

RURAL TRANSPORTATION SERIES

No. 4



Elderly and Disabled Rural Residents A Continuing Transportation Issue

A report sponsored by the Sustainable Rural Communities Research Program
(University of Guelph and OMAFRA); and the Canadian Rural Partnership,
Government of Canada

By

Marni Herold, Todd Gordon, Kathy Kaye,
Emily Brockie and Tony Fuller

February 2002



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Canadian Rural Partnership, Government of Canada
Sustainable Rural Communities Research Program (University of Guelph and
Ontario Ministry of Agriculture, Food and Rural Affairs)

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ISBN 0-662-39376-7

Catalogue number A113-1/4-2005E-HTML

Agriculture and Agri-Food Canada Publication Number 33798E

This publication is available on the Internet at: www.rural.gc.ca

Également offert en français sous le titre :

COLLECTION D'ÉTUDES SUR LE TRANSPORT EN MILIEU RURAL, Étude n° 4

Personnes âgées ou handicapées vivant en zone rurale : Un problème de transport qui persiste

Agriculture et Agroalimentaire Canada N° de publication 71288F

PREFACE TO THE SERIES

This is the fourth in a series of reports on research undertaken on rural transportation in Ontario, 1998-2001. The fourth report is based on an examination of elderly and individuals with disabilities living in rural areas and their mobility problems. Information is drawn from the literature and from comparative studies.

Report number one reviewed the Community Transportation Action Program (CTAP), 1998-2000, and the experience of the selected rural communities that participated.

Report number two is based on an examination of rural youth and their mobility problems. Considerable evidence suggests that young people between the ages of 16 and 24 are almost invariably transportation-disadvantaged, especially those in rural locations outside of towns. Obtaining a sense of the dimensions of the problem is the main purpose of the rural youth scan.

Report number three is a first look at rural roads and their future given the changes in municipal restructuring and the rural economy's dependence on exports.

At the small community level, rural transportation is almost entirely dependent upon the automobile. Apart from inter-city buses, there is no public transportation in small-town Canada. We assume that those with access to an automobile are able to get around and those without are considered "transportation disadvantaged." This includes the elderly, rural youth, and the mobility challenged.

Getting around in rural areas is essential for most people's needs. Mobility governs access to jobs and services as well as to social and recreational activities. To a large extent, the economy, as well as civil society, is dependent upon transportation of one kind or another. Therefore, the provision and maintenance of transportation infrastructure is of prime importance in rural areas and this includes roads, bridges and soft infrastructure such as regulation (insurance and policing). Transportation thus involves a complex set of interconnected parts and requires a good deal of planning and servicing to remain effective and efficient.

It is surprising, therefore, that very little research attention has been paid to rural transportation issues in the 20 years preceding the end of the 20th century, at least in Ontario. This is particularly true for rural youth. The scans of transportation conditions in rural areas of the province are intended to provide information on some of the key issues and servicing problems facing governments, organizations and rural citizens.

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ACKNOWLEDGEMENTS

This research was sponsored, in large part, by the Rural Secretariat at Agriculture and Agri-food Canada. Some financial aid was also provided by the Sustainable Rural Communities Research Program at the University of Guelph, part of the Enhanced Partnership between the university and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). The research was undertaken in the field by Marni Herold, Kathy Kaye, Emily Brockie, and Todd Gordon, all graduates of the School of Rural Planning and Development at the University of Guelph. The Grey Bruce Huron Perth District Health Council was helpful in allowing their staff to distribute the surveys on behalf of the University of Guelph.

Tony Fuller
SRC Research Program Director
Guelph, January 2002

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Executive Summary

Rural households in Canada generally face several conditions that affect their mobility. These conditions are increasingly problematic for rural residents who are elderly or disabled. The conditions include:

- a. Most rural households own, or have access to, a personal automobile
- b. Few public transportation services exist
- c. The rural elderly are dependent on having access to personal automobiles
- d. When an automobile is not available, problems arise
- e. There are few alternatives available for meeting the transportation needs of the rural elderly

Why is it still a Problem? What the Literature Says

Transportation is an ongoing problem for the elderly and physically disabled residents of rural areas. This is despite an increase in car ownership.

- a. More than 30 years of studies support this
- b. Various societal changes shape the problem differently over time. At the present time, deinstitutionalization, centralization, the growing number of elderly residents in general, the professionalization of the third sector, and the reliance on the personal automobile are factors forcing the rural transportation dilemma into the 21st Century.
- c. The same main problem has existed for more than forty years - *lack of affordable, accessible transportation services where personal mobility is an essential component of well-being*. Issues that have been present for the past twenty years include the vast differences of rural communities for one another, the increasing cost of both providing and using transportation services in rural areas, as well as ongoing insurance and licensing barriers.

Recent Societal Changes

Increases in home-care services, which encourage independence through **deinstitutionalization**, have decreased the transportation problem. However, problems still exist in areas where seniors must travel to services themselves.

The **centralization** of health, education, and social services has led to the consolidation of services, which has resulted in a changing dynamic for rural community transportation. Rural residents must travel farther, and for longer periods than they had in the past and when compared to their urban counterparts, in order to gain access to treatment facilities, hospitals, schools and community activity centers.

Seniors are a fast growing population group in Canada. By 2021, it is expected that there will be about 7 million seniors in Canada representing 19% of the total population. In the year 2000, there were an estimated 3.8 million Canadian residents over the age of 65. Approximately, 24% of this population lives in a rural area.

The **reliance on the personal automobile** has shaped funding agendas. As it becomes easier for people with an accessible vehicle to be mobile (improvements to infrastructure etc.), a greater division between those with cars and those without is formed (i.e. people who do not have access to an automobile, or who cannot afford to travel the required distances, may be left unable to access necessary services).

With increasing cutbacks to social services, a **higher demand is being placed on the volunteer (third) sector to provide transportation services**. This situation may be exacerbated by recent trends with respect to volunteer participation – that is, recruiting and retaining adequate numbers of volunteers.

On-going Issues

The **cost** of both using and providing transportation service in rural areas is problematic for the rural elderly and physically disabled, and for the service providers of these populations. Several additional **barriers** to providing transportation services for rural elderly and disabled residents exist. These include:

- a. The use of transportation options is shaped by the attitudes, preferences, and trends of the rural elderly population. The literature suggests that informal services through friends and family are most likely to be used. However, this type of service is not available to all rural elderly residents.
- b. Female elderly residents in rural areas are less likely than their urban counterparts to have an active driver's license and/or access to a vehicle.
- c. Political and organizational barriers
- d. Organizational barriers
- e. Funding barriers
- f. Administrative barriers
- g. Geographic Barriers

The reality of **differential needs and issues facing the rural elderly population, as well as the differences in rural areas themselves**, suggests the need to explore possible alternative transportation systems, in order to have a variety of malleable solutions that are applicable to an array of transportation problems. In the midst of recent amalgamation strategies, rural areas have been included as parts of larger “cities”, making it more difficult for the rural voice to be heard.

What are we doing about Rural Transportation at the Policy Level?

There is continuous debate over the appropriate division of responsibility to meet transportation needs (public vs. private, and levels of each). However, the need to provide transportation services is widely recognized. Provincial government ministries that provided funding for transportation programs in Ontario at the time of this research include the ministries of: Health, Transportation, Citizenship, Culture and Recreation, Education and Training, and Community and Social Services.

Provincial funding has enabled non-profit agencies to provide various forms of transportation services for their specific clientele. This has caused duplication as well as gaps in transportation services.

How Might we do Better at the Policy Level?

The fragmentation of transportation service provision through public, private, and not-for-profit agencies, creates 'silos' where the needs of certain target groups are met, but which leaves individuals without access to these services. This may be because these individuals do not meet the required criteria. Service provision fragmentation also results from similar programs competing for the same limited transportation resources. These problems could be ameliorated through the following:

- a. Government ministries could operate transportation programs in cohesion with each other to alleviate funding problems
- b. Attention must be given to improving community transportation systems, especially in rural areas
- c. Developing stronger incentives for integrating transportation planning at every level especially if groups are working toward multi-sector coordination

What are we Doing at the Community Level?

Approximately 25 rural communities participated in an inter-ministerial Ontario provincial initiative, CTAP, in recent years. These communities have all attempted to coordinate existing transportation resources, and some continue to do so.

In response to the continuing need for new and expanded transportation services, numerous community based transportation projects have responded to the need for transportation services for sub-groups of the rural population, including the elderly and persons with disabilities. Many small-scale projects and programs have been organized by community clubs, churches, and local volunteers. These “micro” programs often operate separately from government-funded programs

How might we do better at the Community Level?

Service agencies could implement or strengthen **coordination** strategies. The majority of existing transportation services in rural areas are specifically geared toward special populations, such as elderly and disabled individuals, thus providing the opportunity for independent living. This typically narrow focus of transportation services creates undesired results in rural areas of Ontario, especially during times of limited public funding for the provision of accessible transportation. The existence of criterion-based transportation services also results in duplication and similar programs unnecessarily competing for transportation resources. The resulting gaps, as well as the overlapping of services, prompts the need to consider coordination efforts.

Coordination Benefits Identified in the Literature

Stakeholder	Coordination Benefits
Client	<ol style="list-style-type: none"> 1. more clients receiving services 2. increased points of service entry 3. increased client contact with other service providers
Administration	<ol style="list-style-type: none"> 1. joint development of new services/products 2. gain and offer expanded resources 3. shared cost of product/service development 4. increased continuity of services due to joint funding, purchases of service, staff assignment, and standardization of eligibility criteria 6. increased efficiency due to identification of program duplication and opportunities for resource redirection 7. increased opportunity for personal gratification 8. opportunities to learn and adapt 9. gain of mutual support, group synergy, alliances, and harmonious working environment
Funders	<ol style="list-style-type: none"> 1. gain and offer expanded resources 2. shared cost of product/service development 3. increased efficiency due to identification of program duplication and opportunities for resource redirection 4. gain of mutual support, group synergy, alliances, and harmonious working environment

Source: Adapted from Rogers and Whetten, Interorganizational Coordination 1982. Iowa State Univ. Press.

It is commonly felt that coordination may be the key to overcoming mobility issues for rural residents. The potential benefits of coordination have been well documented and are outlined in the above table.

Coordination of multi-sector transportation services could lead to more effective transportation services when transportation resources (programs, volunteers, vehicles, staff, and funding) are available. However, there are many different types of “rural” and various levels of coordination. It is important to realize that one coordination strategy does not provide all of the answers. One has to be mindful that coordination efforts must be structured and adjusted to fit each unique rural area.

Another caution to consider when moving toward coordination of rural transportation services is the already existing multi-stakeholder involvement in transportation services. In order to fill in the gaps, many transportation projects have been implemented at the cost of volunteer time in planning as well as service provision. Therefore, any coordinated effort must be approached from several angles to honour those groups, individuals, senior’s councils, agencies, organizations, etc. that have committed themselves to improving mobility conditions for residents of rural areas.

In recent years, there has been a concentration on community economic development, quality of life, supportive housing, school restructuring, and healthcare provision in rural areas. All of these issues are imperative to rural life. However, one common thread winding throughout them all is the ability of all rural residents to be mobile.

1 INTRODUCTION

The difficult situation that elderly people often find themselves in with regard to transportation in rural areas is well known. It first came to the attention of researchers and health planners in many countries the late 1970s with efforts to de-institutionalize senior citizens. The elderly who live at home longer become increasingly dependent on family, friends and neighbors for rides to satisfy their needs. This realization is consistent with the continuum of care notion that also grew up towards the end of the last century. This perspective relates housing, health care and transportation together as primary conditions for the maintenance of the elderly in rural and small town Canada. Although much (mostly gerontological) attention has been paid to health care, and some to housing, it is not clear what attention has been paid to transportation for the rural elderly.

This scan of the literature is an attempt to remedy this issue. What, if anything, has changed or improved in terms of rural transportation for the elderly and people with disabilities in rural areas? If this is the main question, then others quickly follow. What are the current demographics? For example, are seniors still moving into small towns? What transportation needs are being served, and by whom, and at what cost? In general, are these conditions sufficient and satisfactory?

In order to answer some of these questions, the researchers consulted the literature and talked to key informants. Because the literature proved disappointingly sparse in relation to transportation issues, other information was gathered from various surveys and sources. Not a great deal of progress appears to have been made, and some might say that transportation is 'the forgotten issue' in rural areas. On the ground, in a whole host of rural communities, however, provisions have been made to assist the elderly and the disabled, such that the picture is unclear as to what exactly the situation is regarding the rural elderly and their transportation needs.

This report is an attempt to review the situation, to report on the literature, to compare with what was known previously, and to make suggestions about progress and problems. It is limited by the conditions of a scan, in that it is neither a systematic review nor an analysis of primary data. In the first section, an extensive literature review is made. In section two, a small survey of service providers is used to report on agency issues. Section four contains a literature review of transportation issues and disabled individuals. Finally, an extensive review of transportation issues in rural America is included to add a comparative dimension to the scan.

Together with the other three reports in the series, this report is intended to provide an update as to the state of rural transportation issues in rural Canada.

2 THE RURAL ELDERLY AND TRANSPORTATION ISSUES

Mobility is the ability of individuals to get around in a way that satisfies their basic needs and enables them to conduct a normal life.

The mobility needs of the rural elderly is not an issue that has been ignored in the social sciences and health-related literature. However, the bulk of the studies relating to the rural elderly and transportation have taken place during the 1980s (Table 1.1). Studies looking at the status of the rural elderly and transportation have followed sporadically (Table 1.2).

Table 2.1: Selected Rural Elderly and Transportation Studies from the 1980s

Author(s)	Study
Aday, R. H., and L. A. Miles. 1982	Long-term Impacts of Rural Migration of the Elderly: Implications for Research
Coward R. T., and G.R. Lee. 1985	The Elderly in Rural Society
European Conference of Ministers of Transport	“Social Service” Transport: Transport for Elderly and Handicapped Persons
European Conference of Ministers of Transport	Transport for Disabled People: International comparisons of Practice and Policy with Recommendations for Change
Fraser, B. S., and A. M. Fuller.	One-Stop Access for Citizens: a Model of Integrated Service Delivery for Rural Areas
Hodge, G. 1987	The Elderly in Canada’s Small Towns: Recent Trends and Their Implications
Hodge, G. 1987	Retirees in the Local Economy: Blessing or Blight?
Joseph, A. E., and A. M. Fuller	Aging in Rural Communities: Interrelated Issues in Housing, Services, and Transportation.
Krout, J. A. 1987.	Rural vs. Urban Differences in Elderly Parent’s Contact with Their Children.
McGhee, J.L.	Transportation Opportunity and the Rural Elderly: A Comparison of Objective and Subjective Indicators.
Pickering, J.	Analysis of Transportation for the Elderly in Bruce County.
Scott, J.P., and K. A. Roberto.	Use of Informal and Formal Support Networks by Rural Elderly Poor.

Note: Full bibliographic details for these studies may be found in the references section of this report.

