ACCESSIBILITY OF THE OLD-OLD TO THE FAMILY PHYSICIAN: SIDNEY, BRITISH COLUMBIA , A CASE STUDY

by

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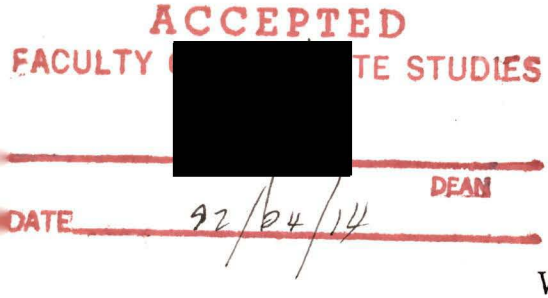

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ABSTRACT

As the elderly population of Canada increases, planning for their special needs gains importance to assure that they retain their quality of life. A major issue of concern to gerontologists is the availability of adequate health care, and specifically accessibility of doctors for the non-institutionalized elderly. In Sidney, British Columbia there is an elderly population which contains a relatively large proportion of independently living old-old, those seventy-five and over. This study focuses on this segment of the population of seniors who have been identified as a group with significantly greater needs and fewer resources than those below seventy-five years of age. The major goal was to determine whether or not this group experienced difficulties in gaining access to general practitioners in Sidney. A literature survey revealed that very little research on such questions of accessibility had been carried out in Canada.

The results of seventy-four personal interviews were presented and analyzed, in addition, participant observation experiences with six members of the sample group were reported on. Field investigations provided additional information. The respondents represented a cross section of the old-old population of Sidney who obtained medical treatment from general practitioners.

The findings indicated, with a few exceptions, that the respondents experienced little difficulty in gaining access to their doctors. Problems occurred in cases where changes in health or simply the aging process further limited mobility, requiring alternative transportation arrangements. In such cases, the knowledge of available transportation options was found to be inadequate and some recommendations were made to improve the dissemination of relevant information.

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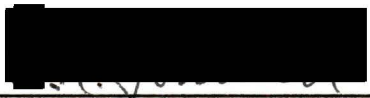

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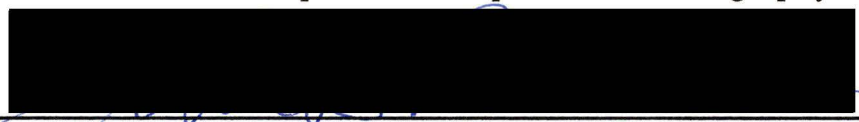

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CHAPTER 1

1.0 INTRODUCTION

Demographic aging is a common feature of developed nations. This process, whereby an entire population grows older, is neither simple nor straightforward. Changes in fertility rates, mortality rates, and immigration policies all contribute to the aging of a population. Societies which are growing older demographically need to plan now for the effects that these changes will have in the short and medium term. The United Nations defines a population as aged if over seven per cent of the nation's population is sixty-five or over. Canada, using this definition, is both an aging and old nation.

Recently the Canadian population has been aging at an accelerating rate. In the decade that ended in 1986 nearly eleven per cent of the population was sixty-five and over.[1] This was an increase of approximately two per cent over the value for 1976. In comparison it took thirty years (1946-1976) for the percentage of Canadians aged sixty-five and over to increase by only 1.6 per cent (Statistics Canada, 1988a). Just over four per cent (or approximately one million persons) of the elderly were aged seventy-five and over. Among the developed countries, Canada has one of the highest growth rates for those eighty and over (Statistics Canada, 1988a).

Present population estimates predict that the population of those sixty-five and over will grow from its current size of approximately three million to more than four million at the turn of the century.[2] In the second decade of the next century, the children of the Baby Boom (1944-1966) will begin to enter the ranks of the senior population and by 2021 there will be six million people in Canada sixty-five and over (Stone and Fletcher, 1986).

The demographic changes involving the elderly are particularly relevant to today's decision makers. One factor is the disproportionately high use this group makes of health care resources. The health care needs of this group must be addressed.

This study focuses on the old-old (seventy-five and older) to determine the factors which affect their opportunity to receive medical care from general practitioners. It centres on the population of the old-old living in the town of Sidney, British Columbia. The Census Metropolitan Area of Victoria, of which Sidney is a part, has long been known as an area with a large retirement population. Observations made in Sidney, therefore, may be indicative of trends and conditions which will occur in the near future in other Canadian places. The old-old were interviewed and observed in order to better understand the circumstances particular to that group. By investigating how the old-old gain access to general practitioners' services, and experience access barriers it is hoped that knowledge can be gained to understand and improve that access by the elderly and assist them in maintaining personal well being and continuing an independent lifestyle.

Chapter one explains why health and access to health care service is particularly important to the elderly. It also gives an overview of the nature of medical accessibility and why the old-old in particular need to be studied. Chapter two elaborates the nature of medical accessibility and the conditions and circumstances which specifically affect the mobility of the aged. It also discusses the nature of the modes of transportation used by that group as well as the physical environment of the old-old. Chapter three contains a discussion of the rationale, objectives, and research methods used. Also included is a commentary on the parallel and community transportation available in the research area. The results of the interview survey are presented in chapter four. Chapter five presents a detailed commentary on the participant observation aspect of the study along with a description of the physical environment of both the general practitioners' office buildings and the immediate surrounding area. Chapter six provides a summary of the findings and presents recommendations.

1.1 NEED FOR PLANNING

This growth in number of elderly is important, in part, because it pertains to a population category whose rate of utilization of human support services,

both private and public, is far in excess of the average figure. As an example, the elderly (sixty-five and over) who were admitted to hospital had an average stay of eighteen days, which was twice as long as that of those who were less than sixty-five (9.7 days) (Chappell, et al., 1986).

Government interest in older people is increasing because of their rising importance both economically and politically (Neugarten, 1974). Politically, this group will be in a position to exert pressure on elected officials to provide what the elderly believe to be reasonable services. Economically, the government will be pressured to allocate its scarce resources efficiently to these services (Mc Daniel, 1986:53). The way in which government is able to provide these resources most effectively is of prime importance to both recipients and providers.

The main issues identified by the elderly and reflected by gerontologists and other researchers concerned with the aged and the aging of society are: effective health care, pension or income security, appropriate housing and improved transportation options (Baker, 1988; Novak, 1988; Chappell et al., 1987; Marshall, 1987; Stone and Fletcher, 1980). The population in general is also somewhat anxious about the effects the aging population will have on society. These concerns about the aging of Canada's population are warranted. Changes in population mix, health care costs and pensions represent some of these anxieties. It is unlikely, however, that these demographic changes will, as some have suggested, result in a crisis situation, particularly if appropriate planning is initiated now (Mc Daniel, 1986). As the president of the National Advisory Council on Aging stated:

> Let me dispel any notion that there is a "Geriatric Crisis" looming. The important point is that <u>all</u> sectors of society must plan and adapt to changes that are already with us, and consider the <u>implications</u> of this dramatic change in population mix----an event unique in the history of mankind (Matthews, 1989).

Those sixty-five and over, those who are nearing the status of the aged and society as a whole need to understand these changes and what factors are important to living successfully as an aged person.

1.2 QUALITY OF LIFE

A reduction in premature deaths caused by inefficient or ineffective health care has been an acknowledged goal of the Canadian health care system (Lalonde, 1974). One cannot, however, simply equate health to life expectancy as some have suggested (McWhinnie and Oullet, 1981:31).

Historically, humans have lived under the threat of illness and premature death. Over the past two centuries social and scientific advancements have greatly reduced the incidence of premature death. Now people can live successfully through the cycles or stages which define a complete life. Because a relatively long life now is fairly well assured in the developed world the question of health has become more closely related to quality of life, an issue which has become much more important.

In evaluating a person's life there is a need to include some measure of quality of life (Wilkins and Adams, 1983:xxiii). This can be inferred by the morale of the individual (Schunk, 1985:312), and the best predictor of the morale of the elderly is their physical health (Kane and Kane, 1981). Another measure of quality of life is the general degree of individual well-being. This factor also is strongly related to health (Larson, 1978). This concern with maintaining and improving the quality of life of the individual is one part of the Canadian value system (Yeates, 1978) and, in terms of the elderly, a goal of gerontological research and planning (Hagen, 1988:18; Warnes, 1981:317; Wiseman, 1978:1; Carp, 1976:30).[3] As quality of life for the elderly is a goal to which society subscribes, providing effective health care must be a major concern in research, planning, and policy.

1.3 HEALTH CONCERNS

Health care is considered a fundamental human right (Lewis et al., 1976; Shannon and Dever, 1974:140). Although an argument against this principle is difficult to find, the universal position of health care to all poses difficult

problems, particularly for the elderly (Cheong, 1981:58; Ritchie, et al., 1981; Robson, 1981:271; Shannon and Dever, 1974:140). Canada has tried to address national health needs by creating a medical plan which attempts to provide every Canadian with access to medical care and hospital treatment (Clarke, 1987:2). This goal is not yet fully achieved.

Many elderly suffer from declines in hearing, strength, endurance, and vision, as well as problems with kinaesthesis and mobility (Carp, 1976; Golant 1976; Tuan, 1974:57-58). All these actual or potential losses and other problems contribute to the concern of the elderly for their health and well being. Health problems become cumulative and worsen with age. The rate of use of medical services is lowest for older children, teenagers, and young adults, higher for those in the earliest years of life, followed by almost exponential increases for older adults and the elderly (Statistics Canada, 1981).

There are strong economic reasons for attempting to provide the needed level of health care to the elderly. The Canadian Medical Association found that an estimated forty per cent of health care expenditures in Canada were attributable to the elderly, who account for eleven per cent of the total population (Canadian Medical Association, 1987). Attention to the health care needs of the elderly in earlier stages of health loss will likely reduce the greater costs of more extensive health care which are likely to occur later.

Despite their disproportionately high consumption of health care services most elderly Canadians are considered relatively healthy individuals for their age (Marshall, 1987:395) but are more vulnerable than younger people to medical difficulties. The elderly, however, often identify health as their major source of concern (British Columbia, 1989a:11; Baker, 1985b). Other research has identified health issues as second in importance to the provision of income security (Report on Care of the Elderly: Phase II, 1986:2).

Utilization of health services is also related to age (McKinlay, 1972). The 1978-79 Canada Health Survey showed that the elderly had more chronic health problems than the younger population. The distinction of use by age group is also evident within the different age groups of the elderly (Health and Welfare Canada and Statistics Canada, 1981). The National Advisory

Council on Aging (1989b:30) found that among seniors "a much higher percentage of older seniors (75-84) cited physical health as a problem than younger seniors" (65-74). LaLonde (1974) pointed out that the elderly were a neglected group of Canadians in terms of health care. He stated that a principal cause of this neglect is that the medical problems of the elderly often cannot be cured. This does not "...satisfy the healing instincts on which the health care system thrives" (41). Since that time attitudes have changed to some extent. As a result of a comprehensive report published by the Canadian Medical Association recommendations were made to help improve healing, to prevent illness, and to promote health for the elderly (1987). Suggestions for improving the condition of the elderly made by the Canadian Medical Association also extended beyond the medical profession to government, community, and individuals. The holistic approach of the recommendations fortunately contradicts some of LaLonde's earlier assumptions about doctors' attitudes existing in certain segments of the health care system.

1.4 INSTITUTIONAL CARE

With the exception of the Netherlands, Canada has the highest rate of institutionalization of the aged (Marshall, 1987:474), with over nine per cent of the elderly receiving some type of institutional care, (*Environmental Competence Amongst Independent Elderly Households*, 1982). While the institutionalization of some high risk elderly people is the safest and most economical form of care, it is no longer considered to be acceptable treatment unless absolutely necessary. The trend toward the deinstitutionalization of the elderly has been established in several developed nations. Some Canadians have identified this as a goal (Ontario Social Development Council, 1982). Chappell et al. (1986) believe that the health care system is slow to respond to this aim, but recently a concerted effort has been made in this direction by the British Columbia government (1989a).

There are three main reasons for promoting the non-institutionalization of the elderly. First, Chappell and Penning suggest that the move toward deinstitutionalization has been motivated primarily by economics (1979:362).

The basis for this assumption is supported by findings both nationally and provincially, where high costs of medical care are attributed to institutional care (Baker, 1988:50; Health and Welfare Canada, 1981; Gross and Schwenger 1981:129). Second, studies have shown that institutionalization of those who do not require it can cause decreased well-being and even death of older residents (Gutman et al., 1986). Third, less dramatic, but also important, is life satisfaction. There is a direct relationship between the independence of the elderly and their well-being and life satisfaction (Connidis, 1985; Chappell and Penning, 1979). For many elderly individuals "the move from independent or semi-independent living to institutional living is a traumatic last resort" (*Environmental Competence Amongst Independent Elderly Households*, 1982:1.0).

1.5 INDEPENDENCE

Several decades ago Mumford (1956) identified the desire of the older citizen to remain part of the community for as long as possible. He argued that "the worst possible attitude toward old age is to regard the aged as a segregated group, who are to be removed at a fixed point in their life course...from their familiar neighbourhoods" (191). This desire to remain part of the community is a reflection of the common desire of most adults to remain independent and maintain autonomous lives and is well documented for those living in Western society (National Advisory Council on Aging, 1989; Baker, 1988; Conidis, 1985; Taylor and Todd, 1982; Swain, 1981; Warnes, 1981; Weeks and Cuellar, 1981; Chappell and Penning, 1979; Golant, 1979; Cantor, 1976; Golant and Caslin, 1975; Brand and Smith, 1974; Carp, 1972b; Clark and Anderson, 1969). As with health and the elderly, there is a strong positive relationship between life satisfaction and personal autonomy or independence (Birdsall, 1979). As Carp (1976:37) noted: "The most dreadful possibility to an old person is that of becoming a burden to others; the most desired personal attribute is independence".

The importance of such a goal is also recognized by the Canadian government (Statistics Canada, 1988a). The position of all elderly Canadians may be reflected in the outcome of the National Advisory Council on Aging's

cross-Canada meetings where the message from the seniors was "...clear and unequivocal":

> The primary interest of seniors is to continue to live autonomously in the community and preferably in their own homes (National Advisory Council on Aging, 1986:i).

