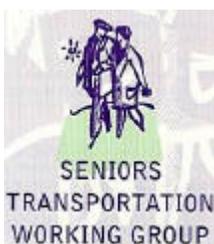




# The Mobility Needs and Transportation Issues of the Aging Population in Rural Manitoba

Prepared for The Manitoba Seniors and Healthy  
Aging Secretariat

Prepared by The Institute of Urban Studies



Gina Sylvestre  
Gary Christopher  
Marcie Snyder

© March 2006



## **The Mobility Needs and Transportation Issues of the Aging Population in Rural Manitoba**

### **1.0 Introduction**

Population aging is regarded as one of the most significant demographic developments of the past century (Treas, 1995). In countries such as Canada, older persons represent the fastest growing segment of the population (Rosenberg & Everitt, 2001). In 2001, for example, approximately 13.0 percent of the population was aged 65 or over (Statistics Canada, 2002a), a proportion that is projected to reach 21.4 percent by 2026 (Statistics Canada, 2002b). In particular, population aging is a defining characteristic of nucleated communities in Canada's rural hinterland (Bryant & Joseph, 2001). The process of population aging is occurring at a much faster rate in rural and remote areas than the rest of Canada. Moreover, more than 20 percent of Canadian seniors live in rural parts of the country (Keating, Keefe & Dobbs, 2001). According to Joseph and Fuller (1991), it is clear that the progression of population aging will require special attention to the changing needs created by increasing numbers of seniors residing in sparsely populated and geographically remote rural locales.

In rural Canada, transportation is considered to be one of the greatest concerns for the growing senior population (Grant & Rice, 1983; Herold, Gordon, Kaye, Brockie & Fuller, 2002). For most elders, the availability of suitable forms of transportation is crucial for their continued participation in desired economic, social and recreational activities (McGhee, 1983). The provision of effective transportation contributes to an older person's social integration by facilitating social interaction, community participation and access to goods, services and medical care that promote independence (Glasgow & Blakely, 2000). Research has illustrated that there is a close association between the lack of transportation and low life satisfaction, isolation, loneliness and self-reported poor health (Grant & Rice, 1983; Glasgow & Blakely, 2000). In rural areas in particular, personal mobility is dependent on adequate transportation options and is an essential component of well-being for the aging population (Herold, et al., 2002).

Kerschner (2003) suggests that a rural senior's ability to access distant services and activities may have a direct relationship to the ability to remain independent in the community. In many cases, driving an automobile allows older adults to remain

independent in rural settings. However, the absolute reliance on private cars is a disadvantage because when an aging individual can no longer drive there are limited transportation alternatives (Keating, 1991). Solving the mobility problems of older adults can present major problems in non-metropolitan areas of Canada where public transportation is often unavailable. Increasingly, seniors in rural areas have become dependent on informal support networks to satisfy their mobility needs. The lack of transportation alternatives puts rural seniors at greater risk of isolation from their friends, local community activities and health and social services (Grant & Rice, 1983).

In order to better understand the mobility and transportation issues faced by seniors, it is relevant to investigate the community context of growing old in rural and remote areas of Canada (Krout & Coward, 1998). A focus on the intersection between aging and context is related to the field of environmental gerontology which represents a multidisciplinary approach to the study of the interaction of the person and environment. Gerontological research that has investigated the relationship between aging and the community context has focused primarily on the urban setting and has underemphasized the significance of transportation for older adults (Coward & Lee, 1985; Kendig, 2003). Kendig notes that past work in environmental gerontology has tended to focus on either home or institutional environments rather than “the macro-scale environments of neighbourhoods, regions, and urban-rural divides that are so significant in structuring experiences of aging” (Kendig, 2003: 612). Transportation is the forgotten issue in rural areas and research on the transportation mobility of older persons living in low-density rural areas has been relatively neglected (Glasgow & Blakely, 2000). As a result, the knowledge base and program development on the transportation needs and mobility issues for seniors in rural Canada is limited and fragmented (Joseph & Fuller, 1991; Herold et al., 2002).

The present project was initiated to explore the issues of mobility and transportation disadvantage for older adults aging in the context of rural Manitoba. This was an opportunity to gain a greater understanding of an issue that little is known about. The primary goal of this study was to identify transportation resources and the problems that rural seniors experience when using different modal options. Moreover, the findings of this project have provided the foundation to formulate recommendations that will offer

guidance and momentum to pursue long-term solutions for the mobility needs of rural seniors.

## **2.0 The Investigation of Transportation for Older Adults in Rural Manitoba**

The present investigation represents a preliminary analysis of the mobility issues encountered by the aging population of rural Manitoba. It has provided an opportunity to evaluate an issue that, although recognized as a serious concern by many, has not been formally considered. As very little was known about the situation for seniors in rural Manitoba, this project was a starting point in which to develop a community network and identify the next steps that are required for a comprehensive strategy to improve the availability of transportation for the aging population of rural Manitoba.

An extensive review of literature was conducted to identify the key factors that are relevant to the issue of transportation for seniors in rural areas. The following section provides a literature review that identifies the personal circumstances of older adults in rural areas and the environmental constraints that create transportation difficulties for this population sub-group. In addition, the study included a spatial analysis and the creation of a series of maps to demonstrate the need to consider the differential distribution of seniors and service resources in the rural environment. The section following the literature review provides these maps and an overview of their significance.

A vital component of this project was an extensive consultation process that was carried out with various community members throughout the rural and remote regions of the province. It is important to note that this project was of short duration and was carried out during the winter months. As a result, it was difficult to travel to rural communities and while the researchers were able to hold some focus groups, a great deal of consultation was also accomplished by telephone. As this process was important in identifying the issues and building capacity within the communities, the following provides an outline of all stakeholders, service providers and seniors who were consulted:

- Senior Specialists in the nine rural regional health authorities of Manitoba.
- Handi-Van operators in a range of communities.

- A focus group with handi-van operators, Services to Seniors Coordinators, volunteer drivers and seniors in the North Eastman RHA.
- A focus group with Adult Day Program participants and the handi-van operator in Whitemouth.
- Surveys conducted by Adult Day Program coordinators with participants in Sprague, Ashern and Riverton.
- A focus group with Services to Seniors coordinators in the Interlake RHA.
- A focus group with Services to Seniors coordinators from Brandon and the Assiniboine RHA.
- A conference call with the Adult Day Program coordinators in the Assiniboine RHA.
- Telephone consultation with 15 Services to Seniors coordinators in the Central RHA.
- Telephone consultation with 8 Services to Seniors coordinators in the South Eastman RHA.
- A survey on the handi-van operations conducted by the Seniors Specialist in the Parkland RHA.
- A survey of the Services to Seniors coordinators conducted by the Seniors Specialist in the Parkland RHA.

This report provides an overview and analysis of the issues identified in the consultation process. In Section 5, the various transportation modes available to rural seniors are discussed in relation to their merits, as well as weaknesses. A series of recommendations are formulated in this discussion. One of the primary recommendations is the development of a coordinated transportation system at the regional level which is described more fully in the section that follows. In the final section of the report, the recommendations of the study are re-iterated in relation to next steps and long-term solutions.

### **3.0 Aging and the Rural Context**

Rural communities are changing demographically, economically and socially; these communities are evolving into an array of diverse milieu in which to grow old. Despite these changing dynamics there is a notable lack of research focused on the relationship between the changing characteristics of rural places and the subjective experience of growing old in such settings (Rowles, 1998). Older adults are considered to experience a “double jeopardy” in rural areas because they “face challenges and problems based both on age and on other characteristics that are associated with older age, as well as disadvantages inherent in living in sparsely populated and geographically remote rural areas with their lack of resources, opportunities and services to meet those challenges” (Krout & Coward, 1998: 6). In order to better understand the issue of transportation for the aging population in rural and remote areas, it is useful to consider how both personal and environmental factors affect the ability of an older person to remain mobile and independent.

#### **3.1 Rural Seniors**

There are a number of factors related to aging in rural areas that are important to consider in relation to a senior’s ability to access adequate transportation. In this subsection, the aging of the rural population is discussed, in addition to the disadvantages experienced by rural seniors and the decline of supportive rural communities.

##### ➤ *Population Aging in Rural Areas*

- Despite the increasing urbanization of the aging population, seniors continue to be over-represented in rural areas in a majority of countries (Kinsella, 2001).
- The proportion of the elderly in the rural population has grown as a result of aging-in-place and the out-migration of the younger population to urban areas thereby accelerating the aging of rural communities. In addition, some rural areas experience the in-migration of retirees (Andrews, 2001).
- The oldest-old is the fastest growing segment of the older population and rural areas have a higher share of the 85-and-older group than do urban centres (Rogers, 2002).

- The aging of the population has wide-ranging consequences for rural communities (Rogers, 2002).
- Aging-in-place and the out-migration of younger adults has resulted in a decline in the overall population, an increase in dependency ratios and the erosion of the tax base (Coward & Lee, 1985; Kerschner, 2003).
- The out-migration of young people may leave older women and men without the direct support of their family (Kinsella, 2001).
- Population aging has strained community resources to provide healthcare, housing and transportation (Rogers, 2002).
- The implications of a growing rural senior population suggest that aging is a more salient issue for smaller communities than for urban areas (Coward & Lee, 1985).

➤ *Rural, Old and Disadvantaged*

- In comparison to the urban elderly, rural seniors are a disadvantaged group: they are older, have less education and have lower incomes (Keating et al., 2001).
- Rural elders have considerably lower incomes and higher poverty rates than their urban counterparts (Krout & Coward, 1998). According to Glasgow and Brown (1998), the severity and extent of rural poverty is not reflected in the social science literature.
- In rural areas, poverty is more pronounced among older women, widows, those living alone and the oldest-old (Glasgow & Brown, 1998; Krout & Coward, 1998).
- Older women are over-represented in non-metropolitan areas. These women are more likely to be widowed, to live alone and to lack social support. Because women live longer than men, they are more likely to experience declining health and dwindling economic resources (Rogers, 2002).
- Rural seniors are more likely to live in older, substandard housing with fewer facilities. The lack of alternative housing options and the low real estate values prevailing in most rural areas mean that elders must remain in dilapidated housing that will only become worse because of the high costs of home maintenance (Keating, 1991; Belden, 1993).

- The consequences of poverty for the aging population in rural areas are far-reaching.
- Rural seniors may not be able to access basic needs for goods and services because of inadequate income. The combination of low education levels and inadequate income mean that rural seniors have less ability to negotiate and obtain needed services (Keating et al., 2001).
- The low income of rural seniors can impede participation in social networks and community activities. These older adults are at risk of social isolation and declining rural communities often lack adequate formal and informal support systems to buffer the effects of poverty (Glasgow & Brown, 1998).
- The low socio-economic status of rural seniors is strongly associated with poor health. The higher poverty rates and poorer health of the aging rural population is indicative of the greater need for services and resources than the urban elderly (Rogers, 2002).

➤ *Rural Seniors: The Transportation-Disadvantaged*

- A basic determinant of the quality of life of older persons is unrestricted mobility that allows access to needed services and social and recreational outings (Wachs, 1988).
- As a result of geographic remoteness and the lack of transportation alternatives that characterize rural areas, unrestricted mobility requires access to automobile travel. Despite the higher rates of poverty, the level of automobile ownership is greater among the rural than the urban elderly (McGhee, 1983; Kagis, Menec & Blandford, 2006).
- Private vehicles are used for almost 90 percent of the trips made by rural seniors. In general, younger seniors drive themselves to access needed services and to participate in activities. However, with the increase in the oldest-old age group (aged 85 and older), a greater number of older individuals are reaching the point when the cessation of driving becomes necessary as a result of functional and health decrements (Fozard, 2000; Glasgow & Blakely, 2000).

- The transportation disadvantaged group in rural areas is largely composed of widowed females, living alone, with limited economic resources and who are advancing in age (Grant & Ride, 1983; McGhee, 1983).
- It is this sub-group of older rural adults who have special mobility needs for transportation assistance and support (Kerschner, 2003). In order to access supports and services in the community, many of these transportation-disadvantaged seniors rely on automobile transportation provided by family members and friends.

➤ *Rural Ideology*

- Traditionally, rural communities are seen as being poor in terms of amenities and formal services, but rich in people willing to volunteer their help (Keating et al., 2001). It is assumed that rural seniors compensate for the lack of formal services by living in communities that are well integrated and having strong support networks of family and friends to provide care (Krout & Coward, 1998).
- The emphasis on community and family support reflects a value orientation stemming from the early settlers who settled on the harsh northern frontier of Canada. Historically, individual autonomy was both necessary and highly valued; however, cooperative relationships with neighbours as well as with family members were also fundamental to survival. According to Keating (1991), the interconnection of work and family, the need to control the natural environment and geographic isolation fostered a “rural ideology” emphasizing self-reliance and the interdependence of family, friends and neighbours.
- The care and support of seniors in rural communities is reflective of the central features of traditional rural life: neighbouring, interpersonal relationships, mutual obligation and interdependency, knowing and being known, caring and sense of community (Rowles, 1998).
- In relation to community support, rural areas are advantaged over urban centres, however, the differences are less than stereotypes might suggest (Keating et al., 2001).

- There is great variation in the strength of informal networks in rural communities that determines whether a long-term care continuum exists to meet the needs of individual seniors. The diversity, complexity and internal values of rural areas, along with regional, occupational and cultural differences all influence the strength of rural ideology (Keating, 1991).
- According to Rowles (1998), the continuing existence of the traditional experience of aging amid a supportive rural culture has been jeopardized. The idea of social credit and mutual support is no longer viable because environmental conditions that once created a supportive milieu no longer exist.
- Informal support is the key of continuing care to rural seniors, however, local economies and related migration patterns significantly affect the likelihood that seniors will have family and friends nearby (Keating et al., 2001).
- Typically, young people must migrate from farming communities to urban centres to obtain employment. The chronic out-migration of younger people weakens social institutions and disrupts the social support networks of older individuals (Glasgow & Brown, 1998).
- As a result of demographic changes, economic restructuring and transitions in social institutions and values, the community context for growing old is evolving (Rowles, 1998).

### **3.2 The Rural Context**

Given the supportiveness and stability offered by rural communities, it is important to pose whether the rural milieu affects elders positively or negatively because of the distances from health and social services and the lack of transportation alternatives (Keating, 1991). There are aspects of the rural community context that are considered to facilitate or constrain the access of older persons to resources and supports that can buffer the effects of age, declining health and relatively low income in a rural environment (Glasgow & Brown, 1998). In this sub-section, both the physical ecology of and economic conditions of rural Canada are discussed, in addition to the issues of service access and transport availability.

➤ *The Physical Ecology of Rural Canada*

- Attributes of the physical ecology of rural and remote areas of Canada that are particularly relevant to the experience of aging include:
  - Low population densities with seniors spread over a large geographic area
  - Sparsely distributed communities with small populations
  - Poor quality roads
  - Absence of sidewalks in rural towns
  - Isolation
  - Severe weather conditions create challenges for mobility
- Arcury and colleagues (2005) identified the conceptual significance of distance as a barrier to care for rural communities. Rural areas are characterized by large distances between population centres that require seniors to travel great distances in order to access services and social networks.
- Distance is a good indicator of rurality in Canada, where distance can be intensified by severe climatic conditions.
- The issue of vast distances as a barrier for seniors to access services and social contacts has been made more acute by the spike in gasoline prices that has occurred in the past year (Stranahan, 2005).
- The physical isolation of older adults has negative repercussions for their well-being and overall quality of life (Andrews, 2001).

➤ *The Rural Economy*

- Rural areas have experienced major transformations as a result of economic restructuring in the national and global marketplace (Krout & Coward, 1998). Farm consolidation and the loss of rural industrial employment have led to the deterioration of employment opportunities and investment that fuel the out-migration of young people in search of urban jobs (Rowles, 1998).
- The situation is often severe for farm communities and service centres in the agricultural hinterland. In the context of Manitoba, the BSE Crisis (Mad Cow

Disease), decreasing grain prices and summer flooding have all contributed to the stagnation and cumulative decline of many rural and remote areas.

- As rural communities depopulate, the informal care-giving base for rural elders diminishes at the same time that essential services such as postal outlets in some communities are jeopardized by low and declining populations (Bryant & Joseph, 2001).

➤ *Access to Services in the Rural Landscape*

- Predominantly, rural seniors wish to remain in their own homes in their own communities. The ability to gain access to services is viewed as a critical element for older adults to live independently (Keating, 1991). However, in comparison to the urban environment, services for many rural residents are less accessible, more costly to deliver, narrower in range and scope, and fewer in number (Coward & Lee, 1985).
- Two fundamental trends have affected the use of rural space and access to services: the area of countryside under urban influence has expanded, while at the regional level services have been consolidated in fewer rural communities (Bryant & Joseph, 2001). As a result, the nature of rurality is characterized by dispersed population, a scattered pattern of small service centres and a concentration of service functions in widely separated urban centres (Joseph & Fuller, 1991).
- A major issue regarding service access in rural areas has been the centralization of the public and private sectors due to the increasing financial strain of maintaining services in sparsely populated and geographically isolated communities (Herold et al., 2002). It is the aged in rural towns who are particularly disadvantaged by the removal of services.
- Many public programs in the realm of health, education and social services have been re-organized in response to changing population needs and cost efficiency objectives (Bryant & Joseph, 2001).
- The evolving fabric of rural home- and community-based service provision and the widespread closing of rural hospitals represent profound changes in the social support potential and health care landscape of rural environments (Rowles, 1998).

- As a result of healthcare restructuring the range of health care services for elders living in small towns in rural communities is limited, fewer health care alternatives are available, and rural health services are less accessible (Kerschner, 2003). Accessing health care services can be difficult in low density rural communities, which are often far from comprehensive medical care and facilities (Rogers, 2002).
- Low population density is associated with less access to informal support networks, as well as inefficiency in providing services such as home care, nursing homes and hospitals because there are few potential recipients spread over a large geographic area (Keating et al., 2001).
- The private sector has also been reluctant to remain in rural locales due to the disadvantages of low population thresholds (Herold et al., 2002).
- The availability of several resources have been identified as essential for seniors to remain independent: bank, grocery store, doctor, church, post office, pharmacy, beauty shop/barber, restaurant, social club, variety store, department store and clothing store (Keating, 1991). However, plagued by years of decline and poverty, some communities cannot provide a full range of appropriate and accessible health and social community-based services (Krout & Coward, 1998).
- As small towns continue to decline many communities can no longer provide essential goods and services. Grocery stores are generally only found in larger towns, while population decline drives retail stores and other service establishments out of business.
- Although most rural seniors do have access to grocery stores and pharmacies, approximately 20 percent must go outside their community for groceries and other services (Keating et al., 2001).
- If rural seniors are to maintain even their basic quality of life given the decline in service accessibility, they must typically travel considerable distances to larger service centres (Kihl, 1993).
- With the centralization of services greater pressure is placed on volunteer organizations to assist older rural residents. However, fundraising for this type of

programming must compete with other community groups and with larger rural centres that have greater resources (Herold et al., 2002).