Table 2.2: Selected Rural Elderly and Transportation Related Studies, Post - 1990

Author(s)	Study
Burkhardt, J, Henrick, J and P. McGavock	Assessment of the Economic Impacts of Rural Public Transportation.
Carnahan, T. and C. A. Miller	Housing and Transportation Study: Lambton County.
Coward, R.R., Cutler, S.J., and R.A. Mullens	Residential Differences in the Composition of the Helping Networks of Impaired Elders
Cullinane, S., and G. Stokes	Rural Transport Policy
Cutler, S. J., and R. T. Coward	Availability of Personal Transportation Households of Elder: Age Gender, and Residence Differences.
Dunnett, B.C.	Housing and Support Services for the Elderly in Small Communities: The Potential for the Abbeyfield Model in Rural Ontario.
Joseph, A. E., and A. M. Fuller	Towards an Integrative Perspective on the Housing, Services, and Transportation Implications of Rural Aging.
Lewis, D., Guthrie, B., Friedrichs, P., and J. Hicking	Transportation for Disabled Persons in Ontario: Towards a Strategy for the 1990s
McCall, H.C	Coordination of Transportation for the Elderly
Stunkel, E. 1997	Rural Public Transportation and the Mobility of Older Persons: Paradigms for Policy.

Note: Full bibliographic details for these studies may be found in the references section of this report.

When comparing literature relating to transportation and the rural elderly over the last thirty years it is evident that five key issues remain unchanged.

1. Most rural households own or have access to a personal automobile.
2. There are very few public transportation services in rural areas.
3. The rural elderly are dependent on access to personal automobiles.
4. When a personal automobile is not available, problems arise.
5. There are few alternatives available for meeting the transportation needs of the rural elderly.

It is evident in the literature that an increase in home-care services, which makes it possible for the rural elderly to remain in their own homes longer rather than becoming institutionalized, decreases the transportation problem experienced by this population. On the other hand, home support services and senior activities require seniors to travel to a specific location. Without accessible services, and transportation to get to these services, people can be prematurely moved into a nursing home facility for the remainder of their lives. This is a cost not only to the individual, but also to their family and to the state.

2.1 THE PROBLEM

2.1.1 The Rural Elderly (What are we Dealing With and What is The Problem?)

Rural areas are “diverse in context and the impacts of population aging may be both common and place-specific” (Joseph and Fuller, 1988). In other words, there are both common factors and issues, and a considerable range of factors and issues unique to specific rural locations. Furthermore, there is considerable diversity in the range of efforts that have addressed the problems faced by the rural elderly population.

Any study of rural phenomena is hampered by the realization that the literature is problematic because the meaning of ‘rural’ is not fully explained in each study. In addition, it is very difficult to get a clear picture of the situations that the rural elderly are experiencing.

The following statistics provide some insight into the characteristics of the rural population sub-group considered in this study (Statistics Canada, 2000):

- Seniors are a fast growing population group in Canada – growth is twice as fast as the overall population since the early 1980s
- In 2000, there were an estimated 3.8 million Canadian residents over the age of 65
- By 2021, it is expected that there will be about 7 million seniors representing 19% of the total population, and 9 million seniors by 2041, making up 25% of the total population.
- Seniors make up 12.6% of Ontario’s total population.
- One quarter (24% in 1996) of Canadian seniors live in a rural area
- Seniors are more likely than younger people to live in a rural area: 24% compared to 21%

2.1.2 Independence and Personal Mobility

The transportation literature reveals much about personal mobility and the rural elderly. These findings include the following:

- Transportation is one of the largest, self-reported concerns of the rural elderly (OACSC, 1992).
- Transportation is a fundamental aspect of everyday life for the majority of Canadians, especially those in rural areas (Stommes, 1990).

- Cutler and Coward (1992) recognized that having a car or another mode of transportation is critical in meeting the daily living needs of the rural elderly. It was stated that the availability of transportation could greatly influence the social participation and accessibility of services for the elderly population.
- Having the means to be mobile was found to be a factor contributing to the well being (Joseph and Fuller, 1991) of rural elders, as well as a factor in measuring the satisfaction of elderly individuals (Cutler and Coward, 1992).
- Wacker, Roberto and Piper, (1998) and Carp (1988) found that transportation plays a critical role in the social, psychological and physical well being of elderly people and greatly influences the use of other services.

These findings reveal that personal mobility, which, in a rural setting, is dependent upon access to a reliable transportation mode, is an essential component of well being for the rural elderly.

In rural Canada, the elderly have traditionally faced mobility problems, although these were the same for almost everyone in the past. For example, in the horse-drawn era, most mobility needs for all residents were located in nearby settlements. Since the automobile and the centralization of services, the elderly have been increasingly in need of obtaining their service needs in central places.

The centralization of the public and private sectors creates problems related to rural community transportation. It would appear that many decisions are currently being made based only on fiscal determinants. At the same time, both the public and private sectors have become aware of the financial strain of maintaining services in rural areas due to the spatial layout of rural communities and low population densities. The centralization of health, education, and social services has led to the consolidation of services funded by the government (Ministry of Transportation, 1996). This requires rural residents to travel farther, and for longer periods, in order to gain access to treatment facilities, hospitals, schools and community activity centres (Ministry of Transportation, 1996). The question remains, “How are rural people expected to sustain access to these services, especially when many of them are elderly and/or infirm?”

The centralization of the public sector places pressure on the third sector to cover unmet needs. However, volunteer organizations need funding in order to operate. Volunteer organizations in rural areas increasingly find it harder to acquire funding to operate necessary programs and services as they are forced to compete with geographical areas with higher population numbers and resources to draw from (Dunnett, 1991).

The centralization phenomenon is not unique to the public sector. The private sector, including grocery stores, pharmacies, restaurants, and financial institutions, has also been reluctant to remain in rural locales due to the disadvantages of low population thresholds. As a result, local amenities that were once a part of most rural towns are no longer easily attainable for transportation disadvantaged rural residents.

2.1.3 Lack of Affordable Transportation

The literature reveals that inadequate public transportation in, and between, rural communities is a major issue for the elderly (OACSC, 1992). The lack of transportation options means that often cost is a major barrier to providing conventional public transportation services in rural areas. This barrier exists for both service providers and for the rural elderly as service consumers, and has been an issue for quite some time. Cottrell (1975) discovered that formal transportation services that did exist were not effective as they were expensive and not known about. The costs will only continue to increase as funding declines (Stommes, 1990) due to the high costs of covering distances, especially when services and amenities are continually removed from the smaller towns. It is widely understood that there is a high per capita and per person trip cost in rural areas for reasons that include the following:

- Wear and tear on rural vehicles comes from harsh weather and road conditions
- Rural areas tend to have a limited, trained labor pool available for transportation provision
- Rural public transit users tend to be income challenged, disabled, have no alternative to public transportation, or require personal attention by staff personnel.

Krout (1987) proposed that because of the low population densities, the cost of public transportation is high for the rural elderly, which reduces the use of the service. Another explanation could be the fact that many formal services attempted in rural areas are usually urban based and not suitable for rural areas. This means that services are not easily accessible, which may lessen the trust of rural individuals. However, Stunkel (1997) found that nationally, about 7% of all transit riders are 65 years or older, while rural communities have an average of 18% elderly passengers in the United States.

Despite the high costs of providing transportation services, Hodge (1989) suggests that municipal governments need to provide public transportation for their elderly populations, as older people prefer to maintain their independence and avoid dependence on family and friends for transportation. Cullinane and Stokes (1998) agree that public funding should be geared toward transportation in rural areas, but found that many recent developments in transportation have been designed to aid the transport of goods, as well as the comfort levels of those traveling via the personal automobile. Improvements that favour the automobile create further disadvantage for certain groups within the rural population, including the elderly. These views suggest that municipal governments bear responsibility for providing accessible transportation for the rural elderly. In light of recent funding constraints faced by rural municipal governments in Ontario (and elsewhere in Canada), this expectation may be difficult to realize.

If financial aspects are the driving force behind policy decisions it could also be argued that increased public transportation will result in decreased health care costs as the availability of transportation has been found to be a significant predictor of life and health satisfaction (Cutler and Coward, 1992). Therefore, the cost of providing accessible transportation services for the rural elderly may be offset by lower health care costs. However, measuring and establishing a direct linkage between these phenomena may be difficult.

Coward and Lee (1985) reported rural areas as having fewer referral systems and fewer staff designated to the task of assisting people in finding a means of transportation, in addition to the near non-existence of public transportation.

2.1.4 Reliance on the Personal Automobile

Studies have suggested that the majority of rural residents, in North America and the UK, depend on and have immediate access to a personal automobile (Cutler and Coward, 1992; Farrington, Gray, and Martin, 1997). However, not all of the studies have determined whether the vehicles can be operated by their owners, or members of the same household. These studies support the suggestion that the majority of people living in rural areas are not in need of public transportation services. It cannot simply be assumed however that all rural residents will have access to a personal automobile, providing them with the freedom to obtain employment, access to health facilities, and the ability to carry out daily activities (Fraser and Fuller, 1989).

While current statistics relating to car ownership in rural areas of Ontario are not available, dividing the population of each province by the number of light vehicles registered provides a crude indicator of the importance of the automobile to provincial residents (Transport Canada, 1999). For every one car in Canada, there are 1.85 people. Ontario has a similar rate with 1.87 people to every one car.

The dependency of today's society on the automobile has resulted in increases in funding for roadwork and decreases in funding for public transit, especially in rural areas (Sutton, 1988). Fewer and fewer transit routes outside of urban areas exist, leaving many rural towns neglected in terms of regular bus schedules and services. This low level of service provision may be worsened by bus deregulation in the future.

While governments may claim that improvements have been made to decrease congestion of traffic, it has been found that these improvements may simply augment the original problem (Cullinane and Stokes, 1998). The easier it is for people to use personal automobiles to fulfill their mobility needs, the higher the volume of traffic. Cullinane and Stokes (1998) suggest that the improvements made to road systems are simply working against themselves.

As it becomes easier for people with an accessible vehicle to be mobile, a greater division between those with cars and those without is formed. When most people have the ability to, and are willing to drive long distances to obtain services, centralization of services into urban areas appears to be an economical option. However, those people who do not have access to an automobile, or who cannot afford to travel the required distances may be left unable to

access necessary services. For example, while many rural residents may own their own vehicles, the ongoing costs of fuel can turn a vehicle into a financial burden, and may leave others feeling hopeless (Cullinane and Stokes, 1998). The researchers argue that individuals without cars should not be forced to rely on those with cars. They state that this supports the notion that ownership of a personal vehicle is superior to not owning a vehicle. This idea may build upon already depleted self-esteem of an elderly person who may be required to rely on others to carry out daily activities.

The implications of current land use planning policies must also be considered when addressing the issue of increased reliance on the personal automobile (Kehm, 1998). The separate development of suburban areas, industrial zones, commercial zones, and residential zones augments the need to rely on automobiles to carry out daily tasks such as grocery shopping, employment, recreation, and education. Because of these types of separate spatial developments, it has become nearly impossible for one to rely on bicycles, walking, or alternative modes of transport (Sewell, 1998). **Mixed-use planning would greatly reduce the use of automobiles for single purpose trips.**

In terms of the effects of the reliance on the personal automobile on the rural elderly population, Cutler and Coward (1992) reported that the availability of vehicles was higher for rural farm residents and lowest for central city residents in their rural and urban comparison study. However, the study does not explore whether the available vehicles are actually used. The elderly may have reported their ownership of vehicles, but may not use them out of fear of driving, or perhaps their impending physical disabilities. **This suggests the need for more study to differentiate between vehicle ownership and vehicle use among the rural elderly.**

Another problematic issue relating to methods used to determine the 'degree of need' for transportation by the rural elderly are the pre-imposed categories used to classify whether one is in need of transportation or is managing on one's own. McGhee (1983) divided a study sample into 'transportation dependent' and 'transportation independent', with vehicle accessibility as a major categorical indicator. The 'transportation independent' expressed less need for additional transportation services than did the 'transportation dependent'. The limitation of the two categories must be noted, as perhaps a transportation continuum may have been more effective in deriving useful results. **This study reveals the strong reliance on the personal automobile by all populations, including the rural elderly, and the acceptance of this fact in today's society.**

2.2 THE SERVICES: TRANSPORTATION PROVISION/SERVICES

2.2.1 Types of Variations of Services Provision

Several types of transportation ‘solutions’ have been attempted in rural areas. These “solutions” have included the following:

- Urban-based public transportation programs
- Centralized dispatch systems
- Fixed-route transit systems

These types of programs may have been implemented successfully in some instances. However, they have often not been successful, because of both inadequate consideration of the different characteristics of rural transportation as compared to urban, and failure to acknowledge the variability in characteristics among rural areas.

Recognizing that there is no ‘cookie cutter’ solution for overcoming local transportation challenges, the Ministry of Citizenship and the Ministry of Transportation (2001) identified eight stages of transportation provision in relation to coordinated efforts. The eight stages are outlined in Table 1.3 (following page) and include:

1. Information Exchange
2. Needs and Resource Assessment
3. Implementation Planning
4. Public Information and Referral Service
5. Joint Acquisition/Sharing Supplies and Services
6. Use of Excess Capacity
7. Joint Use of Resources
8. Centralized Co-ordination

Table 2.3: Coordinated Transportation Service Options

	Stage	Selected Characteristics
Pre-Coordination Groundwork	Information Exchange	<ul style="list-style-type: none"> ▪ Brings together organizations to share information and challenges ▪ Creates a general understanding of the bigger picture ▪ Launching pad for coordination
	Needs and Resource Assessment	<ul style="list-style-type: none"> ▪ Identifies gaps as well as what is already available in the community ▪ Reveals opportunities for coordination
	Implementation Planning	<ul style="list-style-type: none"> ▪ Community partners work together to sort out necessary details to bring coordination to life
Coordination Options	Public Information and Referral Service	<ul style="list-style-type: none"> ▪ A “one-stop” source of information for all available transportation options in the area ▪ Common marketing plans ▪ Centralized telephone information line ▪ Coordinate transportation information rather than resources
	Joint Acquisition/Sharing Supplies and Services	<ul style="list-style-type: none"> ▪ Buying power is increased and cheaper prices result ▪ Shared purchases include fuel, vehicles and maintenance
	Use of Excess Capacity	<ul style="list-style-type: none"> ▪ Providers help each other to help themselves Using unused or underutilized vehicles that could be made available by one service provider to serve the clients of another ▪ More clients are able to receive rides during busy periods
	Joint Use of Resources	<p>Intent is to meet the requirements of all of the parties equally, or as agreed</p> <ul style="list-style-type: none"> ▪ Examples include joint usage of fleets, or working together to purchase a vehicle.
	Centralized Coordination	<ul style="list-style-type: none"> ▪ An active and dynamic system of matching available resources to local needs ▪ A single agency acts as the coordination and assigns trips to any of the vehicles made available to meet local needs (dispatches trip requests) ▪ The service does not have its own vehicles but use the surplus capacity of their agencies and contracted services where required

Modified from the Coordinated Community Transportation Resource Manual. Ontario Ministry of Citizenship, and the Ontario Ministry of Transportation, 2001.