The most frequently reported reason for moving into housing which provides assistance with daily living is loss of personal health (see Appendix B for ADL measuring tool). Contrary to widely held belief, economic factors were seldom identified as a reason for the elderly person giving up his or her independence (National Advisory Council on Aging, 1989:2-4; *Environmental Competence Amongst Independent Elderly Households*, 1982:1-2).

1.6 THE NATURE OF THE PROBLEM

Prevention is better than cure. Preventive health care can reduce the probability of chronic disease and disability. With diagnosis and treatment it is often possible to reverse the negative effects of chronic diseases. Furthermore, rehabilitation can help some people not only restore lost functions but also to compensate for un-restorable functions (Cohen, 1989; Atchley, 1985:165).

Recently there have been indications that there is the political will to work towards a medical approach emphasizing "wellness", a pro-active approach to maintaining a healthy life, (British Columbia, 1989a; *Capital Regional District Healthy- 2000*, 1988; Kendall, 1988; *Report on Care of the Elderly Phase II*, 1986; *Victoria Health Action Plan*, n.d. (1988); Ontario Advisory Council on Senior Citizens, 1986; *Toward a Community Support Policy for Canadians*, 1986), instead of the traditional approach of repairing and healing. A key component in either of these approaches is the accessibility of resources.

1.7 ACCESSIBILITY TO MEDICAL CARE

In Canada, the elderly have been identified as a disadvantaged group by the fact that they do not receive adequate care under the national health care plan, (Lalonde, 1974:41) and this need for health care is still a concern today (British Columbia, 1990). In general, distance from medical services, limited transport, income, personal health, the built environment, personal mobility and fear of travel all have been identified as contributing to the degree of difficulty the elderly have in obtaining medical care. Yet, access to health care is of special importance for the elderly because of their greater relative need and their reduced ability to travel, compared with the younger population. In analyzing the nature of the trip to the doctor it must be recognized that there are two components. The first is the spatial or distance, component, typically measured as kilometres or alternatively travel time, and the second is the physical environment, both natural and built, which exists between places.

Distance alone is an insufficient measure because travel time may vary according to changes in traffic patterns hourly, daily, and seasonally. Travel time is a useful measure that is frequently utilized (Bradley et al., 1978; Wachs and Kumagi, 1973). Reliably measuring the significance of the environmental factors with which a traveller must cope is more difficult. Unfortunately there is no easy method of estimating and measuring all the various attributes of the environment, and more problematic is the differing extent to which these attributes affect the individual.

Distance, in particular, has been shown to affect the use of medical services (Joseph and Philips, 1984: Ritchie et al., 1981; Phillips, 1979a:815; Knox, 1978:416; Ambrose, 1977:102; Hart, 1971). Distance is considered important because the elderly have significantly less mobility than the general population (Birdsall, 1979:174; Wiseman, 1978:1; Carp, 1972c; 1971a). Consequently, travel through a particular space is more difficult for them than it is for the general population.

The space between two or more places may be of equal distance, but the experience of travel between these places frequently is different, as a result of the environments through which one passes. These environments may

provide a benign, inhibiting, or facilitating experience, depending on the nature of the environment and the characteristics of the individual who passes through it. The physical components are parts of the whole travel experience and must be addressed in order to understand the nature of any intervening space. Special consideration of the physical environment is important for the elderly. According to Lawton's environmental docility hypothesis, "the greater the degree of competence of the organism, the less proportion of variance in behaviour is due to the environment" (1970). With reference to the elderly, they are more sensitive to the environment because they have experienced a reduction in competence (Lawton, 1970). Thus an understanding of both the natural and built environments is significant in understanding accessibility to resources for the elderly.

1.8 QUESTIONS OF ACCESSIBILITY

The availability and the accessibility[4] of medical services have both been identified as significant problems for the elderly (Knox, 1978:420). While the availability of health care services is undeniably an issue for the elderly (Hodge, 1984:65; Birdsall, 1979:173; Lawton, 1972), accessibility is a more immediate and pressing concern. Havens (1980:219) summarized this as follows: "...as age progresses, the need for resources to be more accessible remains the highest need and the need for resources to be more available remains the lowest." In order to reduce or to delay the onset of the negative health effects of aging there must be an understanding of what are the barriers which inhibit access to medical care by the elderly portion of the population.

1.9 AGE AS A BOUNDARY

Aging is clearly a multidimensional process in humans. There are, therefore, several ways to measure a person's life course. Biological, psychological, functional, social and chronological ages exist for all people (Birren and Renner, 1976:4-5). In studying time related patterns or conditions chronological age has been identified as a poor general index. This results from individual differences in development and at best is a general indicator

of a number of physical dimensions (Neugarten and Hagestad, 1976). Despite these problems, chronological age is an important, if not "indispensable" (Neugarten, 1974:191), index in the societies of the developed world. Record keeping and legal definitions rely on this method of identification. Furthermore, society defines both the rights and responsibilities of its citizens on the basis of chronological age. In the case of the elderly, retirement, pension plans and other considerations are based on chronological age. Because other more sophisticated measures often are impractical methodological constraints dictate the use of chronological age (Golant, 1979:8).

1.9.1 The Old-Old

When age is used as an index acknowledgement must be made of the variability that occurs within age groups. Havens (1980), for example, demonstrated gender differences relating to overall health for the same age group. This is particularly significant with the group defined as "seniors," "elderly," "pensioners," "old," and "aged". Neugarten (1974) was one of the first to identify the elderly as heterogeneous rather than homogeneous. This newer approach reflects more accurately the changing age structure within the older population. These sub-categories were identified as the young-old, those fifty-five to seventy-four, and the old-old, those seventy-five and over (Neugarten, 1974). Currently it is generally accepted that there are several groups which exist within the broader term of reference, "the elderly." Also, it should be noted that there is no general consensus as to when one becomes elderly outside of definitions such as "sixty-five and older", which was created to establish entitlement to a right. The sub-groupings for this chronologically wide ranging group also are varied.[5]

Health care planning for the elderly traditionally began at age sixty-five, however, Neugarten (1975:9) recognized that the young-old were a relatively healthy group. Subsequent research (Philips, 1979:178) suggested that "the elderly" was so broad a classification that it likely disguised intra-group differences. Ehrlich (1981) and others (United Senior Citizens of Ontario, 1985a; Herbert and Peace, 1980:235) were able to show that health differences

within the sixty-five and older group demanded recognition of the young-old and the old-old as distinct groups. In 1986 the Capital Regional Hospital and Health Planning Commission of Victoria, British Columbia in its strategic *Report on Caring of the Elderly: Phase II* noted that "...utilization experience shows no significant difference prior to the age seventy-five, and for this reason seventy-five and older is recognized as the base for planning purposes" (25). This is not to say that those seventy-five and older are a homogeneous group. There is, however, significantly less variability within the old-old than within the larger group referred to as the elderly. For these reasons it is important to concentrate on the old-old rather than the elderly in general in the study of access to the general practitioner.

The old-old need access to health care resources to maintain independent lifestyles. These people use the same medical resources as the younger population, but they use them more often. In addition, as chapter two will explain, the old-old encounter greater environmental difficulties in their various modes of travel than the younger population in gaining access to medical attention.

ENDNOTES

1 Canada's percentage of population aged 65 and over in 1986 was 10.7, slightly below the average of 12.2 for the members of the Organization for Economic and Community Development (OECD, 1988:12).

2 Using 65 as the age at which one is defined as "elderly," "old," "aged," "pensioner," or "senior," is strictly a social convention (Mc Daniel, 1986:10).

3 Quality of life in gerontology is used as a organizational concept around which research is carried out (Schunk, 1985:313). These dimensions include, for example, life satisfaction, morale, and personal well-being (Rose and MacDonald, 1984:47; Larson, 1978).

4 The distinction of availability, the existence of a service, and accessibility, the ability to use a service, is one which is important to recognize and will be elaborated in chapter two.

5 Arriving at definitive terms relating to aging members of society is difficult if not impossible. The gerontological literature refers to "the aged," "pensioners," "seniors," "the elderly," "old" and "older people", but the age references are not standardized. People have been considered seniors at the age of 55 (Baker, 1985b) and elderly from the age of 60 (Hall et al., 1986:48; Golant, 1984a:266; 1984b; 1979:8). In Canada, 65 is the age more frequently used to define the beginning of the "the aging population", as a result of convention supported by the traditional change in life course, retirement for males and the empty nest years for females (Chappell et al., 1986:1).

Most recent research on the elderly has been conducted with more than one age group identified. The division of those considered elderly into groups of the young-old, or younger elderly, 65-74, and the old-old, or older elderly, 75 and over, is most common (Hagestad, 1987:417; Hall et al., 1986; Bryant and El-Attar, 1984; Golant, 1975:18). Lawton's (1977:177) minor alteration uses 65-75 inclusive for the younger group and 76 and over for

the older group. More recently other divisions have been introduced, the "very-old," 85 plus (Hall et al., 1986:48); the "oldest old," (Suzman and Riley, 1985:177); and the "frail-old" (90 plus) (Mc Daniel, 1986:11). The World Health Organization defines the "elderly" as those 60-74 years of age and the "aged" as those 75 and over.

CHAPTER 2

2.0 THE OLD-OLD AND THE URBAN ENVIRONMENT

This chapter provides a comprehensive explanation of how physical accessibility to services is defined. In addition, it also describes age related changes and how these changes affect the mobility of the old-old in the physical environment. Lastly, the environmental constraints which may affect accessibility at the general practitioner's office building are discussed.

2.1 THE INDEPENDENT LIVING OLD-OLD IN THE RESIDENTIAL CONTINUUM

The old-old occupy a wide variety of living arrangements. Following closely Gutman and Mercer (1979, 1), a framework of four groupings of the old-old may be identified along a shelter-care continuum:

(1) the healthy old-old who maintain an independent residence which may be either owned or rented, private sector or subsidized;
(2) the healthy old-old who no longer maintain a separate residence but live in an extended support setting. This would typically be the family, but could also be a co-operative;
(3) the old-old who require a degree of care and supervision such that they can not reside outside of an institution;
(4) the old-old who require treatment in an extended care hospital or hospital like setting.

By international standards a relatively large proportion of the Canadian elderly population receive some type of institutional care. Nevertheless, the majority of elderly people and even of the old-old live independently and it is these old-old who are living outside of institutions who constitute the population of study in this thesis.

2.2 RESIDENTIAL LOCATION OF OLDER PEOPLE

A significant amount of research conducted on the elderly in the early and middle 1970's was concerned with their residential location in metropolitan areas (Golant, 1972; 1975; Clark, 1975; Hiltner and Smith, 1974). The elderly had been stereotyped as living in ghettos in or near central business districts. More recently researchers have found this perception to be an inaccurate one.

Canada's elderly population is predominantly located in urban areas. These areas, however, are by no means limited to the largest centres. Since the 1960's trends indicate that a large proportion of older people have chosen to remain in or move to small towns.[1] This population is made up of both the younger and older elderly. Typically, almost "40 per cent of the retirement population in small towns is 75 years of age or older" (Hodge, 1989:6).

Today the residential location of the elderly is known to be typical of the general population. In medium-sized urban Canadian places, for example, research indicates that the elderly are just as likely to live in the suburban areas of the city as they are to be more centrally located. Only in urban census tracts most distant from the census metropolitan area centres are there indications of particularly low densities of the elderly and old-old (McDougall, 1988).

Although Canada's population has been aging since before Confederation (Foote,1982:9), it has been only recently that the proportion of elderly has been growing "most dramatically in small towns" (Hodge, 1984:1). There is considerable evidence to indicate that increasing proportions of elderly population are occurring in British Columbia towns (Hodge, 1989:7; Gutman et al. 1986; See Table 2.1).

TABLE 2.1

PROPORTION OF BRITISH COLUMBIA ELDERLY LIVING IN DIFFERENT TYPES OF SETTLEMENTS, 1961-1986

Settlement Type	Per cent 65 Years and Over			
	1961	1971	1981	1986
Large Cities(1)	10.0	11.0	12.4	14.1
Small Cities(2)	8.2	8.6	10.8	13.0
Small Towns(3)	9.9	8.1	10.7	11.8
Rural Farm	9.9	8.1	10.7	6.6
Rural Non-Farm	8.0	7.3	7.9	9.7
British Columbia	10.2	9.3	10.9	12.1

Source: Hodge, 1989

Notes: (1) Places with populations exceeding 100,000

(2) Places with populations between 10,000 and 100,000

(3) Places with populations between 1,000 and 10,000

2.3 POTENTIAL AND REVEALED ACCESSIBILITY

In general, there are two approaches to understanding accessibility to health care services. The first focuses on utilization patterns, while the second focuses on potential barriers to utilization. Both of these are valid approaches and, while neither is definitive in evaluating accessibility, together they provide a comprehensive picture.

Access to health care may be considered as effective when those who need care obtain it (Aday and Anderson, 1974). In order to determine accessibility one needs to discover the level of use in relation to need (Donabedian, 1973). To employ revealed accessibility (utilization) as a measure of satisfying need one must identify exactly what is "need". Four definitions of need are commonly used in health care: normative need, felt need, expressed need, and comparative need (Bradshaw, 1972). The first three refer to the needs of the individual and the fourth the needs of groups. Normative need is

determined by the health care professional. Felt need is need as it is perceived by the individual, that is, what the individual desires. When the felt need becomes a demand for service it is an expressed need. Comparative need, like normative need, is also determined by health care professionals. In the case of the aged, if there is a group of individuals who do not have regular check ups, as do other aged people, there is a comparative need for service.

Evaluating to what extent needs are met has typically been accomplished by using two approaches, revealed and potential accessibility. The use of revealed accessibility in terms of felt need has been considered unreliable because lay people may incorrectly evaluate their need for medical care (Joseph and Philips, 1984). To be effective they suggest that the measurement of need requires professional evaluation in terms of normative need for the individual or comparative need for the group. Nevertheless, expressed needs have been used to measure accessibility (Ritchie et al., 1981), and these results can be compared to research on similar individuals and groups to provide some indication of accessibility. Potential accessibility focuses upon the opportunity or potential for a certain type of behaviour rather than upon the actual behaviour (Moseley, 1979). This school of thought relies upon evaluating the social and economic condition of individuals and estimating the quality of the health care system to determine accessibility; the emphasis in this study will focus on physical accessibility.