- Moreover, the difficulty of delivering services, and the lack of transportation to get to the services, suggests that some rural seniors may be institutionalized prematurely (Kinsella, 2001).

➤ *Transportation in the Rural Context*

- Transportation is a crucial element in understanding whether rural seniors are disadvantaged by lack of formal services in their communities. Access to services is often dependent on an individual's ability to drive long distances (Keating et al., 2001).
- According to Kihl (1993), the driver's license has helped define a lifestyle based on the expectation of continued mobility, where access to services is more significant than travel distances.
- Geographic distribution coupled with their health and mobility limitations can complicate the ability of older adults to drive to or travel to services and activities that provide opportunities for community involvement (Kerschner, 2003). Without access to an automobile, distance becomes a major barrier to access (Keating, 1991).
- It is an interesting observation that seniors living on farms have the furthest to travel to access services, but they are the least likely to report having problems with transportation. This suggests that those living on farms that can no longer drive and do not have other family members on the farm to provide rides must move to rural towns or urban centres.
- As indicated previously, rural seniors are considered to be transportation disadvantaged because of their dependence on private cars and the lack of transportation alternatives (Keating, 1991).
- Kerschner (2003) points out that the same challenges that make it difficult to provide services to rural seniors are the same challenges that make it difficult to provide transportation in rural areas. Small populations dispersed over a wide geographic area complicate efforts to extend transportation networks.

- The absence of transportation alternatives in rural areas is the result of the high costs required to efficiently coordinate supply and demand when riders and destinations are so widely dispersed (McGhee, 1983). Cost is a major barrier to providing conventional public transportation services in rural areas; there is a high per capita and per person trip cost. Without substantial public subsidy, it is not cost-effective to maintain rural public transportation networks. These costs will only continue to rise because of the high expenditure required to cover long distances, particularly when services continue to be removed from smaller communities (Herold et al., 2002).
- The lack of public transportation in rural areas, coupled with the rising costs of providing mobility is indicative that greater strain will be put on informal support networks to provide rides in order to address the health and social needs of older adults.

#### **4.0 Aging in Rural Manitoba: A Spatial Analysis**

The term rural denotes a broad range of definitions. Conceptually, rural can be limited to regions with populations of less than 1,000 inhabitants, or it can include every place that is not a major metropolitan area (du Plessis, Beshiri, Bollmand, & Clemenson 2001). Population density and distance from large populations (i.e. metropolitan centres) or service centres can be used to define rural areas, and the term “isolation” has been used in some cases to describe rural life (Keating 1991).

Most remote, rural areas experience higher rates of poverty and low population densities (i.e. less than 6 persons per square kilometer), and slower tax base growth than their urban counterparts.

In some cases, rural life has been categorized into two major components, “metro-rural” and “remote-rural,” with the former addressing the influence of metropolitan centres on rural areas, and the latter using distance from large population and service centres as a determinant (Keating 1991), according to more recent studies, researchers are moving away from the notion of “urban versus rural,” and are instead viewing residence

as a continuum encompassing remote, sparsely populated areas to very densely populated central cities in metropolitan areas (Coward and Kraut 1998).

How rural is defined has a profound effect on the questions that are asked, and the programs and policies that are in turn developed. The term rural is not definitive, nor can it be considered homogeneous. Rural areas are comprised of a mixed set of communities; these communities have a variety of networks that combine them into a series of functional systems (Joseph and Fuller 1991). We must be cognizant of the differences between rural communities. These areas vary in terms of demographics, geographic location, economic base, community resources and leadership, social interaction, and cultural patterns. This being said, the rural elderly have a variety of experiences and needs, and the heterogeneous living situations of rural elders have only recently been recognized.

Due to the differing conceptualizations of rurality, it is essential that we do not generalize the services that the rural elderly need, because diversity (e.g. social and economic) and geographic variability (e.g. road conditions, accessibility) exist between rural communities, and this can make it difficult to draw definite conclusions about the overall extent of rural transportation needs (McGhee 1983).

A series of maps were compiled using Geographic Information Systems (GIS) analysis; these maps are useful in the case of this project, as they allow for a spatial examination of the study area (Figure 1). Mapping out the social, physical, and economic aspects of each rural municipality (RM) allowed for associations and patterns to be identified. Therefore, in order to illustrate spatial relationships and trends as they relate to the senior populations residing in the RMs of southern Manitoba, the following images were produced.

Figure 2 shows general population density, where as expected, highest population concentrations are found radiating out from the city of Winnipeg (up to just over 180 persons per square kilometre).

Figures 3, 4, and 5 indicate senior population density by age group. Higher densities of seniors between the ages of 55 to 74 can be seen along the eastern border of Manitoba, specifically in RMs such as Reynolds, Piney, Whitemouth, and Lac Du Bonnet. When

examining the 75 and over age group, high population densities are found along the northern edge of the study area, as well as in the Westman region.

Figures 6 and 7 use Location Quotient (LQ) as a statistical method to calculate the locational concentration of seniors living in RMs, relative to the number of seniors living in Manitoba as a whole. This descriptive spatial statistic is widely used in the study of human geography, as it allows for a single statistical value to be calculated in order to reveal population distributions and concentrations.

$$LQ = \frac{a_x/c}{b_x/d}$$

where,  $a_x$  = total senior population in an RM  
 $c$  = total overall population in an RM  
 $b_x$  = total senior population in Manitoba  
 $d$  = total overall population in Manitoba

Most importantly, these Figures show the extent to which a particular distribution, in this case senior population density, differs from the provincial norm. Clear patterns of senior concentrations appear along the fringes of the province. This indicates an over-representation of seniors in these areas. The Interlake region and the Parkland region show very high concentrations of seniors, especially in the age 75 and over category. These RMs are located in some of the most isolated regions, also characterized by lower median income (Figure 9) and an aging population (Figure 8). Such maps emphasize that these seniors may not be able to easily access resources and services.

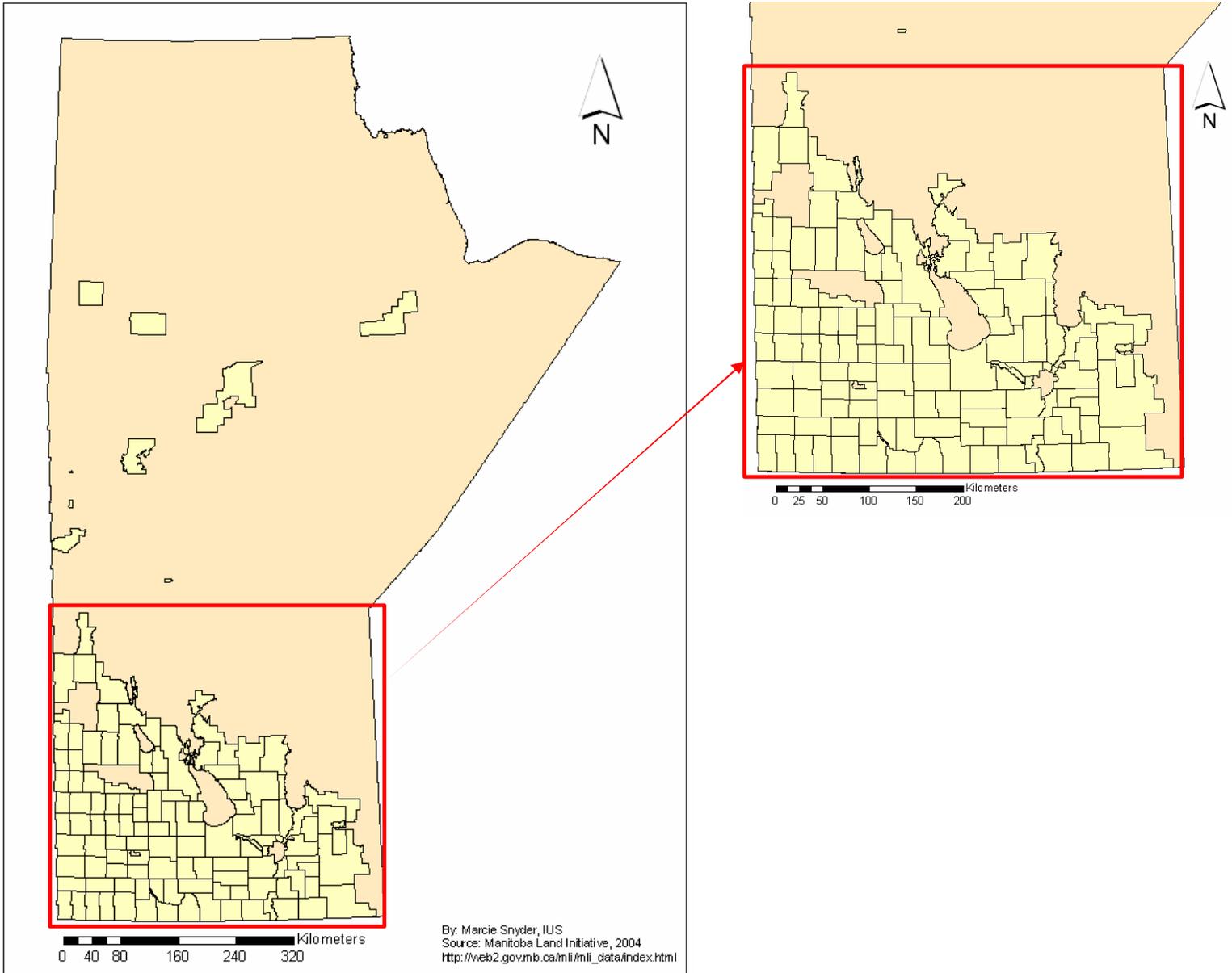
Conversely, it can be noted that rural communities that are seen to be poor in terms of amenities, are often rich in people willing to volunteer their time. This is revealed in Figure 10, where a relatively high percentage (20 – 30 percent) of people in these distressed areas have provided unpaid care to a senior.

Each of these maps illustrates the distinctions between communities in terms of population, income, and social amenities. The utility of GIS as a tool for further analysis in this study is of significant importance. It allows a research problem to be examined in a spatial context, illustrating a visual representation of the study area. Therefore, the following recommendation is made:

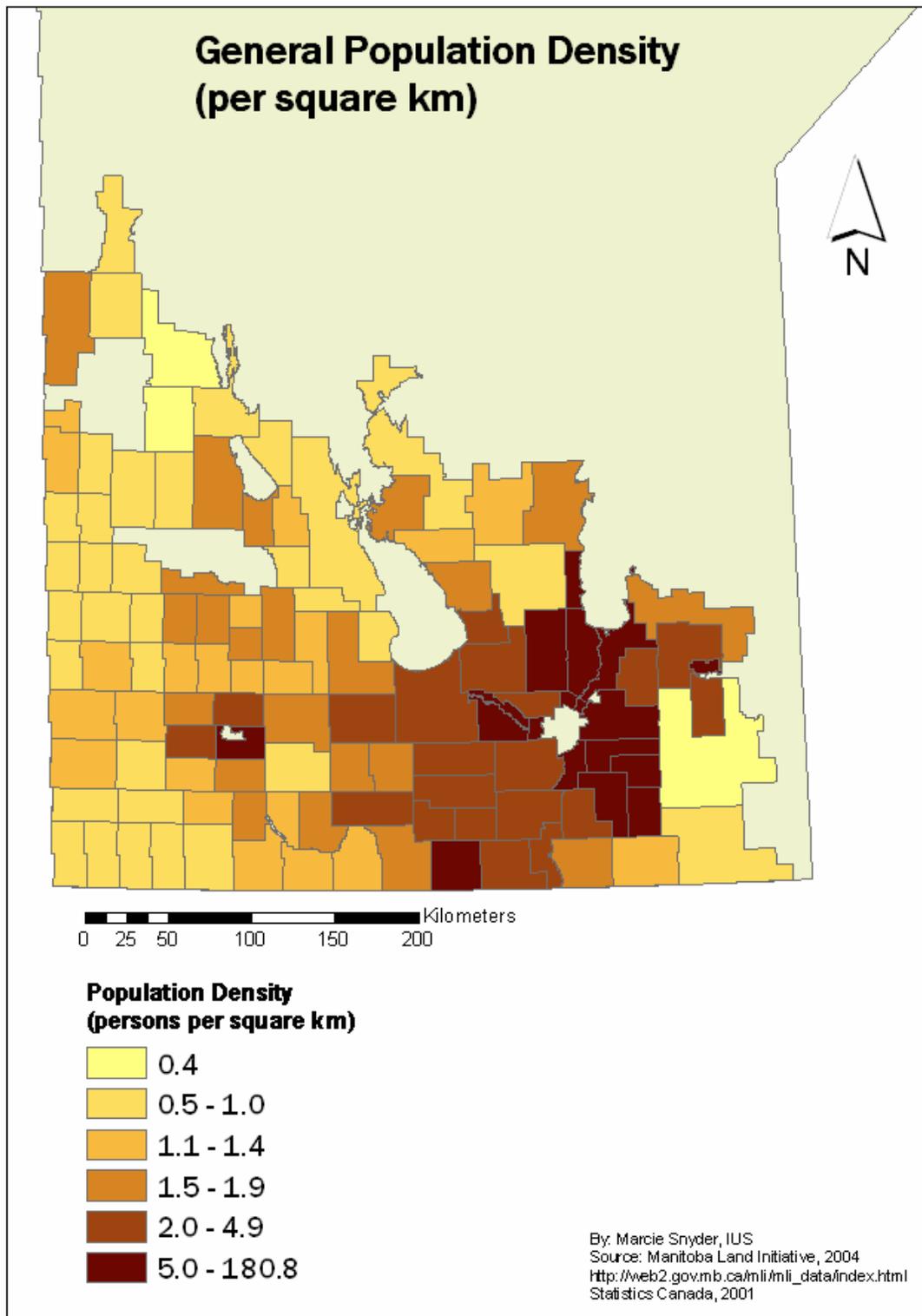
- ❖ To further explore the use of spatial analysis in identifying those seniors experiencing transportation disadvantages, as well as formulating solutions to address mobility issues.

**Figure 1**

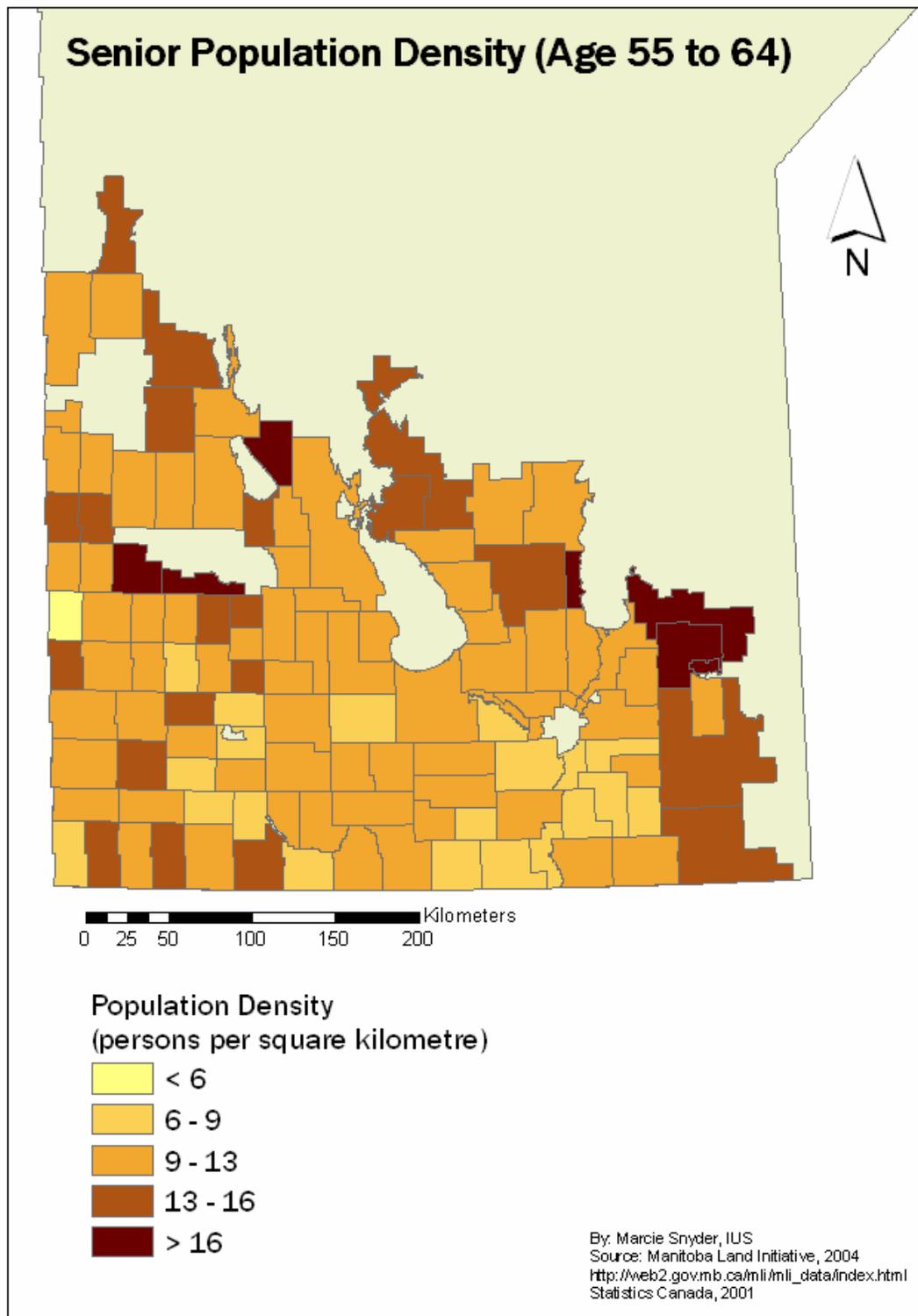
# Study Area Rural Municipalities of Southern Manitoba