2.3 RURAL AREAS TYPOLOGY

The programs and services examined in the study demonstrate significant differences in terms of what key informants felt was required in a successful transportation program. These opposing conditions may simply reflect a difference of opinion of the numerous stakeholders consulted, but more importantly, they could also stem from the uniqueness of the rural areas attempting to improve their transportation services. As the importance of each aspect was not generally agreed upon, these issues have been termed ‘considerations’ and are outlined in Diagram I. It is interesting to note the differences in opinion of the importance of: community development aspects and public participation. The literature suggests that the sustainability of a program is greatly affected by the amount of input that users of the programs, volunteers of the program, and administrators of the program provide during the initial planning and implementation stages.

The categories that have been developed are flexible and general in nature, reflecting the differences of each rural community and the transportation resource base that is typically available. The three ‘types’ of transportation projects include:

1. Urban centralized- high resource
2. Rural centralized-low resource
3. Rural dispersed

2.3.1 Urban Centralized – High Resource

The urban centralized – high resource model of community transportation coordination entails much of what the term suggests. The program is centralized in an urban area, which incorporates a rural catchment area. In this way, the surrounding areas are able to benefit from the high level of resources available in the urban area. Resources that are utilized in this type of project include human resources from centralized services, funding from councils, funding from service groups, transportation services (including private companies and accessible services), as well as a higher population of people looking to use the transportation services. This model works to make the existing forms of community transportation more effective for a greater number of community residents, as well as the organizations, and public sectors involved. This type of model does not suggest that the transportation is only provided from the rural area into the urban area, but that it is generally planned and implemented based on the more urban area. Rides may be provided from rural to urban areas, rural to rural areas, or within a rural village itself.

2.3.2 Rural Centralized – Low Resource

The rural centralized – low resource differs from the urban centralized – high resource model of community transportation coordination. In this type of coordination, a rural area, usually a town or village, is selected as the base for a centralized system of transportation for the surrounding areas. There is little interaction with urban organizations or transportation

services, although trips to urban areas may frequently be made to nearby urban centers. As the name suggests, this model has few resources from which to draw. In some examples from this study, an area may have several low-key, volunteer transportation programs that would benefit and become more efficient through a centralized dispatch system. This model may also be applicable in areas where transportation services are non-existent, but a need for some type of service is recognized. The approach to this type of model is to start slowly, and build upon what exists, all the while noting what works and what does not. The need for starting slowly in this type of situation was a common comment on community projects of this nature. In order for a 'new' project to be successful, trust must be built between all stakeholders, which can be quite time consuming.

2.3.3 Rural Dispersed

The rural dispersed approach to community transportation coordination builds upon already existing transportation in rural areas. Typically, there is some form of transportation service in several small towns and villages, which serve the surrounding rural areas. All that is needed is better coordination between the numerous programs. A benefit of this model is autonomy that is kept by the individual community projects. To a regular user of the service, no notable changes would be evident, except perhaps the increased options of traveling further distances. This type of approach also allows for the sharing of ideas, promotion of programs, and combined funding approaches. Urban areas may be included in this type of approach, but should not play a dominant role in the planning and development stages, or claim a large proportion of the clientele of the combined services.

2.4 BARRIERS TO MOBILITY

There are numerous barriers to both the usage of transportation services and the development of transportation services for the rural elderly.

2.4.1 Attitudes/Preferences/Trends

Barriers such as the *perception* of independence may be more important than the more obvious issues associated with the provision of transportation alternatives to the elderly in rural areas. Research into the rural elderly and transportation behaviour has revealed that where formal public transportation services are provided, they are often not well utilized by the elderly. These findings include the following:

- Joseph and Fuller (1991) found that public transportation was rarely included in transportation behaviour of rural seniors, even when it was available
- Cottrell (1975) found that most elderly people depended on the automobile for transportation, except where special transportation was available. Even when free transportation was available, those who had cars drove them, instead of using the other services. It was reported that 90% of trips made by the elderly were made as

a passenger or driver in a car. The author discovered that automobiles were more available to the rural elderly than urban elderly.

- Coward and Lee (1985) state that organized services (public or provided through a social service agency) were used as a last resort to meet mobility needs.
- Coward (1979) found that the acceptability of formal services depended on the person or group sponsoring it.
- Newhouse (1995) found that formal services were sought when informal supports ceased to meet the needs of the elderly. The study also reported that rural elderly were more likely to use informal services when compared to urban elderly.
- Scott and Roberto (1995) reported exclusive use of informal support networks. Informal familial support services were utilized when they were in close proximity and were replaced by friends and neighbours if they were not. However, the study did not consider the formal services available to the area of study, which could have influenced the use of the informal support network.
- McGhee (1983) discovered that informal services were preferred as they included a social component.
- Another study found that the rural elderly have established patterns of service utilization through existing informal networks that are based on traditional rural values emphasizing independence and family loyalty (Powers and Kivett, 1992).

These findings highlight the preference of the rural elderly to use informal transportation services. Pickering (1987) also discovered a general assumption that informal arrangements are adequate in meeting the transportation needs of the rural elderly. It may then be construed that any effort to 'improve' transportation services would disrupt efforts of the volunteer sector. However, the stress placed on volunteers due to the lack of public transportation services would not appear to be equitable either. The findings also indicate that the nature and the extent of the formal services must be carefully examined when comparing the utilization of the two types of services. With the rural elderly, the nature of the service *provider*, or at least their perception of the provider, is an important factor in making decisions regarding alternative transportation modes. Finally, the findings suggest the importance of tradition and culture in the transportation decisions of the rural elderly.

2.4.2 Gender

The literature reveals several aspects that are gender related that produce differences in the transportation patterns of the rural elderly. Examples of findings related to gender include:

- Cutler and Coward (1992) reported that rural women had the lowest rate of vehicle availability, but as this group got older, access increased, possibly due to multi-

generational households. This study failed to inquire into the number of people who actually use vehicles that are available to them. This finding may also not take into consideration the reality that women may retain, or even newly acquire, driving privileges as a result of the differential in health status between the sexes. In other words, men may lose their ability to drive because of poor health, thus allowing or requiring female partners to become more active vehicle users.

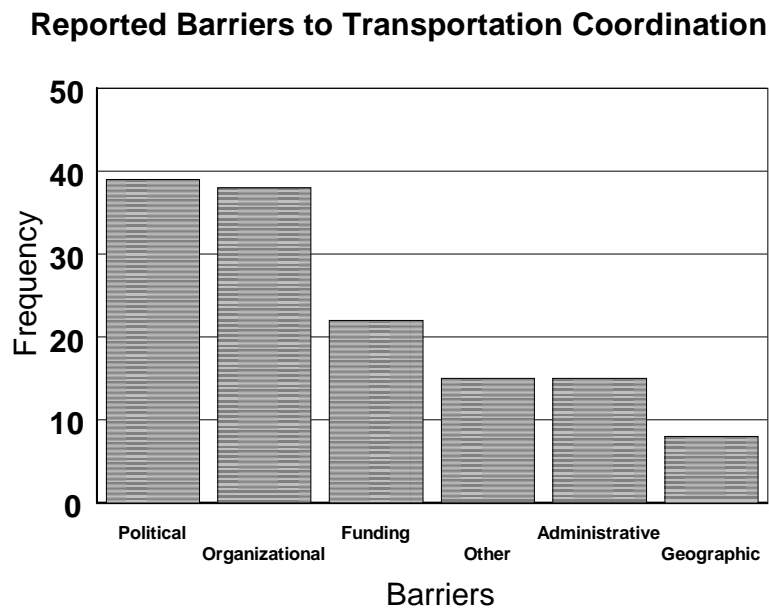
- Patton (1975) studied transportation patterns and found that only 33% of elderly women reported driving as a mode of transport while 75% of men did. Women were also found to make fewer trips than all other age groups. The date of this study must be considered and one might expect the proportion of elderly women driving to have increased in the thirty years since this study was undertaken.
- Cottrell (1975) found that many rural elderly women did not have a driver's license. This study also stated that females living in a one-person home were half as likely to have a car when over the age of 75, than their 60 to 65 year old counterparts. Ten years after this study, Coward and Lee (1985) restated that a lack of ability to drive is especially problematic for rural elderly women. The lack of access to a vehicle likely continues to be a barrier for a significant number of rural elderly females.
- McGhee (1983) found that a greater proportion of women expressed a need for additional transportation compared to men.
- Scott and Roberto (1985) realized that elderly widows utilized their families as main service providers. However, this study did not mention existing formal services in the area.

2.4.3 Barriers to Coordinating Transportation Resources

In a review of transportation coordination projects in rural communities, Fuller and Herold (2001) found several barriers to providing transportation services. The majority of these barriers appear to focus on perceived rules and regulations of provincial ministries that provide transportation funding. To summarize, 137 barriers were identified and were grouped into six categories. These are: geographic barriers, organizational barriers, administrative barriers, funding barriers, political barriers, and other barriers.

As can be seen in Figure 1.1, the majority of the barriers are considered political and organizational in nature.

Figure 2.1: Reported Barriers to Transportation Coordination



2.4.3.1 Political Barriers

Political barriers that were identified with the highest frequencies were:

- Municipal Amalgamation and funding changes
- Lack of enabling provincial legislation and regulations
- School board policies restricting non-student riders on school buses
- Fewer elected officials to sit on area service boards (health, school, social)

2.4.3.2 Organizational Barriers

Organizational barriers were considered to occur within or between the potential partners of the community transportation projects. Thirty-eight barriers were identified in this category. The following is a list of the most frequently mentioned of these:

- Few people willing to share resources (turfism)
- Lack of member continuity due to restructuring of involved organizations
- Differing and restrictive eligibility criteria of organizations already providing transportation services

2.4.3.3 Funding Barriers

Barriers related to the funding aspects of coordination were mentioned 22 times. The funding barriers that were identified include:

- Lack of funding
- Finding sustainable funding
- Fear of losing transportation budgets by coordinating with others
- Clients not used to paying for transportation services

2.4.3.4 Other Barriers

The 'other' category mentioned 15 hindrances to effective coordination. While there was a wide range of responses in this category, repeated barriers include:

- Decreasing availability of volunteers
- Clients are accustomed to personal services of the past
- Lack of consumer and provider knowledge of existing services

2.4.3.5 Administrative Barriers

Barriers around administrative operations were also mentioned frequently. The majority of the fifteen respondents identified the following two barriers:

- Time issues (length of time for planning and implementation, balancing committee time between work and committee duties)
- Insurance costs and restrictions

2.4.3.6 Geographic Barriers

Geographic barriers to effective coordination were mentioned the least often. The three geographic barriers that were recognized most often (out of eight) include:

- Geographic service boundaries stipulated in municipal by-laws
- Large geographic area (distance in getting from point A to point B)
- Sparse population

2.4.4 Responsibility

A debate that remains is the determination of the appropriate division of responsibility to meet transportation needs. Should the responsibility lie in the public or professional spheres? Should transportation provision remain an individual responsibility as in the past, thereby ignoring the increasing importance of being mobile in today's society? Alternatively, should the responsibility lie within the realm of the state? What are the moral obligations of providing transportation to individuals? How should human relations be governed to ensure the well being of everyone (Lowry, 1975)?

The increase in specialized transportation services subsidized by the government actually becomes problematic for the social service sector. Unlike education transportation, social service agencies do not guarantee an allotted space for each person utilizing their services (Sutton, 1988). The researcher suggests that by creating health, social, and school services, the government has created a need for access to the services (Sutton, 1988). Furthermore, it is noted that volunteer services are increasing due to the growing awareness of the lack of transportation services available to the public.

Provincial funding has enabled non-profit agencies to provide various forms of transportation services for their specific clientele. These agencies and organizations include, but are not limited to those listed in Table 1.4.

Table 2.4: Selected Non-Profit Agencies Involved in Transportation Services - Ontario

Alzheimer Society	Mental Health Centres
Canadian Red Cross	Multiple Sclerosis Society
Cancer Society	Day Care Centres
Home Care Programs	Support Services for Seniors
Hospitals	Victorian Order of Nurses
Meals on Wheels	Children's Aid Society
Volunteer Centres	Canadian National Institute for the Blind
School Boards	Palliative Care Services
Association for Community Living	

Source: Ministry of Transportation, 1996

These agencies provide a variety of services that include:

- Shared taxi services
- Car pools
- Dial-a-bus
- Volunteer driver systems
- Fixed rate van services

- Customized personal transportation systems

Most transportation programs designed and implemented by community groups (Rotary clubs for example) do not receive any type of provincial funding. Generally, these projects succeed entirely as the result of volunteer efforts. However, the fact that the entire voluntary sector is facing challenges with respect to the recruitment and maintenance of volunteers jeopardizes the continuation and expansion of these types of transportation programs.

A number of municipal governments also provide specialized transportation for residents within their own political boundaries, to destinations within these boundaries. Rural transportation systems tend to follow political boundaries rather than service areas, which increases problems for the rural resident, who may need to travel long distances and across service boundaries to satisfy their needs. This reality has several implications for the rural elderly. These needs may stem from a myriad of reasons, including visiting family and accessing specialized healthcare.

While it is suggested that the state should adopt a moral obligation for providing transportation services to rural areas, past attempts to take on such a task have not been successful or sustainable. Funding for these types of efforts is a case in point. When governmental funding formulas focus only on populations of people in specific areas, rural areas do not receive the funding that is required to provide adequate services. This reality emphasizes the fact that population density is a major determinant of the efficiency of these types of programs. The operational costs of providing public transit in rural areas, where large distance separate settlements, are much higher than in urban areas. If urban transportation models are applied to a rural setting, the providers must be prepared to accept lower service delivery efficiency, the consumers will have to accept lower quality of service, or some combination thereof. It is well understood that the cost of supplying a consistent rural transportation service would be immense, especially one based on an urban model.

Perhaps it is not the responsibility of the government to provide public transportation, especially to special populations. One may feel that it is not appropriate to spend tax dollars on those who do not continue to be equal contributors to society (Friedman, and Adamchak, 1983). This could in fact be a growing problem in the future of rural areas as elderly people increasingly turn to non-urban settings to enjoy their retirement. If fewer and fewer people of the 'working years' inhabit these areas, who will carry the cost of providing transportation for the 'dependent' age category? At the same time, who will volunteer?

With increasing cutbacks to social services, a higher demand placed on the volunteer (third) sector to provide transportation services can be expected. Without reliable funding from the public sector, it is hard to plan and organize programs involving volunteers, even though the program providers wish to remain independent of control of public agencies. This situation may be exacerbated by recent trends with respect to volunteer participation. The voluntary sector has become critical for the effective delivery of welfare services.