2.4 FAMILY PHYSICIANS: AVAILABILITY AND ACCESSIBILITY

At a base level two components are required in order to obtain health care services. First there must be a service in existence and this supply of service is defined as availability. Secondly, there must be a way for the individual to gain physical access to that service. Accessibility itself has two main elements, socio-organizational and geographic or physical. Both of these segments must be explored in order to understand the barriers and opportunities which affect access to health care in general, and access by the old-old to their family physician in particular.

2.4.1 Availability

In order to gain access to the services of a general physician there is a prerequisite that the service exist. Availability is primarily defined as the ratio of the number of physicians in relation to the population size (Joseph and Phillips, 1984:79; Aday and Andersen, 1974:209). Two problems exist when using such ratios under more extreme conditions. On a large scale there is the probability that remote areas with low population densities may be under supplied while the urban places may be over-supplied. On a smaller scale, ratios may be hard pressed to reflect the reality of availability. When availability is based on numbers of practitioners located near the homes of people this ratio fails to acknowledge an important detail for a large portion of the population. A doctor's office hours and the normal working hours of patients often make it more practical for patients to use doctors who are located nearer places of employment rather than near the patients' homes. The resulting "leakages" of patients across artificial boundaries affect the validity of these ratios.

Notwithstanding the problems of using ratios for availability under extreme conditions, research on physician availability has shown the relation of population to doctors to be a useful means of expressing availability (Joseph and Phillips, 1984). There is no consensus on the optimum number of physicians for a population size (Adams, 1989:68), nor the absolute value in such ratios, yet they are often used as a measure of availability (Joseph and Phillips, 1984). With reference to North America, approximately one physician per 770 persons has been suggested as able to provide good primary care (Shannon and Dever, 1974:37). The number of physicians and persons per physician by province and territory in Canada is shown in Table 2.2. If a good level of availability is determined by the ratio of 1:770 (number of persons to physicians) then Canadians, in general, are well served.

Another consideration for availability is the variation in physicians' skills. (Mechanic, 1976). The consequence of this variation in Canada, however, is minimized by the use of licensing criteria. These can be considered sufficient to provide an operational degree of standardization within the profession. Practice patterns and personalities of physicians also vary, as do the needs of

various patients. For the purposes of comparison these differences are not considered significant. Physicians, therefore, are considered to be equal in ability and productivity. Correspondingly, the overall needs and demands of elderly patients are considered sufficiently similar for comparative purposes.

TABLE 2.2
PHYSICIANS AND POPULATION PER PHYSICIAN BY PROVINCE FOR 1987

Province	Number of Physicians	Persons per Physician
Newfoundland	1070	530
Prince Edward Island	184	696
Nova Scotia	1912	461
New Brunswick	968	736
Quebec	15,279	433
Ontario	20,847	450
Manitoba	2,226	486
Saskatchewan	1,700	595
Alberta	4,591	520
British Columbia	6,420	461
Yukon	32	775
Northwest Territories	46	1,120
CANADA	55,275	467

Source:Canada Year Book, 1990:.

2.4.2 Accessibility

Accessibility is an issue because of the barriers which prevent or restrict it. Health care in Canada, like many public services, is not equally available to all individuals. One of the primary reasons for this is that users, in aggregate, are

continuously and unevenly dispersed in space, while health services are dispensed from discrete facilities with fixed locations (Dear, 1974). There are two main groups of factors contributing to health care resources which have been recognized in the geographic literature (Ambrose, 1977). Locational accessibility represents the space and the nature of that space which exists between the user and the location of the service and effective accessibility represents the non-spatial factors inhibiting access (Mechanic, 1976:11; Aday and Andersen, 1974:219). Joseph and Phillips (1984), have considered also hours of operation and the time-space budgets of potential users as factors.

2.4.3 Effective Accessibility

Economics as a barrier is dependent largely on the nature of the existing health care system (Joseph and Phillips, 1984). Since the Canadian health care system is essentially state funded "...lack of income does not prevent people from seeing a doctor" (National Advisory Council on Aging, 1991;69). Bennett and Kransy (1981) suggest that there are no financial barriers to health-care in Canada and medical necessity is the only basis on which access rests. Inequities based on economic class still exist (see Beck, 1973). However, because of "Medicare," which provides low cost medical care, poverty has become less of a barrier to medical care in recent years (Baker, 1988:122). An investigation of income and access to medical care in Ontario revealed that variation in medical-care utilization and benefits could not be explained by income groups (Manga, 1981)[2].

Social barriers to medical care in Canada exist but appear to be in decline. Since the introduction of Medicare there has been an increase in the number of lower income households in Quebec which have utilized health care resources (Enterline et al. 1973). Research in Saskatchewan indicates that while accessibility has increased for lower socio-economic groups there still exists a disparity within the range of socio-economic groups (Beck, 1973).

The possibility of obtaining care seven days a week, twenty- four hours a day also needs consideration. Potential availability and accessibility of a physician during the daytime would be at its maximum, since most

physicians operate from their offices during typical business hours. Evenings and weekends, therefore, afford less availability. During these times there are two standard alternatives, house calls from one's own general practitioner or by a general practitioner who specializes in house calls and trips to the emergency department of a hospital.

In general, house calls deserve particular attention because of an assumption that physicians in Canada do not make house calls any more. This belief may be based on the influences of American television, but it is inaccurate in the Canadian context (Trent, 1989:717). Reasons which account for house calls being difficult to make revolve around the spatial distribution of patients' residences relative to the physician's office and the related transit problems of traffic and parking. In several larger Canadian cities where general practitioners cannot set up office practices, for various reasons, alternate practices which consist solely of making house calls are becoming more common (Scotton, 1989:A1; Trent, 1989). In smaller urban places traffic, parking and other similar transportation related problems are less inhibitory to house calls.

For those who do not have family physicians, or cannot gain access to their family physicians or receive house calls, a third option is the use of the hospital for primary care. In Canada (National Advisory Council on Aging, 1989a:28), the United States (Bohland and Frech, 1982) and the United Kingdom (Philips, 1981) hospitals have been a source of entry for individuals seeking primary care.

To understand the time-space budget of the elderly it is necessary to consider the maximum amount of time the people can spend comfortably going to, coming from and waiting for the doctor. The effect of these events will be dependent upon, primarily, the means of transportation used, the general health of the individual and the nature of the medical office environment.

2.4.4 Locational Accessibility

The proximity of the general physician to the (potential) patient's residential location is referred to as locational accessibility. In all but a few cases the physician's practice is fixed in space for his or her normal working hours. At best, house calls account for a minimal percentage of patient contacts. The locational considerations of family physicians have been well documented.[3] Briefly, locations are chosen according to the relative advantages of sites which are in attractive areas, accessible to the public, have recreational opportunities and adequate hospital facilities. There is also a desire by physicians to cluster together.

For the patient, not having to leave his or her residence for a doctor's visit might be considered ideal. The energy and financial costs of visits would be eliminated. This is impractical for physicians if they wish to be available to as large a clientele as possible. On site visiting by general practitioners is typically reserved for institutionalized individuals, for example, those in hospitals. For older people wishing to maintain their own homes for as long as possible house calls generally are unavailable unless, perhaps, temporarily when the patients are seriously ill.

2.5 AGE RELATED CHANGES AFFECTING MOBILITY

In order to understand why the old-old experience problems in their mobility it is necessary to understand some of the changes which occur as a result of aging. Individuals will not necessarily experience all these changes at the same age, at the same rate, or to the same extent. These changes impact different people in different ways and for some people the impact may be greatly delayed. While the impact of any specific change may be slight the cumulative effect of all the potential changes should be considered in evaluating the net effects of aging on mobility.

2.5.1 Vision Impairment

The eyes are considered the most important of sensory organs. As people age often they become more dependent on their vision to correct for other sensory losses (kinaesthetic and auditory). Unfortunately, the aging process negatively affects the vision of a large number of individuals in several ways.

Any serious visual difficulty regardless of cause is referred to as a vision impairment. Frequent causes of visual deterioration associated with age include cataracts, glaucoma, macular degeneration[4], and diabetic retinopathy.[5] Most seniors who are seriously visually-impaired suffer what is termed "low vision," defined as "any visual impairment for which ordinary glasses or contact lenses cannot bring a person's vision up to a normal sharpness" (National Advisory Council on Aging, 1989b:32).

Vision deteriorates in several ways. Because the pupil becomes smaller with age less light is let into the retina. Furthermore, the development of cataracts results in increased glare as the lens becomes more opaque. As the muscle tone and elasticity of the eye diminish with age so does the ability to focus quickly and accurately. In addition, the field of vision narrows, sensitivity to glare increases, and the ability to judge distances and detect movement decreases. For those who have cataracts or glaucoma the situation is further exacerbated (MacDonald, 1989; National Advisory Council on Aging, 1989b).

The data are clear on how extensive vision impairment is for the aged. Twelve per cent of those seventy-five and over said they had a vision impairment (Health and Welfare Canada, 1981). Twenty-one per cent of disabled people over sixty-five have some form of visual impairment (Statistics Canada, 1986b) and more than sixty per cent of visually impaired Canadians are over sixty-five (National Advisory Council on Aging, 1989b).

2.5.2 Hearing

With age hearing becomes less sensitive; this is especially true for high frequencies, but it also occurs for low frequencies. In terms of mobility there are two concerns that accompany this reduction in perception. First, sound is an important component in our internal alarm system and any reduction in hearing may result in slower reaction times. Second, hearing also plays a part in maintaining balance. This is an important factor for pedestrians.

2.5.3 Kinaesthesis

The individual's perception of change in body position and orientation in space becomes less accurate with age and body sway also increases. The combination of these two factors results in a quicker loss of balance. The cumulative effects of kinaesthetic changes and reduced visual acuity are likely to contribute to an increasing tendency in the elderly to suffer falls.

2.5.4 Flexibility and Strength

Rheumatism or arthritis cause problems in daily living for approximately one-half of Canadians sixty-five or over. (Lee et al., 1985). The impact of problems related to the above can be seen in two main areas, flexibility and strength. Flexibility, the ability to move a joint within its normal range of motion, is clearly an important element in general mobility. Normal wear of the joints, decreased activity levels, and pathologies, arthritis for example, can individually or collectively result in a reduction of mobility. Muscular strength also decreases with age. Estimates of this decrease vary from eighteen to forty per cent (National Advisory Council on Aging, 1989b). Loss of muscular force and muscle tone combined with the possibility of atrophy can lead to both loss of balance and slower reaction times.

2.5.5 Cognitive Changes

The ability to process information received by the senses can be reduced as the older person's brain loses the capacity to filter out background "noise". This noise includes both auditory noise, such as traffic sounds or a car radio playing, and visual "noise" such as a large number of traffic signs and signals, as well as general activity in the surrounding area. This often results in slower reaction time. Short-term memory also is affected by age. Problems can occur for the older driver when he has to react to new traffic signs or signals, or route changes. Because it may be difficult to process and retrieve cues to a revised route reacting quickly enough to a hazardous situation may not be possible.

It is unlikely that anyone would be impacted to the maximum extent by all of the above conditions and still be living an independent life in the community. What must be acknowledged is the cumulative effect of the various conditions at various levels as they impact to different degrees upon individuals. The result often is a significant reduction in the level of mobility of the old-old.

2.6 ENVIRONMENT OF THE OLD-OLD

It has been pointed out that "the elderly are particularly vulnerable to the constraints of the environment" (Herbert and Peace, 1980:253).[6] Older people have more limited physical resources than the younger population. The old-old, therefore, are taxed to a greater extent than are younger people in their interactions with the environment. Because of this condition it is important that this component of their everyday life is addressed as it relates to mobility and accessing the family physician.

Lawton (1970) proposed a view of social ecology in which the ecosystem consisted of five components, the first two of which were necessarily present and the last three usually:

(1) The individual

(2) The physical environment
(3) The personal environment - family, friends, and small groups.
(4) The supra-personal environment - groups of spatially clustered individuals.
(5) The social environment - social structures such as norms and institutions.

(Lawton, 1970)

All five elements of the environment are interrelated and affect the individual. The physical environment, which includes natural features and human made structures, is of particular interest to geographers. It is, in part, these items, in addition to the type of space and distances between people and objects, which either facilitate or limit mobility. Because access to general practitioners almost always is obtained by leaving the home it is important to understand what are the environmental obstacles and barriers beyond the doors of the homes.[7]

The efficient delivery of medical service typically requires patients to visit doctors at their place of practice. Unless one is living at a care facility which has resident physicians it is clear that health care services have to be located at some distance from the user. Depending on the distance to be overcome and the resources and abilities of the individual, there will be varying degrees of ease or difficulty experienced in obtaining these services. International research indicates that there are certain shared experiences related to overcoming distance and physical barriers which either reduce or prohibit access to medical care for the elderly.

2.7 ACCESSIBILITY AND THE ENVIRONMENT

Two environmental components have an impact on the aged's abilities to travel between their homes and their physician's offices. The natural environment, on the one hand, presents conditions which are almost always beyond human control, but their effects may be ameliorated by adaptation or compensation (MacDonald, 1989; National Advisory Council on Aging,

1989c). The built environment, on the other hand, is invariably within human control, but it can seldom, if ever, be designed to satisfy all user groups. Typically, aspects which fulfil the needs of one group will have negative or undesirable consequences for another.

The natural environment may present difficulties in terms of weather, lighting and topography (Guttman and Mercer, 1979; Golant, 1976; Howell, 1976). Compensation for weather and lighting often can be made by adjusting schedules to daylight hours and planning activities for moderate days. Physical characteristics generic to a locality, such as steep terrain, are significant for those who have to walk as a means of travel, but less so for those who travel by motor vehicles.

In the built environment relatively permanent land use features, such as a busy highway or railroad tracks, present barriers which are difficult to modify or adapt to (Lynch, 1960:47 and 100). Less severe barriers, such as a poor separation between pedestrian and vehicle traffic flow, are more easily corrected. These barriers often are a result of the specific needs for which the built environment was created, that is, fitting the needs of an average user. For the elderly user, who is at a physical disadvantage compared to the general population, the negative impacts of the built environment often pose serious problems. With reference to transportation the following quotation indicates how design has failed to address the needs of the elderly.