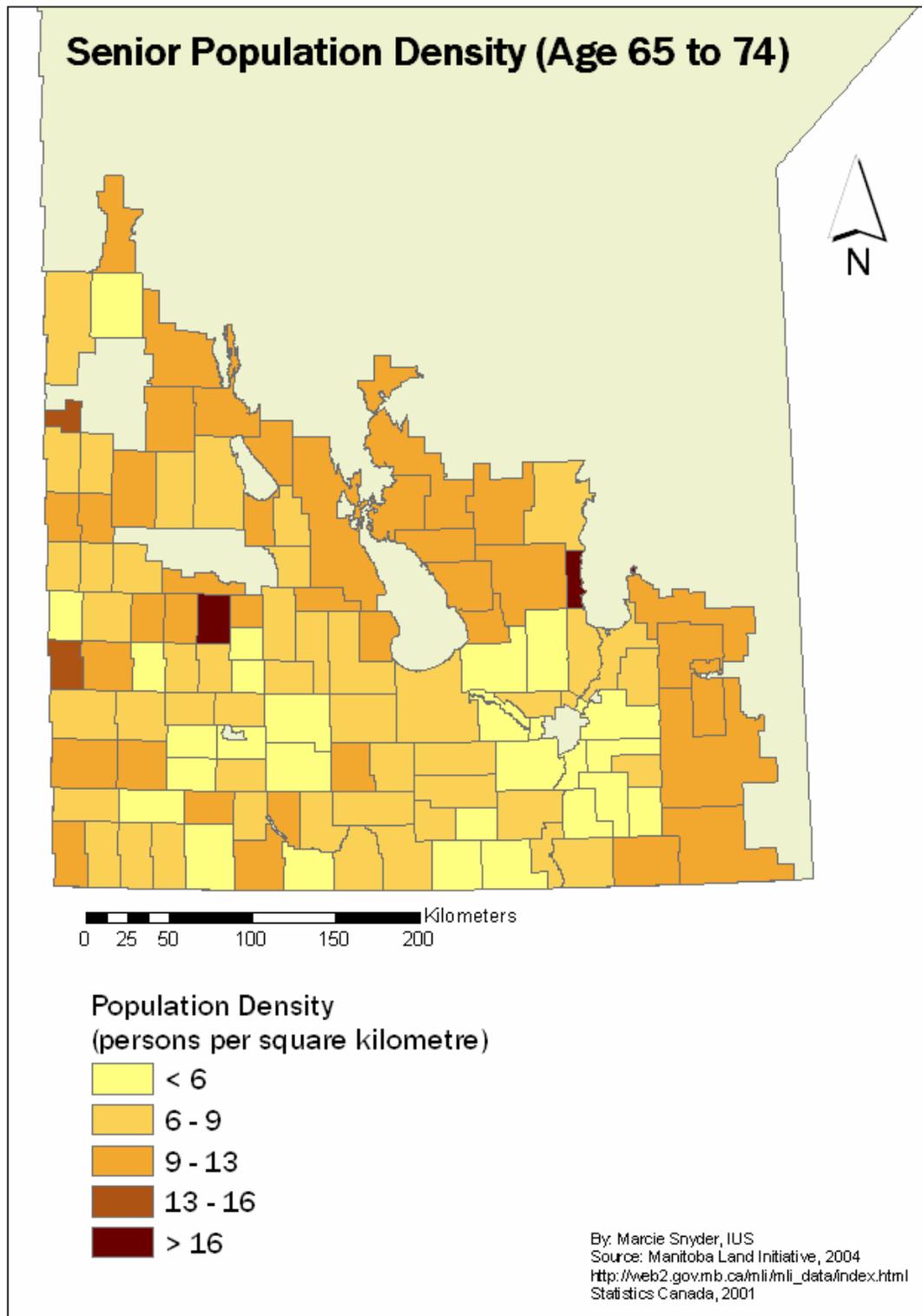
**Figure 2**



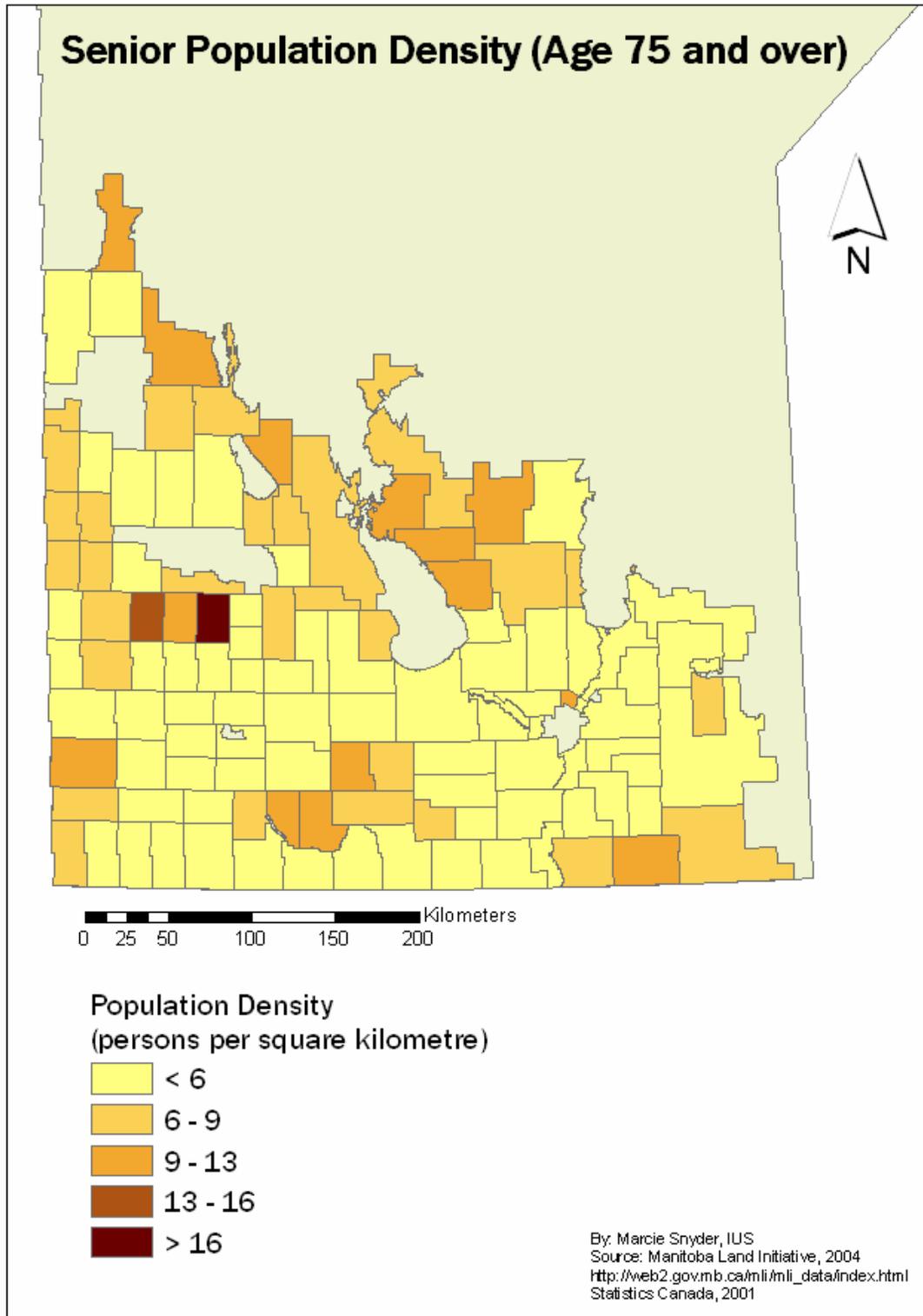
**Figure 3**



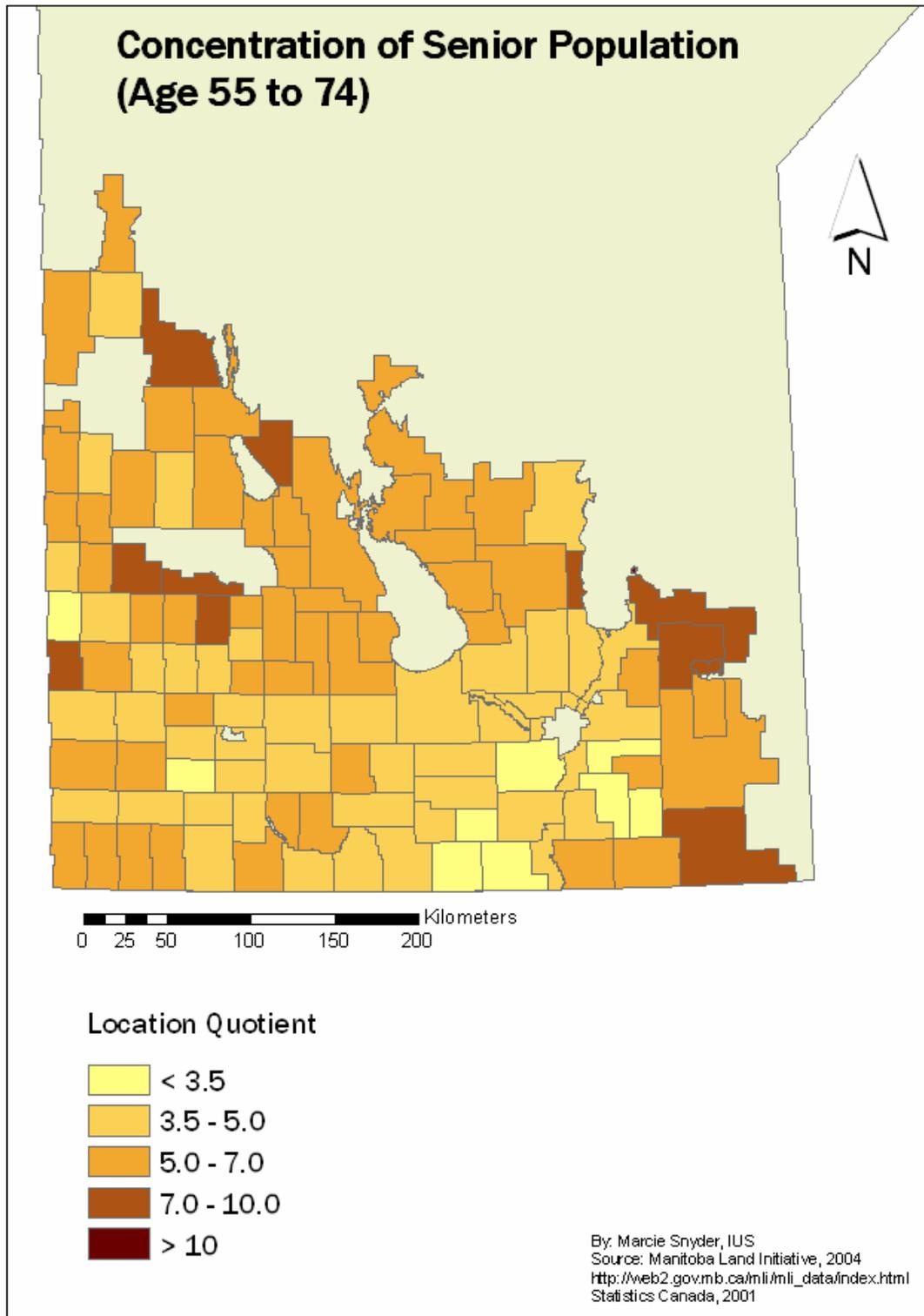
**Figure 4**



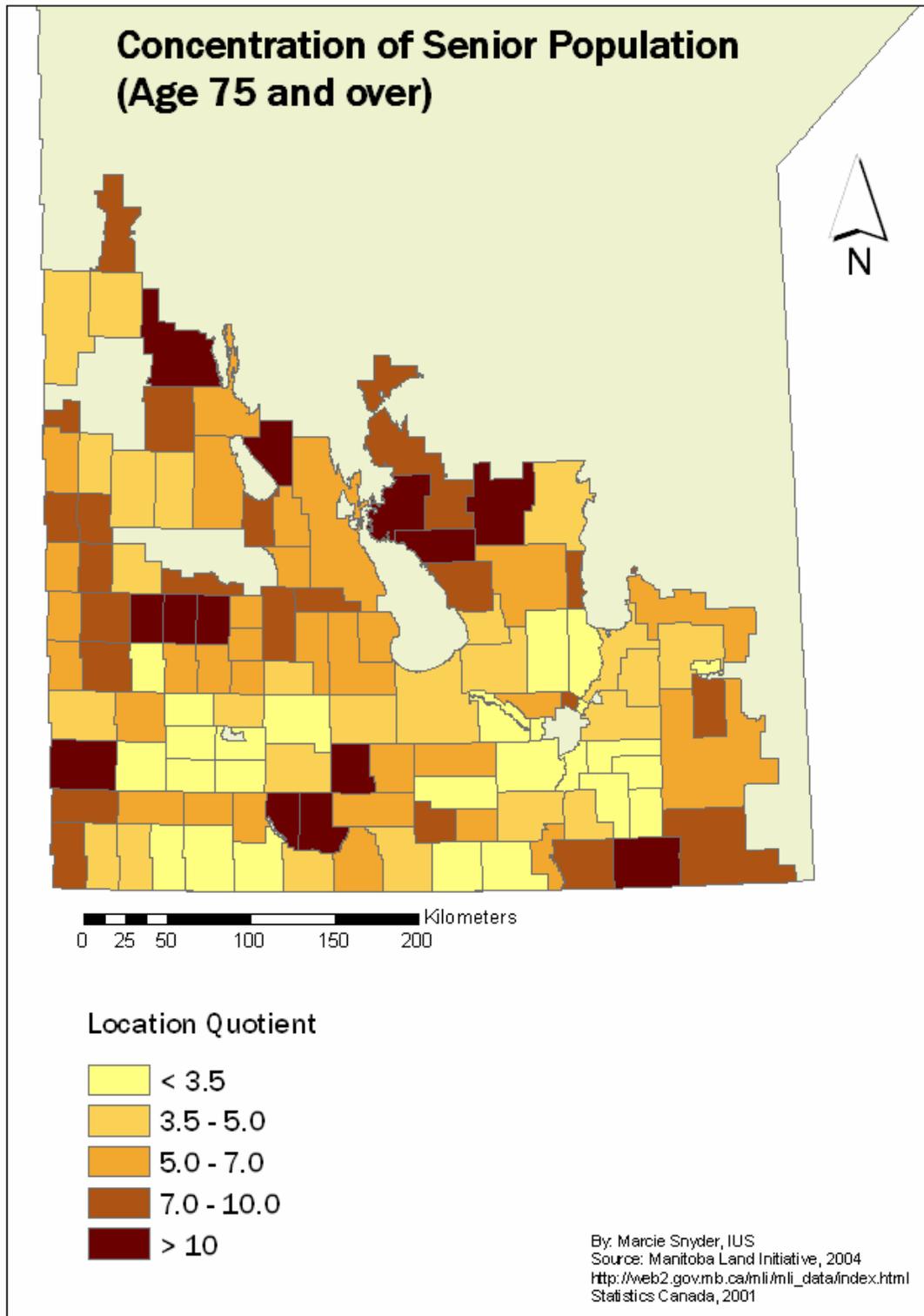
**Figure 5**



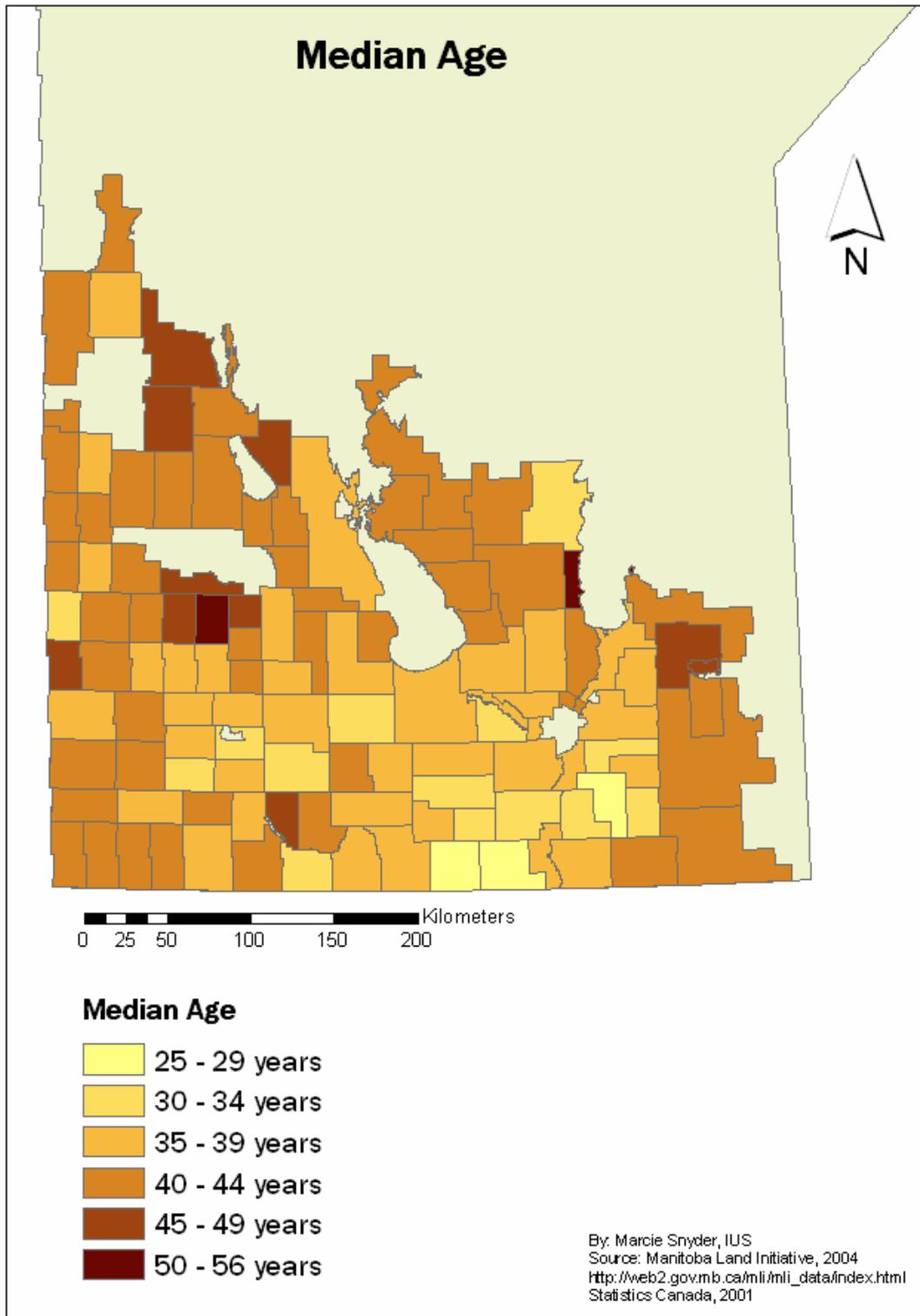
**Figure 6**



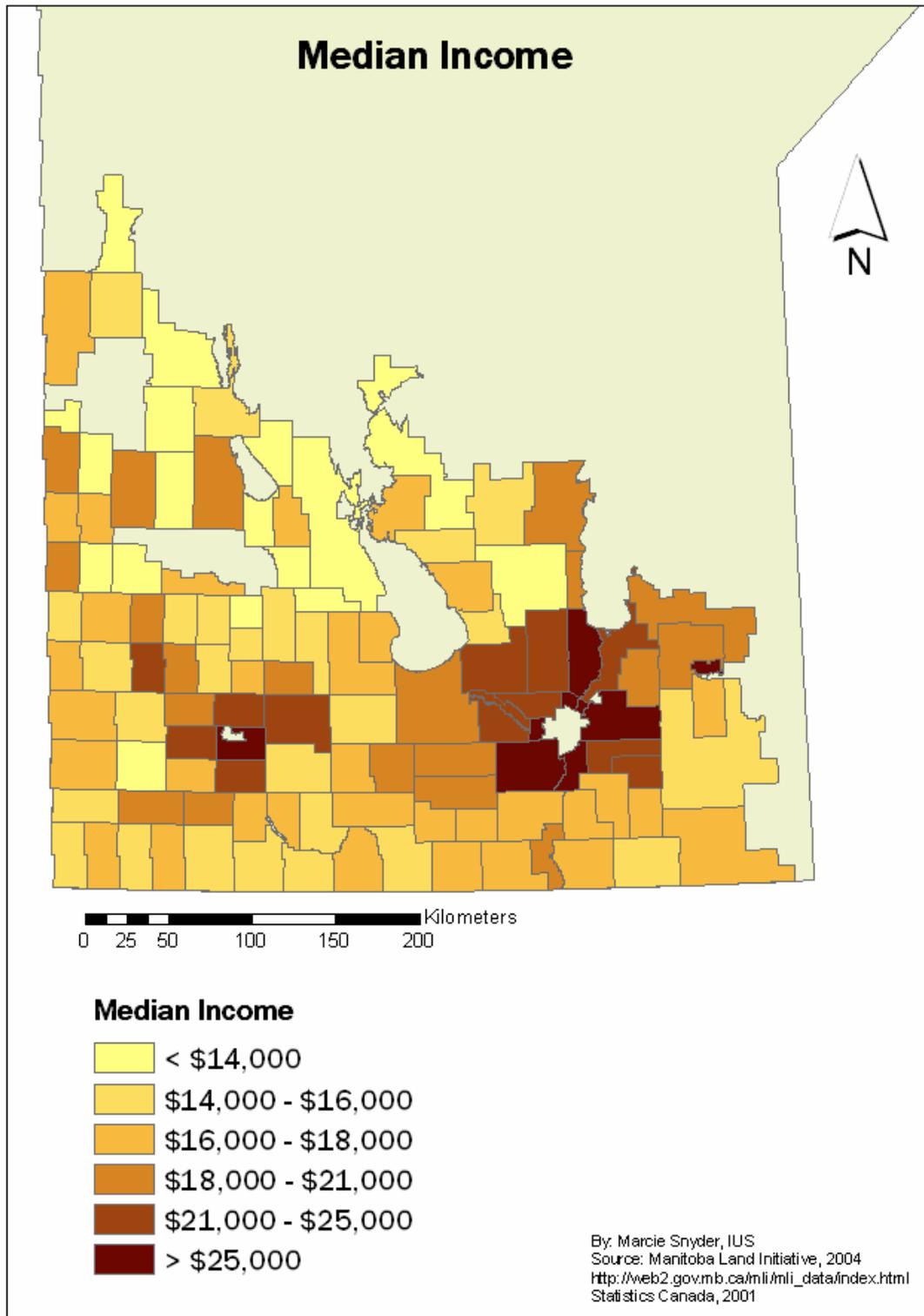
**Figure 7**



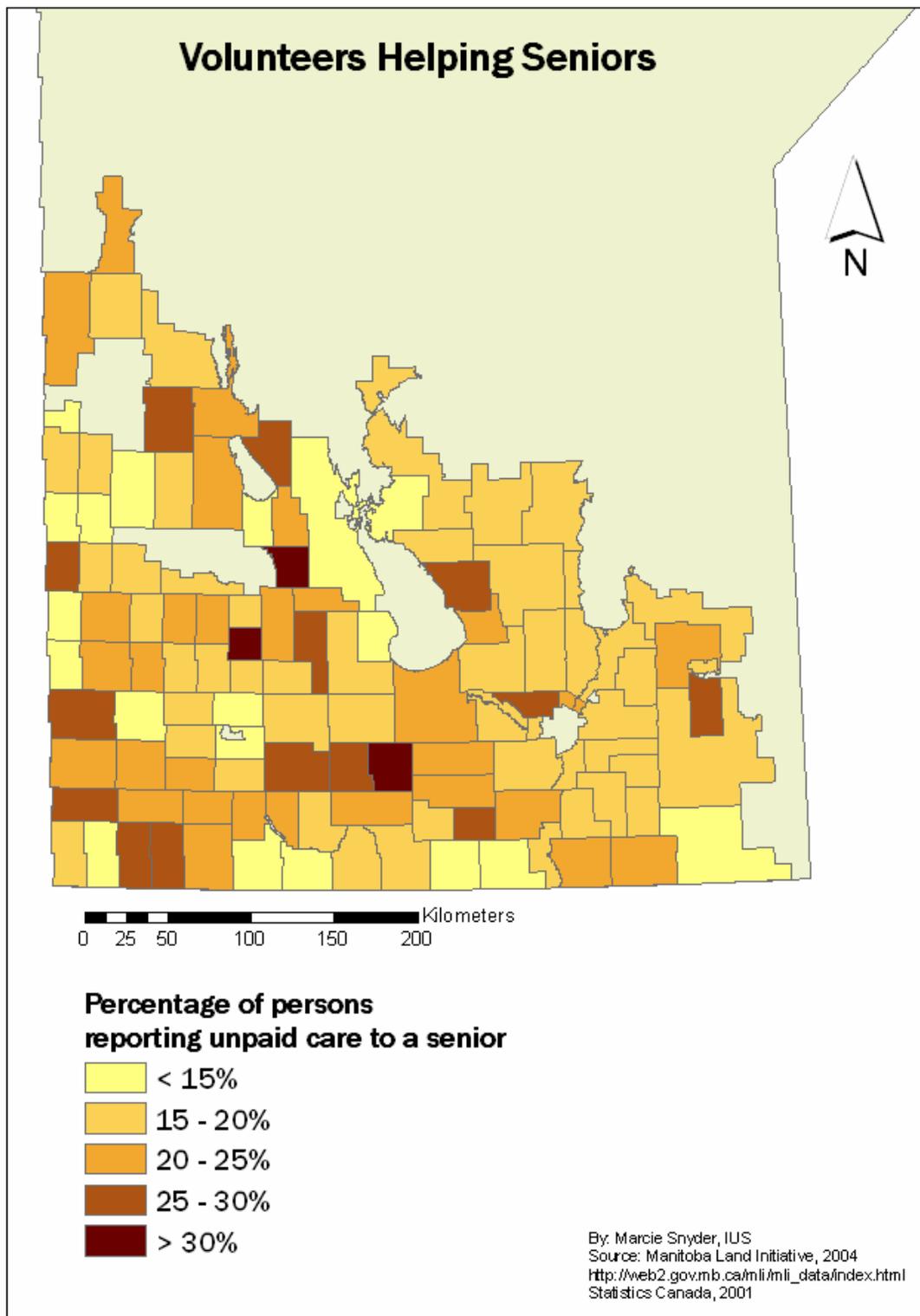
**Figure 8**



**Figure 9**



**Figure 10**





## **5.0 Transportation Options for Seniors in Rural Manitoba**

The literature review demonstrated that aging in the rural context presents many challenges for seniors to remain independent when transportation resources are limited. The primary objective of this project was to gain an in-depth understanding of the issues surrounding mobility and transportation options for older adults in the rural and remote regions of the province of Manitoba. In this section, the types of transportation available in rural Manitoba are described, the issues related to these options are reviewed and recommendations are developed to provide a framework to identify the next steps required for a continued focus on transportation issues and to establish long-term solutions that will ensure the independence and quality of life of older adults in rural Manitoba.

### **5.1 Key Factors to Improve Transportation for Rural Seniors**

Before examining specific transportation options, it is important to note several key factors that have been identified as essential in the development of effective and sustainable transportation options for seniors in rural environments.

#### *➤ Advocacy and Networking*

In consultation with many service providers, it was repeatedly emphasized that transportation is crucial for the independence of rural seniors. It was recommended that a message be sent to all levels of government (municipal, provincial and federal) that policies to encourage aging-in-place in rural communities must include the provision of adequate transportation. Such advocacy requires the development of effective networks throughout the province to establish unified goals. It is particularly significant that Services to Seniors specialists have identified the need to establish a seniors transportation working group, similar to the group in Winnipeg, in rural Manitoba. Therefore, the principal recommendation of this report is:

- ❖ The development of a rural transportation network that will provide a strategic framework to address the next steps and long-term solutions for transportation for rural seniors.

➤ *Local Solutions*

As the consultation process of this study provided a broad overview of the circumstances faced by rural seniors, it became apparent that the needs of communities and regions are unique. In some communities transportation is not perceived to be a major issue because the combination of transportation modes including informal supports, volunteer programs and handi-van services addresses the mobility needs of seniors. In comparison, the isolation and the lack of transportation options in other communities creates great hardship for older adults who are unable to access needed services and social contacts. For example, cuts to Greyhound bus service have created greater isolation for some seniors. Furthermore, other communities report greater social capital and the ability of the community to care for its seniors. Therefore, it is recommended that the unique needs and resources of communities and regions must be an integral part of the development of solutions:

- ❖ Mobility solutions must address the unique needs of each locality.

➤ *The Degree of Rurality*

When discussing mobility solutions for rural seniors, it is important to distinguish the variability of rural geographies. The transportation needs of seniors living on farms can be far more complex than the needs of older persons residing in a small town where groceries and other services can be accessed by walking. In addition, basic retail services are not available in some small communities. Furthermore, it is essential in an analysis of transportation for rural seniors that there be a distinction between local mobility needs and transportation that is required for long-distance travel. Therefore, it is recommended that:

- ❖ Transportation solutions must take into account the degree of geographic isolation and the distinction between local mobility needs and long-distance transport requirements.

➤ *Unmet Mobility Need*

Based on this preliminary investigation a broad picture of the transportation requirements of rural seniors has been established. However, it must be emphasized that a comprehensive survey of seniors was not possible because of the time frame of this study. While it appears that transportation provision is adequate for some seniors, there is still a great deal of unmet mobility need to access social and recreational activities in particular. Moreover, it is apparent that there are many seniors that service providers are unaware of who are living in isolation and refuse support services because of their steadfast self-reliance. These observations highlight the need to consult with seniors about their transportation needs in rural areas:

- ❖ A comprehensive survey of seniors in rural Manitoba is required to advance understanding of the transportation requirements of an aging population.

➤ *Medical Transportation*

From all accounts, transportation for medical services and care is the most serious mobility problem faced by rural seniors. Whether an elder receives a ride from informal support networks, volunteer programs or handi-van services, great cost is incurred to reach urban centres. Rural seniors often miss appointments with specialists because of the lack of transportation, while others find it difficult to manage in cities without escort provision.

There are several local Cancer Society organizations in rural Manitoba that coordinate transportation anywhere in the province for cancer patients to access treatment. Volunteer drivers are used for the program and a reasonable rate is charged to the client with the remainder of the volunteer's expenses subsidized by the organization. The coordination and resources provided by the Cancer Society is very important to rural communities. The question to be posed is why this system could not be applied for all the medical transportation needs of rural seniors with the inclusion of reasonable rates? Therefore, a very important recommendation is:

- ❖ The development of a separate medical transportation system to provide inexpensive mobility and escort services.

➤ *Funding*

Finally, it is clear when discussing transportation for rural seniors that funding is an overriding issue for service providers struggling with limited resources, for volunteer drivers faced with rising gas prices, as well as seniors struggling with limited pensions. While some subsidies for low-income seniors do exist, there were many suggestions to investigate additional funding and tax credits for seniors to subsidize their transportation needs. Therefore, a broad recommendation is put forward:

- ❖ The establishment of increased funding and tax deductions to assist all who are involved in providing mobility options to seniors in rural Manitoba.

➤ *Coordinated Transportation*