2.5 OVERVIEW OF COORDINATION MODELS

While more detailed transportation services descriptions have been developed, Fuller and Herold (2001) have classified transportation services in an alternate way. The three ‘types’ of transportation models are based on an exploration of 25 rural community coordinated community transportation projects. Useful information has been gathered in terms of what approaches could lead to an improvement to lives of the transportation disadvantaged people living in rural areas. The three models of coordination, as well as ‘tips’ provided by those involved in the planning and implementation of rural transportation projects, are illustrated in Diagram I.

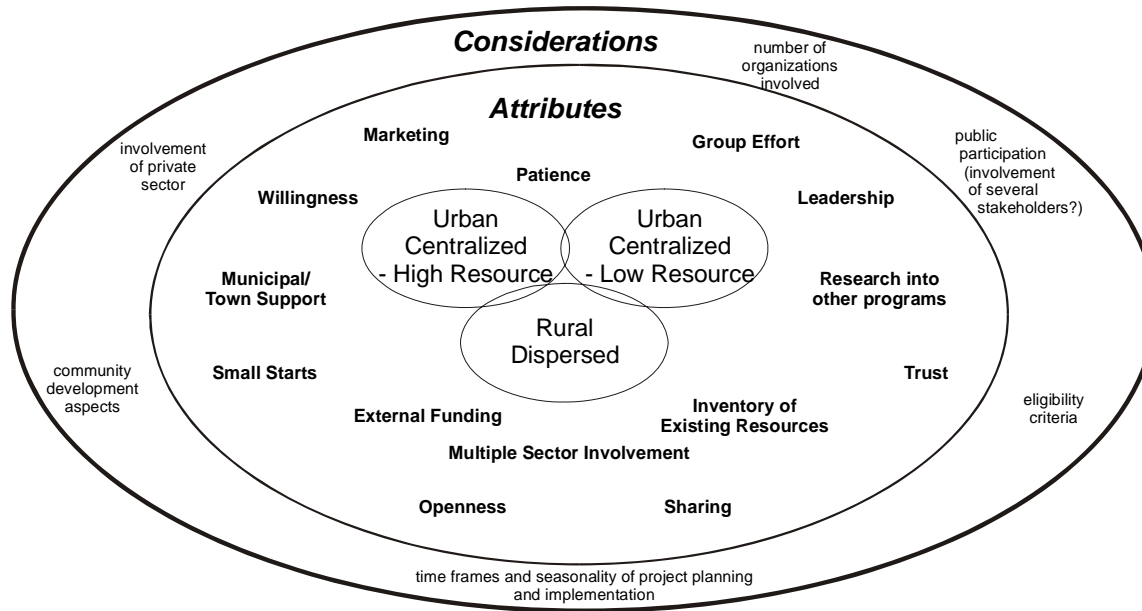
The center of Figure 1.2 illustrates the three types of transportation coordination, urban centralized – high resource, rural centralized – low resource, and rural dispersed, found among the 25 rural communities. The inner circle of the diagram represents common needs that were identified in the majority of the projects. The circle identifies the necessities of developing a successful transportation program or service. The outer circle illustrates aspects of planning for coordination that were not common to all of the groups, but were given consideration by a number of communities. This circle identifies ‘considerations’ when developing a successful transportation program or service.

While the three types of rural transportation coordination differ in several ways, there are common aspects that must be noted. No matter what the approach taken, the amount of resources available or the population dispersion, the communities in this study have noted various ‘needs’ that must be met in the planning and implementation stages of any transportation program or service. These common needs are reflective of steps outlined in the literature. These commonalities are illustrated in Figure 1.2.

Figure 2.2: Rural Transportation Attributes and Considerations

Source: CTAP Rural Case Study, 1999-2000 (N=25)

**Attributes and Considerations for
Coordinated Rural Transportation Programs/Services:
The Experience of Rural Ontario Communities involved with CTAP**



2.5.1 Lack of Coordination ¹

The fact that there are gaps in transportation services for specific rural residents, along with the effects of the changes in society (governmental spending, land-use planning, centralization of services), have not gone unnoticed by the rural population, all levels of government, and third sector agencies alike.

While the need for transportation has been identified, it is also apparent that many rural areas have made efforts to improve the transportation conditions for certain residents. Most transportation programs serve a specific clientele and are largely the result of voluntary programs organized through churches and service clubs. At the same time, several provincial ministries provide funding support for the transportation of certain groups of people. The resulting gaps, as well as the overlapping of services, prompt the need to consider coordination efforts.

In response to the continuing need for new and expanded transportation services, numerous community based transportation projects have been implemented for sub-groups of the rural population, including the elderly and persons with disabilities (discussed in a later section). Many small-scale projects and programs have been organized by community clubs, churches, and local volunteers. These “micro” programs often operate separately from government-funded programs.

The need to provide transportation services is widely recognized. Provincial government ministries that provided funding for transportation programs in Ontario at the time of this research include the:

- Ministry of Health
 - Ministry of Transportation
 - Ministry of Citizenship, Culture and Recreation
 - Ministry of Education and Training
 - Ministry of Community and Social Services
- (Ontario Ministry of Transportation, 1996)

Unfortunately, rural residents often do not have equal access to such programs, as services do not exist on a systematic or egalitarian basis (eg. one county has volunteer transportation, another has a mobility bus, but the two are not coordinated).

The majority of existing transportation services in rural areas are specifically geared toward special populations, such as elderly and disabled individuals, thus providing the opportunity

¹ Drawn from MSc. Thesis, Herold, M. A. 2001. Coordination Efforts in Rural Communities: An Exploratory Study of Transportation Projects in Rural Ontario.

for independent living. This typically narrow focus of transportation services creates undesired results in rural areas of Ontario, especially during times of limited public funding for the provision of accessible transportation. The fragmentation of transportation service provision through public, private, and not-for-profit agencies creates 'silos' where the needs of certain groups are met while other individuals are left without access. This is also because some do not meet the required criteria. Other researchers have argued that the existence of criterion-based transportation services also results in similar programs competing for transportation resources. For example, they have argued that if government ministries would operate transportation programs in cohesion with each other, funding problems would be alleviated, leaving a great number of individuals served, in comparison to the needs met through existing isolated transportation programs (Cutler and Coward, 1992). While the efforts of each transportation service must be applauded, the duplication that results from limited program scopes is obviously problematic and unnecessary.

The dispersed and inefficient nature of specialized transportation programs, which are often the result of the growing need to be mobile in today's society, suggests that attention must be given to improving community transportation systems, especially in rural areas. In order to continue essential rural transportation services, it has been suggested that human service agency coordination is critical (Stommes, 1990). However, few incentives for movement toward coordinating services are provided through program policy makers in umbrella organizations. Researchers have suggested that there is a need for stronger incentives for integrating transportation planning at every level especially if groups are working toward multi-sector coordination (Jennings and Ewalt, 1998; Stunkel, 1997). However, it is also argued that while policy reformers often urge coordination as the key to more effective delivery of public services, there is little beyond anecdotal evidence to suggest that coordination approaches can actually improve public services in multi-organizational delivery systems. This illustrates the need to investigate and identify models of coordination strategies for agencies, organizations, and private companies who provide transportation services in rural areas of Ontario.

In 1974, Bell and Olsen suggested that there was a need to examine United States federal regulations that may serve to limit use of transportation funds. The researchers noted that a structure supporting joint funding for community transportation resources would help to transform special purpose programs to multipurpose systems.

More than twenty years later, in her examination of United States federal policy regarding public transportation in rural areas, Stunkel (1997) expressed the need for the coordination of transportation resources at the community level. For example, it was found that the vehicles of many rural organizations often stand idle, which suggests the need for better coordination among agencies providing any level of transportation services to populations in a rural area. It was felt that rural transportation systems tended to follow political boundaries rather than service economies, which increases problems for the rural resident, who may need to travel long distances and across service boundaries to satisfy their needs. The lack of transportation options will only continue to increase as funding declines (Stommes, 1990). One way to improve services, recognized in the literature, is to involve greater or better service coordination (Carnahan and Miller, 1991; Fisher, Knutson, and Ladewig, 1992)

A recent Ontario provincial government program, Community Transportation Action Program (CTAP), responded to the duplication and gaps in transportation service provision. CTAP began in September 1996 and concluded in September of 1999. CTAP was a joint provincial initiative involving ministries already carrying transportation budgets: the Ministry of Transportation, Ministry of Education and Training, Ministry of Citizenship, Culture and Recreation, Ministry of Health, and the Ministry of Community and Social Services. The ministries were brought together to support a program with the goal of providing Ontario communities with the opportunity to develop sustainable, integrated transportation programs by coordinating already existing resources.

CTAP was introduced to decrease gaps, duplication, and inefficiencies of existing transportation services; to increase service planning at the local level; to increase the quality and access to services for consumers; to free up resources to meet service demands; and to empower local decision making (www.ctap.gov.on.ca). In order to reach the specified goals, CTAP was designed to offer support for community efforts by acting as an agent of change and encouraging the use of already existing resources.

The CTAP agenda assumed that the coordination of public agencies, not-for-profit agencies and private companies would be an effective way of managing existing service providers and transportation resources in rural areas.

In total, 58 Ontario communities received CTAP funding after submitting the required proposals. Of these, 25 were adjudged rural in nature, by population size, location and composition of the service area. Approximately \$126 000 was provided to rural communities wishing to improve their transportation options. On reflection, the Community Transportation Action Program (CTAP) was a success. Despite a number of shortcomings, the program stimulated a number of groups and communities to seek ways to collaborate and seek efficiencies for effective service – an example of the provincial government realizing and supporting the need to coordinate transportation resources, including those in rural areas (Fuller and Herold, 2001, Rural Transportation Series, #1).

2.5.1 Benefits of Coordination²

The benefits of coordination appear to be well documented in the organizational design literature (Agranoff and McGuire, 1999; Alter and Hage, 1993; Bergquist et. al., 1995; Jennings and Ewalt, 1998; Gulati, 1999; Mizrahi, 1999; Ramsey, et al., 1998; Rogers and Whetten, 1982). However, while most of the literature serves to inform administrative types of strategic processes, there are few researchers or authors providing a multi-stakeholder approach for the evaluation of coordination benefits. In order fully to determine the value of a coordinated effort, all stakeholders must be considered in addition to the traditional focus on administrative groups.

² Drawn from MSc. Thesis, Herold, M. A. 2001. Coordination Efforts in Rural Communities: An Exploratory Study of Transportation Projects in Rural Ontario.

A brief review of noted coordination benefits reveals a number of benefits to coordination. These include those aspects that can be quantitatively measured (i.e. number of new clients served, number of dollars raised through coordination efforts, and number of new organizational alliances formed). Coordination benefits also include those based on the opinions of the people involved in service provision (i.e. personal fulfillment, increased feelings of trust among organizations, and insight into learning opportunities gained). Table 1.5 outlines benefits that have been noted from the literature.

Table 2.5: Coordination Benefits Identified in the Literature

Stakeholder	Coordination Benefits
Client	<ol style="list-style-type: none"> 1. more clients receiving services 2. increased points of service entry 3. increased client contact with other service providers
Administration	<ol style="list-style-type: none"> 1. joint development of new services/products 2. gain and offer expanded resources 3. shared cost of product/service development 4. increased continuity of services due to joint funding, purchases of service, staff assignment, and standardization of eligibility criteria 6. increased efficiency due to identification of program duplication and opportunities for resource redirection 7. increased opportunity for personal gratification 8. opportunities to learn and adapt 9. gain of mutual support, group synergy, alliances, and harmonious working environment
Funders	<ol style="list-style-type: none"> 1. gain and offer expanded resources 2. shared cost of product/service development 3. increased efficiency due to identification of program duplication and opportunities for resource redirection 4. gain of mutual support, group synergy, alliances, and harmonious working environment

Source: Adapted from Rogers and Whetten, 1982.

While the positive aspects of coordination are encouraging, the literature recognizes that there are negative elements as well. Perhaps the most obvious drawbacks in the area of transportation services relates to the gradual phasing out of traditional means of providing transportation in rural areas. If coordination of existing services is sought, agencies may form new systems, such as a service brokerage arrangement, where a central dispatcher is utilized. When this occurs, working arrangements are usually created which may increase the formality of an originally informal agency, or cause agencies to lose their identity (Nowland-Foreman, 1998). In order to coordinate transportation activities, staff may be hired to carry out an increased number of duties, thereby replacing volunteers (Shaffer, 1992). When volunteers are replaced by professional positions, rural residents may begin to lose faith in what their community is capable of doing. This would then result in a continuous decline of volunteers in the future (Nowland-Freeman, 1998).

2.6 DISCUSSION: ENDURING RURAL TRANSPORTATION ISSUES

The study of rural elderly transportation needs and issues is plagued by problems. One such problem lies with the methodology of many studies in the literature. For example, seniors who are not mobile may over-report their satisfaction with transportation. This situation may arise for several reasons, including the possibility that the rural elderly may not feel comfortable asking others for rides (Joseph and Fuller, 1988). It is understandable that the rural elderly wish to maintain their independence and “behaviour based on a desire for self-sufficiency appears to be most highly valued among farm seniors” (OACSC, 1992).

It is clear that gaining a complete view of the transportation needs of the rural elderly across the province is not possible, as every group of rural elderly individuals has its own views of what is required to increase their mobility. However, it may well be possible to identify, and monitor, core needs and issues that do tend to affect the rural elderly sub-population across wide geographic space and circumstances. In addition, the reality of differential needs and issues suggests the need to explore possible alternative transportation systems, in order to have a variety of malleable solutions that are applicable to an array of transportation conditions.

3 TRANSPORTATION ISSUES FACED BY RURAL INDIVIDUALS WITH DISABILITIES

This section will outline the general themes that emerged from the literature about rural transportation for people with disabilities. Most of the literature was written in the 1970s and early 1980s, which is probably a reflection of the community living/deinstitutionalization movements of the time (this also coincides with 1981 being designated as the International Year of the Disabled). While conferences about transportation systems and needs for disabled and ‘handicapped’ individuals were commonplace during that time, much of the focus remained on urban transportation. Overall, there is a lack of information pertaining specifically to **rural transportation** for people with disabilities. In cases where rural issues were addressed, they were often done as token paragraphs or chapters. Nonetheless, this limited coverage revealed some key information and issues. These include:

- Lack of clarity regarding definitions and demographics
- The need for mobility
- Increased accessibility problems in the rural setting
- The cost of transportation in rural areas
- Inadequate service provision for rural disabled persons

3.1 DEFINITIONS AND DEMOGRAPHICS

There are two general terms used to describe people with disabilities: ‘disabled’ and ‘handicapped’. Many authors define these two terms within their own bodies of work, where ‘disability’ tends to be associated with physical impairment and ‘handicap’ tends to be associated with the interaction of the disability and the environment. However, it should be noted that, as a whole, these terms could be used interchangeably, as much depends on the time, context, and place in which such terms are used.