> Today's road traffic systems are abundant with examples of discrimination by default against elderly road users. The frequent lack of convenient crossing facilities on city streets, the poor legibility of road signs, difficult entries/exits on public buses and the very high speed level on motorways in most countries are just a few classical examples which show that roads are equipped and controlled to match the needs and abilities of the young and able, but with little or no regard for the large road user minority of citizens whose maximum functional abilities have suffered the natural decline of age (Organization for Economic and Community Development, 1985:16).

Certain built features are barriers to some mobility impaired or restricted individuals; yet, at the same time, "each type of mobility impairment defines its own barriers, and the strategies employed to remove and circumvent barriers for one group may be in conflict with the environmental demands of another" (Foote, 1986). When a curb cut is installed to provide ease of change in height from sidewalk to road it also makes the differentiation of sidewalk and road more difficult for the visually impaired person to discern. In searching for solutions for one group it is critical to avoid creating hazards for others.

Previously it has been identified that, in general, the elderly experience reduced mobility and therefore experience difficulty in accessing health care services. More specifically, it must be asked if this reduced mobility affects the old-old's opportunity to get to the family physician. As a result of a national survey in Canada designed to examine the service needs of seniors it was discovered that transportation to medical appointments was ranked as one of the highest needs (Hamilton, 1983). Clearly there was a difficulty expressed by the elderly in traversing the space between home and doctor. Another question needs to be addressed: what conditions exist which create these problems and resulting expressed needs for transportation?

2.8 TRANSPORTATION

A recent National Advisory Council on Aging publication stated, "for many older Canadians, transportation and mobility are keys to community living" (MacDonald, 1989;iv). At present most health care services are fixed in space and therefore require the user to be sufficiently mobile to make the return trip to the point of delivery of that service if it is to be utilized. This means that for health care to be accessible the old-old need to be mobile. This is a concern since the elderly have been identified as a group for whom mobility and transportation are explicitly identified problems (National Advisory Council on Aging, 1989b; National Advisory Council on Aging, *Expression*, 1985; Warnes, 1981; Carp, 1980, 1972b; Birdsall, 1979; Garrett and Hill, 1972).

Each mode of travel has specific advantages and disadvantages for any individual. The disadvantages are not exclusive to the old-old, but some are recognized as problems for the aged. The four common modes of travel are walking, private automobiles, public transportation, and taxis. Other methods of transportation, such as bicycles, adult tricycles and three wheeled powered scooters for the disabled are far less common than the above but do exist and are in increasing use by the old-old. The following details the experiences of the aged with these various modes of travel.

2.8.1 Walking

Walking is an activity fraught with risk for the old-old (MacDonald, 1989; Golant, 1976; Howell, 1976; Carp, 1971a). While the hazards identified below can affect everyone, it is the old-old's limited ability to respond to these conditions which makes their situation critical. Potential hazards to elderly walkers include: sidewalks, which if they exist at all, may be poorly constructed or in poor repair; children playing and objects left behind on the sidewalk. Where there is no designated pedestrian walkway the poor separation between the pedestrian and vehicle flow is of danger to the elderly because of typical problems with balance, vision, hearing, and ability to react quickly to potentially dangerous situations. Street crossings also are dangerous for the elderly pedestrian, since high curbs may make it difficult to step up or down safely. The speed of traffic and absence of traffic signals or crosswalks, signed or otherwise, also pose problems. Where signals exist they may be confusing or change too quickly for the older pedestrian to feel comfortable or safely cross the road. Reduced levels of strength and endurance also may limit severely the distance that can be travelled on foot.

Walking is as important for the well being of the old-old as it is for the population in general, but the reasons why it is important and of concern are not so apparent. The single most important factor is that virtually all modes of travel require walking as a component at the start and end of every trip.

2.8.2 Automobiles

In North America, the private automobile is the primary method of transportation. This mode of transportation is important because an owner has the maximum potential for short and middle distance mobility. In relationship to age and ownership, Canadian, American, and British research indicates that fewer households headed by persons sixty-five and over own cars than those headed by younger persons (Ritchie et al., 1981; Carp, 1972b).

For the senior having a driver's licence has a positive influence on both the perceived and actual well being of the individual (MacDonald, 1989). Automobile ownership patterns by seniors may be partly explained by the fact that those who are the elderly now grew up in an era when automobiles were not so numerous as they are today. This factor would apply more to those who make up the old-old of today. The trend for all age groups in the last thirty years is an increase in the number of kilometres driven and the percentage of people who are licenced to drive (Organization for Economic Co-operation and Development, 1985). In the mid-eighties one in two Canadian seniors were licenced to drive compared with one in three in the mid-sixties (National Advisory Council on Aging, *Expression*, 1985).

Driving safety is an important issue. There are indications that the elderly are more likely to be involved in accidents and to suffer serious or fatal injuries (MacDonald, 1989) than the general population. This is critical for those seventy-five and over who have higher death rates from collisions than most of the younger groups (MacDonald, 1989).

Driving experiences for the old-old are influenced by three factors. The second can be considered a result of the first but is evaluated separately here. The first factor is result of the aging process as it impacts on the physical and psychological changes in the individual. Second, the age of the driver when he or she learned the skill is significant. Finally, the nature of the driving environment which is designed for a population with fewer limitations has an impact on elder driver safety.

A decline in physical abilities is a significant factor for the older driver. Reduction in vision has been identified as part of the process of aging which also has been correlated with poor driving performance (MacDonald, 1989). With age there is reduced ability to perceive contrasts, and red becomes more difficult to recognize (MacDonald, 1989). Since a correct response to signal lights is dependent on colour recognition the signal may be misinterpreted. Driving at night also has been identified as a risk for the elderly driver (MacDonald, 1989; OECD, 1985:76). Reduced ability to adjust to headlight glare and poor illumination contribute to the potential for night-time road accidents. Arthritis may make it difficult for drivers to check over their shoulders, thus further reducing their fields of vision and the ability to make well informed decisions, such as the decision to change lanes. With respect to hearing there is no evidence that a reduction in this capacity reduces safe driving performance. But, since sound is used as a warning, reduced hearing can result in slower reaction times to emergency situations (MacDonald, 1989).

Cognitive changes also make it difficult for the elderly driver to process large amounts of information and to filter out irrelevant facts in order to make wise decisions fast enough to assure driving safely (MacDonald, 1989). The complexity of the information to be analyzed by the older driver also has been identified as a problem for safe driving (Organization for Economic and Community Development, 1985).

Limited driver training available to those who learned to drive before 1950 means a potentially less sophisticated driving group. The skills learned were developed with less traffic, simple roadways and less responsive cars. This difference between the more recent driver and the older one has been identified as a contributing factor to differences in levels of safe driving (MacDonald, 1989).

Another influence on the elderly's driving experience is the motoring environment. Poor placement and small lettering of road signs present difficulties to the older person. Sign or signal colours also are of concern. Signs placed closely together and signs which are not standardized require more processing time. This may cause drivers to slow down unexpectedly or

react later than they should, which can result in accidents. Reduced vision and hearing, as well as increased reaction times, mean that there may be insufficient opportunity to respond appropriately.

Driving is difficult for the elder motorist. Most traffic accidents happen at intersections (MacDonald, 1989; Organization for Economic and Community Development, 1985). For the older driver vision may be blocked by buildings or other obstructions and crosswalks may be poorly marked or difficult to read. Once a decision has been made to act there may be too little time to adjust or correct an ill-advised movement. The higher speed of today's traffic exacerbates problems arising from these unsatisfactory conditions. In recognition of speed as a contributing factor the Organization for Economic and Community Development (1985) suggested that any effort made to reduce speeds at an approach to an intersection would have positive road safety results.

Typically, for all age groups there are relatively fewer women than men who are licenced drivers. In British Columbia, for example, in the case of women over the age of sixty-five, the proportion ranges from sixty-five per cent in the sixty-six to seventy-five age group to about twenty per cent of those over eighty-six. The rate for women over sixty-five is about fifty per cent while for males it approaches one hundred per cent (Province of B.C. Ministry of The Solicitor General and Statistics Canada unpublished and requested data). While these differences are much lower in groups of younger people today, the historic patterns of fewer women drivers in the population of the old-old continue to exist. When women who are now seventy-five and older were young they did not have the same economic opportunity, social independence and general public support to learn to drive and own cars as did their male cohorts, or as young women do today.

In order to understand one of the subtleties of the elderly's mobility the significance of the difference between the proportion of male and female elderly drivers needs to be examined. Although women outnumber men in the older age group the percentage of women aged seventy-five and older who are married has been increasing since 1966 (Statistics Canada, 1988a). This results in the opportunity for many non-driving women to be in

relationships with male drivers. Hence, increasing numbers of non-driving women in relationships can depend on their partners as drivers. More important, however, is the advantage which accrues to elderly males who are in relationships with women who drive. Although there are fewer women driving than men the gap has been closing rapidly and larger numbers of elderly women are drivers. This has two potential positive opportunities for males. First, males traditionally have married women who are younger than themselves and, second, women remain healthier than men as they age (Havens, 1980). Therefore, the old-old male with failing health who has no license to drive, but who has a younger, healthier female partner who does have a license has the same opportunity of mobility as if he could drive himself. In terms of general mobility, when a couple owns a car it is only necessary that one of them drive for both to enjoy the mobility an automobile provides.

Although elders experience more problems and are less able to drive relative to the younger population they continue to use their vehicles for as long as possible. As more of this population ages there will be increased numbers of old-old drivers, both male and female, and the net result with more women driving will be increased mobility for men.

2.8.3 Public Transportation

Because the public transportation system is designed to accommodate a wide range of users with different objectives the experience of public transit for the elderly often is more demanding and less convenient than for younger users. In order to obtain an optimum balance of convenience and cost, conventional mass transportation services run relatively fixed routes at fixed intervals. Since the majority of transit users are workers who are going to the central business district, the elderly users who want to go to peripheral areas may have to travel from home to the central location and transfer from there to get to their destinations. This means that if they travel at rush hours likely they will experience physical and emotional stresses resulting from the increased level of crowding. If the trip is taken during off peak hours the wait can be longer at each point of boarding. Exposure to the elements and fatigue

because of a lack of shelters and shortages of benches can make public transit unnecessarily tiring, painful, and unhealthy.

Taken for granted by the younger user, public transit use presents varying degrees of difficulty to the old-old. Since the use of public transportation requires interaction with the walking environment between the home and bus stop, and between the place of disembarkation and the destination, many of the previously identified problems concerning walking also are a part of public transportation experience. The older rider must be able to: travel to the bus stop and arrive at the right time; recognize the correct bus for his or her trip destination; board the bus; pay the fare; move safely within the bus; and either find a seat or stand. He or she must be able to recognize the stop, instruct the driver to stop, disembark and walk to the final destination. Difficulties with vision may make it hard for the older passenger to identify the correct bus and determine the required stop. Problems with flexibility may make it difficult to board and disembark the bus quickly enough to be acceptable and with no assistance. Problems with balance may make it difficult for the elderly to stand safely as the bus manoeuvres through traffic; stopping, starting, slowing down, speeding up and turning. There are also potential old-old users who cannot make use of the transit service because of difficulty in getting transit information. In addition, Golant (1972) stated that schedules often are difficult to understand and those with hearing impairments cannot use telephone information available to younger users.

2.8.4 Taxi

Taxis have long been identified as having limited use by the elderly in Canada, United States and Great Britain (Woodsworth, 1989, Canadian Medical Association, 1987; Schmitt, 1979:128; Golant, 1976; Carp, 1972a:52; 1972c:63). Golant (1972:196) found that the relative importance of the taxi was so small in the daily trip activity of the Toronto elderly that it was insignificant. Carp (1971b) found that four times as many elderly walked than took taxis when going to the doctor. In Ontario only community agencies provided less frequent transportation to medical services than did taxis (United Senior Citizens of Ontario, 1985b). The Canadian Medical

Association (1987) found that the taxi was too expensive to use more than occasionally as an alternative form of transportation. In Great Britain where there is a subsidy for some disabled elderly people Ritchie et al (1981) found that taxis were, with the exception of bicycles and motorcycles, the least frequently used means of transportation for those sixty-five and older.

The comment on the high cost of taxis needs some discussion. Woodsworth (1989) identified poverty as the potential reason for their lack of use. While this is the case for some individuals it may be the perception of expense which is the problem. When costs of automobile ownership and usage are compared to taxi service for trips by the elderly taxis are significantly less expensive than automobiles.[8] For those who experienced the Depression there may be a perception that taxi use is a luxury and this thought precludes or severely inhibits their use. This perception may exist also for individuals who formerly owned and operated vehicles, but who now have lost the ability to drive.

2.8.5 Parallel Transit

Parallel transit systems, such as 'dial-a-bus', 'transbus' and 'handydart,' have been developed specifically to address the needs of those who are unable to use conventional public transit. One of the primary features of most vehicles used in these systems is a design which allows wheelchair mobile individuals to be accommodated. Another feature is that the passenger seldom is required to walk more than a few steps at home or destination. Thus, for those individuals who might not be able to walk to or board regular transit public transportation still is available. Unlike standard public transit, these services often are not on fixed routes, nor on fixed schedules. Typically, the potential elderly user phones a dispatcher some time before the ride is needed and a schedule is set up to best accommodate the user within the operating system's mandate and resources (British Columbia, 1989a and Golant, 1976).

In British Columbia, handydart is the name of the provincial parallel transit agency which provides special transportation services. The system

exists not only in the two major metropolitan areas, but also in nine smaller communities. This transportation option has been developed to make public transit available to those seniors with disabilities which inhibit their use of conventional transit (British Columbia, 1989b). From its inception this system generally has experienced very heavy demand for service and although it has been continually expanded it has seldom been able to keep up with demand. This system, as it exists in the study area, will be discussed in detail in chapter three.

2.8.6 Community Volunteer Service

The contributions which volunteers make to society generally, and to the elderly specifically, are well documented (see Angus, 1991). Among the largest contributors of volunteer assistance are seniors themselves (Expression 1989a; see Expression 1989b). Twenty per cent of volunteers are seniors and older volunteers typically contribute more hours per person (Expression, 1989a). In British Columbia it has been shown that women sixty-five to sixty-nine are the most likely to be volunteers among the total population (Connidis, 1989).