The following sub-sections contain discussion of the distinct transportation modes that are available to rural seniors. The consultation process for this project demonstrated that in some parts of rural Manitoba older adults are well-served by transportation options, while in other areas seniors are disadvantaged by the lack of accessible transportation. Overall, there are some important transportation resources in rural Manitoba that if used in a more coordinated fashion would provide comprehensive service to a greater proportion of transportation disadvantaged seniors, as well as other community residents with mobility limitations. A regionally-based coordinated transportation system would more efficiently utilize scarce resources and provide the framework for greater inter-agency exchange. Therefore, a fundamental recommendation of this study is:

- ❖ The development of a coordinated transportation system that would more effectively provide mobility support to seniors in rural Manitoba.

## **5.2 Driving**

Driving is the main form of transportation for rural seniors and, in many cases, it is the only mode available. For that reason it is important to provide the supports needed to keep senior drivers safe. Many resource coordinators indicated that seniors in their communities know their driving limitations and restrict driving to within the town (and use the volunteer driving program for out-of-town trips) and only drive in day-time and in the summer. Nonetheless, there are many seniors who should not be driving but continue to do so because there are no alternatives. Several resource coordinators specified that the 55 Alive program was not effective because seniors are afraid they will be tested and will lose their license.

Rather than just focus on a means to keep seniors driving, perhaps there should be equal emphasis on providing the supports that are required for seniors to adapt to non-driver status. It is a very sensitive issue as it is very difficult for older adults to stop driving because it signifies a loss of independence. For some individuals, relinquishing their driver's licence is devastating as driving provided the means to reach social and recreational activities. In some cases, families have resorted to stopping maintenance of the car in order to keep their parent off the road. One resource coordinator observed that those rural seniors who experience great hardship and are not prepared to lose their license tend to isolate themselves and will not accept rides from others. In contrast, those elders who recognized the need to give car up adapt better because they are optimistic and will accept rides. Based on these observations it is suggested that:

- ❖ Programming be developed to provide awareness and support for rural seniors to give up driving and adapt to transportation alternatives

### **5.3 Informal Support Networks**

After driving, the most desirable transport option is automobile rides provided by the senior's social support network. The importance of these networks is illustrated by estimates that the informal network of family and friends provide 80 to 90 percent of long-term care in rural areas (Keating et al., 2001). During the consultation process the importance of informal help was emphasized again and again. Families provide a significant amount of rides and seniors prefer to get rides from friends and family so that

social activities are part of the trip to an urban centre. In addition, neighbours provide rides, purchase groceries and run errands for seniors. Some communities do not require formal volunteer programs because family is near, and the community is very supportive. A resource coordinator referred to a “caring community” which is a group of people who get together for the common good of the community. Overall, community support can be considered a form of volunteering in which rides are provided informally and seniors pay for gas and other expenses.

Most seniors are able to manage with the help of family, neighbours and the community. Despite the importance of informal care networks, many seniors do not have access to such networks. The provision of transportation by friends, families and communities is jeopardized as a result of three issues:

- In many cases it is seniors driving seniors in rural Manitoba. And while there is still a relatively large pool of younger seniors, it is important to question what will happen when fewer and fewer are able to drive.
- Many seniors do not live close to their children, while others cannot rely on family because they have either moved away or are too busy. For example, many children cannot drive parents to medical appointments because they work. In communities such as St. Anne, seniors have family close because of the proximity of the town to Winnipeg. While other seniors have no family support because younger persons in areas such as Parkland have had to move to western Canada for employment.
- Many service providers remarked that rural areas are changing as there is not the same sense of community as before and economic conditions are creating greater hardships. As the discussion on rural ideology suggested, it is possible that the culture of a caring community will diminish with younger generations who are more self-oriented.

Informal support networks are a key component for seniors to maintain independence. However, the findings of the study suggest that seniors may have decreased access to family and community supports in the future. In order to ensure that older adults

continue to receive this support, it is important to emphasize that regular care can place heavy burdens on caregivers, increasing the vulnerability of those without strong networks. Rural caregivers consistently report more stress, more caring commitments, and less external assistance than urban caregivers. Despite their willingness to help, we may be expecting too much of informal rural support networks (Keating et al., 1991). Based on these observations two recommendations are formulated:

- ❖ Increase recognition of the contribution of informal caregivers in providing transportation to rural seniors through tax credits.
- ❖ Develop greater awareness of the dwindling volunteer base for seniors in rural Manitoba.

#### **5.4 The Volunteer Driving Program**

The volunteer driving program in rural Manitoba is one of the most effective forms of transportation. Many drivers provide door-to-door services along with “escort” duties while in urban centres for medical appointments, which make the trip easier for the elderly or frail clients. The social aspect of this program is also beneficial to the mental wellness of the clients. In many communities, this is the only option for transportation for seniors as handi-van services may be too costly, unavailable, or non-existent. The volunteer driving program was identified by the majority of Services to Seniors coordinators as the most economical form of transportation that can be provided to seniors.

In many communities, there are formal volunteer driving programs arranged by resource councils as well as informal volunteers, where seniors are able to directly call family and friends for rides. This sub-section will highlight some of the benefits and issues of the formal volunteer driving program raised by the service providers.