The Committee on Disability “employs the terms ‘disability’ to connote any physical or mental condition which may affect the functioning of the individual. A handicap, on the other hand, is a condition which arises from an environmental situation” (The Canadian Organizing Committee for 1981). Wright, along a similar vein, argued that while the term ‘disability’ refers to the functional condition of the person, the term ‘handicap’ refers to the psychological, social, and behavioural consequences of having a disability. As such, “handicaps create disadvantage by preventing the fulfillment of roles that are appropriate according to age, gender, social and cultural features of an individual” (Gething, 1997, 514). Revis and Revis, on the other hand, claim that, “A disabled person refers to someone who is unable to meet an environmental performance expectation because of some functional limitation. However, the concept of disability may be further modified by taking into account the impact of other variables such as income and socioeconomic factors” (1978, 171).

The terms 'mobility handicapped' and 'transportation disabled' are used heavily through the literature, and have similar meanings. Mobility handicapped is established as a mobility-limiting situation relating to any individual's physical health, mental or educational condition which prevents the individual from effectively planning and/or using public transportation for trip making. This includes those who could use the public transportation system but only "with difficulty or loss of dignity" (Social Planning Council of Kitchener-Waterloo, 1978, 13).

At the *Fifty-First Round Table on Transport Economics on Transportation for Elderly and Disabled Persons*, it was suggested that while the overall population of people with disabilities is declining in Europe, the proportion of mobility-handicapped persons is actually increasing. This was found to be a concern as families continued to become smaller and did not have the resources available to provide transportation services (European Conference of Ministers of Transport, 1980, 32). In the United States, the 1990 census indicated that rural populations were becoming older and more transportation dependent (Sych, 1999, 223). Revis and Revis found that demographic data indicate that "an increasing part of the market for transportation for the disabled will be made up of persons 75 or older with increasingly larger concentrations of women in the population" (1978, 172). A large proportion (one half to three quarters) of transport-disabled people are in older age groups, while it is estimated that one quarter of elderly people are disabled (European Conference of Ministers of Transport, 1986, 7). Looking more specifically at the rural population, Revis and Revis found that "the largest share of disabled living in rural areas were living in small towns" (1978, 172).

There are various opinions about the number and proportion of disabled people within Canada. "A study prepared by the Royal Commission on Health Services in 1964 estimated that 7.1% of the population suffered from a permanent physical disability, of whom 3.1% of the population had severe or total disabilities" (The Saskatchewan Coordinating Council on Social Planning, 1974, 6). Statistics Canada, on the other hand, indicated that 15.5% of Canadians have some form of disability (National Transportation Agency of Canada, 1993, 3; European Conference of Ministers of Transport, 1986, 36). The European Conference of Ministers of Transport in 1986 found that in Canada about 13.7% of the population has a disability, though the United Nations estimates it closer to 10% when looking at various countries and the ways in which they obtain their data. One higher estimate was made by Fuller, who stated that the approximate proportion of the rural population who has a disability, defined broadly, is probably as high as 30% (1978, 147).

The numbers are considered much lower for the transportation/mobility disabled. The Canadian Transport Commission found that 2.8% of Canada's population in 1985 had some physical condition or health problem that made it difficult for them to travel without assistance. However, this estimate may be low because of people's reluctance in admitting the existence of a disabling condition or health problem. The Saskatchewan Coordinating Council on Social Planning stated in 1974 "it would be conservative to employ the 3% figure as a general approximation of the number of Canadians requiring improved transportation services". The Canadian Transport Agency (1985), however, found that in Ontario 3% of the population has a transportation disability. When looking at urban and rural areas there is a

slight difference, with 3.03% being urban and 2.90% being rural. In the U.S., a much higher number was given by Taylor and Taylor, who found that about 25% of the population is classified as transportation disabled. In this definition, transport disabled includes any person who, due to a physical condition or illness, is unable to ride fixed route transit (e.g. bus) without special facilities (Taylor and Taylor, 1996, 5).

Taylor and Taylor (1996) found the following common characteristics of disabled persons who have difficulty using transit:

- Tend to be older with multiple physical problems
- Tend to belong to a lower socio-economic group
- Tend to be less educated and underemployed

Gammon found that rural residents tend to be poorer than non-rural residents, and this is especially true for minority groups (2000, 175) Brail, Hughes, and Arthur found that while people with disabilities are often lumped together with the elderly population when discussing special transportation services, there is a wide variation between the groups, each with specific needs (1976, 159).

3.1.1 The Need for Mobility

In 1978, Revis and Revis stated that, “The structure of our society in the mid-20th century poses an absolute demand for a high level of personal mobility and that demand has been increasingly expressed by the disabled” (1978, 170-172). They also found that:

In terms of their mode preferences, the disabled behave much like other transit dependents, with strong preference expressed for personalized transportation, particularly the automobile whenever possible. When private personalized transportation is available (and is needed) by the disabled, there is evidence to indicate that they, along with many of the low-income group, often use what they consider to be the next best thing – taxis...In terms of their need for mobility, the disabled are not very different from the rest of the population who are disadvantaged regarding transportation. Their trip patterns and usage are very similar to that of the elderly and other handicapped (this means work, services, social, shopping, recreation).

This is consistent with the view of The Saskatchewan Coordinating Council on Social Planning, who asserted that the trip purposes of the disabled are just as diverse as the non-disabled, “including trips for educational, medical, entertainment, shopping, and recreational purposes, or simply to visit the home of a friend” (1974, 10).

The importance of mobility is very clear in the literature. “Since 1970 there has been a growing awareness that for many people the lack of transportation represents a serious limitation on their personal and emotional well-being” (Revis and Revis, 1978, 173). There is

a question of the connectedness between the social position of the person with a disability and their mobility. For example, it was found that access to transportation means (primarily a car) is more important than the disability itself. Thus, mobility has to be considered not only as a physical fact but a social fact (European Conference of Ministers of Transport, 1980, 38). Mobility is a critical factor in the full participation and equality of disabled persons in Canadian life (The Canadian Organizing Committee for 1981). “Adequate transportation can also be the catalyst for a radical transition in the manner in which the handicapped views himself and his social role” (The Saskatchewan Coordinating Council on Social Planning, 1974, 11). However, “mobility...is largely affected by factors such as incomes, fares and/or the cost of using systems, the availability and frequency of service, and the extent to which the service goes to origins or destinations that are relevant to the disabled. Decreased mobility for the disabled typically means fewer trips and choices as to where they can go, especially if public transit routes are largely oriented toward work trips” (Revis and Revis, 1978, 172). People with transport-disabilities tend to take fewer trips for personal reasons than non-transport-disabled people (Taylor and Taylor, 1996, 7). A person who is denied mobility suffers the disadvantages of not having access to transportation...from social to economic deficits (The Saskatchewan Coordinating Council on Social Planning, 1974, 9).

In general, “most people, regardless of their disabilities, prefer independent living arrangements that take advantage of technology and innovative support systems. This is made even more practical by a combination of creative housing and transportation programs” (Rosentraub and Gilderbloom, 1989, p. 32).

3.1.2 Accessibility

“Transportation remains the single most important barrier to the efforts to provide the handicapped person with the opportunity to participate fully in the life of his community” (The Saskatchewan Coordinating Council on Social Planning, 1974, 1). “Numerous surveys show that, for those disabled people who can drive or who have someone else to drive them, the biggest single aid to personal mobility is a private car” (European Conference of Ministers of Transport, 1986, 11). Interestingly, The Social Planning Council of Kitchener-Waterloo found that the largest group of mobility disabled is not comprised of individuals who are confined to wheelchairs. However, many special public services cater to those using wheelchairs. Sixty percent of unassisted trips are provided by family, friends, and taxis (1978, 34). While “in fact, access to adequate transportation is often the deciding factor between being dependent upon family members or society and being able to function independently” (The Canadian Organizing Committee for 1981), Revis and Revis found that “drivers are not in the position to provide the kind of personal service that the disabled often require” (1978, 173). Nemeth, Brown and Hughson stipulate, “attempts to maintain a handicapped person in a community where there are little or no special services may lead to total dependence on the family and public assistance” (1981, 1). The Canadian Organizing Committee for 1981 put forth the notion that “all modes of transportation are vital to the integration of disabled persons into the mainstream of community living. Any barriers to integration must be eliminated”. However, the Hon. Alex Taylor made the point that: “Handicapped people today are faced with a strange and weird anomaly. Medical technology

has extended their reach into the community, while standardization (of public transportation services) has created artificial barriers to their participation in that same community” (1974, 22). Rosentraub and Gilderbloom claim: “the environment for people with disabling conditions can be described as life in an invisible jail – a jail because it restricts the free movement of individuals, and invisible because others do not see the constraints this environment produces. Access for everyone is rarely a concern of planners or policy-makers in constructing public or private spaces” (1989, 31). Fuller pointed out that while rural transportation (especially public) is quite a serious problem in general, it is chronic for those who have a disability who really feel the inadequacies of the system (1978, 146-47).

Access in terms of physical design remains among the top concerns of people with disabilities. However, Revis and Revis argue that an “important area of progress...has been the impact of accessibility rules on the design considerations for the handicapped and elderly for any new systems” (1978, 174). Books and manuals to aid disabled travelers are becoming more common so that people have a better sense of where they can travel without having to worry about the physical barriers. These books provide information about specific services in Canada (most of these apply to federally controlled modes such as air, rail, and ferry) and what rights they have as travelers. One example is *Handi-Travel: A Resource Book for Disabled and Elderly Travellers* by Cinnie Noble (1985).

3.1.3 Cost of Transportation

“Those with disabilities generally find it difficult to obtain necessary transportation because they often cannot drive, and taxis or other types of private transportation services serving them are expensive. In addition to the expense of purchasing transportation services, the isolation of the disabled is compounded by their problems with access to the available public and private transportation systems” (Revis and Revis, 1978, 170). In addition to the high cost of services, Revis and Revis (1978, 17) pointed out that a “lack of income means little private transportation is available and few trips are made. If these limitations on mobility are coupled with a lack of accessibility on public transportation systems, the transportation problems of the disabled become readily apparent.” In the United States, Abt Associates Inc. found that “handicapped people who are employed tend to locate their residence closer to their jobs than do the population as a whole, due primarily to the high cost of their transportation and the general inconvenience of their impairment. This does not mean, however, that they live in areas with better transportation accessibility...” (1969, 5).

Gething (1997, 520) found that the issue of rural transportation for people with disabilities “is not just a matter of distance, but also of limited infrastructure available to transport people at a reasonable cost across both large and short distances, and of high costs associated with using a motor vehicle as the major form of transport. It was reported that much of public transport in remote and rural areas (when it is available) is inaccessible for people who use a wheelchair or who have mobility restrictions.” Since the population of people with disabilities is typically low in rural areas (compared to urban areas), “the high cost associated with the provision of community based services to a small number of rural persons is indeed difficult to justify to funding agencies and politicians” (Nemeth, Brown and Hughson, 1981,

1). In terms of actual service delivery, Sych found that coordination of specialized local services depends on the financial incentives involved (1999, 236). Additionally, Transport Canada found that “the substantial variations in the degree of funding assistance provided by the provinces are due to geographic factors such as size and the number of urban centers, historical precedence, and differences in priorities and circumstances” (1998, 217).

3.1.4 Service Provision

In a comprehensive survey of the needs of the severely disabled, transportation was one of the most frequently reported problems. Furthermore, one of the more significant findings was that “over 60 percent of patients interviewed indicated that their need for transportation was not being met” (Revis and Revis, 1978, 170). A study by the Social Planning Council of Kitchener-Waterloo in 1978 found that there were three specific problems associated with transportation for the disabled: (1) physical barriers, (2) extent of transportation services available, and (3) the cost of transportation. Ten percent of those surveyed pointed out a lack of transportation from outlying areas to attend appointments and participate in community activities. In addition, Revis and Revis found in their study that the transportation problems of the disabled result from the interaction of four basic factors:

1. *Low Income*, which places serious restrictions on their mobility options to the extent that they are unable to buy needed disability-related equipment or services to facilitate travel.
2. *Transportation service deficiencies* that further reduce mobility as reflected in transportation that is either not available, available in the wrong places at the wrong time, inconvenient, or operating too infrequently to be of any relevance.
3. *Rural isolation*, which further compounds the problems of mobility for those disabled living in rural areas. Frequently social and/or health services that would otherwise be available cannot be reached because of lack of transportation facilities.
4. *Design problems* with transportation systems covering vehicles and fixed facilities, terminals, bus stops, and other transportation installations. These design difficulties reduce accessibility for the disabled and have received particular attention recently as “major constraints on the ability of the disabled to make trips” (1978, 171)

Overall, “...rural services have been slow to develop. This is primarily because most service models and funding policies are designed for the city with little or no accounting for rural needs and conditions of life. The traditional approach to providing services to rural areas has been to transplant or extend those based in the city” (Nemeth, Brown and Hughson, 1981, 1). Fuller found that the issue of rural public transportation is rarely a topic for debate, mainly due to the high level of car ownership, and as a result, very little is known about what is needed and what is provided in our rural areas (1978, 145).

“Traditionally, transportation services for the Disadvantaged in most urban and rural centers across Canada have been provided by voluntary agencies or private companies on a fee for

service basis” (The Canadian Council for the Disabled, 1978, preface). Surprisingly enough, “in absolute numbers, rural transportation systems and services are far more numerous than urban operations in Canada. The Canadian Urban Transit Association estimates that at least 300 organized systems are in place, many operated mainly by volunteers” (Transport Canada, 1998, 215). While many systems are in place and “...there is a wide array of transport available to disabled persons in rural areas, including autos, volunteer services and taxis, the principal problem appears to be insufficient supply” (Lewis et al., 1991, 245). Taxis are presently the most commonly used method of transportation by the disabled (The Saskatchewan Coordinating Council on Social Planning, 1974, 14). However, “taxi transportation also presents problems even to those who can afford it, in that many drivers will not accept the responsibility or the burden of picking up a handicapped fare” (Social Planning Council of Kitchener-Waterloo, 1978, 10). In a more negative view, for the handicapped rural adult, “there seems to be little alternative to solving his transportation problems himself one way or another” (The Saskatchewan Coordinating Council on Social Planning, 1974, 28)

The Social Planning Council of Kitchener-Waterloo found that municipalities have been reluctant to assume responsibility for the disabled, as they have been largely viewed as a social service responsibility (1978, 9). Lewis et al. found that provincial policy (Ontario) is very weak in promoting mobility for disabled persons in rural areas and areas without transit service (1991, 242). In the United States, “the problems of bureaucracy are compounded by a proliferation of local governments that duplicate services, of which transportation is one” (Sych, 1999, 223). In relation to the social construct of traditional rural communities, Gething states that: “Many smaller communities have a greater sense of belonging and community spirit. Neighbours may be more willing to help each other out in times of need”. On the other hand, some rural communities may be conservative and fiercely independent (1997, 516).

In terms of service delivery systems, “there are two basic methods by which the right of the handicapped to equal access to public transportation can be recognized:

1. Integrated services, or the adaptation of present facilities to eliminate barriers to the handicapped;
2. Parallel services, or the establishment of new services to complement the existing public transit system” (The Saskatchewan Coordinating Council on Social Planning, 1974, 21).