Volunteer agencies in several communities provide transportation for the elderly who are experiencing difficulties with mobility. The extent of these services varies from place to place, depending on the volunteer resources of the specific community and varying supply of government funding. These alternate modes of transportation often provide for the needs of the elderly where other services are non-existent or limited. Because they are staffed by volunteers there is usually either no charge or a nominal fee for service. The lack of fee revenue, however, is a factor which limits the ability to provide services which equal demand. Nonetheless, in smaller communities where public transit is inconvenient, or not available at all, this form of alternate transportation fills an essential role in helping to maintain the elderly as mobile and independent members of the community.

2.8.7 Other

Bicycles, adult tricycles, and three wheeled powered scooters for the disabled are alternative means of transportation used by some elderly and old-old people. There is little in the way of research, however, which indicates that they are significant modes of transportation for trips to the general practitioner.

The old-old today are much more typical of the general population in their modes of travel than they have been in the past. However, there are factors related to the aging process which make travel difficult, unsafe or both for the individual. For many driving is more common than in the past; this is certainly true for women. Similarly, the development of alternative forms of transport which address the specific needs of the elderly has advanced. In sum, the travel options for the elderly have been improving and therefore so has their mobility. However, travel remains more difficult for the elderly than for the population at large.

2.9 ENVIRONMENT OF THE DOCTOR'S OFFICE

The visit to the doctor means travelling in two environments. The home environment of the elderly should not be dismissed and has been studied thoroughly elsewhere (see Canada Mortgage and Housing Corporation Bibliography, 1988). However, it is generally of little direct consequence in the role of accessibility or availability of medical care (Ruzits, 1984; Golant, 1982). Environmental and architectural barriers at medical service facilities, on the other hand, have been identified as conditions which limit accessibility to services for a portion of the elderly population and mobility impaired individuals (Foote, 1986). Because it has been suggested that "in part...people learn to avoid barriers by withdrawing from difficult environments" (Foote, 1986:597) these features of the built environment are detailed here.

Foote (1986) and the National Advisory Council on Aging, (1987) have made specific recommendations regarding the built environment as to what should exist in order that it may be safe and provide convenient access to

mobile users. In order to reduce the possibility of tripping and falling, sidewalks adjacent to any facility should be in good repair, flat, smooth and even. Cracks should not exceed 2.5 centimetres. Wherever there are sidewalks there also should be curb cuts in order to facilitate wheelchair access. Also these provide improved pedestrian access for those with limited flexibility.[9] Private parking and handicapped parking are desirable and should be barrier free. In order to facilitate wheelchair use level entries are desirable; however, where grades exist there should be ramps and the grade of these ramps should be no greater than one unit of rise to twelve units of run. Door thresholds should be no higher than 2.5 centimetres in order to reduce the possibility of tripping and to facilitate wheelchair use. Both interior and exterior doors should neither stick nor require more than 6.8 kilograms of force to allow for ease of opening. Widths of doors should be at least eighty-one centimetres. Doorways should allow for manoeuvrability by wheelchair users and grab bars also should be available for support. Floor coverings in all areas should not impede the use of wheelchairs.[10] In order to reach offices which are located at other than grade, elevators as well as stairs are required. Elevator doors should be of a width sufficient to allow for the manoeuvrability of wheelchairs. Call buttons and car control buttons for the elevators should be no more than 120 centimetres from the floor. Grab bars and appropriate floor coverings also should be provided.

In summary, it has been stated that the elderly, as a result of aging, experience limitations in mobility that the younger population does not encounter. Consequently the aged experience greater difficulty in coping with the physical environment. The outcome is that access to general practitioners frequently is more difficult for the old-old than it is for the general population.

ENDNOTES

1 Small towns have been defined as places with populations between 1,000 and 10,000 (Hodge, 1989:9).

2 A shift from the incorrect perception of the elderly as a social underclass is slow in coming (Gross and Schwenger, 1981:12; see as well Wiseman, 1978). As individuals, both young and old unattached Canadians face a higher risk of poverty. Poverty does exist for some elderly individuals as it does for younger individuals. But, the once commonplace situation of being poor and aged has been changing rapidly in Canada and elsewhere. Now many elderly individuals have sufficient and secure incomes (Maddox, 1981:37 see also National Advisory Council on Aging, 1991, Battle, 1988 and National Council of Welfare, 1985). This is illustrated by the fact that the sixty-five and over age group had the second lowest percentage of families below the poverty line, after the 45-54 group which was lowest.

3 For comprehensive discussions see Bryant, 1981; Knox and Pacione, 1980; Knox, 1978: Barnett and Barnett, 1977; Barnett and Newton, 1977; Diseker and Chappell, 1976; Shanon and Dever, 1974; Lankford, 1971; Sumner, 1971.

4 Macular degeneration is the loss of visual acuity as a result of the degeneration of the area in the eye in which the cones are located, where vision is especially sharp.

5 Diabetic retinopathy is a pathological lesion affecting the retina, the area of the eye containing the light receptors.

6 For a thorough discussion on the hazards of the environment for the elderly in both North America and Europe and also the need for change see; MacDonald, 1989; Matthews, 1989; National Advisory Council on Aging, 1989b; Canadian Medical Association, 1987; Organization for Economic Cooperation and Development, 1985; Foote, 1986; Wilson, 1982;

Milas, 1980; Basu, 1979; Wiseman, 1978; Carp, 1976; Golant, 1976; Howell, 1976; Reigner, 1974; Gigt, 1973; Smeltzer and Tavis, 1969.

7 Extensive research has been done elsewhere in understanding and evaluating the quality and design of residences for seniors. See *National Advisory Council on Aging* 1987, in particular, chapter 3 and appendix 5. See as well, *Maintaining Senior's Independence A Guide to Home Adaptations,* 1989 and Older People and their Homes, 1988 for details relating to environmental (retro-) design of the home for continued independence. Any negative evaluation of a "house" by a non-resident expert should be carefully measured against the subjective positive evaluation of the resident's "home" (see Porteous, 1989; Sullivan, 1981).

8 The cost of owning and operating of an automobile will vary depending on several factors. Runheimer International (British Columbia Automobile Association, n.d.) states that the range of costs for owning an automobile in British Columbia would be $ 6,054.00 - $ 7,778.50 per year and $ 0.252 - $ 0.324 per kilometre depending on automobile size. It is expected that while capital costs might be lower for seniors, operating costs would be higher.

9 While the curb cut may aid those with problems of flexibility it may be a disadvantage to the visually impaired who use the curb to distinguish the walkway from the roadway. Consensus at this time supports the greater advantage of the curb cut.

10 The number of individuals requiring wheelchairs is limited, but meeting their needs is important and environmental designs must consider their situation (Denroche, 1989).

CHAPTER 3

3.0 THE ACCESSIBILITY OF THE FAMILY PHYSICIAN TO THE OLD-OLD IN SIDNEY, BRITISH COLUMBIA

This chapter outlines the rationale, objectives, and methods used in this study. The research area is described as well as the transportation systems which are available within its boundaries. The availability of general practitioners in this location also is discussed.

3.1 RATIONALE

The underlying assumption upon which this research is based is that the old-old wish to live independent lives as functioning members of society for as long as possible. To this end maintaining one's good health has been identified as the most important requirement in retaining an independent life style and therefore access to medical care is essential. With typical reductions in mobility and disproportionate increases in the need for health care, accessibility to the general practitioner is a question which needs to be addressed. Little research has been done on this topic for the old-old and information which is in the public domain, for example, census data, has very little geographic specificity (Wiseman, 1978).

Much of the previous research on the elderly has focused on minority segments of the population: in the worst instances they are the sick, the poor, or socially disadvantaged; alternatively they are the economically advantaged who live in planned communities or towns (Golant, 1984). Difficulty with accessibility should be inversely related to economic resources. The study of a sample group from either of the economic polar opposites would reveal, one might expect, diametrically opposed results. The investigation, however, of a cross section of neither the economic elite nor the disadvantaged would be expected to reveal results which are typical of the majority of the old-old. Therefore, the study of such a group would be valuable.

In order to determine whether or not the independently living old-old have adequate access to medical care their circumstances first must be evaluated. It is the purpose of this study to determine the availability and accessibility of general practitioner care and to identify problems that are encountered by the old-old. As a result, changes, where appropriate, will be suggested to improve accessibility to medical services for the old-old.

3.2 OBJECTIVES

This thesis is concerned with the old-old who are living outside of institutional settings. This focus was chosen because of a lack of baseline information on the non-institutionalized old-old and their specific situation in terms of the research questions. Information is regularly collected by the various government bodies concerning the eight to ten per cent of the older population who reside in institutional settings. Accessibility issues for those living in these institutions are different from those encountered by people living independently.

Often individuals in supportive or institutional settings receive both formal and informal assistance with modes of transportation and medical assistance that the independently living elderly do not receive. Congregate care facilities frequently have drivers and vehicles to provide private transportation for their clients. On an informal basis, aides in supportive settings frequently provide help for residents which the study group does not have.

In Canada "primary care for the elderly is provided almost exclusively by family physicians" (Canadian Medical Association, 1987:20). This is not a unique situation. In the United Kingdom "the general practitioner is the main point of entry for the public to the formal health care service where general practitioners deal with about ninety per cent of the illness which reaches the British Health Service" (Phillips, 1979:169). Even for more extensive care it is frequently the family physician who admits his or her patient to the hospital (Giggs, 1979). For the purpose of this thesis the definition of health care service is restricted to those services provided by the

general practitioner or family doctor: "the 'gate- keepers' of the medical world and to clinics and hospitals" (Whitelegg, 1986; see as well Curtis, 1982; and Phillips, 1981; 1979).

To understand the nature of accessibility to general practitioners by the old-old several aspects must be addressed. Is distance a factor in the accessibility of a general practitioner? What distances do the old-old travel to get to their doctors? Does the mode of transportation used by the old-old in getting there affect accessibility? What are the environmental barriers affecting access to a general practitioner? **The primary objective of this thesis is to determine whether or not the accessibility of family physicians in the Town of Sidney, British Columbia is perceived as a problem by the old-old residents.** In order to attain this objective, it is necessary to:

1. **determine the availability of general practitioners in the primary census agglomeration area of Sidney;**

2. **identify the location of the general practitioners used by the old-old in Sidney and;**

3. **investigate the effects of the environment and its role in relation to the accessibility of physicians by this group.**

3.3 THE RESEARCH AREA

Issues concerning the elderly have been investigated by researchers in several countries, but most of the work has been by American researchers (Warnes, 1990). To integrate the American results into a Canadian context requires an acceptance that conditions in the two nations are similar rather than dissimilar. In the North American context an argument has been put forward by Yeates and Garner (1980) that Canadian and American cities are more similar than different, but this has been challenged (Goldberg and Mercer, 1986). Mercer (1979) suggested that the differences between Canadian and American cities could be organized around three themes: urban population change and social character; urban economic and spatial structure;

and institutions and the quality of urban life. The differences in these factors, it is argued, result in a substantially different urban environment in Canada compared to that in the United States. The Canadian-American differences as they relate to this research are presented in three principal areas.

First, is the provision of health care. As a result of the difference between the Canadian social type of medicine and the American user pay system there should be "...a rather different geographic pattern in the provision of medical services within cities" (Goldberg and Mercer, 1986:31). Second, the Canadian system for the provision of public transportation and its use is substantially different from that of the United States (Table 3.1). Third, Canadian urban areas are more compact in form as a result of, among other things, public mass modes of travel (Goldberg and Mercer, 1986:174). Because of these differences American research results may not be valid in the Canadian context and therefore there is a need to investigate the particular situation of the old-old in Canada.

3.3.1 Sidney, British Columbia

In order to have a more typical representation of the elderly population in an average community, the non-institutionalized old-old population of Sidney, British Columbia was chosen. Sidney is a town which had a population of 8,982 in 1986 and is typical in many ways of the towns in British Columbia (see Hodge, 1989).

The Town of Sidney, located in the southwest of the province, is one of thirteen political entities within the Capital Regional District of British Columbia (Figure 3.1) which functions as a regional level of government with limited powers. The Census Metropolitan Area of Victoria, or Metropolitan Victoria, (the same area as the Capital Regional District but not including Saltspring Island or the Outer Gulf Islands) in general is widely known as a retirement centre in Canada. This is an historic trend and likely will continue for some time (Forward, 1979; 1981; 1984; Yeates 1978). The most recent changes in population (1981 - 1986) confirm Sidney as an important retirement locale (Table 3.2).

TABLE 3.1

COMMUTER MODAL CHOICE FOR SELECTED CITIES*

	Per Cent Commuters		
	Using Auto/Truck	Auto/Truck Users Driving Alone	Using Public Transportation
CANADA[1]			
Montreal	59	42	31
Toronto	61	46	31
Vancouver	75	62	18
UNITED STATES			
Baltimore[3]	87	64	12
Washington[4]	84	58	15
Pittsburg4	86	68	13
St. Louis[3]	94	71	5
San Diego[2]	91	73	5
Seattle[1]	90	72	8
Portland[2]	90	71	8

*Automobile, truck, and public transportation modes only, alternative transportation not included. Rows do not equal 100 per cent.