##### **➤ *Benefits***

The availability of the services is one of the reasons why the volunteer program is used in many areas of Manitoba. Some communities do not operate handi-vans and taxi companies do not service every town, limiting the options for transportation to local

medical appointments, shopping, and social activities. Most resource coordinators have a limited pool of volunteers that they are able call to drive clients with some notification.

When volunteers drive from a rural community to an urban centre for a medical appointment, there is the advantage of having an escort for the senior. In addition to the driver, there is also the opportunity to have an additional person to provide an escort. As an example, Beausejour has two volunteer drivers that regularly provide trips into Winnipeg. Each volunteer has a partner to provide door-to-door service while the driver parks and retrieves the car. As a comparison, the driver of the handi-van indicated that there is nowhere for the vehicle to temporarily park at many offices to provide this level of service.

Cost was also often identified as another leading reason why the volunteer program is so widely used. The efficiency of the vehicle is far greater than that of using a handi-van, and in most cases less expensive and more comfortable. Most volunteers are given a small amount of money, \$5.00 to \$10.00, for local trips to compensate the driver for their time. If the trip is for out-of-town purposes, a fee of approximately \$0.35 per kilometre is charged, or a flat rate such as Whitemouth to Winnipeg is \$60.00 return. In contrast to using a volunteer driver, the senior would accrue greater costs with operating their own vehicle with insurance, annual maintenance, and fuel.

Another benefit of the program relates to the coordination of the volunteer driving pool. Many resource coordinators arrange transportation with the volunteers and the handi-vans, and at times the Cancer Society transportation program. These coordinators understand the needs of the clients and arrange the appropriate type of transportation. If the client is in a wheelchair and a handi-van is available in the community, the coordinator will arrange for the van, and vice versa if the client is independently mobile, a volunteer may be arranged for.

A benefit of small towns can be seen from the perspective in a northern Interlake RHA community. The resource coordinator, on occasion, will cold call individuals whom she knows that may be able to provide a ride to one of her clients. She also takes the opportunity to call those who commute to a larger centre for rides of seniors. Knowing the town residents can aid in establishing a volunteer base, formal or informal.

➤ *Issues*

With the apparent success of the volunteer driving programs, there are some substantial issues. The primary issue that was identified by many resource coordinators was the fact that the drivers of the volunteer program are seniors themselves. Although there are social benefits of seniors driving seniors that can be a benefit to both client and driver, this one issue introduces a number of other potential concerns, including a dissolving volunteer base/change in demographic profile, safety issues, where drivers will go, and volunteer availability.<sup>1</sup>

The issue about the safety of driving with other seniors is one that resource coordinators are required to deal with on a regular basis and have no easy solutions. Unfortunately, there are times when the coordinator needs to end the volunteer's contribution for safety reasons. Other safety concerns are that some volunteer drivers do not feel comfortable driving in a major urban centre. This places a restriction on how a volunteer can be used. Some drivers state that they are willing to drive to the "perimeter" which does not meet the needs of the client.

Another issue is that at times seniors do not appreciate the value of the volunteers' time and efforts. Some volunteers will not pick up certain seniors because they do not pay the going rate for the services provided. This results in the coordinators getting involved with driving elderly clients themselves, placing additional strain on the services provided by the region. Unfortunately, there are at times when a senior will not use the services because it is too costly to pay a volunteer, not realizing themselves how much it costs to operate and maintain a vehicle.

There is also an issue of volunteer burnout. In small communities with a limited volunteer base, there can be an over reliance on one or two volunteers, which can result in the volunteer withdrawing their services for a time, or permanently. It is important to note that volunteer recognition and appreciation can only go so far in helping reduce the burnout effect. Burnout can also be enhanced by the growing need for drivers as a result of the increase of programs offered, and the centralization of medical services to a few centres in Manitoba.

---

<sup>1</sup> Some volunteers are "snow birds" where they are available to drive during summer months, and are gone for the winter months.

Finally, there has been a recent trend in some regions for a diminishing volunteer base due to the rise in gas prices. Many volunteers have identified that with the rise in fuel, the limited amount of mileage paid by the clients may not cover the cost of gas.

➤ *Recommendations*

There are no easy solutions to the issues presented in this section on the volunteer driving program. Limited volunteer base, aging populations, mileage rates and access to volunteers creates some hardships in communities that are attempting to allow seniors to age-in-place. Many communities use volunteers, and frankly, many could use more to provide for the community needs.

Based on this brief evaluation of the volunteer driver program, the following recommendations are prescribed.

- ❖ Provide for a volunteer recognition incentive in the form of government rebates or tax credits.
- ❖ The governments need to identify that there is a substantial savings from volunteer programs in the form of social and capital savings.
- ❖ Provide seniors better tax breaks for transportation for medical appointments.
- ❖ Provide better advertising within communities to show the need for volunteers and that more volunteers make less work for the few.
- ❖ Better education for the seniors on the costs of operating vehicles.
- ❖ Better education and involvement from high school students in the importance of volunteering; try to incorporate volunteer credit program.

## **5.5 The Mobility Disadvantaged Transportation Program**

The provision of handi-van services in rural areas of Manitoba is an important resource for the aging population. With decreases in the availability of informal supports and volunteers in the community, the need to effectively utilize handi-van resources becomes increasingly pertinent. In this sub-section, the program is described and evaluated to illustrate the issues that need to be addressed in order to develop a more efficient and coordinated mobility service for older residents of rural Manitoba.

### **5.5.1 The Mobility Disadvantaged Transportation Program**

The Mobility Disadvantaged Transportation Program Grants (MDTP) is a Provincial Government sponsored program designed to provide support to rural communities in Manitoba for the operation of Handi-vans. According to the MDTP Guidelines, the program is specifically “designed to assist communities to provide transportation services for mobility disadvantaged persons in Manitoba” (MDTP Guidelines). Although there are many ways to interpret the definition of mobility disadvantaged, according to Jane Inouye, Department of Intergovernmental Affairs and Trade (IAT) Municipal Finance Analyst, the mobility disadvantaged are those who have a physical or mental disability or are above 55 years of age. The MDTP Guidelines go further clarifying that eligible users are “any individual who by reason of illness, injury, age, congenital malfunction or other permanent or temporary incapacity or disability is unable without special facility or special planning or design to utilize available transportation facilities.”

In order to apply for funding, the community must have a formal government “sponsoring” the program. The governing body can be a town/city, or Rural Municipality (R.M.) that receives the funding for disbursement to the Handi-van operation. Once the sponsoring body is established, there can be any number of organizations or individuals that operate the Handi-van; the sponsoring body does not need to run the system. Currently, there are 64 communities or municipalities that are taking part in the program, and once funding is in place for the community, the only on-going requirement is to provide IAT with annual operating budgets.

There are three levels of grants in place provided for the MDTP. They are as follows:

1. Start-up Grants of up to \$6,000
  - Start-up grants are provided on a one time basis to the sponsoring body.
  - This grant is in addition to any initial capital grant authorized.
  
2. Capital Grants
  - Capital grants are provided on a one time basis to purchase initial vehicle.
  - Funding may also be available for purchase of a second vehicle (*not for replacement* of old equipment, but to add service).
  - Funding must be approved in advance of purchase of equipment.
  - 50% of actual cost of the capital asset is provided up to a maximum \$10,000.
  
3. Operating Grants
  - Operating grants are provided annually.
  - Operating grants cover 37.5% of gross annual operating costs up to a maximum of \$20,000 for one vehicle, and \$30,000 for two vehicles.
  - Expenses are calculated based on the calendar year, while grants are administered on the fiscal year.
  - An interim grant (administered in September) can be applied for based on the previous years operating budget.

In order to receive the start-up grant, the community must show need for funding. Once funding is in place, it is not necessary to show further requirement; the operating grants will always be available *if* the community demonstrates commitment to operate the service. Also, if the community shows the need for transportation funding, it is rare that grants will be rejected. As for replacement costs, there is no program in place, capital grants may not be used to replace vehicles, only to increase the fleet to accommodate shortfalls. In some cases, the IAT has declined grants for second vehicles as the municipality had not shown the need for a second vehicle.

The MDTP Guidelines suggests that 25 percent of the operating costs be recovered through user fees. In some instances, this can result in a high cost to users. The IAT requires that all municipalities that operate a MDTP Handi-van must create a board of

members that has representation of all interested parties. Members can include government officials, operator, advocacy groups and users. This board is charged with the responsibility for the design and implementation of user fees and local administration of the system.

### **5.5.2 Program Overview and Trends**

Over the past 30 years that the MDTP has been in operation, the number of communities and municipalities using the service has increased to 64 communities, with other communities indicating that they are in the process of applying to the program. The 64 communities that operate a Handi-van service are located in seven of the Regional Health Authorities in the province.<sup>2</sup> Information on these programs was provided by the Department of Intergovernmental Affairs and Trade based on the combined annual statistics submitted by the 64 municipalities for the 2004/05 budget year. Table 1 provides information for each regional health authority related to rates, annual number of trips, annual kilometres travelled and average trip distance.

The majority of the 64 communities and municipalities utilize only one vehicle to operate the Handi-van program. Only eight communities operate two vehicles, and four communities operate three vans. There is only one community that uses four vehicles for servicing the needs of the population. The majority of the vans are privately operated, or through a board/municipality operated system. There are nine operations that are operated directly by a Regional Health Authority (with ten vans).

#### **➤ *User Fees and Charges***

With the volatile gas market, the data on rates that was provided for this report may be lower than present figures as many operations increased fees during the 2005 year. Accordingly, the 2004 data demonstrates that there were only two operations that charged less than \$2.00 per trip within the town. There are five operations that charged \$7.00 to \$10.00 per trip (some are round trip with two stops, some charge one way with each stop incurring an additional charge). The majority of Handi-van operations (31 percent, or 20

---

<sup>2</sup> There are four Handi-van operations, Winnipeg, Brandon, Thompson, and Flin Flon, that receive funding through Provincial Transit initiatives rather than the MDTP funding. The RHA of Churchill does not operate any form of Handi-van service.

systems) charge \$2.00 to \$3.00 per direction. Out-of-town rates also vary and can include mileage costs, user fees, and, in some cases, additional pick up charges for out-of-town residents.

The out-of-town rates user fees range from no charge to \$10.00 for return trips (only nine operations do not charge a user fee). Some operations do not charge the mileage fee if the trip is within a certain distance to the home base of the van, in which case a slightly higher fee is charged (seven operations do not charge per kilometre, but some charge high user fees – Viriden charges \$35 to \$80 per trip for longer distance trip purposes). Mileage charges from a low of \$0.25 to a high of \$1.00 per kilometre (see **Figure 2**). The table illustrates that one third of the Handi-van operations charge rates between \$0.40 and \$0.49 per km, while 27 percent of the operators charge a lower rate and 36 percent charge more for out-of-town rates. According to both Handi-van operators and user groups (Seniors Resource Councils, ADP Co-ordinators, etc.) the 2005 gas prices have had an impact on operating costs of the vans, resulting in fee structures increasing during the year. Not all services have increased their fee structure within the operating year (April to March), but may adjust pricing with the submission of budgets to IAT in 2006.

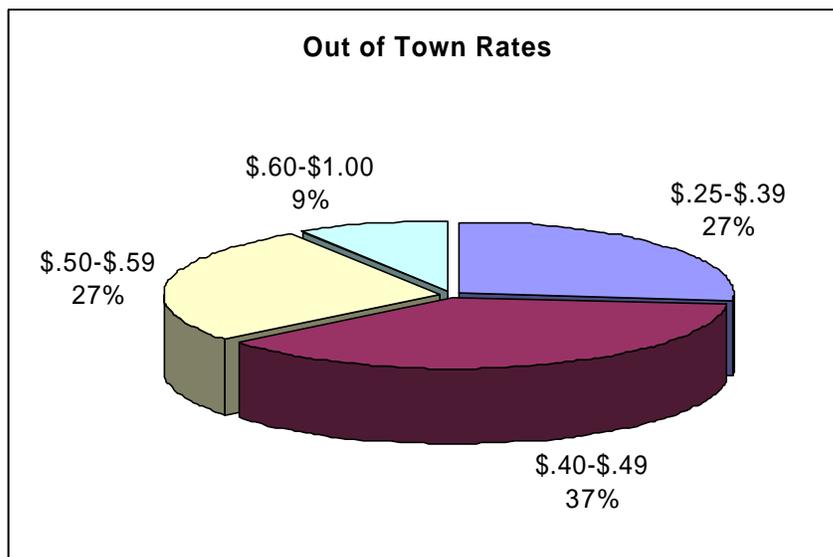


Figure 2: Mileage rates for out of town trips. Source: IAT.

The following are some examples of charges that clients must pay to travel between centres for medical appointments.

- For a client to travel from Riverton in the Interlake RHA to Gimli to see a doctor, a distance of approximately 80 kilometres round trip, the rate is \$50.
- Miniota to Birtle, 62 kilometres round trip, rate \$22.00.
- Miniota to Brandon, 226 kilometres round trip, rate \$94.50
- Miniota to Winnipeg, 626 kilometres round trip, rate \$224.00
- From Notre Dame de Lourdes to Winnipeg, 252 kilometres round trip, rate is a minimum of \$95.00 *plus* \$10.00 per hour for the driver.
- St. Pierre-Jolys to Winnipeg, 112 km round trip, rate is between \$100 and \$150 depending on the duration of the appointment.
- Whitemouth to Winnipeg, 200 kilometres round trip, rate is \$100.00 plus a waiting time charge.

As indicated above by the examples presented, there is a large discrepancy for out-of-town trips. These costs are only for transportation and do not include additional expenses such as meals or accommodation. It was noted during the discussions with the service providers that these costs increase regularly, as a result putting a strain on the volunteer driving programs offered.<sup>3</sup>

➤ *Number of Annual Trips*

Trip patterns range as greatly as the regions that operate them. Of the 64 systems, six van services (10 percent) reported less than 100 trips annually. However, it should be noted that operations with low trip numbers usually have a high annual kilometre usage. The smaller number of trips in combination with high kilometres is indicative of the use of the Handi-van service in remote communities to access medical care in urban centres. At the other end of the continuum, four van services (6 percent) reported making more than 10,000 trips per year, indicating that the van service is well used in these areas.

---

<sup>3</sup> As a comparison, Whitemouth to Winnipeg for a volunteer driver would cost the client \$60.00, no wait charge,. Wheelchairs are not accommodated for a variety of reasons.

Figure 3 shows the total number of trips reported in 2004 for each of the 64 Handi-van operations.

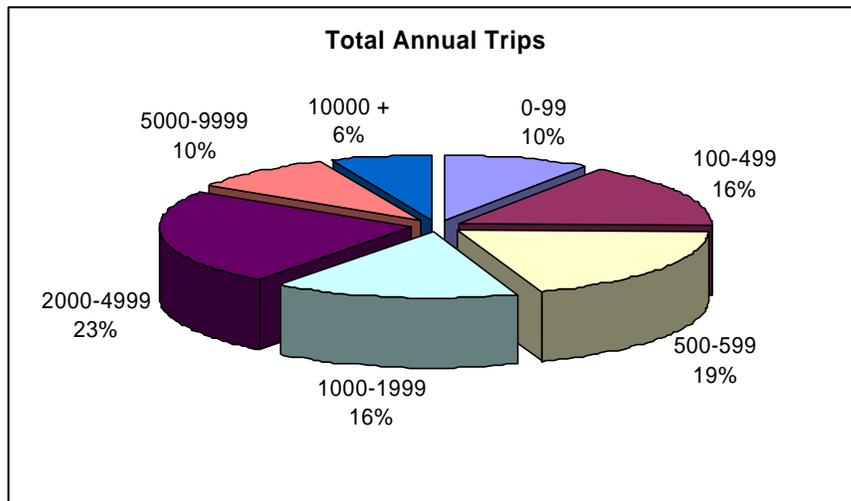


Figure 3: Total number of annual trips. Source: IAT.

➤ *Annual Number of Kilometres*

Within the MDTP, all of the Handi-van programs reported an annual usage range from 1400 km to greater than 60,000 km. There are 15 Handi-van operations (24 percent) that reported an annual usage of 10,000 km to 15,000 km. Some of the systems with multiple vans reported more than 60,000 annual kilometres (only 3 percent) reflecting the combined number of kilometres for all of the vehicles in the operation. The + 60,000 annual km operations include one service in the Interlake RHA, and one in the Parkland RHA. As these communities are dispersed and isolated, the high number of kilometres is indicative of the distances needed to travel from remote areas of the province to urban centres. The operations that reported greater than 30,000 km annually comprise of 21 percent of the MDTP funded Handi-vans. Handi-van services that reported less than 10,000 annual kilometres comprise the majority (35 percent) of the Handi-van operations. The lower annual distances travelled may be indicative of local trip patterns, or that the van services are not used regularly. Figure 4 shows the breakdown of the distances that all Handi-van operations travelled in 2004.

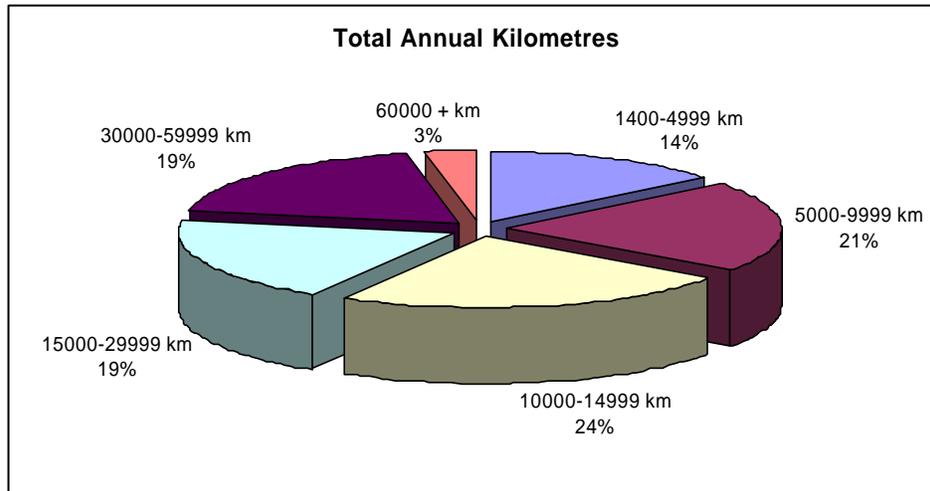


Figure 4: Total Annual Kilometres travelled in 2004. Source: IAT.