“A frequently raised objection to the establishment of a parallel system is that such a system is antithetical to the normalization process or the natural desire of the handicapped person to be accepted as equal in his community” (The Saskatchewan Coordinating Council on Social Planning, 1974, 22). However, a survey done by The Saskatchewan Coordinating Council on Social Planning found that “78% of individuals said they would travel more often if parallel services were offered” (1974, 23). Brail, Hughes, and Arthur suggest that identifying the level of disability is important in determining the usefulness of transportation systems because people with more severe disabilities will typically require door-to-door service

whereas people with mild disabilities may be able to use the public transportation system (1976, 51).

Many recommendations have been made for improving service provision for the disabled in rural areas. Transport Canada suggests in depth planning, but points out that “formal planning for accessible transportation services in rural communities usually requires a transportation study, yet small municipalities often do not have the human resources necessary to plan and carry out such a study” (Transport Canada, 1998, 222). One of the recommendations made was “that provincial departments of transport provide incentives to local governments to develop, in consultation with disabled persons, plans and time frames for:

- Making municipal transit systems more accessible to disabled persons with fares no higher than those charged to non-disabled persons;
- Establishing or improving demand-responsive transportation for persons unable to use public transportation (The Canadian Organizing Committee for 1981, 1981, p.10).

Forest challenges program and service administrators to consider the following when planning and implementing transportation programs that are accessible to rural disabled persons (1995, p. 22):

- A population that is spread sparsely across a large land area
- Specific (and often diverse) geographic and climatic features of the area to be served
- Low base of disability
- Difficulties in recruiting and retaining qualified personnel
- Unequal distribution of available service providers
- Scarcity of public transportation
- Values and rules of rural culture as they relate to individuals with disabilities

Steve Quiring made the statement, “We feel there would be some general conditions which a municipal service would have to meet in order to qualify for any assistance which we may be able to make available. I think basically what we are trying to do is encourage a high quality service”. The following general conditions should be aimed at the long term:

1. That the transit service be a door-to-door service

2. That the equipment that is used is specialized and of an adequate standard
3. That drivers for this service be specially trained
4. That a reasonable fare structure be utilized
5. That the general transportation service must be available during both days and evenings” (Department of Highways and Transportation, Saskatchewan, Canadian Rehabilitation Council for the Disabled, 1974).

Fuller challenges the future direction of rural transportation for people with disabilities by saying we must “examine more carefully the need” and undertake research to figure out the exact needs of the disabled in rural Canada. He also suggests that demonstration projects should be undertaken in different rural environments to look at how different schemes work in different areas, and programs that reduce the risk and cost of starting up a ‘mobility club’ (a community based service that matches drivers with riders at a low cost) should be considered (1978, 148-49). This differs from the more pessimistic view that “aside from piecemeal measures there is little that can be done to improve transportation services for the handicapped in rural areas. The problems involved are simply too great to overcome with any systematic solution” (The Saskatchewan Coordinating Council on Social Planning, 1974, 28).

4 A SURVEY OF AGENCIES PROVIDING TRANSPORTATION SERVICES IN ONTARIO

4.1 SURVEY BACKGROUND

In order to assess general issues of transportation for the rural elderly, the author took advantage of an opportunity to circulate a survey questionnaire to agencies that participated in a Rural Aging Forum hosted by the Grey Bruce Huron Perth District Health Council. The survey was included in a follow-up letter sent to all participants by the health council.

The survey consisted of two pages of both closed and open-ended questions. These questions were designed to gather information from the agencies with respect to the following:

- The type and extent of transportation services provided by the agencies to rural elderly residents and persons with disabilities.
- The geographic area covered by the agencies in the provision of transportation services to the above client groups.
- The specific needs of the clients served by the agency (whether met by the agency or not).
- The issues and challenges faced by the organizations in delivering transportation services.
- The mobility issues and challenges faced by the clients.

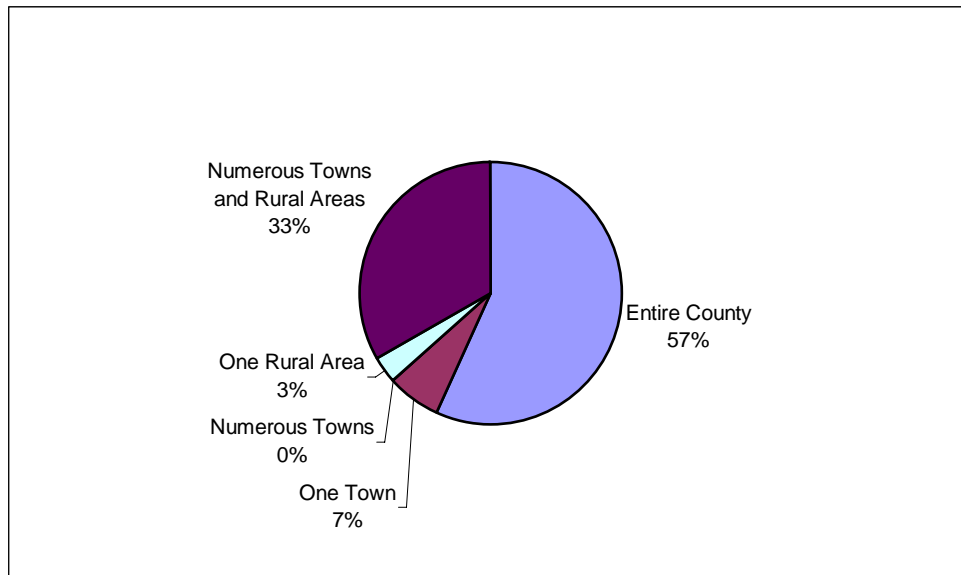
One hundred and fifty surveys were mailed, with 30 returned, resulting in a response rate of 20%. However, it must be noted that not all forum participants would be able to accurately complete the survey (local politicians, local businesses, federal government representatives, private consultants, health planners, and university professors). Approximately 100 of the attendants were individuals representing agencies or organizations that work with elderly individuals in Perth County, Ontario.

4.2 SELECTED RESULTS OF THE SURVEY

Question #2: Describe area served

The intent of this question was to gain a sense of the relative “ruralness” of the transportation service of each agency. Sixty-five percent of the respondents reported that 75-100% of their clientele resided in rural areas. Fifty-seven percent of the respondents represented agencies or organizations that provided services in some way to elderly individuals in an entire county, while 33% of the respondents provided services to elderly individuals in numerous towns and surrounding rural areas. Figure 3.1 provides a detailed breakdown of the response to this question.

Figure 4.1: Areas Served by Responding Agencies and Organizations

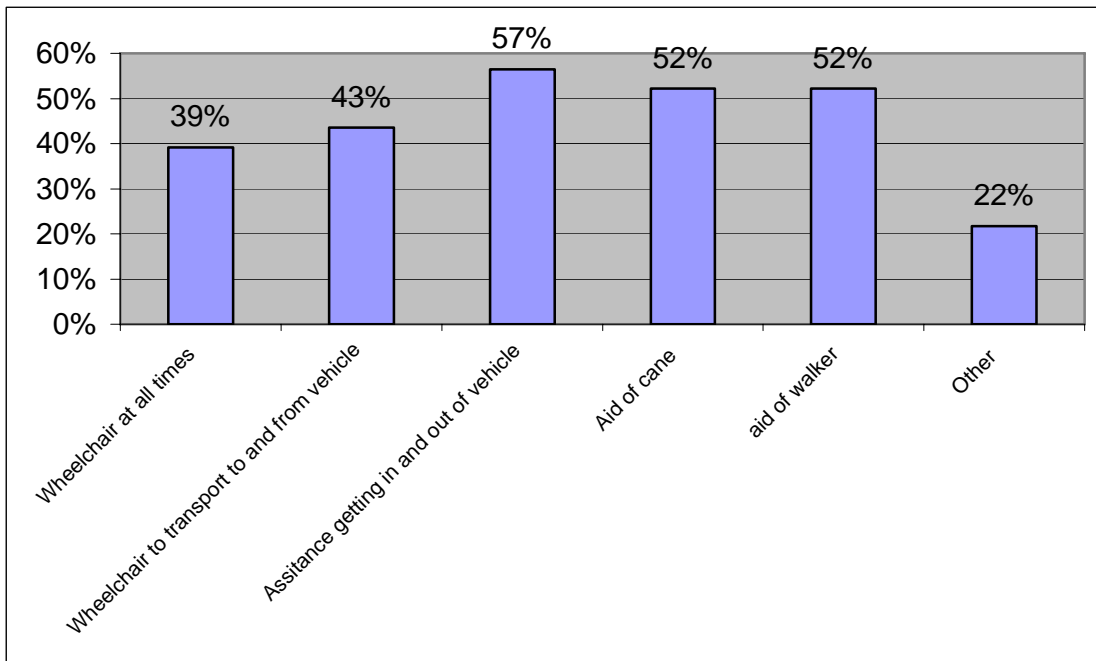


It is evident that service provision for the elderly generally involves covering large rural spaces and many small towns. Service sheds are large, which makes transportation a major consideration. This is true whether providing services to the rural elderly in their homes or bringing them to a central location.

Question #4: What type of assistance with transportation do your clients require?

In this question, respondents were asked to indicate the percentage of their clientele that required various forms of assistance in meeting their transportation needs. Most of the agencies reported that a large part of their clientele required assistance with transportation, as illustrated in Figure 3.2. However, the findings suggest that a significant proportion of clients require relatively low levels of assistance in accessing transportation services.

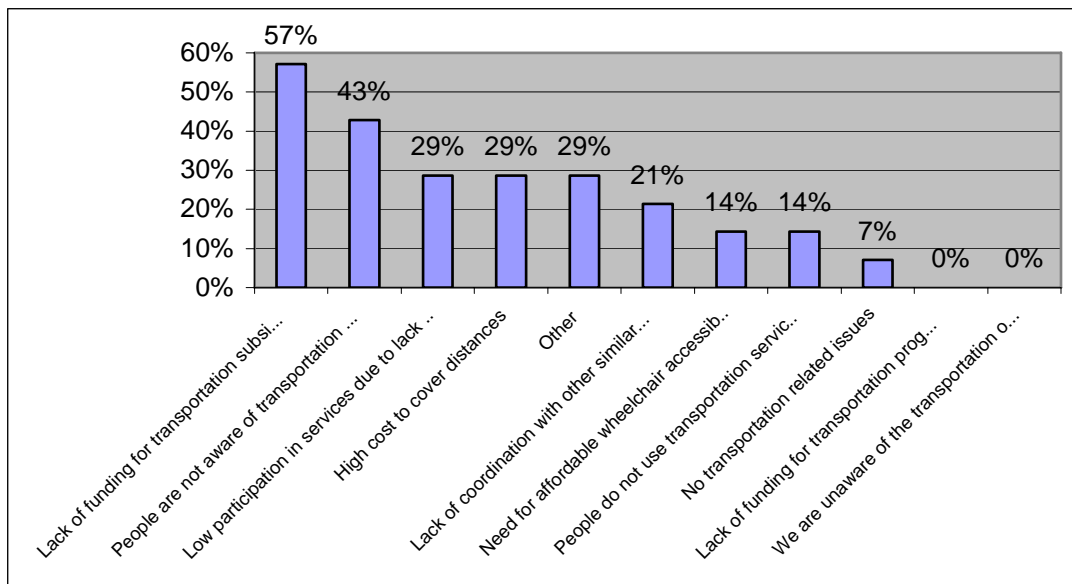
Figure 4.2: Types of Assistance Required by Clients of Transportation Services



Question #5: What do you feel are the key transportation issues that your clients experience?

Respondents were asked to identify the top three pre-determined key transportation issues (based on the literature review) that were faced by the organization or agency that they represented. Figure 3.3 illustrates the distribution of the agency- identified key transportation issues. Lack of funding for transportation was identified as one of the top three transportation issues in 57% of the responses, followed by the lack of awareness of existing transportation options (43%). The third ranking was split between “low participation in services to lack of available transportation,” “high cost to cover distances,” and the “other” category which included a range of agency specific issues.

Figure 4.3: Key Transportation Issues Faced by Agencies and Organizations – Percentage Ranked in Top 3



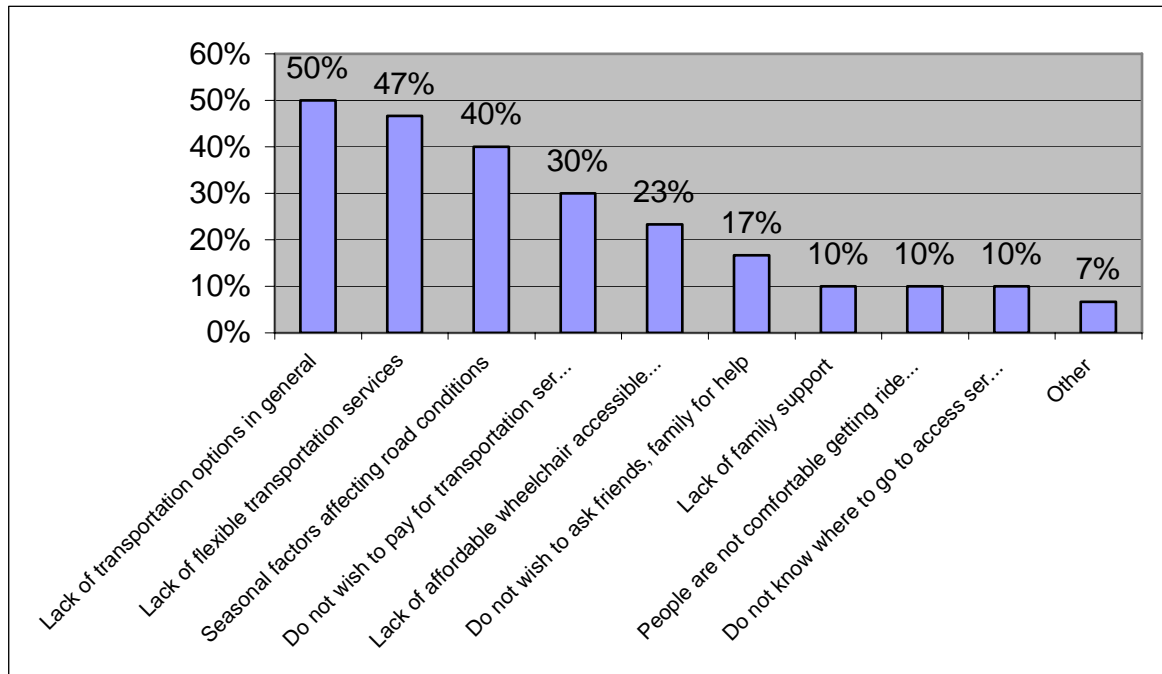
Examples of the additional key issues under “other” include:

- “People are aware of the service, but don’t use it because of pride or feel they are “not ready for the bus yet.”
- “Clients (older rural adults) may prefer to avoid stigma of requiring transport to addiction counselling services, even if volunteers were available.”
- “Transportation for non-emergent care (diagnostic testing, consultations) expected to become more problematic; involves waiting time at each end until ambulance available (ambulance per se may not be necessary, but options limited.)”
- “Sometimes supervision for the person at home prohibits caregivers from getting out to access transportation to services and support groups.”