Note: Column two is a sub-set of column one

1 All Canadian cities, average over 1975-77 inclusive

2 Data for 1975

3 Data for 1976

4 Data for 1977

(*Source: After Goldberg and Mercer, 1986: 178*)

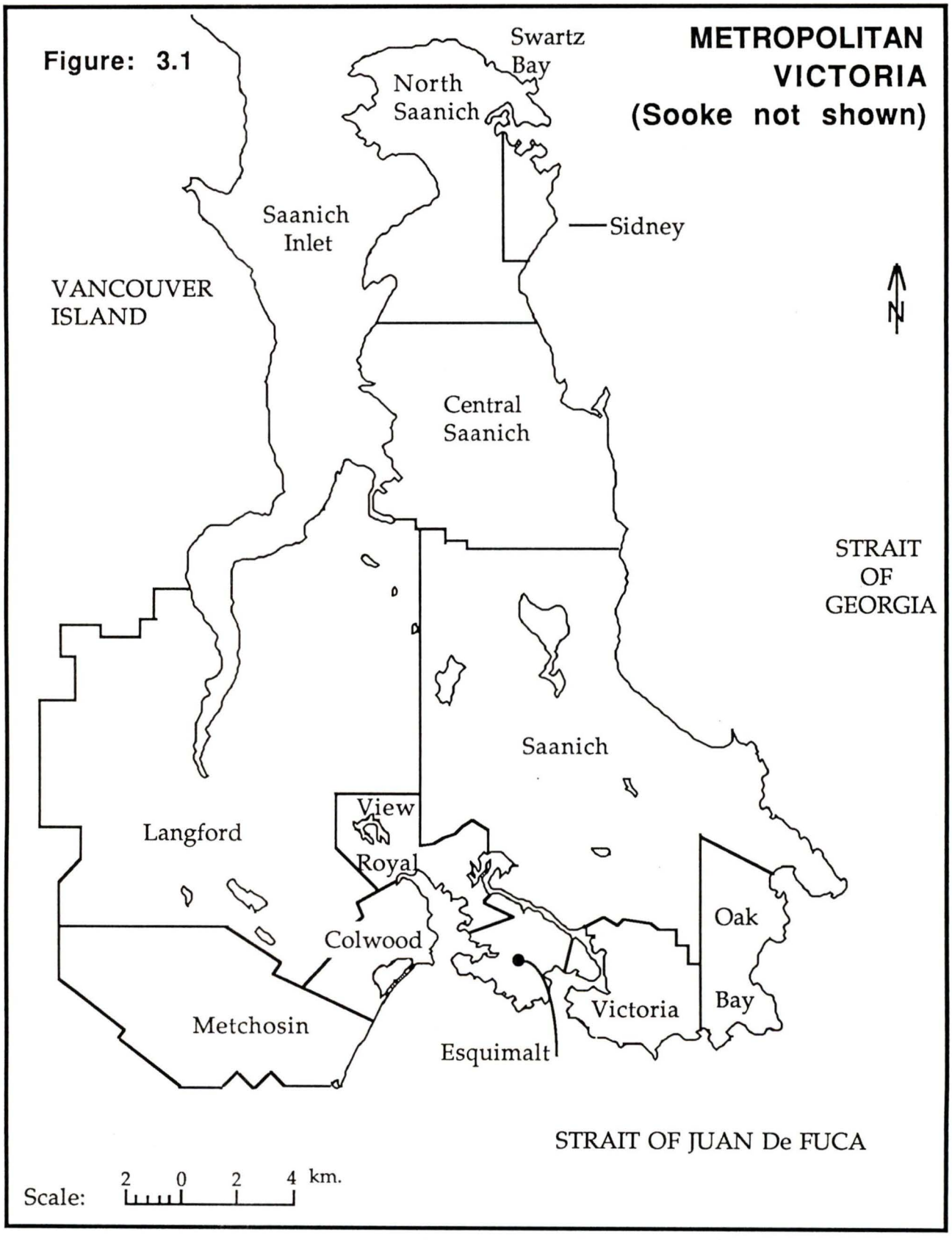


Figure: 3.1
METROPOLITAN VICTORIA
(Sooke not shown)
Swartz Bay
North Saanich
Saanich Inlet
Sidney
VANCOUVER ISLAND
N
Central Saanich
STRAIT OF GEORGIA
Saanich
View Royal
Langford
Colwood
Oak Bay
Victoria
Metchosin
Esquimalt
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

TABLE 3.2

CHANGE IN POPULATION SIDNEY 1981 - 1986

Age group	1981 Per cent of total	1986 Per cent of total	1981-1986 Per cent change
0-19	25.4	22.4	-3
20-34	21.4	18.1	-3.3
35-44	10.6	13.1	2.5
45-54	9.0	8.3	-0.7
55-64	13.8	13.1	-0.7
65+	19.7	25.0	5.3

Source: Statistics Canada 1981,1986

Thirty kilometres north of the urban core, Sidney shares many of the attributes which make the City of Victoria popular as a retirement community. Primarily, the climate which is one of the most moderate in Canada makes it appealing to the elderly who, in the Canadian experience, as detailed in *Seniors and Winter Living* (National Advisory Council on Aging, 1989) find it difficult getting about in climatically harsh environments. The proximity of the ocean and the uncrowded spaces are two other characteristics which make Sidney attractive to the elderly.

Because of seniors' larger absolute and relative numbers the older population now has more options. A variety of housing opportunities cater to the elderly. Sidney has several congregate care facilities for the seniors. These homes have an average entry age of eighty (Watts, 1991) and provide a service-rich environment. In addition to the market driven opportunities, a non-profit supportive environment also exists in the form of Abbeyfield housing in Sidney.

In order to accept the appropriateness of Sidney for this study as a geographically independent town and not simply an extension of an urban centre in a Census Metropolitan Area, an explanation of its context is

provided. A Census Metropolitan Area consists of a large urbanized core, together with adjacent urban and rural areas which have a high degree of economic and social integration with the core and is defined as the main labour market area of the urban complex. Such areas comprise one or more census subdivisions which meet at least one of the following criteria:

> (1) the census subdivision falls completely or partially inside the urbanized core;
> (2) at least fifty per cent of the employed labour force living in the census subdivision works in the urbanized core;or
> (3) at least twenty-five per cent of the employed labour force working in the census subdivision lives in the urbanized core. (Statistics Canada, 1988b).

Even though Sidney is part of the Victoria CMA it is not part of the Primary Census Metropolitan Area of Victoria, but instead it is in the Sidney Primary Census Agglomeration. This particular distinction, also based on interchange of the labour force (thirty-five per cent or greater), indicates a level of separation from the core area of Victoria CMA. The overriding factor in determining Census Metropolitan Areas and Primary Census Metropolitan Areas is the labour force in relationship to the urbanized core. This aspect has little to do with the research population which is seventy-five years and older.

Although Statistics Canada provides a well structured and precisely defined description of the area surrounding the city of Victoria, the CMA does not represent the common perception of several divisions. The local perception of Victoria CMA is more commonly based on a separation into three sub-regions; the Urban Core, the Western Communities and the Peninsula (Figure 3.2) (Seright, 1990). The Urban Core consists of the City of Victoria, the District of Oak Bay, the Township of Esquimalt and the District of Saanich. These communities are the most urban and most densely populated. Saanich has urban, suburban and rural characteristics which can be seen readily as one moves away from the City of Victoria's boundary. The Western Communities are made up of the City of Colwood, the Town of View Royal, the District of Metchosin, and the electoral areas of Langford and

Sooke. Each of these communities has a smaller population and is less densely populated than any of the 'Core' municipalities. The Peninsula is made up of the District of Central Saanich, the District of North Saanich and the Town of Sidney. The Peninsula communities, with the exception of Sidney, also are less populated and less dense than the Urban Core (Figure 3.3). This perception of separation of Sidney from the urban core is significant to the elder residents of Sidney.

Sidney has several features which make it appropriate for the research proposed. It has a population the size of which has been identified as typical and preferred by the elderly and it has a proportion of the elderly population which will be representative of towns in the future. In addition, Sidney also has the amenities to which the elderly are attracted (Hodge, 1989; 1987). Sidney is separated from the core area communities by two political districts and because of the inconvenience of this separation in terms of distance (time and energy costs) one would expect the old-old of Sidney to use family doctors located in the community (Hodge, 1984; Curtis, 1982; Haynes and Betham, 1982; Hopkins et al., 1968). This anticipated local use therefore should reduce leakages across the borders of the study area. For these reasons, although Sidney is a town within a census metropolitan area, it is similar to other towns in British Columbia and is appropriate for the proposed study (Hodge, 1989).

Demographically, Sidney's older population is not typical of that of the City of Victoria. Although the proportion of the population sixty-five and over is similar, that of seventy- five and over is considerably higher in Victoria (Table 3.3). Gender distribution is significantly different for both age groups between these two locations. The difference in the proportion of old-old to young-old is due chiefly to the fact that most of the institutions housing the old-old who can no longer live independently are situated in larger urban places. The great excess of women over men in Victoria probably is due to the fact that women live longer than men and constitute a high proportion of the institutionalized population.

TABLE 3.3

AGE/SEX DATA AND RELATIONSHIPS FOR SIDNEY, THE CITY OF VICTORIA AND THE VICTORIA CMA FOR 1986

	Sidney	Victoria City	Victoria CMA
Percent 65 and over	24.9	25.1	17.9
Percent 75 and over	9.4	13.2	7.6
Males /100 females 65 and over	74.3	52.3	66.0
Males/100 females 75 and over	71.4	46.2	56.5

Source:Statistics Canada 1986.

3.4 TRANSPORTATION IN SIDNEY

Sidney is within the Victoria Regional Transit System's service area and as such public transit is supplied. The transit system provides both inter and intra-urban service. The system has been updating its vehicles for easier use by the elderly through designs which require less bending and by providing priority seating. For those seniors (and others) with restricted income special annual passes are available at a reduced cost.

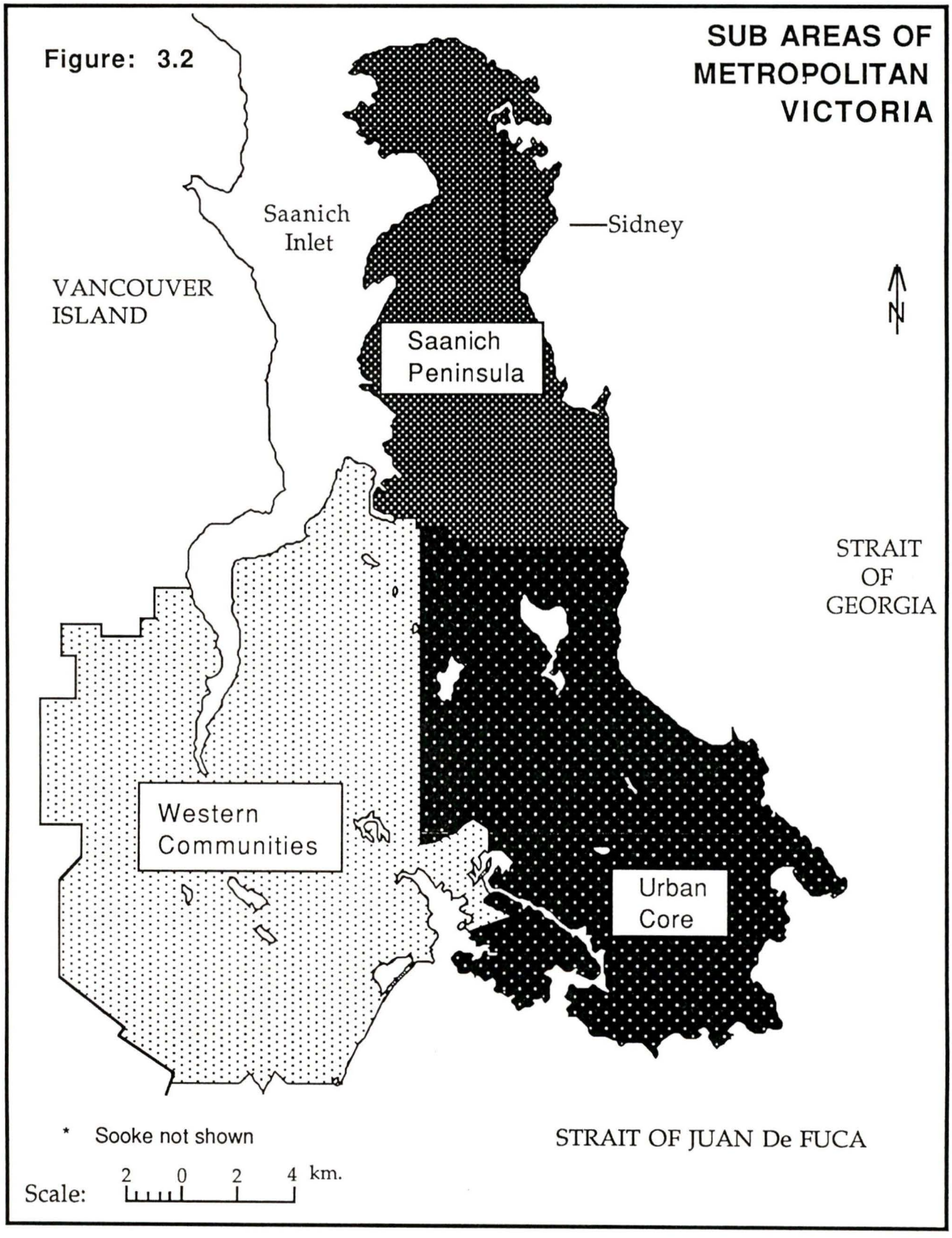


Figure: 3.2
SUB AREAS OF METROPOLITAN VICTORIA
Saanich Inlet
Sidney
VANCOUVER ISLAND
Saanich Peninsula
N
STRAIT OF GEORGIA
Western Communities
Urban Core
* Sooke not shown
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