➤ *Average Trip Distances*

The average trip distance for one-quarter of the Handi-van operations was between 2.6 and 5 kilometres. Two Handi-van programs, located in the Assiniboine and Central RHA's, recorded average trip lengths over 100 kilometres. The general consensus from RHA service providers and operators is that using the Handi-vans within the local region is more cost effective than travelling outside the locality. This is demonstrated by the large percentage (47 percent) of all MDTP Handi-vans that travel an average of less than ten kilometres. Regional use (between rural communities) has a fair representation as one third of the vans travelled between 10 to 40 kilometres. Inter-regional use is becoming more limited indicated by the 20 percent of vans travelling over 40 kilometres per trip. Figure 5 show the average distance travelled per trip in 2004 for the 64 Handi-van operations.

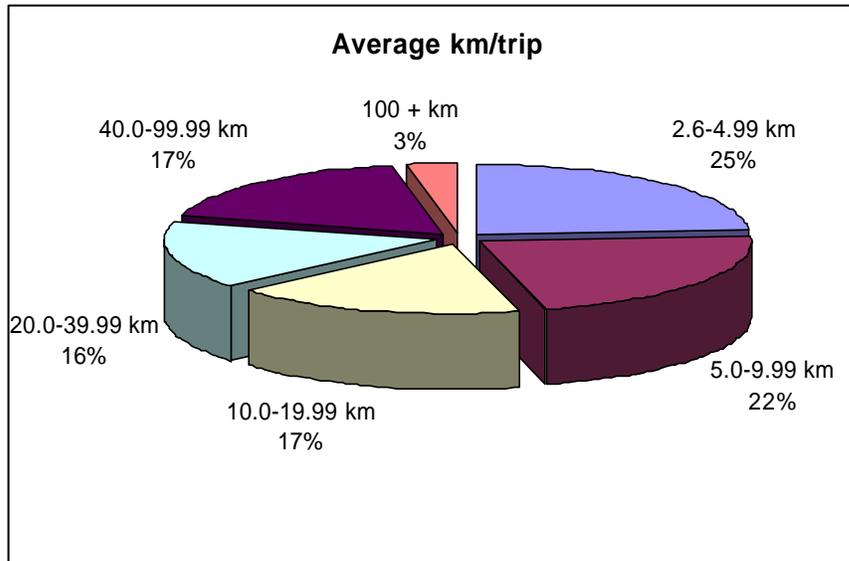


Figure 5: Average trip distances per trip in 2004. Source: IAT.

### 5.5.3 Issues Related to Handi-Van Services in Rural Manitoba

The MDTP is an important source of transportation in rural areas that allows seniors and mobility challenged people to access services. However, based on dialogue with operators, service providers and users, there are several strengths and weaknesses of the program.

It is important to note that the issues discussed here can be inter-related and have implications for many effects on many different aspects of the MDTP administrators, operators and users. For example, an increase in cost to seniors usually equates to increased costs to the RHA's using Handi-van for programs such as the Adult Day Program (ADP). We will identify some of the main issues that were discussed in interviewing individuals, program coordinators and operators.

#### ➤ *Escorts*

The first issue relates to the provision of escort services to medical appointments in urban centres. It was identified that there are concerns in using the Handi-van for medical trips from smaller rural communities to larger centres like Brandon or Winnipeg. Although van operators do not charge companions travelling with the users, those

individuals who do not necessarily need an escort on a day-to-day basis get dropped off in front of the doctor's office and are "left to fend for themselves." Many Handi-vans provide curb-to-curb service, some provide door-to-door, but when it comes to appointments in Winnipeg or Brandon, the drivers may not be able to help the client to the door for various reasons (such as no easy/short term parking at the downtown offices).

➤ *Priority Uses*

The second issue relates to the variation in defining priority users. As per direction from IAT, the administrators of the operations are required to produce a priority list of use in cases where demand exceeds capacity. Many operators identify that medical appointments have priority, (in one case of a double booking, a charter was cancelled at the last minute to accommodate a trip into Winnipeg for a specialist medical appointment). At least one operator identified employment as the first priority, with medical appointments as secondary. The operator did indicate that there were no issues in booking medical appointment trips around employment schedules as there is flexibility within the employment programs. The typical priority listing is as follows:

1. Medical
2. Employment
3. Adult Day Program
4. Charters
5. Other uses (shopping, social, etc.)

The ADP being lower on the list can put a strain on the program that the RHA is trying to provide, and in more than one instance, the ADP users were "stranded" as the Handi-van was called out to a higher priority (even with previous bookings for the ADP).

➤ *Booking Arrangements*

In relation to the booking of Handi-van services, there can be issues that confuse the users, as well as the operators. Some Handi-van operations are administered and operated by the RHA, or Seniors Resource Councils, which use a central office for dispatch. In most cases, one phone number is used to contact and transportation arrangements are

relatively simple. In most cases, however, the clients must call the Handi-van operator directly. For the Handi-van operations that do not have a central booking agency, the client needs to know who to call. In at least one case, knowing who to call changes daily (there are five part-time drivers) and the client is required to look in the local paper to identify which number to call to arrange directly with a driver. Most bookings are required at least 24 hours in advance, eliminating spontaneous trip purposes that most people with personal vehicles take for granted. There are some cases, specifically the Roblin Handi-van, that spontaneous trips can usually be accommodated.

➤ *Continuity of Service*

At times, the Handi-van operations only have one or two drivers, and at times for unforeseen circumstances or conflict of timings, are unable to perform the duties. For example, recently in Whitemouth none of the three drivers were available for a weekend charter, resulting in the cancellation of the social outing that was arranged by the ADP Co-ordinator. The lack of availability of drivers is an issue for many Handi-van operations. Relating to this, there are many cases when the van is only available Monday through Friday during business hours (i.e. 8:00 am to 4:30 pm) and not available on evenings, holidays, or weekends (times when vans are not being used by regular users such as ADP, and regular medical trips).

➤ *Costs of Operation*

To reiterate, the MDTP is an asset to the communities that operate them to an extent. However, operating costs can result in excessive fees for the user. The IAT provides 37.5 percent funding for annual operating costs, but this falls short for many communities that have a limited population base to draw fundraising and donation money from. A senior's resource coordinator identified that there were five or six groups trying to fundraise within a community population of 3000 people. This puts a strain on fundraising for all community groups. Operational costs can include:

- Fuel
- Annual Vehicle Inspections (a raising cost every year)
- Driver pay

- Normal maintenance costs (cleaning, oil changes, engine fluids)
- Other maintenance costs (brakes, tires, windshields, universal access equipment maintenance)

Although there are capital grants available for the start-up of the Handi-van services (50 percent of actual cost of the capital asset up to a maximum \$10,000), there are some communities that can only afford second hand vehicles (for example, the LGD of Piney found a *used vehicle* for \$35,000 with high mileage), but in the long term maintenance costs can increase exponentially, making the van too expensive to maintain. There is no provision to upgrade old equipment from Provincial Government funding and grants (IAT indicated that funding for second vehicles was denied because of the lack of need for a second vehicle). The large number of kilometres driven by some Handi-van programs suggests that it could take only a few years of operation to accumulate upwards of 200,000 plus kilometres on the vehicle. Given the high use of the vans, maintenance costs could make the program unaffordable, or require the purchase of a new van within a few years, once again putting a strain on the fundraisers.

In some communities the Handi-van can be chartered as a means to combat the high operational costs of the program. Although the charters should not be priced so high that it would make it unaffordable to use the Handi-van, there should be at least cost recovery and potentially a modest income from the charter.

There are instances where service operators are attempting to turn over the operation of a handi-van program to a different authority. It was cited that high costs, not only from fuel but from all operational expenses, were the primary reason for this desire of change. In one instance, the process has seen some resistance since the RHA knows about the high costs of operation and the non-existent return on investment. At present, the Handi-van does still operate, but may in the near future be discontinued.

The town of Erickson is experiencing some issues on the sustainability of the van operation in this community. The Legion owns the Handi-van which requires many repairs in order to maintain a safe vehicle. There is also a concern that the Handi-van “does not pay for itself” resulting in sporadic use of the service. This is additionally hindered by the drivers, all whom are volunteers, that are willing to drive once a month,

but feel that once a week is too much time to volunteer. In Winkler, the Handi-van operation discontinued its service as it was primarily used by a disabled population to get to educational programs. When the program moved to a different location, the Handi-van was no longer required for the remaining population, which relies heavily on family and friends for transportation.

At the other end of the continuum, there are Handi-van programs that are well run, and well used. For example, in Roblin (population of 1,818 in 2001), one van provided 1,534 trips in 2004 logging 9,558 kilometres. The high trip count and low distance is indicative of local use, and the data suggests that if one van is operated five days per week, an average of six trips are made on a daily basis. Another example of a well used system is in Gimli (population 1,657). In this community and region, three vans provided 13,850 trips in 2004 with a total of 58,253 kilometres logged.<sup>4</sup> Melita operates one van (\$2.00 one way) that provided 3,454 trips with 17,623 kilometres recorded (average of five kilometres per trip).

There are many other Handi-van operations that provide good service within the community as indicated by high trip/low mileage data provided to the IAT in the annual budgets. However, it is important to note that a transport system based on local trips does work, while the system is unaffordable in most cases for regional transportation. It is also notable that most long distance trips for medical purposes only transport one person, thus influencing the high costs incurred because of great distances.<sup>5</sup>

➤ *Drivers*

Within the various operations of the Handi-van, there is a wide range of issues relating to the drivers. The first is the concern of volunteer versus paid drivers. Most operations pay the drivers an average of \$10.00 per hour. This rate of pay seems to be reasonable since the driver is required to go through the Class 4 licensing process (drivers under 60 require a medical exam every five years, 60 and over, every two years). It also seems reasonable pay for spending up to eight hours driving clients around to appointments.

---

<sup>4</sup> On average, 4,616 trips and over 19,000 kilometres were logged per vehicle based on 5 day operation. Each van has an average of 17 trips per day accruing 75 kilometres.

<sup>5</sup> For communities that allow charters, the kilometre rates are slightly higher in most cases (\$0.20 to \$0.40 higher), even if the van is full, the cost is much less per person, making a 100 kilometre trip affordable.

Unfortunately, paying drivers results in additional operating expenses which may be reflected in increased user fees. In Roblin, the drivers are “true volunteers” where there is no pay, nor is there any expectation of pay. User fees are \$1.50 per direction within the community, making it accessible and affordable to those on fixed incomes.

A further issue is the age of volunteer drivers. Many Handi-van operations that use volunteers to drive the vehicles are over the age of 55. A specific example is that the drivers in Roblin range in age from 60 to 85. Another community, located in the Interlake RHA, also uses seniors as drivers for their Handi-van program. The Roblin users feel safe using the program, as indicated by the high use of the Handi-van. However, there were concerns raised by the resource coordinators and seniors in the Interlake community about receiving assistance from drivers and the level of the safety of driving.

In some cases not all van operations have a driver base that can accommodate the demands of the community. As previously discussed, Erickson has a difficult time finding drivers; Whitemouth, with three dedicated drivers, at times can not provide charters due to conflict of bookings. Minnedosa also uses volunteer drivers, which puts restrictions on hours of use.

#### ➤ *Costs for Seniors*

Transportation is an integral component of remaining active in the community. It is also an important component to get the seniors out to social functions for continued mental health, and to provide for an independent lifestyle. Communities that provide Handi-van services for a reasonable cost, (most have identified that under \$3.00 is considered reasonable) provide a greater number of rides for non-medical trip purposes. Using this service to go shopping for groceries, pharmacy, and social activities helps in maintaining an independent life.

Unfortunately, there are some Handi-van systems that charge \$10.00 per direction *within* town, which makes it unaffordable to most people. Some program administrators justify the high cost by arguing that a Handi-van should charge similar fees to the local taxi service (where available) to ensure that the local taxi owner will not go out of business. Using the Handi-van for medical trips (i.e. specialist doctors in Winnipeg) usually results in a very costly bill to the client. Most operators (38 percent) charge

between \$0.40 to \$0.50 per kilometre, a user fee, plus per hour charges while the driver waits in the city for the client. This can easily result in a minimum of \$100.00 to \$150.00 *per trip* within close proximity to Winnipeg (within 150km radius).

As a way to encourage Handi-van use over the volunteer driver program in Pilot Mound, the volunteer driving program charges the same fee structure as the van operation. This results in over 3,000 trips per year for the Handi-van. However, for out-of-town trips, the volunteer program rate of \$0.35 is less than the Handi-van rate of \$0.50 per kilometre. In this community there is also strong encouragement to use family and friends for long distance trips as it becomes a social outing and an opportunity to shop.

Throughout the discussions, many resource coordinators identified that using the volunteer service is less expensive than taking the Handi-van. Returning to Whitemouth, using the volunteers to go to Winnipeg costs the client \$60.00, rather than \$100.00 plus wait time for the Handi-van. Most volunteer programs charge only for mileage and parking, whereas most Handi-vans charge more for mileage (an average of \$0.20 to \$0.40 more), plus parking and wait times.

Charters provide an affordable option to shop and participate in social activities. In St. Pierre-Jolys, there is a monthly shopping trip into Winnipeg which costs \$10.00 per person, and given the reasonable cost, the Handi-van is well used for these trips. In other cases, being able to fill the van is not an issue; charters for social trips from Roblin to Yorkton (78km) and Dauphin (95 km) occur “regularly” and are affordable to the users (a flat fee of \$3.00 per person plus \$0.25/km for the van; if the van has 10 passengers, the return trip to Yorkton would cost approximately \$7.00 to \$10.00 per person). In other municipalities, charters are not permitted (according to the annual budget submissions to IAT, 13 communities do not allow for charters). There is concern that shopping trips from a rural area to an urban centre like Winnipeg, Brandon and Portage la Prairie, would put a strain on local merchants businesses (although in some communities only grocery stores are available).

➤ *Cost for Program Delivery*

In the Interlake RHA, the rise in user fees for van services resulting from rising gas prices has put a strain on the services provided by the RHA (i.e. the ADP). As a result,

the RHA has had to consider increasing user fees of the ADP to cover the costs of the Handi-vans. The ADP provides funding to the Handi-van operators, and has a partial cost recovery from ADP users (the fee is for the program - \$7.00 per day - and the ADP covers the cost of the Handi-van and other operational costs of the program - \$47.00 funded by the Government; there are some bills that reach over \$1200.00 per month for transportation alone).

It is important to note that as a result of increases in gas prices, some Handi-van programs have introduced loading fees (some clients are not in towns, so the van has to drive to more remote locations), empty mileage fees (instead of loading fees), or both fees. The questions raised by some RHA's are about the legality, or appropriateness of such fees. According to IAT, there should not be empty kilometre fees, nor the additional loading fees that are above and beyond the "normal" fee structure. Nonetheless, these fees demonstrate the strain on Handi-van programs as a result of rising gas prices.

In addition to the rising costs of the Handi-van, more and more seniors are calling upon the volunteer driving programs offered by many Resource Coordinators, resulting in a strain on this valuable source of transportation assistance. This reduction of use can result in the increase of user fees of the Handi-van programs, or the discontinuation of the service leaving those who need wheelchairs in a difficult position.

It was indicated that in some cases it is the regular programming for ADP clients and the disabled community that provides consistent funding for the Handi-van. During the rest of the time, the vans sit idle in garages or parking lots. This indicates that the Handi-van operations are not well used, and that the downtime that the vans have, can increase the cost of operation.<sup>6</sup> In Ashern, the ADP no longer uses the Handi-van for charters as it is more economical to rent a van and transport clients that way.

➤ *Program Protocols*

The issues that surround program service delivery and protocols revolve around the vast differences in rules and guidelines implemented by each service provider. This could be a result of the requirement of IAT that the communities and service providers create a

---

<sup>6</sup> Insurance premiums, annual inspections and maintenance still need to be paid for even if the van sits unused. Adding a marginal amount of miles to provide a service to the community may reduce the user fees, or at least reduce operational costs to the operator by having some income versus no income.

board to direct the Handi-van service. Each board is to be comprised of members of the community that have a vested interest in the operation of the Handi-van (including municipality, operator, and users). In order to create a system that does not detract from local amenities, certain boards do not allow for charters, whereas other boards allow charters as noted above.

The MDTP Guidelines also require that van services are *available* for 40 hours per week. This can allow for the Monday through Friday daytime only operations, leaving the van unused on evenings and weekends. Although there are communities that restrict the hours of operation, there are a few Handi-van operations that operate “24/7” assuming that there are drivers available.

In some communities, the Handi-van can be used for ambulance services (for *non-emergency, non-life threatening* services). In Fisher Branch, an ambulance for 16 km would have cost one person \$245.00 instead of the cost of \$21.00 for the Handi-van service. Although there was a cost savings of \$224.00 (or more if you calculate the wages for the EMT personnel), some communities do not allow for the Handi-van to be used for this purpose due to liability (drivers are not trained to do this type of service). With the increase in ambulance fees, it is possible that the use of Handi-vans will grow.

The other issue revolves around the dedicated use of the Handi-van for the ADP’s in the RHA’s. Some vans service two or three ADP’s, limiting *public* use to only two days of use per week. Two communities shared one van in the Parkland RHA, with each municipality providing for half of the remaining budget requirement of 63 percent of funding. One municipality has a group home for mentally challenged people. The van was constantly booked (as per priority listing) for the group home clients for medical and employment reasons. The members of the second municipality rarely used the Handi-van because of the restrictive booking times. As a result, a second van was purchased, one to serve each community. This resulted as a financial strain on both communities, but both vans are well used for each respective community.<sup>7</sup>

In Nor-Man RHA, the Handi-van is not available for booking until children with disabilities are dropped off at school, and ends when the van is needed to pick up those

---

<sup>7</sup> Both Handi-vans are still operated by one board and sponsoring body which was identified as a cost savings measure on operational/administrative costs.

children. This creates conflicts between users and booking schedules in this region. The service is also not available during the summer and Christmas school breaks.

Another case is in Assiniboine RHA, where one community places more restrictions than that indicated by the MDTP Guidelines. Users must “qualify” to use the services, and if they do not, there is an expectation that the client will use the taxi or alternative means. Additionally, within this community, charters are not allowed for seniors ADP outings, but since the Handi-van is operated by the local PCH, those clients have transportation for social outings provided.