Question #6: What do you feel are the key transportation issues that your clients experience?

This question was designed to solicit the respondent’s perceptions of the significant transportation issues faced by their clients. Again, respondents were asked to identify the top three issues from a series of pre-determined responses. Figure 3.4 illustrates that 50% of the respondents identified the issue of a lack of transportation options in general as a major issue. A lack of flexible transportation options was rated as being one of the three most important issues by 47% of the respondents, followed by 40% of respondents identifying seasonal factors affecting road conditions as one of the top three key transportation issues experienced by their clients.

Figure 4.4: Key Transportation Issues Faced by Clients - % Ranked in Top 3



Respondents also identified “other” key transportation issues that were felt by the clients of their agencies. Examples of these additional specific key transportation issues include:

- “We try to have it [wheelchair accessible transportation] as affordable as possible, yet costs are still high enough, especially if on a limited budget and the cost of operating the bus.”
- “Affordable and accessible transportation from one area of the county to another (cross-border issues of local transportation providers)”.
- “Needs to be room for attendant – family can’t always take time off for appt. but will pay for attendant.”

4.3 DISCUSSION OF SURVEY RESULTS

This survey was small and opportunistic in that it took advantage of an existing gathering of individuals and organizations concerned with the rural elderly in Southwestern Ontario, including their transportation needs and issues. Nonetheless, the results of the survey provide some insight into the rural elderly transportation situation in Ontario and provide a preliminary basis for comparison with similar issues elsewhere in Canada.

One finding of the survey concerns the coverage area of typical organizations providing transportation services to the rural elderly. Question # 2 (Figure 3.1) indicated that the majority of these organizations provide service on a countywide or larger basis. This reality raises inherent issues about the organization's ability to provide adequate transportation coverage to rural seniors. All of the counties concerned have population densities that vary widely. All have relatively significant urban population concentrations as well as population components that are widely dispersed. In addition, urbanized areas are not evenly distributed across the county jurisdictions. Given the likelihood that efficient service provision results in providers being based in or near urban centres, this raises the question of how widely dispersed rural elderly residents are served by existing transportation services.

Two related findings from the survey are the fact that transportation service providers identified lack of funding as a major concern or issue (Question #5, Figure 3.3), and these same providers identified the lack of available transportation services as one of their client's main concerns (Question #6, Figure 3.4). It should be noted that both of these concerns were identified by the *service providers* – in other words, there was no direct client response to this question. However, the responses to these two questions support each other. It is evident that more transportation services are needed by the rural elderly in the counties covered by the survey, and it is evident that current providers do not have the funding to provide it. Furthermore, given the current fiscal situation for municipal governments in a restructured and realigned Ontario, additional funding will have to come from senior levels of government, from fund-raising, or from providing service on a cost-recovery or for-profit basis.

In turn, the issues of funding and inadequate service provision raise many additional questions, including the following:

1. What level of transportation service to the rural elderly is considered adequate?
2. How does service provision adequacy vary across rural spaces within Ontario and within Canada?
3. If there is significant variation in the level of service required, can this reality be addressed with equity? Should equity be a concern, and if so, for whom?
4. Given a growing senior population, can adequate transportation service in the rural areas of Canada be provided to the elderly at any reasonable level of funding?

5 TRANSPORTATION SYSTEMS FOR THE RURAL ELDERLY: AN AMERICAN PERSPECTIVE

5.1 INTRODUCTION

As has been previously discussed, there are many issues related to transportation in rural areas that specifically relate to the elderly population. General rural transportation issues influence access to health, employment, education and social activities. For aging members of rural society in particular, these transportation issues influence health and one's ability to maintain a sense of independence. This section will review some of the issues that have emerged in the transportation literature, provide a brief overview of American transportation related policy and legislation, and examine transportation systems throughout the United States. New York State will be used to provide an in-depth example of how transportation can be coordinated in rural areas to meet particular demands.

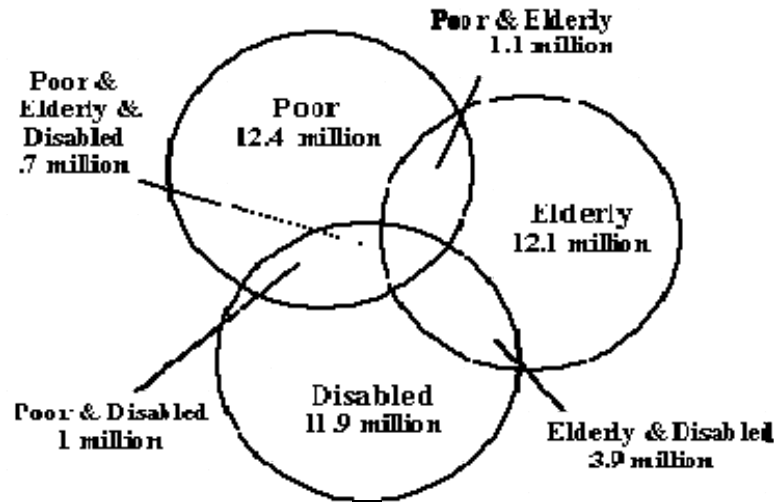
At first glance, it appears that Americans have paid greater attention to the transportation needs of both the rural elderly and rural persons with disabilities. This impression is supported by both evidence of greater research into trends and issues facing these groups, and by evidence of past and present transportation programs, at all levels of government, that attempt to address the needs of these groups. In comparison to the apparent lack of research and development programming in Canada, particularly during the past decade, the existence of *any* American research and programming presents a contrast to anyone examining rural transportation topics. However, on closer inspection, the American situation with respect to both research and programming to address needs is not as positive. One must keep in mind that the United States has a total population that is approximately ten times larger than Canada's and a rural population in the neighbourhood of 75 million people (allowing for differences in the definition of rural)³. Given this reality, it then becomes clear that the United States has significant room to improve with respect to research and action regarding the rural elderly and disabled persons.

A large proportion of rural Americans are in need of improved transportation services, and many of these individuals are seniors. Figure 4.1 represents a recent estimate of the total number of elderly or disabled persons who need transportation assistance in the United States as compiled by the Research and Training Centre on Rural Rehabilitation Services. (<http://ruralinstitute.umn.edu/rtrcrural/Trn/TrnFact.htm>).

This diagram outlines those rural residents who are classified as "transportation dependent" because they have no transportation of their own. Section 5311 of the federal Transportation Equity Act for the 21st Century (TEA-21), covering non-urbanized transportation services, is relevant for an estimated 91 million Americans, one third of whom are transportation dependant (Spas and Seekins, 1999). Therefore, there are many American rural residents who are, elderly and/or disabled, poor, and reliant on some form of transportation system to meet their mobility needs. This number demonstrates the significant need for transportation programs that meet the needs of disadvantaged rural Americans.

³ Using the CTAA figure of 25% of the American population residing in rural areas.

Figure 5.1: Transportation Dependent Rural Americans; Poor, Disabled and Elderly



Spas and Seekins, RTC; Rural, 1998

5.2 POLICY AND LEGISLATION RELATED TO TRANSPORTATION

As in Canada, rural areas in the United States may be disadvantaged in terms of access to funding in support of alternative transportation initiatives. Some progress was made in 1998, when the United States federal government authorized the TEA-21. This act essentially allocated more funds for public transportation in rural areas in general, as well as for people with disabilities and the elderly in particular. Total transportation funding under TEA-21 was increased by approximately 40% over the previous legislation, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (USDA, 1999). However, only 5.5% of the federal funds under TEA-21 have been allocated for rural areas (defined as < 50,000 persons). This suggests that the majority (94%) of the funding has been allocated to urban areas. This is despite the fact that 26% of the population resides in rural locales (RTC, 1999). In addition, despite the fact that rural transit funding increased significantly, the proportion of TEA-21 funding committed to public transportation, transit, and accessibility programs in rural areas is very small. These program areas will receive approximately 0.7% of the total TEA-21 funding allocated between 1998 and 2003 (USDA, 1999). Consequently, rural citizens in the United States face a continuing disadvantage in terms of access to transportation services.

This unequal distribution of funds for rural transportation programs is likely the result of a number of factors. These include the reality that public or publicly subsidized transportation programs in rural areas are costly and inefficient when measured by urban standards. The situation may also stem, in part, from a lack of willingness, creativity, or interest on the part

of public agencies in developing programs that work in rural areas. Surely it is easier to continue “thinking inside the box,” and continuing to allocate funding to urban programs (where there is also very real need) that have at least some hope of high utilization and high efficiency.

5.3 RURAL TRANSPORTATION SYSTEMS FOR THE ELDERLY IN THE UNITED STATES

In spite of the funding and other barriers outlined above, there are American examples of successful transportation programs oriented to the rural elderly and rural disabled persons. This section will provide a brief overview of programs implemented with some success and will identify relevant characteristics that contributed to successful implementation.

Both urban and rural transportation programs are often focused on meeting the needs of elderly people since they are typically a group that are disadvantaged in terms of mobility. One in five Americans will be aged 65 or older by the year 2020 (Freund, 1998) and estimates show that three-quarters of the elderly population reside in rural or suburban areas. This means that many elderly residents have limited access to transit systems – systems that are designed for, and oriented to, servicing high-density areas. This reality is further evidence of the need for a continuing and strengthened focus on transit systems that are oriented to the needs of rural America.

One example of a successful transportation initiative tailored for seniors (although not rural seniors specifically) is discussed by Kathy Freund in her article *ITN Seeks Sustainable Senior Transit Service with Car-like Convenience* (<http://www.ctaa.org/ct/sepoct98/itn>). The main goal of the Independent Transportation Network (ITN) was to build a non-profit transportation system that was sustainable and could be replicated in other areas. The focus of the ITN project was, again, on enabling seniors to maintain their mobility as they age. The underlying premise for this type of transportation system is based on the previously mentioned facts about the aging population of the United States.

The ITN was initiated in 1995 with a small volunteer base of three people. Currently ITN provides transportation services to residents within a 15-mile radius of Portland, Maine. The service is currently accessed by more than 600 seniors aged 65 and older and another 50 residents who are visually impaired. ITN has grown to provide approximately 1,200 rides per month utilizing 75 volunteer drivers with their own vehicles, as well as 5 paid drivers who use four company vehicles.

Another factor influencing the design and implementation of ITN was the reality that the rate of traffic accidents increases among older drivers. This influences overall community health care and safety, since if a larger number of older persons are involved in car accidents (as the population ages), resulting in injuries to themselves or others, health care costs will increase accordingly. Accident rates for persons older than 65 are predicted to increase dramatically by the year 2020, rising above rates that are higher than the current rate of accidents related to alcohol use (Freund, 1998). Again, the evolving older driver situation points to the need

for adequate, safe transportation options for seniors, options which still allow rural elderly residents to continue to live independently. Programs to assist seniors with transportation need to be implemented, especially in rural areas where distance is a major limiting factor for mobility.

Two important questions guided the development of a transportation system that would ensure seniors would buy into the idea:

- How can the service be designed to ensure that it is reasonably priced so that it could be a marketable and attractive option?
- How can the service be designed so that it offers a viable alternative to current mobility patterns that are based almost exclusively on the utilization of the single occupant vehicle? Trends show that this is the most popular mode of transport and, therefore, transportation systems should enable seniors and users to choose their preferred mode as a service if they cannot provide it to themselves.

Another example of a successful rural transportation system is demonstrated in a study undertaken by the Transit Cooperative Research Program (TCRP, 1999), a research initiative that examined the inherent characteristics of effective transportation systems in non-urban areas. This study was focused on transportation systems that utilized existing school bus systems to provide a more broad based public transportation system within rural communities. Research included 13 case studies carried out in an equal number of states. The four key elements of successful programs of this type were as follows:

1. Transportation options do exist and these alternatives must be recognized within the affected communities.
2. Community involvement is essential.
3. Programs benefit from a united community stand on the issues and extensive liaison with government to implement programs with supportive policies and regulations.
4. Time, effort, and commitment are necessary to see projects materialize.

(TCRP, 1999)

The programs discussed in the TCRP study were not exclusive to the elderly persons population, but were designed to provide transportation options to non-urban communities as a whole. The barriers to utilizing school bus systems as a public transportation method include the existing legislative and regulatory environment. Another significant barrier is the negative attitude toward particular public transit modes, which hinder the development or coordination of existing transit resources (TCRP, 1999). Concern for safety, especially the safety of children and young people, is also another consideration in attempting to utilize this type of system as a public transportation resource.

Other rural areas have demonstrated promising strategies that have been identified by the Research and Training Centre on Rural Rehabilitation Services (RTC). These strategies involve coordinated models with shared vehicles, volunteer systems, voucher systems and personal/private enterprise. These strategies can be seen in many programs that have been developed in Canada as well. Coordinated models utilize existing resources and depend on the formation and maintenance of effective agency partnerships. An example of this type of system is a shared van between a community church and an Independent Living Center in New Mexico. As discussed earlier in this report, this type of coordination needs to be encouraged and rewarded because the evidence suggests it is one of the viable alternatives for rural areas.

The RTC also encourages the effective utilization of volunteers in rural transportation programs. To this end, many effective programs have implemented voucher systems for drivers, systems that result in the partial reimbursement of costs for drivers providing transportation assistance to other community members. The Community Transportation Association of America has also advocated the use of volunteers for rural transportation with a similar voucher system. The result of these volunteer/voucher systems is greater access to subsidized transportation services for low-income and other disadvantaged members of the rural community. This type of subsidized low capital system is especially significant for rural residents where distance is a significant mobility barrier and low densities are a constraint on conventional transportation alternatives.

Tennessee and Georgia are experimenting with interest-free loan systems to allow households that do not own a car to purchase a vehicle and maintain it. There has also been an attempt in Tennessee for to pool individual transportation allotments together to lease a vehicle. From an entrepreneurial standpoint, small businesses could be created that deliver transportation-on-demand (Spas and Seekins, 1998). This would create an employment opportunity as well as service a community need. The sense of community in rural areas could be drawn upon as an asset in enabling the success of this type of program.

5.4 TRANSPORTATION SYSTEMS FOR THE RURAL ELDERLY: EXAMPLES FROM NEW YORK STATE

According to the U.S. Census Bureau, there are approximately 3.2 million citizens aged 60 and over in New York State (1999). The state's 44 counties are home to a total population of approximately 18,000,00 people. Thus, seniors represent 18% of the population. (<http://www.aging.state.ny.us/explore/population/estimates/est99tot.htm>). This significant elderly population demonstrates the need for transportation programs that improve mobility for these residents.

