WATERLOO HU</td>
<td>1304</td>
<td>241</td>
<td>1593</td>
<td>312</td>
<td>1561</td>
<td>269</td>
</tr>
<tr>
<td>WELL.-DUF.-GUEL.</td>
<td>1170</td>
<td>179</td>
<td>1123</td>
<td>216</td>
<td>1104</td>
<td>208</td>
</tr>
<tr>
<td>WINDSOR-ESSEX</td>
<td>1250</td>
<td>207</td>
<td>1406</td>
<td>264</td>
<td>1474</td>
<td>334</td>
</tr>
<tr>
<td>YORK REGIONAL HU</td>
<td>1732</td>
<td>233</td>
<td>1793</td>
<td>294</td>
<td>1824</td>
<td>263</td>
</tr>
<tr>
<td>CITY OF TORONTO</td>
<td>2524</td>
<td>445</td>
<td>3369</td>
<td>681</td>
<td>3298</td>
<td>634</td>
</tr>
<tr>
<td>Total</td>
<td>39278</td>
<td>7729</td>
<td>42777</td>
<td>9434</td>
<td>41766</td>
<td>8998</td>
</tr>
</tbody>
</table>

**Table A-1** Case numbers of Cycle 1.1, 2.1, 3.1.