➤ *Sustainability of Operations*

The remoteness of many communities in Manitoba creates issues of sustainability of Handi-van operations. The cost of fuel is one of the largest concerns when operating the larger styles of Handi-vans. Many are 12 to 18 passenger mini-buses with rear access for universal and easy access that are not fuel efficient. The fact communities use the van to transport clients to medical appointments does not bode well for economical sustainability, often transporting one or two people per trip. There is no easy solution to the coordination of appointments, but using smaller equipment may be one solution.

The mini-buses are used primarily because of the ability to carry multiple wheelchairs and seated passengers at one time. Handi-van operators also feel that buying this size of vehicle for a relatively slightly higher cost than large 12 passenger vans is more economical as the mini-buses are already universally accessible (whereas the vans need to be converted with expensive upgrades).

Additionally, some community service providers book only those who are in wheelchairs to the Handi-van as using volunteer drivers and a personal vehicle is more cost effective (\$60 from Whitemouth to Winnipeg in a volunteer driver/car versus \$100 for the Handi-van). This increases the down time of the vehicles, and encourages single occupancy use.

Although there are issues with the sustainability of a Handi-van service in small communities, it would be prudent to indicate that there is only one transit system in the world that is self sustaining; the remaining systems all depend on some form of

government subsidy.<sup>8</sup> Transit, especially Handi-van operations, should be considered as a service for the community, not an income generator for the operator.

➤ *Coordination of Transportation*

Coordination of transportation is a very difficult issue to address. Some Resource Coordinators have tried to encourage multiple clients to book specialist appointments on the same day. Unfortunately, the logistics of such a trip can be very difficult because clients may need to go to multiple locations within the city. When a coordinator from Assiniboine RHA booked two clients on the van to Winnipeg, one frail client had to wait over four hours to start the trip home after her appointment. As a result, it was decided that this was not feasible to do this again.

Other concerns of coordinating transportation is arranging for the pickup of clients. Again in Assiniboine RHA, clients will use volunteer drivers over the Handi-van because there are too many phone calls to make to arrange for the Handi-van, whereas usually only one phone call for the volunteer drivers.

Positive aspects of Handi-van operations include examples of coordination between RHA's and RM's. In Franklin, the Emerson Handi-van provides a number of different services, from the meal program to picking up clients in Franklin for the Emerson ADP (at a reasonable price). A Handi-van system may not be viable in Franklin with limited use and client base, but as we have seen, for the occasional use sharing of equipment is possible, and encouraged by IAT. Some communities have shared services and equipment, and once the service is overtaxed, there is an application to create a new van service, or in the case of the Parkland communities, an additional van was purchased.

Another way to increase use of the Handi-van, and to ensure drivers are available, some ADP and Services-to-Seniors coordinators drive the vans for their program and charter. Although this does put an additional strain on these positions, it ensures the greatest amount of participation of the clients served.

Other innovative ways to address the needs of seniors have been adopted in the use of the Handi-vans. In Fisher, ADP participants are dropped off at the grocery store while the van drops others off at other locations, then returns for them after shopping. In another

---

<sup>8</sup> Hand-vans can be considered a form of transit.

case, a woman who requires bathing assistance lives too far away for homecare workers to reach her and it would cost \$68 to bring her to town by handi-van. The solution was to enrol her in the ADP which provides handi-van transportation and after lunch on the days of the program she is transported to the PCH for a bath and hair care.

#### **5.5.4 Recommendations**

There are no easy solutions to the issues presented in this section on Handi-van programs. Even if funding was not an issue, the Handi-van services have serious limitations including the varied of hours of service, eligibility, and divergent fare structures between the various operations. Other limitations relate to the availability of vans and drivers. The community of the LGD of Piney is currently in the process of applying for MDTP funding to address the grave problems of isolation in this community partly occurring as a result of curtailment of Greyhound, or inter-city bus service. In the case of the community of Elie, the purchase of a van was considered for a period of time, but it was felt that the service was “way beyond the ability of the community.” The restrictions incurred by the high initial costs and daily operations are restrictive for many communities that desire a transportation system.

Based on this evaluation of the Handi-van program, the following recommendations are prescribed.

- ❖ The development of a province-wide network to address issues surrounding the handi-van program, to establish monitoring of the program and greater accountability, to share experiences and to promote the greater coordination of resources and services.
- ❖ The standardization of the rate structure for handi-van programs throughout the province to ensure equitable access for all rural seniors.
- ❖ The standardization of the operation of handi-van programs to include guidelines that specify booking procedures, hours of operation, identification of user groups and trip priorities.
- ❖ The identification of the feasibility of the handi-van program devoted entirely to the provision of transportation services at the local community level. Included in

this approach is the use of regular charters to ensure that seniors have affordable transportation to access needed goods and services.

- ❖ The identification of the need for alternative solutions for long-distance transportation that is primarily required for medical purposes.
- ❖ The identification of the need to address the high costs of providing handi-van services to remote areas that are most in need of mobility assistance because there are no alternatives and isolation is a major concern.
- ❖ The consideration of the use of different vehicle types to address the unsustainability of some aspects of the programs such as low ridership and “gas-guzzling” vans.
- ❖ The identification of additional funding sources such as corporate sponsors to address the high costs of universally accessible vehicles.
- ❖ The greater coordination and sharing of resources and services amongst all handi-van programs as part of a coordinated system to address the transportation disadvantages experienced by rural seniors.

## **5.6 Aboriginal Elders in Rural Manitoba**

During the research process of this project, Aboriginal seniors were identified as a special group of users who required greater consideration. In a focus group with Aboriginal elders, it was identified that transportation was never considered as an issue given, more pressing social and cultural issues. However, with identifying that transportation options are limited on reserves, it may be a starting point in addressing mobility needs of elders within the context of healthy living. Many of the discussions surrounding transportation were considered within other contexts, such as substance misuse and abuse, again emphasising that transportation is not an isolated problem.

Many of the reserves that have transportation provisions through Federal jurisdiction offer rides only for medical purposes. An important component to community involvement, mental wellness and daily active living comes from the ability to socialize. Many of the individuals indicated that they felt lonely as a result of the isolation of their residence. One example comes from an elder from the Sioux Valley Reserve. Every day she phones her neighbour to have a social chat, thus reducing the feeling of loneliness

and isolation. When asked if she felt isolated because of the lack of transportation options, she replied “no” and a discussion of the elders “doing the best we know how.”

From Sioux Valley Reserve, two universally accessible vans travel 45 kilometres daily to the Brandon Hospital for medical purposes. Unfortunately this single use leaves out the population that needs other services in Brandon. Within Brandon, there is a small provision for transportation at the Brandon Friendship Centre. Van hours are only available from 9 am to 5 pm Monday through Friday. Elders consider that time constraints are a concept that is traditionally non-aboriginal, thus making the elders feel even more restricted in their freedom. In addition to the time limitations, booking of the Friendship van must be made two days in advance, and there is no provision for emergency, spontaneous, or after hour trips.

Volunteer resources on reserve are limited, if at all existent. Although the community is well aware of the social and cultural importance of the elders, time constraints, limited population and resource base to draw from, and the limited incomes that potential volunteers earn places a heavy burden on trying to get volunteers.

Although this focus on the Aboriginal senior community was only one component of the study, the findings clearly illustrate that the Aboriginal population in rural and remote areas of Manitoba is severely transportation disadvantaged. Therefore, it is recommended that:

- ❖ Further investigation and networking be developed to better understand and respond to the mobility needs of Manitoba’s Aboriginal elders.

## **5.7 Manitoba’s Northern and Remote Areas**

Two Regional Health Authorities deserve special mention in this section, Burntwood and Churchill. Both of these RHA’s are considerably more isolated and removed from other communities in the southern half of the province. Both RHA’s have a number of health, social, and environmental issues that have taken priority over transportation. Although both Services to Senior’s coordinators identify that transportation is an issue that needs to be addressed.

Transportation to large urban centres from these two RHA's is supplemented by the Manitoba Government's Patient Transportation Program, available to residents above the 53<sup>rd</sup> parallel (some flexibility is allowed for below the 53<sup>rd</sup> parallel during seasonal changes). Although the cost for patient transfers is covered through this program, incidentals (such as food and lodging) are not covered while the client is out of the community.

➤ *Churchill*

The geographic remoteness and small population base of the Churchill RHA places more strain on program services. Although the town's main complex includes doctor's offices, activity centre and some shopping, the main issue the town faces is getting people out. Within the community, there is no formal volunteer driving program and the extreme climates hinder even short walking distances.<sup>9</sup> To aid in getting seniors out, the Services to Senior's program has instituted a voucher system for taxi use, where clients can get \$7.00 vouchers to travel to medical appointments, and clients are encouraged to stay in the complex for social purposes. There is no requirement for the client to supplement the voucher; however, donations back to the program are welcome.

Currently the population is small, but due to the growth of the eco-tourism industry and growing ties to the community, there may be a slight increase in population. As such, it is estimated that in the next five years approximately one third of the population will be over 55 years of age.

Some of the issues in transportation exceed the mandate of this study, but it is important to note that the high cost of transporting goods to the community has a direct effect on the health of the community at large. As an example, approximately 4 percent of the overall Canadian population has diabetes; in Churchill, in contrast, the average is one in seven people (14 percent) and is climbing to one in every six people (17 percent). The high rate of diabetes, according to the Services to Senior's Coordinator, is a direct result of poor diet, and the availability of healthy food alternatives. Related to the poor choices in food alternatives, cardio vascular issues are also increasing in the community.

---

<sup>9</sup> There are no sidewalks in the community and the roads are generally covered in ice during the winter months, which poses a risk to seniors that have mobility issues.

➤ *Burntwood*

Transportation in Burntwood RHA is one of the many issues in the region. Again, the remoteness of the communities in the region, and weather conditions adversely affect the ability of the community to transport the senior population for medical purposes and social activities.

Some of the rural communities are Aboriginal reserves that provide transportation for seniors for medical purposes (Norway House, and Cross Lake provide transportation for medical purposes to treaty status individuals). This creates additional issues with transportation, as treaty members have access to transportation, while non-treaty members do not. On the other end of the spectrum, there are many communities in the region that do not have transportation options for any of the residents (Gillam, Lynne Lake, Leaf Rapids, and Wabowden to name a few). In Nelson House, the PCH has a van for clients to use for medical purposes and a taxi is available for use and Pikwitonei has a van for use for medi-vac to the airport.

➤ *Thompson*

Transportation in Thompson, the main community in the Burntwood RHA, is somewhat satisfactory, but by no means completely adequate. The city operates a fixed route bus service and a Handi-van service and there are a number of taxi companies that operate in the town. The Handi-van operation is different in operational procedures as it runs more like a dial-a-ride than for mobility disadvantaged people. Anyone can book the handi-van for transportation, \$7.50 anywhere in town and \$20.00 out to the airport. The bus service does not go onto the hospital property, which is a fair distance for the mobility challenged users.

The volunteer base within the community of 13,000 people is virtually non-existent; as a result there is no volunteer driving program. This may not be from the lack of desire to help the community, but from the fact that the population is younger in age, with low-incomes and are simply not available or able to help.

The most effective mode of transportation in Thompson is the taxi service, with the drivers being very helpful in loading and unloading clients and accommodate folding

wheelchairs. Barriers in the affordable transportation options (Handi-van and transit) include wait times for the services and the hours of operation. At present both services only operate Monday through Friday.

With the growth in the community as a result of community ties and family, one potential solution for transportation issues is the opening of a personal care home in late 2006 which has included transportation funding in its operational budget. This solution illustrates that by providing its own transportation, the community be better able to address the need for transportation.

➤ *Other Remote Areas*

The issues surrounding status and non-status Aboriginal people are applicable to all remote areas of the province. In North Eastman, for example, Metis settlements surrounding reserves are not eligible to use the van services provided to the reserve community. Although there are income assistance programs for medical trips, the clients are unable to find drivers willing to accept the \$0.13 per kilometre that the program provides.

In other northern areas of the region, it costs \$60.00 per trip for medical purposes. In these areas, no home care nurses are available, presumably because of the remoteness and cost of travelling to these areas, places a financial burden on the senior population. One client who required dressing changes three times per week, could not afford the \$60.00 per trip for this essential medical care.

Although this study provided only a cursory view of the issues of transportation in northern Manitoba, the degree of disadvantage and the increasing senior population in remote areas requires:

- ❖ The development of a greater understanding of the mobility issues for seniors in northern and remote areas and the establishment of a strategy to address the high degree of mobility disadvantage.

## 6.0 Coordinated Community Transportation

The main recommendation of the study is to enhance the networking and develop coordinated community transportation for the mobility needs of seniors. The Ontario Government commissioned a report in 1993 to address community transportation. This report identified a vision for the future for community coordination of transportation services. The vision was to create a major investment of public resources to make better use of these resources. The coordination of community resources was identified as a means to enhance the quality of services because of the following reasons:

1. an increase, and continued projection of increase, of the population in Ontario;
2. an increase of the proportion of elderly people and people with mobility challenges within the general population;
3. regionalization of health, education and social services;
4. de-institutionalization policies (out patient and community based treatments versus extended stays); and
5. the continued creation and expansion of government funded programs and services in the communities.

The Coordinated Community Transportation Program is a community initiative to combine and manage the existing resources available in a region. In areas that find it difficult to justify the Handi-van that the Mobility Disadvantaged Transportation Program supports due to various reasons, Coordinated Community Transportation (CCT) may be a solution to relieve some of the transportation problems of seniors, persons with disabilities and low-income groups in rural settings. The CCT is a “best solution for the limited resources” program, with the primary goal being to “increase the number of people served and the number of rides provided” (Burkhardt *et al.*, 2004).

Coordinated Community Transportation is an organized way of pooling resources in order to provide the population with better, more efficient transportation options. Toted as a new way of thinking about how we move people, CCT is a collaborative program to reach and service individuals with limited transportation options. CCT programs are designed to improve the quality of life through creating means to be independent, self-sufficient, and allows for added opportunities to participate in the community.

In *Rural Transportation Series Report #4*, Coordinated Community Transportation benefits have been identified in the literature in a number of ways. Table 2 outlines some of the benefits.

Table 2: Benefits of Coordinated Community Transportation.

Stakeholder	Coordination Benefits
Client	<ol style="list-style-type: none"> <li>1. more clients are able to receive services</li> <li>2. increased options for service and locations</li> <li>3. increased client contact with service providers and programs</li> </ol>
Administration	<ol style="list-style-type: none"> <li>1. development of new services with other regions</li> <li>2. increase of resource base and access</li> <li>3. shared cost of product/service development</li> <li>4. increased continuity of services between regions due to joint resources</li> <li>5. increased efficiency resulting in cost benefits</li> <li>6. opportunities to grow and adapt</li> <li>7. gain of administrative support, regional synergy, and alliances</li> </ol>
Funders	<ol style="list-style-type: none"> <li>1. gain resources</li> <li>2. shared costs</li> <li>3. increased efficiency due to resource coordination</li> <li>4. gain of support, regional synergy, and alliances</li> </ol>

Source: *Rural Transportation Series Report #4*.

It is important to note that the economic benefits can include the reduction of costs, and program overlap which can result in the reallocation of some resources to other locally organized and financed programs and initiatives.

Like all programs, there are some identified barriers when using a coordinated system. The Ontario *CCT Resource Manual* identifies that there are real and perceived barriers to coordination. Some of the real barriers include start up costs (financial and time), changing needs in the community, change of administrators, regulations, and funding. Table 3 identifies some of the real barriers and Table 4 identifies some perceived barriers to coordinated transportation initiatives.

Table 3: Actual Barriers to Coordinated Transportation.

<b>Actual Barrier</b>	<b>Explained</b>	<b>Potential Result</b>
Cost	<ol style="list-style-type: none"> <li>1. may initially be higher financially</li> <li>2. may take a long period of time</li> </ol>	<ol style="list-style-type: none"> <li>1. loss of capital</li> <li>2. temporary spike in user fees</li> <li>3. reduction in users</li> </ol>
Changing needs	the community demographic and user profiles may change over time	<ol style="list-style-type: none"> <li>1. result could be that community requires more (or less) dedicated transportation services,</li> <li>2. higher cost to operate over the region</li> </ol>
Changes to Administration	changing administration may not support coordinated transportation initiatives	<ol style="list-style-type: none"> <li>1. removal of resources in the coordinated initiative</li> <li>2. higher costs to those remaining in the effort</li> <li>3. dismantling of initiative</li> </ol>
Regulations	<ol style="list-style-type: none"> <li>1. using various services may need a change of regulations</li> <li>2. insurance coverage</li> </ol>	<ol style="list-style-type: none"> <li>1. some regulations may hinder the coordination efforts (i.e. use of taxi's)</li> <li>2. insurance rates may go up in covering clients and volunteers within the initiative</li> </ol>
Funding	limited funding provided from the senior levels of government	Coordinated transportation initiative may not start in community

Source: Ontario Ministry of Citizenship, Ministry of Transportation.

Table 4: Perceived Barriers to Coordinated Transportation.

<b>Perceived Barrier</b>	<b>Explained</b>	<b>Ways to combat barrier</b>
Turfism	<ol style="list-style-type: none"> <li>1. resistance to change and fear of the unknown</li> <li>2. fear that the organization's purpose will no longer be needed</li> </ol>	agencies must understand that coordination is a <i>growth and development strategy</i>
Use of volunteers	<ol style="list-style-type: none"> <li>1. perception of losing the volunteer pool base of the individual organization</li> <li>2. putting volunteers into the spotlight of criminal reference checks can reduce the desire to help the community through the sheer fact that many people do not like "being put under the microscope."</li> <li>3. cost to completing the reference check</li> </ol>	<ol style="list-style-type: none"> <li>1. promotion of the idea that coordination is a <i>growth and development strategy</i> and that volunteers have a right to say no to volunteering for a specific date.</li> <li>2. identifying that it is the goal to improve the mandate of the organization, and to help the users find better transportation options</li> </ol>
Loss of identity of community	Some communities strive in their volunteer base. If communities start hiring to coordinate transportation initiatives, some volunteers may lose faith in the community and it is possible that the volunteer base would be lost	See above.

Source: Ontario Ministry of Citizenship, Ministry of Transportation and *Rural Transportation Series Report #4*

The term *community* does not necessarily mean a local area, but the community can be the neighbourhood, municipality, or even region since pooling of resources from other municipalities can broaden the resource base. The MDTP administrators recommend to

communities that do not have enough resources to share resources and equipment, and in some cases, this does happen. *Resources* include all of the human, financial, and physical components that can be used to provide services to the public within the community (including drivers, administration and support staff, hardware, software, equipment and government officials).