Various pieces of state legislation and state government policies support transportation programs in New York. Much of this policy is enacted through agreements between the New York State Department of Transportation (NYSDOT) and county and local governments and organizations, with most programs requiring annual reporting to the state transportation

authority. The State Office for the Aging also plays a role in transportation programming for the elderly.

This section will focus mainly on the programs that deal specifically with the rural and elderly component of the population. Programs of significance to rural areas include the Rural Transit Assistance Program (RTAP) and the Rural Public Transportation Coordination Assistance Program. The development of Intelligent Transportation Systems (ITS) in New York is also having an indirect but growing influence on the improvement of transportation services for the elderly in rural areas.

5.4.1 Programs for Rural Transportation

The Rural Transit Assistance Program (RTAP) provides a source of funding for supporting transportation systems in rural areas, including training and technical assistance. RTAP operates at both the state and federal levels, with the Federal Transit Administration (FTA) developing and disseminating transportation materials pertaining to training and providing technical assistance. The FTA also provides the majority of the funding for the RTAP program.

NYSDOT manages the state programs and works with state advisory committees, rural transportation managers, and the various providers in an effort to adequately meet rural transportation needs (<http://www.dot.state.ny.us/pubtrans/rtap.html>). Thus, the rural component is being dealt with at the federal, state, and local level. In addition to RTAP funds, New York (and all states) has two principal federal TEA-21 sources to draw funding and technical support from:

1. Section 5311 which provides capital and operating assistance to public systems in small urban and rural areas; and,
2. Section 5310, which provides capital funding to private non-profit agencies that transport elderly and/or disabled persons in any area- rural or urban.

Neither section specifically addresses the rural elderly as population sub-group, but they are most relevant to this discussion.

RTAP funds have been utilized to address a variety of rural transportation needs across the state, including the following:

- Funding for driver training (for provision organizations), including scholarships for training sessions;
- Covering the cost of agencies sending staff to conferences and seminars;
- The development of a lending library with access to a wide range of transportation information and statistics;

- The creation of a database of statewide bus fleets;
- The support of “Southern-Tier Bus Network” - a forum for discussion and information exchange between transit providers from across the state;
- Supporting the participation of New York transportation managers in the “Mid-Atlantic Group.” This networking group connects transportation managers from seven different states in developing strategies and in sharing training information. (<http://www.dot.state.ny.us/pubtrans/rtap.html>).

5.4.2 Programs for Senior Transportation

In terms of addressing the specific needs of seniors, the State Office for the Aging (SOFA) is the primary resource agency in New York. Although SOFA does not focus on rural needs particularly, it does oversee federal, state and local initiatives that are aimed at servicing seniors aged 60 and older statewide. SOFA is responsible for coordinating, promoting, and administering these programs and ensuring that seniors’ needs are met. Thus, rural areas may be able to gain financial, administrative, and technical support for rural senior transportation programs through this state agency.

There are 59 local area agencies networked through SOFA that are funded by non-profit organizations, county and municipal governments and tribal governments (McCall, 2000). SOFA expenditures for the year 2000 were \$233 million, 27% of which was federal funds, with 48% derived from local governments and 28% coming from the state. \$11.2 million was utilized specifically for transportation programs for the elderly. Again, this breakdown does not identify funding for rural oriented programs, but it does demonstrate that monetary investments are being made for senior transportation in general.

The federal Older Americans Act (1965) requires area agencies to submit plans to SOFA every four years. These plans determine funding allocations for area agencies, draw on needs assessments and resource inventories, and are actually updated on a yearly basis. Transportation falls into the supportive service category of the plans, which is a required element (McCall, 2000). Rural areas might be at a disadvantage in accessing this funding source, since smaller towns may not have the necessary resources to meet the specific criteria requirements. This possibility is further evidence of the limitations of using criteria-based funding models for rural transportation programs.

The Rural Law Center of New York is another example of a resource that advocates specifically for rural transportation needs. The center has developed a statewide network to promote rural transportation issues and advocate for policies and legislation to be implemented that will enhance transportation programs. The center operates at the federal and state level and enhances cooperative efforts, utilizing a wide resource base to address rural and low-income needs (www.rurallawcenter.org/initiatives.html).

5.5 INTELLIGENT TRANSPORTATION SYSTEMS

Intelligent Transportation Systems, or ITS, describe a wide and expanding range of technologies being applied to all transportation modes. ITS have implications for all transportation users and all modes. The use of these systems is being facilitated by rapid improvements in, and integration between, electronic communication systems, spatial data handling, and complex database management. The technologies include micro level applications (vehicle onboard navigation systems), and macro level applications (regional traffic management systems). Convergence potential between micro and macro systems is considerable, with an example being an onboard system accessing traffic and weather conditions available through a macro system.

Although ITS applications for rural areas likely lag behind those for urban areas, and there is probably no example of a system geared directly to the rural elderly, this sub-group of the population does stand to benefit substantially from the broad implementation of these systems. For example, onboard navigation and monitoring systems may significantly improve safety for older drivers. Likewise, rurally implemented macro systems have some potential to improve the efficiency of rural public (and private) transportation systems, thus making them more attractive to service providers and better utilized by intended service consumers.

To address rural areas of New York State more directly, the NYSDOT has developed a toolkit for Intelligent Transportation Systems (ITS) for rural and small urban areas. The ITS model focuses on eight specific areas for effective transportation systems (these cut across the boundaries of both micro and macro systems) which include:

- Incident detection/notification
- Traffic management
- Safety
- Road/Weather Information Systems
- Detection/Mayday Services
- Transit
- Traveler/Tourist Information
- Planning/Outreach

(NYSDOT, 1998)

ITS systems are expensive to implement, and are created through public-public and public-private partnerships with a wide range of agencies that support and sustain these projects and

programs. These systems might also connect rural and urban resources to maximize efficiency and allow less developed areas to benefit from other, more connected urban centers. All aspects of access and mobility are considered, including specific issues related to elderly persons. Using the ITS model, coordinated transit systems are based on Advanced Public Transit Systems (APTS). Examples of APTS include the following:

- Demand-response systems – typically used in rural areas, and generally utilize numerous vehicles as opposed to a fixed route system.
- Automatic vehicle location – utilizes technological methods to track the location of vehicles electronically and relay messages from a central location.
- Transit Operations software – through the use of technology and computer networks, this system integrates and streamlines information such as computer-aided dispatch, route planning, supervisory control and data managing.
- Geographic Information Systems - this form of technology uses mapping techniques and data to provide information on bus fleets in relation to transit routes.
- Traveler Information – this aspect could involve information that can be used for before and during a trip, with information accessible within the vehicle or obtained at wayside points.

(NYSDOT, 1998)

These APT systems have typically been used in urban settings, but aspects of each component could be adapted to suit rural areas and track the location of transportation options. Such ITS models have been used and implemented in various states, using partnerships and innovative techniques for implementation. These systems could potentially benefit rural seniors as they benefit rural residents in general. Another positive factor is the reality that APTS development is currently able to draw on many different public and private resources for support.

5.6 THE NEED FOR MORE ATTENTION TO RURAL ELDERLY AND TRANSIT IN THE UNITED STATES

Despite the programs that are in place to provide support for senior transportation programs in the rural context, the literature suggests that support is still lacking for this population subgroup. In November 2000, Carl McCall issued a press release regarding his documentation of the need for greater attention to the transportation needs of the elderly in New York State. His document cited four main needs that were unmet in Suffolk and Westchester County agencies (his study area):

- Seven providers in Suffolk County reported maintaining waiting lists for more than 700 seniors who requested transportation;

- Two providers in Westchester County reported maintaining lists for 68 seniors who requested transportation to medical appointments as part of a foster grandparent program;
- Ten providers in Suffolk County reported turning down requests for transportation services 4,078 times (1,055 for medical appointments) in the fiscal year ended March 31, 1999; and,
- A Westchester County provider reported that, on occasion, they could only provide transportation *to* a medical appointment, leaving the senior to find his or her own way home from the appointment.

(McCall, 2000)

Specific recommendations were set out to address the issue of unmet transportation requirements and these often advocated more effective monitoring and evaluation practices to enhance the identification of needs and suggest ways to address them.

5.7 CONCLUSIONS FROM AN EXAMINATION OF RURAL ELDERLY TRANSPORTATION IN THE U.S.

At first glance, the United States appears to be further ahead than Canada with respect to providing for the transportation needs of the rural elderly. In some cases, this brief examination bears this out. However, when the sheer size of both the rural population and the rural elderly population is taken into account, it is evident that America is facing as many challenges as Canada and of a similar nature. Nevertheless, this section provides some lessons and insights into both the challenges and effective ways of meeting them. These include the following:

- In spite of a much larger population base, perhaps more private sector involvement and different government structures, providing adequate funding for rural elderly and disabled transportation systems is a major challenge.
- The structural base of legislation and policies often seems supportive, but in practice the programs are not necessarily effective and may not be reaching those in need.
- Rural seniors and the disabled in the examples above often benefit from existing transportation programs, but their needs still appear to be neglected in terms of specifically targeted programs.
- Multi-layered public involvement and public-private partnerships have both pros and cons with respect to meeting the needs of people “on-the-ground.” When multiple layers of government are involved in funding, administering and monitoring specific programs, both efficiency and effectiveness often suffer. Similarly, public-private funding arrangements often result in levels of funding otherwise unattainable, but it is

often difficult to strike the proper balance between addressing the “bottom-line,” and actually meeting the needs of rural people.

- Intelligent Transportation Systems are advancing rapidly, and these technologies have considerable potential to improve the transportation situation for all rural residents, including rural seniors. However, it will still be some time before there is a widespread and direct rural impact from these systems. In addition, one cannot expect ITS alone to address the transportation challenges of a rural senior population that is growing larger and living longer.

In conclusion, various resources can be utilized to strengthen programs and assist rural seniors in maintaining and improving their mobility. The unique nature of rural areas must also be recognized in order for issues to be addressed and responded to appropriately. Thus, this brief examination of the American situation suggests that there needs to be more cohesion between policies and practice to meet adequately the transportation needs of seniors in general, and seniors in rural areas in particular.

6 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

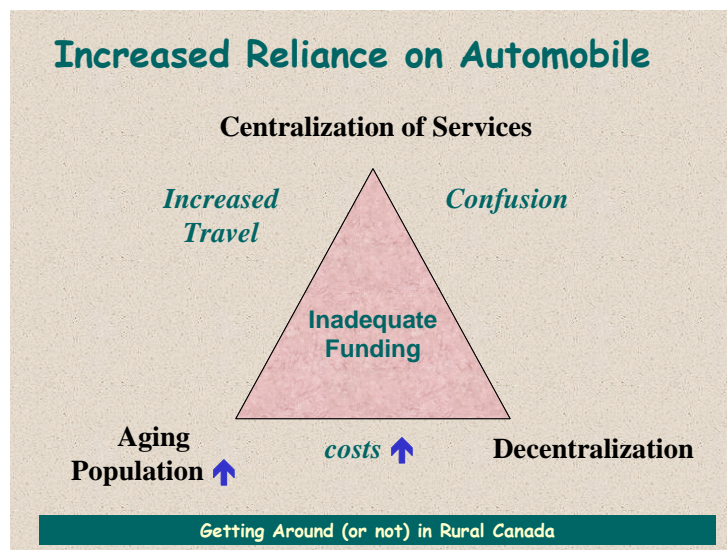
6.1 REPORT SUMMARY

This study has examined contemporary and evolving transportation issues for elderly and disabled persons in rural areas, with reference to the social, demographic, economic, and political factors that are influencing these issues. The literature on both rural elderly residents and rural disabled persons suggests that these groups have experienced transportation challenges that exceed those of other residents. Furthermore, the existence of these relative disadvantages is not new, they having been around as long as the widespread use of the automobile in rural communities. An important finding, however is that the situation with respect to transportation for these components of the rural population continues to evolve. Specifically, the report has examined transportation for elderly and disabled persons with regard to a number of key concepts and identified trends. These include the following:

6.1.1 Mobility

The ability to “get around” and conduct one’s daily activities is more important than ever, given changing social relationships in rural areas, and the centralizing tendency of both private enterprise and public services. Mobility (or at least one’s perception of one’s own mobility) is now recognized widely and explicitly as a determinant of individual health. This reality is important for elderly and disabled residents living in rural settings. While the recognition of the importance of personal mobility has increased, new challenges to mobility have arisen. These challenges include the centralizing location of economic, social, and political activity in rural areas. This situation is exacerbated by the reality that the proportion of elderly and disabled persons in the rural population is increasing. The increasing importance of mobility is shown in the Figure below.

Figure 6.1: The Increased Importance of Mobility



6.1.2 The Dominance of the Automobile

The personal automobile is, by far, the dominant mode of transportation for all individuals in the rural population, including elderly and disabled persons. The very extent of this modal dominance presents a number of difficult challenges for changing the transportation situation of elderly and disabled individuals. These difficulties include:

1. Transportation funding for most of the previous century has been dedicated to maintaining and improving infrastructure that will support an ever-expanding volume of automobile traffic. Consequently, little funding has been available for other transportation modes, and indeed, little interest has been expressed in other modes.
2. As the population ages, the number of individuals who lack access to an automobile, or lack the ability to use one, will continue to grow. However, attempts to address the transportation needs of these rural people are hampered by the entrenched focus on the private automobile.
3. As the ratio of households with cars increases (probably 87% in most rural areas of Canada), the assumption prevails that car ownership means car access for all members of the household. This is a false assumption however, as the elderly, disabled and young people in the household may have to wait much of each working day for the family car which may be away for the purposes of getting one or more family members to work.

6.1.3 Centralization

Both private business activities and, more recently, government services at all levels have been withdrawing from the rural landscape in terms of a physical presence and consolidating in relatively large urban centres. The result for rural residents, including those who are elderly and/or disabled, is that routine tasks and activities can only be accomplished by travelling greater distances, and often only by making multiple trips, as described in the *Arena Society* (Fuller, 1994). Thus the centralization of business activity, government services of all kinds (including healthcare), and even venues for social interaction, is having a significant influence on the transportation patterns of the rural population.

6.2 CONCLUSIONS

From a scan of the literature from different countries and different disciplines, it is difficult if not dangerous to draw hard and fast conclusions about elderly people and the disabled in terms of rural transportation in Canada. Some clear observations are possible however, based on the four pieces of work included here:

1. There is general agreement that **mobility is a determinant of health**. This is especially important for rural areas where ‘normal’ levels of mobility are more difficult to achieve.
2. **Transportation Disadvantaged People:** There has been very little improvement in the experience of those without direct access to automotive transport in the more than 30 years since the issue of transportation disadvantage first came to light.
3. **Socio-Political Trends:** An apparent contradiction of trends contributes to this lack of improvement. Centralization of federal and provincial services is ongoing while a decentralization of municipal powers is also prevalent. Both trends tend to disadvantage those young and older/disabled Canadians without direct access to automotive transportation. People have further to go to get to essential services, and local authorities have few resources to assist with local transportation schemes.
4. **Rural transportation is Canada’s forgotten issue.**

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