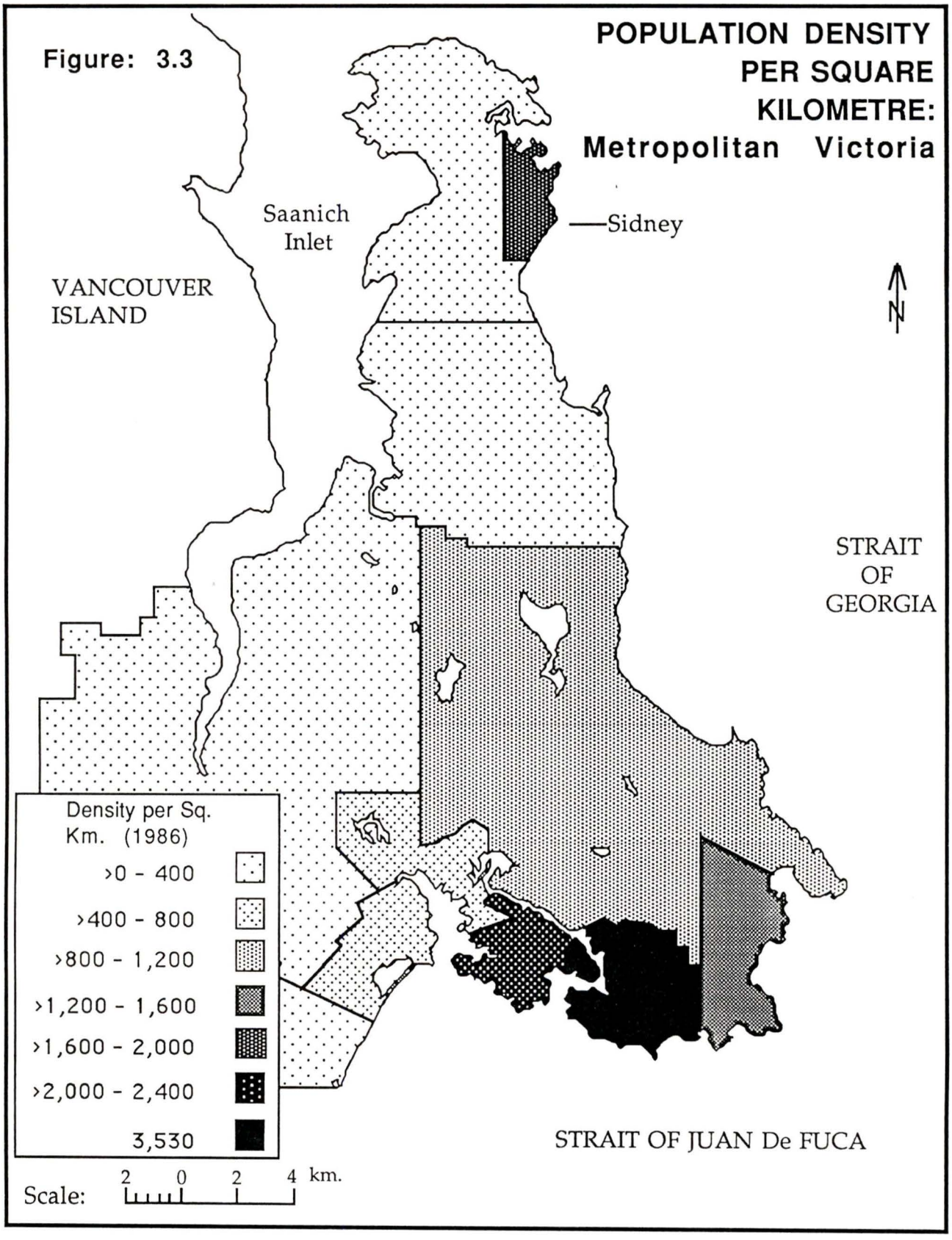


Figure: 3.3
POPULATION DENSITY PER SQUARE KILOMETRE: Metropolitan Victoria
Saanich Inlet
Sidney
VANCOUVER ISLAND
N
STRAIT OF GEORGIA
Density per Sq. Km. (1986)
>0 - 400
>400 - 800
>800 - 1,200
>1,200 - 1,600
>1,600 - 2,000
>2,000 - 2,400
3,530
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

For those who experience difficulty using regular public transit service in Sidney alternate systems have been developed. The systems described here are not unique, but rather, they are representative of services offered in other communities. Locally based, the Peninsula Community Association's volunteer driver program serves Peninsula residents who have special transportation needs. Additionally, "handydart" is another similar system provided under the B.C. Transit authority.

3.4.1 Peninsula Community Association

The Peninsula Community Association is a non-profit agency with the primary objective of promoting and developing a network of community services for residents who live in the area bounded by School District sixty-three (see Figure 3.4). One of several services provided is transportation for the elderly to local medical or specialist treatment centres. In the event that the required services are not available in the Sidney area transportation to alternate destinations is available.

While service is available to the entire area defined by Figure 3.4, the largest percentage of users lives in the Town of Sidney. The Association normally operates with thirty-three to thirty-five drivers. With the exception of three drivers in Saanichton, and one each in Brentwood and Deep Cove, all volunteers are from Sidney. An average of eighty to one hundred volunteer trips are booked each month. Exact trip data do not exist, but as a result of nine years experience the coordinator suggests that approximately ninety-eight per cent of the users are senior citizens, many aged seventy-nine to eighty-two and almost ten times as many women use this service as men (Denroche, 1989).

In order to inform those who may be potential users of this, and the other services provided by the Association, the agency advertises its existence in a number of ways. Home support workers, acting as agents for the Association, inform their clients of the transportation services which are available through their organization. Local doctors also have been informed on an ongoing basis of the availability of the service to the elderly. The local paper

occasionally is used to advise the resident population of the services available through the Association. However, this latter form of advertising is a concern to the coordinator because the Association does not want to appear to be in competition with the local taxi company. Notices in the local Thrift Shop, local fairs sponsored by the Association and pamphlets in general circulation also advertise the transportation services.

This system provides an effective means of meeting the needs of the elderly who would otherwise find it difficult to get to their appointments. When potential users call to request transportation they are asked if they use a cane, walker, or if they are in need any type of special assistance. With this knowledge the coordinator will request a driver who is suitable for the individual.

The volunteer driver will call the passenger as soon as possible. This is done to reduce any anxiety which the person may experience concerning the availability of a driver. The user and driver arrange a suitable time based on the user's mobility and the distance to be travelled. On the day of the appointment the driver will phone again to confirm that the ride still is needed. This will help to remind the older user of the appointment for that day. When the driver arrives he or she will go to the door and offer assistance if required.

If the passenger destination is a hospital in the Capital Regional District a sign in the volunteer's car will allow the driver to park in a restricted area close to the hospital entrance. This parking consideration, however, is not available to the drivers when the destination is a doctor's office in a commercial or professional building. This is most significant when the physician's office is located in the more densely developed portions of the urban core and where convenient client parking is not available.

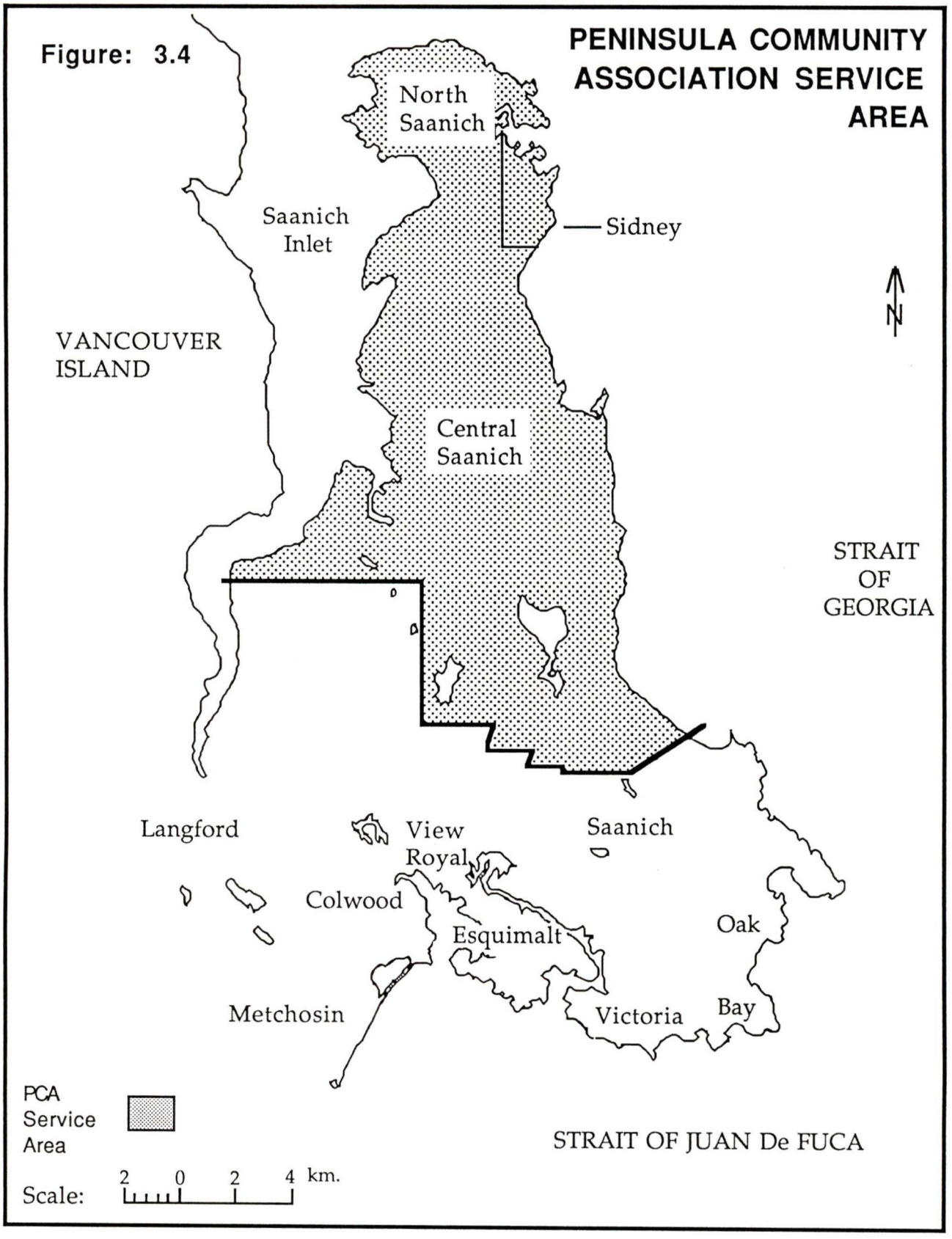


Figure: 3.4
PENINSULA COMMUNITY ASSOCIATION SERVICE AREA
North Saanich
Saanich Inlet
Sidney
N
VANCOUVER ISLAND
Central Saanich
STRAIT OF GEORGIA
Langford
View Royal
Saanich
Colwood
Esquimalt
Oak Bay
Metchosin
Victoria
PCA Service Area
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

This situation creates a problem for the driver and passenger, inasmuch as parking often has to be done at a distance from the doctor's office, making it difficult for the passenger to go directly and with minimum effort to the entrance. In all cases, the volunteer will accompany the user to the reception area of the office. If necessary, the driver will estimate the amount of time the patient might be expected to take. This may determine whether the driver will remain in the office or return later to pick up the individual for the return trip.

Because this service is operated by volunteer drivers certain conditions prevail which might not exist in a service-for-hire situation. The vehicles used are those of the individual drivers. This means that, based on the particular vehicles available at any given time, there may not be one which is suitable for the user. This potential problem is largely addressed by obtaining information from the user about particular needs in the initial interview. Although the most suitable vehicle may not always be available, an effort is made to find one which is.

Drivers make themselves available Monday through Friday during normal business hours. In general this satisfies most needs because these are the hours kept by most physicians. However, when conflicts arise due to scheduling the Association tries to accommodate those needs whenever possible. Approximately one half of the trips take place on the Saanich Peninsula. However, volunteer drivers have gone as far afield as The University of British Columbia when this medical facility's unique services were requested for a client by his doctor. This has happened only once in eight years, but gives some indication of the organization's flexibility.

Although there are few wheelchair users living independently in Sidney, their needs are considered important and have been addressed by the Association. However, this is accomplished only through adaptations and not as part of its overall operating procedure. In a few cases wheelchair users have been transported when someone who possessed both the physical capacity and a suitable vehicle was available. Hence this transportation service could be improved by providing special facilities to accommodate wheelchair users. Because of the present physical limitations of the vehicles

and the drivers it would appear that this situation is not likely to change in the near future.

Concerns expressed by the passengers are given the highest consideration. For example, in the event that there is a personality conflict the coordinator will try to arrange for an alternate driver. If passengers ever expressed concerns about the driving abilities of a volunteer these would be addressed, and if necessary that driver would be asked to work in another capacity for the organization.

The flexibility of the system is a result of the nature of the drivers. As volunteers they have chosen to make their services available to others in less convenient circumstances. These drivers have been described as caring, supportive, neighbourly and concerned by those who have used their services (Denroche, 1989). This qualitative value is difficult to categorize and evaluate but needs to be acknowledged for its positive worth.

3.4.2 HANDYDART

In the Victoria region handydart is funded by B.C. Transit and the Victoria Regional Transit Commission and managed by Accessible Transportation Alternatives under contract to B.C. Transit. It is designed to provide a transportation service in the Capital Regional District, with the exclusion of the Gulf Islands and areas west of the town of Sooke. The people for whom this service is available include everyone whose disability prevents them from using conventional bus service (B.C. Transit, 1989). Therefore, by definition, the target group includes the old-old residents of Sidney who cannot use regular public transit due to disability.

Registration

Handydart users must register with the system by providing basic information and medical facts about which the carrier should be aware. Once this information is recorded the potential client may request transportation service. All information is kept confidential. The client may have an

attendant (one who is needed by the passenger to travel) accompany them free of charge. Alternatively, an escort (one who travels as a companion) can accompany the passenger if space is available, but he or she is required to pay the regular fare.

Fares

With respect to the fee structure, greater Victoria is divided into two fare zones. The fee for one-way transportation is $1.50 within one zone and $2.00 for travel in two zones (a trip from Sidney to Victoria involves travel in two zones). This fare structure is similar to that of regular transit fares. Approximately twelve per cent of the operating cost of handydart in the Victoria region is obtained from passengers.

Wheelchairs and Stretcherchairs.

Handydart is not a taxi service but a shared ride public transit system. The system is designed to provide transportation from accessible door to accessible door. Unlike other transportation services, handydart is designed to transport wheelchair users. In addition to standard and electric wheelchairs, stretcherchairs also may be accommodated. This would indicate that transportation is available to those older-elderly in Sidney who would otherwise be restricted in mobility because of their use of a wheelchair or similar aid.

Demand, Subscribers, and "One off Requests"

Because the handydart system runs at close to its maximum capacity it is organized in a manner which attempts to serve the largest possible number of people. Since the largest number of users are residents in the Victoria area (zone 1), most service use is located there (ninety-three to ninety-four per cent) (Davis, 1989).

The major portion of handydart's transportation service is taken up by subscribers (approximately eighty-four per cent) who use the service on a

daily basis. This, for example, would meet the needs of employees, students and persons who visit day care centres on a regular daily or weekly schedule.

Since the framework for the service has been built up around a subscription system, which is continually working at capacity, "one off requests", such as irregularly scheduled transportation demands for an appointment with the doctor from Sidney to Sidney or Sidney to Victoria, are very difficult to fill (Davis, 1989). In addition, it is recognized that the handydart service has a greater demand on its resources than it can meet at present and "some trip requests may not be met" (B.C. Transit, 1989).