Ontario's Ministries of Citizenship and Transportation prepared a basic manual to aid communities in creating a coordinated transportation model. The *Co-ordinated Community Transportation Resource Manual* identifies eight stages required to implement the CCT program, three of which are pre-co-ordination groundwork. All eight stages are:

1. Information exchange (pre-coordination groundwork);
2. Needs and resource assessment (pre-coordination groundwork);
3. Implementation planning (pre-coordination groundwork);
4. Public information and referral services;
5. Acquisition/sharing supplies and services;
6. Sharing excess capacity
7. Joint use of resources; and
8. Centralized co-ordination

The pre-coordination stages are explained in greater detail in order to identify what communities need to bear in mind when CCT initiatives are being considered.

- *Information Exchange*

This stage is one of the most important aspects in coordinating efforts as it brings together the organizations within the various communities that provide and or use transportation services. The result is to provide the organizations with an understanding of the other groups' needs, operations and challenges, and most importantly, identify the potential and feasibility of coordination. Exchanging information can take some time to complete, however it is at this stage that represents "the launching pad from which successful co-ordination begins" (Ontario Ministry of Citizenship and Ministry of Transportation, n.d.). It is also important to note that this stage is supposed to be low impact financially.

It is important to realize that communication between communities and jurisdictions is designed to form working relationships between the organizations that are not entirely satisfied with current transportation options. It is equally important to state that information exchanges are *not* designed to threaten existing services or interfere with existing obligations to organizations' clients.

- *Needs and Resource Assessment*

In order to identify transportation needs and resources, an inventory assessment of all available resources is necessary. This assessment is a process in identifying what is available, what the services are and who provides the resources, and what the shortfalls are in each community. The needs assessment can be conducted through surveys and interviews with transportation providers, social service providers/stakeholders, and users. Additionally, researching other case studies that provide a coordinated transportation program can identify some solutions that have and have not worked in other areas. In many cases, communities do not have to re-invent the CCT initiative; communities only need to adjust the program to fit within the needs of the region.

The needs and resource assessment do not require high cost surveys in order to minimize start-up costs, and should be completed within a timely manner to ensure that group energy and interest is not lost in the process. The assessments do need to be balanced to ensure that the communities involved create a viable and workable transportation option.

- *Implementation Planning*

The following four points are identified as important aspects in the implementation of the coordinated transportation:

- Examine operational matters
  - Identify needs, resources and projected issues
  - Locations that resources will be held
- Governance structure may need to be created
  - Boards need to include all interested parties of the transportation initiative (users, stakeholders, sources of resources, etc.)

- Boards need to be well balanced and voices need to be heard
- Identify financial considerations
  - Cost of upgrades to equipment
  - Operational costs
  - Capital costs
  - Where funding is obtained from for short term and long term goals
- Evaluation protocols need to be developed
  - How to measure initiatives
  - How to address issues identified
  - How to improve and expand services

The Ontario Ministries of Citizenship and transportation identify some very useful tips in creating and maintaining a successful coordinated transportation initiative:

- ❖ Keep expectations realistic
- ❖ Approach the initiative as a new business
- ❖ Build in sustainability
- ❖ Keep the planning process short

## **Case Studies**

### ➤ *Brant County, Ontario*

In Brant County, a primarily rural region in southwestern Ontario, a coordinated transportation initiative was created to provide transportation to persons with cognitive, psychological, developmental, visual and physical disabilities. The service does not have dedicated vehicles, drivers or day-to-day managers, but uses existing resources of the participating providers. The providers include a long list of businesses, various transportation companies (taxis, bus companies) and hospitals. Using a toll free number, clients call a central dispatcher (in this case a local taxi company) to arrange transportation. The dispatcher then makes arrangements for pickup by one of the service providers. It is important to note that the trip requirements are distributed evenly between all of the service providers to ensure that there is not an overburden to one resource. Trips

are determined by a zone fare structure, one zone costs \$5.00, two zones or more costs \$10.00. The service provides for more than 150 trips per month.

Along with provincial grants, additional sources of funding for this initiative come from a number of different places including, private donations, foundation grants, and shopping mall administrations and businesses. Business involvement comes from the realization that there is a return of investment, creating repeat customers and positive publicity through creating goodwill in the community.

➤ *North Timiskaming: Community Transportations in Partnership (C-TRIP)*

Located on Ontario's northern border with Quebec, North Timiskaming is in a section of the Timiskaming District. According to 2001 Stats Canada information, the district is home to 34,442 residents over 13,280 square kilometres. The largest community in the region is Kirkland Lake with a population of 8,616.

C-TRIP provides affordable transportation options to seniors, persons with disabilities and people on low incomes. One way tickets cost from \$2.50 to \$5.00 depending on destinations in the region. In order to qualify to use C-TRIP, clients are referred to the service by a partner agency (social services, local municipality, health agencies, etc.).

Creating and maintaining partnerships between agencies, businesses, service providers and local governments is an important component to the success of the program. An example of this is that large business may provide equipment or products (such as Canadian Tire Parts) and small automotive repair shops provide the labour to install parts and maintenance of the vehicles. These partnerships help spread the financial and resource burden over a number of different organizations rather than one or two service providers. As such, the C-TRIP program was able to raise over \$65,000 for a new vehicle and equipment.

In maintaining positive partnerships, all interested parties are invited to join the board and are able to "table issues" of the program. As of the year 2000, there were 21 official participants in the operation of the transportation service. These participants ranged from the local YWCA, health service providers, local hospitals and PCH's, various municipal governments, employment services (private and public) and local businesses. A key highlight is that the *Ontario Works* (a provincial employment program) provides the

transportation initiative with volunteer drivers, and that a coordinator and secretary were hired through the federal *Human Resources Development Canada* (now the Department of Social Development).

Needless to say, the C-TRIP program works over a large geographic area for a large population providing an average of 10 to 20 trips per day. The program would not work if individual organizations only considered their own client base.

Like Canada, the issue of aging and transportation in The United States will have a large impact on available resources. In the United States, there are a number of coordinated community transportation initiatives in rural areas in order to provide services to the community. This report has not discussed US initiatives as there are a number of differences in funding opportunities that the Federal Government has in place for rural transportation. As such, it is important to identify that there are a number of resources that can be used in order to implement a CCT program in Canada. The Transit Cooperative Research Program (TCRP) which is funded by the Federal Transit Administration produced a comprehensive manual for implementing a CCT program. The Toolkit, TCRP Report 101 can be ordered or downloaded from the website, <http://www.tcrponline.org/index.cgi>. This manual gives direction on implementation as well as a number of case studies in implementing the system showcasing processes, implementation, barriers and solutions. As a reminder, grant structures for transportation in the United States are completely different than what is available in Canada.

➤ *Calgary Regional Partnership*

The Calgary Regional Partnership “provides the opportunity for regional municipalities and jurisdictions to discuss and work on issues that cross their respective boundaries. It supports a flexible approach, recognizing that different issues may involve different stakeholders and different regional processes” (Calgary Regional Partnership, 2005). Partners include the City of Calgary, surrounding towns and cities, health authorities, and Municipal Districts (M.D.).<sup>10</sup> Figure 11 identifies the members included in the CRP. Specific to transportation initiatives, the Calgary Regional Partnership (CRP)

---

<sup>10</sup> The Municipal Districts in Alberta are the equivalent to the Rural Municipalities of Manitoba.

is in the process of implementing a Specialized Transportation Service (STS) for the aging and the physically or intellectually challenged population.

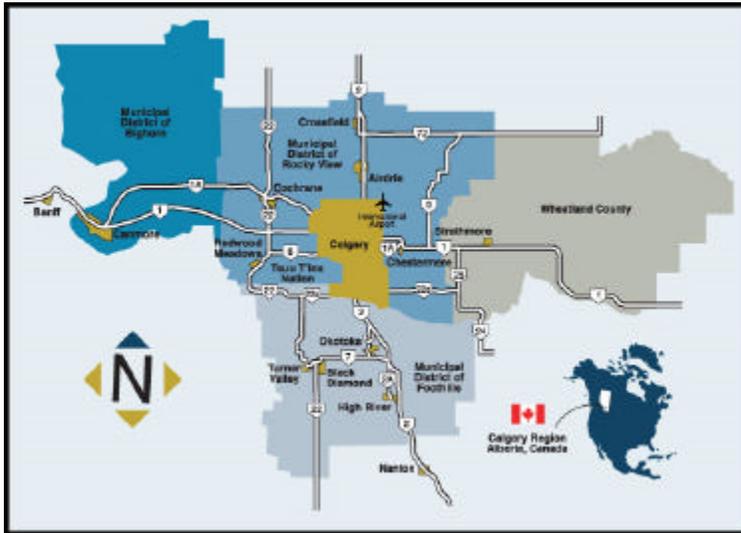


Figure 11: CRP Members. Source: <http://www.calgaryregion.ca/map.html>

A key reason to pursuing the STS is that there were some identified service gaps that existing transportation initiatives had, including a barrier to accessing health care services, limited access to transportation during various times of the week, and high costs. It was estimated by the CRP that there were approximately 35,000 people in the region that required specialty transportation for medical trips to Calgary during the year. The STS is designed to *augment* (not *replace*) already existing transportation initiatives for medical trip purposes from outlying M.D.'s to the City of Calgary.

The STS is being developed as a pilot program that will operate one day per week in each of four M.D.'s to transport clients into Calgary for medical trips. The pilot program will be funded through provincial capital projects for 18 months with the intention that a municipality or a private organization to take over operations and expand into other communities as required. This transportation initiative, as stressed by the Special Transportation Administrator, is not a *replacement* of current municipally operated transportation programs, rather it is an *expansion* of a service that is currently available.

It was identified during a study for the CRP that there were a number of opportunities and considerations for implementing the STC. The following are the opportunities and considerations identified (from <http://www.calgaryregion.ca/>):

- need to tailor solutions to each community
- multi-tiered approach to reflect demand
- effective access to health care
- increased coordination (trip bookings, use of volunteers)
- shared use of transportation resources
- centralized communications
- incentives to encourage volunteers
- user (client) subsidies

## **7.0 Recommendations**

This report has provided a foundation to consider the issues of mobility restriction and transportation disadvantage for seniors in rural Manitoba. The recommendations that have been formulated identify both the next steps that are needed, as well as long-term solutions. The next steps will include the distribution of a summarized version of this report to all interested parties in rural Manitoba. In addition, the report will be distributed at the annual meeting of Services to Seniors coordinators. It is envisioned that these steps will lead to the formation of a rural transportation network that will begin to address how to bring about the long-term solutions that are recommended in this report. As a conclusion to this report, the recommendations are repeated below.

- ❖ To further explore the use of spatial analysis in identifying those seniors experiencing transportation disadvantages, as well as formulating solutions to address mobility issues.
- ❖ The development of a rural transportation network that will provide a strategic framework to address the next steps and long-term solutions for transportation for rural seniors.
- ❖ Mobility solutions must address the unique needs of each locality.
- ❖ Transportation solutions must take into account the degree of geographic isolation and the distinction between local mobility needs and long-distance transport requirements.

- ❖ A comprehensive survey of seniors in rural Manitoba is required to advance understanding of the transportation requirements of an aging population.
- ❖ The development of a separate medical transportation system to provide inexpensive mobility and escort services.
- ❖ The establishment of increased funding and tax deductions to assist all who are involved in providing mobility options to seniors in rural Manitoba.
- ❖ The development of a coordinated transportation system that would more effectively provide mobility support to seniors in rural Manitoba.
- ❖ Programming be developed to provide awareness and support for rural seniors to give up driving and adapt to transportation alternatives
- ❖ Increase recognition of the contribution of informal caregivers in providing transportation to rural seniors through tax credits.
- ❖ Develop greater awareness of the dwindling volunteer base for seniors in rural Manitoba.
- ❖ The development of a province-wide network to address issues surrounding the handi-van program, to establish monitoring of the program and greater accountability, to share experiences and to promote the greater coordination of resources and services.
- ❖ The standardization of the rate structure for handi-van programs throughout the province to ensure equitable access for all rural seniors.
- ❖ The standardization of the operation of handi-van programs to include guidelines that specify booking procedures, hours of operation, identification of user groups and trip priorities.
- ❖ The identification of the feasibility of the handi-van program devoted entirely to the provision of transportation services at the local community level. Included in this approach is the use of regular charters to ensure that seniors have affordable transportation to access needed goods and services.
- ❖ The identification of the need for alternative solutions for long-distance transportation that is primarily required for medical purposes.

- ❖ The identification of the need to address the high costs of providing handi-van services to remote areas that are most in need of mobility assistance because there are no alternatives and isolation is a major concern.
- ❖ The consideration of the use of different vehicle types to address the unsustainability of some aspects of the programs such as low ridership and “gas-guzzling” vans.
- ❖ The identification of additional funding sources such as corporate sponsors to address the high costs of universally accessible vehicles.
- ❖ The greater coordination and sharing of resources and services amongst all handi-van programs as part of a coordinated system to address the transportation disadvantages experienced by rural seniors.
- ❖ Further investigation and networking be developed to better understand and respond to the mobility needs of Manitoba’s Aboriginal elders.
- ❖ The development of a greater understanding of the mobility issues for seniors in northern and remote areas and the establishment of a strategy to address the high degree of mobility disadvantage.

## References

- Andrews, G. R. (2001). Demographic and health issues in rural aging: A global perspective. *The Journal of Rural Health*, 17 (4), 323-327.
- Arcury, T.A., Preisser, J.S., gesler, W.M. and Powers, J.M. (2005). Access to transportation and health care utilization in a rural region. *Journal of Rural Health*, 21 (1), 31-38.
- Belden, J.N. (1993). Housing for America's rural elderly. In C.N. Bull (ed.) *Aging in Rural America*. Newbury Park: Sage Publications, 71-83.
- Bryant, C. and Joseph, A.E. (2001). Canada's rural population: Trends in space and implications in place. *The Canadian Geographer*, 45 (1), 132-137.
- Coward, R.T. and Lee, G.R. (1985). *The Elderly in Rural Society: Every Fourth Elder*. New York: Springer Publishing Company.
- Fozard, J. (2000). Sensory and cognitive changes with age. In K. Schaie and M. Pietrucha (Eds.) *Mobility and Transportation in the Elderly*. New York, NY: Springer Publishing Company, 125-144.
- Glasgow, N. and Brown, D.L. (1998). Old rural and poor. In R.T. Coward and J.A. Krout (eds.) *Aging in Rural Settings: Life Circumstances and Distinctive Features*. New York: Springer Publishing Company, 187-207.
- Glasgow, N. and Blakely, R.M. (2000). Older nonmetropolitan residents' evaluations of their transportation arrangements. *The Journal of Applied Gerontology*, 19 (1), 95-116.
- Grant, P.R. and Rice, B. (1983). Transportation problems of the rural elderly: A needs assessment. *Canadian Journal on Aging*, 2 (3), 107-123.
- Herold, M., Gordon, T., Kaye, K., Brockie, E. and Fuller, T. (2002). *Elderly and Disabled Rural Residents: A Continuing Transportation Issue*. Rural Transportation Series No. 4. Ottawa: Government of Canada.
- Joseph, A.E. and Fuller, A.M. (1991). Towards an integrative perspective on the housing, services and transportation implications of rural aging. *Canadian Journal on Aging*, 10 (2), 127-148.
- Kagis, M., Menec, V. and Blandford, A. (2006). *Manitoba's Seniors: A Compariosn to the "Manitoba Fact Book on Aging"*. Centre on Aging, University of Manitoba.
- Keating, N.C. (1991). *Aging in Rural Canada*. Toronto, ON: Butterworths Canada Ltd.

- Keating, N., Keefe, J. and Dobbs, B. (2001). A good place to grow old? Rural communities and support to seniors. In R.Epp and D. Whitson (Eds.) *Writing Off the Rural West: Globalization, Governments and the Transformation of Rural Communities*. Edmonton, AB: The University of Alberta Press, 263-277.
- Kendig, H. (2003). Directions in environmental gerontology: A multidisciplinary field. *The Gerontologist*, 43 (5), 611-615.
- Kerschner, H. (2003). *Rural Transportation and Aging: Problems and Solutions*. White Paper #4. Pasadena, CA: the Beverly Foundation.
- Kihl, M.R. (1993). The need for transportation alternatives for the rural elderly. In C.N. Bull (ed.) *Aging in Rural America*. Newbury Park: Sage Publications, 84-98.
- Kinsella, K. (2001). Urban and rural dimensions of global population aging: An overview. *The Journal of Rural Health*, 17 (4), 314-322.
- Krout, J.A. and Coward, R.T. (1998). Aging in rural environments. In R.T. Coward and J.A. Krout (eds.) *Aging in Rural Settings: Life Circumstances and Distinctive Features*. New York: Springer Publishing Company, 3-14.
- McGhee, J.L. (1983). Transportation opportunity and the rural elderly: A comparison of objective and subjective indicators. *The Gerontologist*, 23 (5), 505-511.
- du Plessis, V., Beshiri, R., Bollman, R.D. and Clemenson, H. (2001). *Rural and Small Town Canada Analysis Bulletin*, 3 (3). Catalogue no. 21-006-XIE.
- Rogers, C.C. (2002). The older population in 21<sup>st</sup> century rural America. *Rural America*, 17 (3).
- Rosenberg, M. and Everitt, J. (2001). Planning for aging populations: Inside and outside the walls. *Progress in Planning*, 56 (3), 119-168.**
- Rowles, G.D. (1998). Community and the local environment. In R.T. Coward and J.A. Krout (eds.) *Aging in a Rural Setting: Life Circumstances and Distinctive Features*. New York: Springer Publishing Company, 105-125.
- Statistics Canada. (2002a). *Profile of the Canadian Population by Age and Sex: Canada Ages, 2001 Census*. Catalogue No. 96FOO30XIE2001002. Ottawa, ON: Statistics Canada.
- Statistics Canada. (2002b). *Population Projections for 2001, 2006, 2011, 2016, 2021 and 2026, July 1*. (Cited September 20, 2002). – Access: <<http://www.statcan.ca/english/Pgdb/demo23a.htm>

Stranahan, S.Q. (2005). *Running on Empty*. American Association of Retired People Bulletin.

Treas, J. (1995). Older Americans in the 1990s and beyond. *Population Bulletin*, 50, 1-46.