Old-old User Estimates

Statistics detailing the use of this service by the old-old or elderly in Sidney are not available from handydart. Estimates suggest that within the total area served by handydart forty-seven per cent of the users are seventy-five and older (Wick, 1989). It is estimated also that approximately six to seven per cent of the users of the handydart service are in the Peninsula region. This region is closely related to the Peninsula Community Association boundary shown in Figure 3.4. This includes the Town of Sidney, as well as the Central and North Saanich areas.

With the use of postal codes to define geographical boundaries, registered users of handydart were determined by Davis (1989) for the Town of Sidney. The results showed that there were twenty-five registered users. Unfortunately, neither a breakdown by age nor destination is available for the registered users. Davis (1989) and Cousins (1989) estimated that the number of users of handydart for visits to physicians by those seventy-five and over in Sidney was extremely limited.

Parallel Transit Summary

With respect to the special transportation needs of the old-old in Sidney, it may be concluded that the Peninsula Community Association is filling far more of the needs of the old-old in Sidney (and other Peninsula areas) who fall within the parameters of the handydart service objective. This is

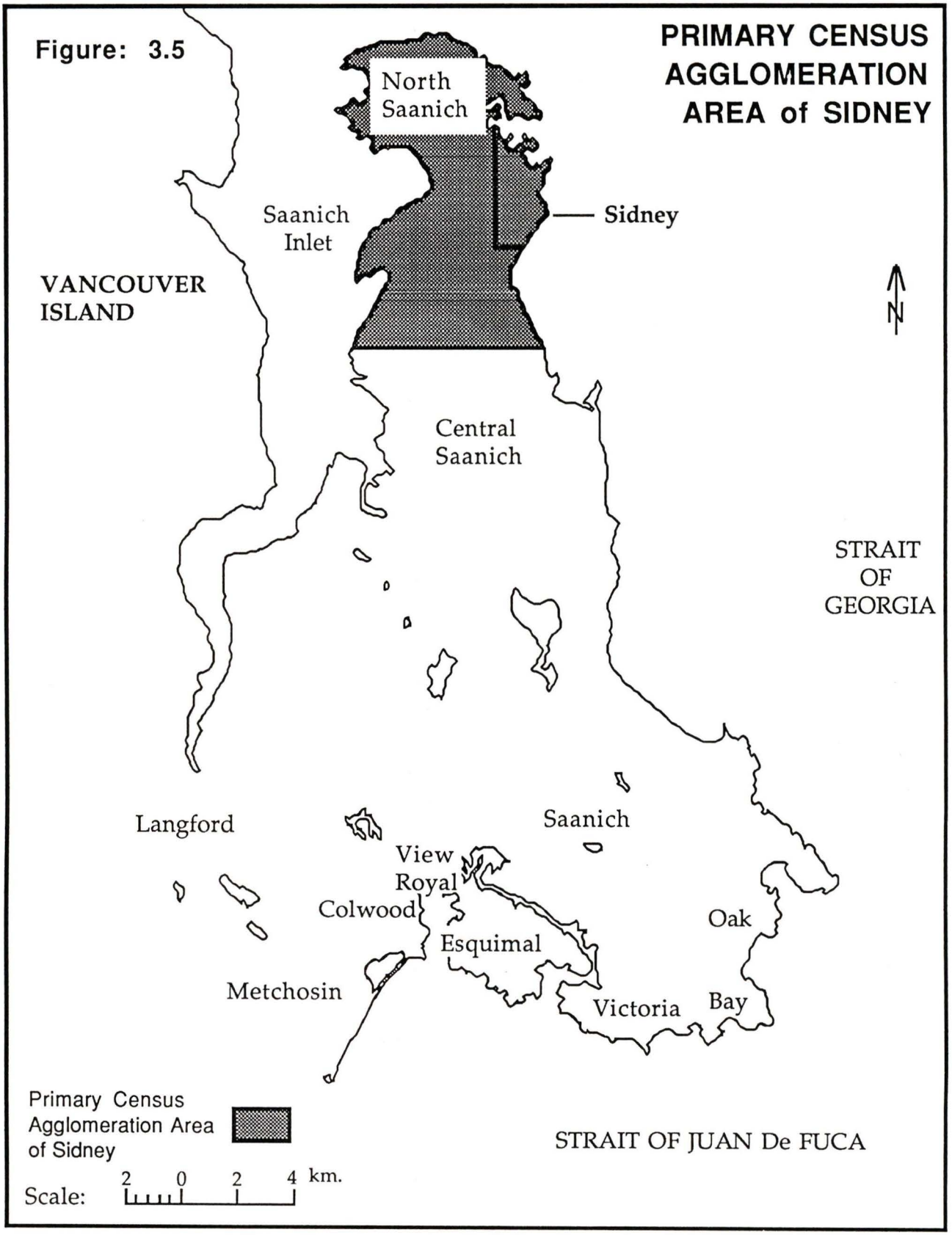
supported by the opinions of the coordinator of the Peninsula Community Association (Denroche, 1989), British Columbia Transit Manager Victoria Planning (Davis, 1989), and the president of Accessible Transportation Alternatives, the contracted operators for the handydart system (Cousins, 1989).

3.5 AVAILABILITY OF GENERAL PRACTITIONERS

The availability of general practitioners to the population of the Town of Sidney was based on the inclusion of all general practitioners who have consulting offices in the Primary Census Agglomeration of Sidney (Figure 3.5, see Figure 4.1 for the location of the practitioners' offices). Using a wider geographic reference than the Town of Sidney allowed the inclusion of physicians who might have offices on or near Sidney's boundaries which might be more conveniently located for some residents than general practitioners practising within Sidney.

The existence of doctors who were in general practice in the Sidney Primary Census Area were determined using several methods. The *Victoria and area Telephone Directory* (1990) provides a listing of physicians, which was compared with a register in the *Canadian Medical Directory* (1989) and the *Medical Directory College of Physicians and Surgeons of B.C.* (1989). Physicians outside the study area were eliminated by reference to telephone

Figure: 3.5


PRIMARY CENSUS AGGLOMERATION AREA of SIDNEY
North Saanich
Sidney
Saanich Inlet
VANCOUVER ISLAND
N
Central Saanich
STRAIT OF GEORGIA
Langford
Saanich
View Royal
Colwood
Esquimal
Oak
Metchosin
Victoria
Bay
Primary Census Agglomeration Area of Sidney
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

prefixes which served to identify the geographic area. The list was further reduced by elimination of medical specialists. Where a discrepancy existed the office of the physician was contacted and the problem was resolved. Physicians with offices in Sidney also were verified by a computer search of business licences. Finally, field research was used to identify the existence of the physicians and their offices.

3.6 RESEARCH WITH OLDER PEOPLE

The methodology of any research project is constrained in some way and the choice is problematic (Sayer, 1984). A multi-operational approach, however, is one way of increasing the opportunity to verify the data collected (Eyles, 1986b). This approach also provides an opportunity for a more comprehensive understanding of the subject (Meyer and Cromeley, 1989; Lawton, 1987:339). In the present study two modes of inquiry were used, the personal interview to acquire quantitative data about patterns, and participant observation to obtain qualitative knowledge of causes.

3.6.1 Development of the Instrument

Traditional methods of investigation designed for the general public recently have been questioned as to their appropriateness for research with older people (Lawton, 1987). This observation was made with reference to the elderly in general. One may presume that this would apply especially to the old-old. Lawton (1987) reported that older respondents were, in some cases, more likely to use fewer response categories, give the same rating to many questions and use more extreme response categories more often than younger groups. Another caution expressed was the probability of volunteers screening themselves out when tasks required reading or writing skills. For the reasons listed below it was felt that the most suitable data collection methods were face to face interviews and participant observations. These methods were carefully evaluated in light of the subject group.

Both telephone and mail offer useful methods of data collection, but they are not without serious limitations for this subject group. Mailed questionnaires have been identified as potentially less satisfactory than interviews because another family member may complete the questionnaire instead of the older person targeted (Rose and MacDonald, 1984:51). Although the use of telephone surveys has been suggested for the elderly, there is a concern that the less well-educated and less healthy elderly would be under-represented in comparison with the broader spectrum of individuals accessed through face-to-face surveys (Herzog and Rodgers, 1988; Herzog et al., 1983).

3.6.2 The Interview

Interviewing strategies range on a continuum from structured to unstructured. The present research is closest to the structured. Set questions were asked in a prescribed order and recorded on a standardized form. However, all subjects were encouraged to volunteer any information which they believed to be related to the survey whenever they felt inclined to do so. Theoretically, the use of the personal face-to-face interview, as opposed to other methods, has the dual advantage of yielding the highest response rate and permitting the use of a longer survey instrument than either mail or phone methods (Sheskin, 1985:15; Rose and MacDonald, 1984).

There are several other advantages to the use of interviews which have been identified in relation to the general population (Sheskin, 1985:16-17) and which are of particular significance with research concerning an older population. First, there is no need for visual acuity, literacy, or fluency in the language of the interviewee,[1] as there is in either a mail survey or self-administered form. A second advantage is that the interviewer can explain the meanings of words or phrases unfamiliar to the respondent. Also, if there is a contradiction in responses the question can be posed again to ensure that the subject understands it correctly. A third advantage is that the answer from one question can form a part of the next, thus avoiding cumbersome wording. Fourth, the respondent is singled out and only the targeted member of a household will participate in the interview. Proxy answers could be

accepted if health conditions prevented a potential subject from answering directly.[2] Fifth, longer answers are more likely to be elicited when the respondent can speak to an interviewer than when the subject is required to take the time and energy to write the responses on a form. Finally, face to face interviews provide a more personal aspect to a survey. For many members of the old-old community the concept of research is unclear or unfamiliar and it was believed that the interviewer could clarify the importance of the data being collected.

On the basis of data collection theory for research on the elderly an interview schedule was developed. A pre-test was designed to assess the ability of the researcher to obtain the desired information from the instrument. Also, the pre-test provided an opportunity to analyze the structure of the instrument so that it could be implemented with a minimum of difficulty. The pre-test was conducted by interviewing ten individuals in the study area and the results led to improvements of the instrument, for instance a reordering of several questions.

The resulting interview schedule was five pages in length with seventy-five questions (Appendix A). The administration time was approximately one hour. The schedule in its final form was intended to obtain information which could provide data for both dependent and independent variables related to the previously identified research inquiries. The questions in the interview, where applicable, followed the design of others (United Senior Citizens of Ontario, 1985a and 1985b). Age, gender, marital status, as well as other demographic information was collected. Subjects also were asked to report on their own mobility and health,[3] as these data related directly to the thesis research (Herbert and Peace, 1980).

With reference to health it was determined that the inclusion of an activities of daily living scale would be beneficial. Although assessment tools, such as the activities of daily living scale, were designed for use by all professions involved with geriatric assessment (Kane and Kane, 1981), it provides the non-medical person a reliable measure of the ability of the individual to preform basic self-care activities (Puxty, 1989; Kane and Kane, 1981). An activities of daily living scale (ADL) was selected based on

conversations with Dr. N. L. Chappell as used in *Housing and Supportive Services for Elderly Persons in Manitoba* (Chappell and Horne, 1987) (Appendix B).

Normal modes of transportation were determined for the regular activities of each subject. Those who had driver's licences and cars or who had partners with licences and cars were noted. The use and frequency of utilization of the local bus service was estimated by the subject. Walking habits also were recorded. For each of the modes of transportation a maximum "comfortable" travel time was determined by the individual (Ambrose, 1977). The method of transportation and time spent to visit the general practitioner were described by each interviewee. These measures were compared with maximum "comfortable" travel times reported earlier in the interview for travel modes.

Availability, use and need were required to determine accessibility. Responses were solicited to determine whether or not they patronized general practitioners, and if so the number of visits (Bohland and Frech, 1982; Aday and Anderson, 1974). In addition, it was determined whether or not the subject had to go elsewhere for care normally provided by his or her general practitioner.

Utilization of general practitioners' services is one of several measures of accessibility (Eyles and Wood, 1983; Philips, 1981; 1979b; Donabedian, 1973). Number of visits, house calls and alternate arrangements in lieu of the visit to a general practitioner were determined. Generally, under-reporting of physician contacts has been identified as a problem in interviews.[4] Although this has been considered less of an issue with older people (McKinlay, 1972), for reasons of accuracy subjects were asked to recall the number of visits they made to their general practitioners during the past six months, rather than a year which would have meant a greater reliance on memory. Felt needs (Pinch, 1979; Bradshaw, 1972) and latent demand also were addressed by determining whether or not the subjects saw their family physicians as often as they would like. Accessibility to the physician had been shown to be negatively affected by: exhaustion (Knox, 1979:166; Carp, 67; 1972b), income (Knox, 1979:166), weather, distance and the unavailability of transport (Girt,

1973). Therefore, these specific points were addressed. Waiting room time also was determined (Ritchie et al., 1981). In addition, respondents were asked to identify any barriers or difficulties experienced in getting to the family doctor (Foote, 1986).

Former residential locations and general practitioners' locations can affect patterns of use. A history of residency, present physician location and change in physician, if applicable, were established. This information would help explain distance anomalies in travel to the general practitioner that might be caused by historic travel patterns of the individual (Philips, 1979; Cleary et al., 1982; Daniels, 1982).

Finally, the subjects were asked to rate their attitudes with respect to modes of travel used, what modes of travel they did use to get to their general practitioner's office, if they would use a door to door service to their doctor's office if it were provided and what accessibility to general practitioners was like for others of their age group who live in Sidney.

3.7 THE POPULATION AND SAMPLE

The development of a random sample for the elderly is difficult for non-government research (Baker, 1985a:3; Wiseman, 1978:4). By necessity, information is kept confidential because it is the government's position that it is in the public interest to maintain the confidentiality of their records. Because no lists were available one had to be created to provide a representative sample of the population of old-old in Sidney.

Widely known for its practicality as a general research tool, the enumeration area is particularly useful for examining issues concerning the elderly (Herbert and Peace, 1980; Herbert and Evans, 1974). Because enumeration areas are small the population characteristics are reasonably homogeneous. The present research uses the information collected from enumeration areas to identify the elderly population and to provide a framework for a random stratified sample. The Town of Sidney has twelve federal enumeration areas (Figure 3.6). However, not all of these were

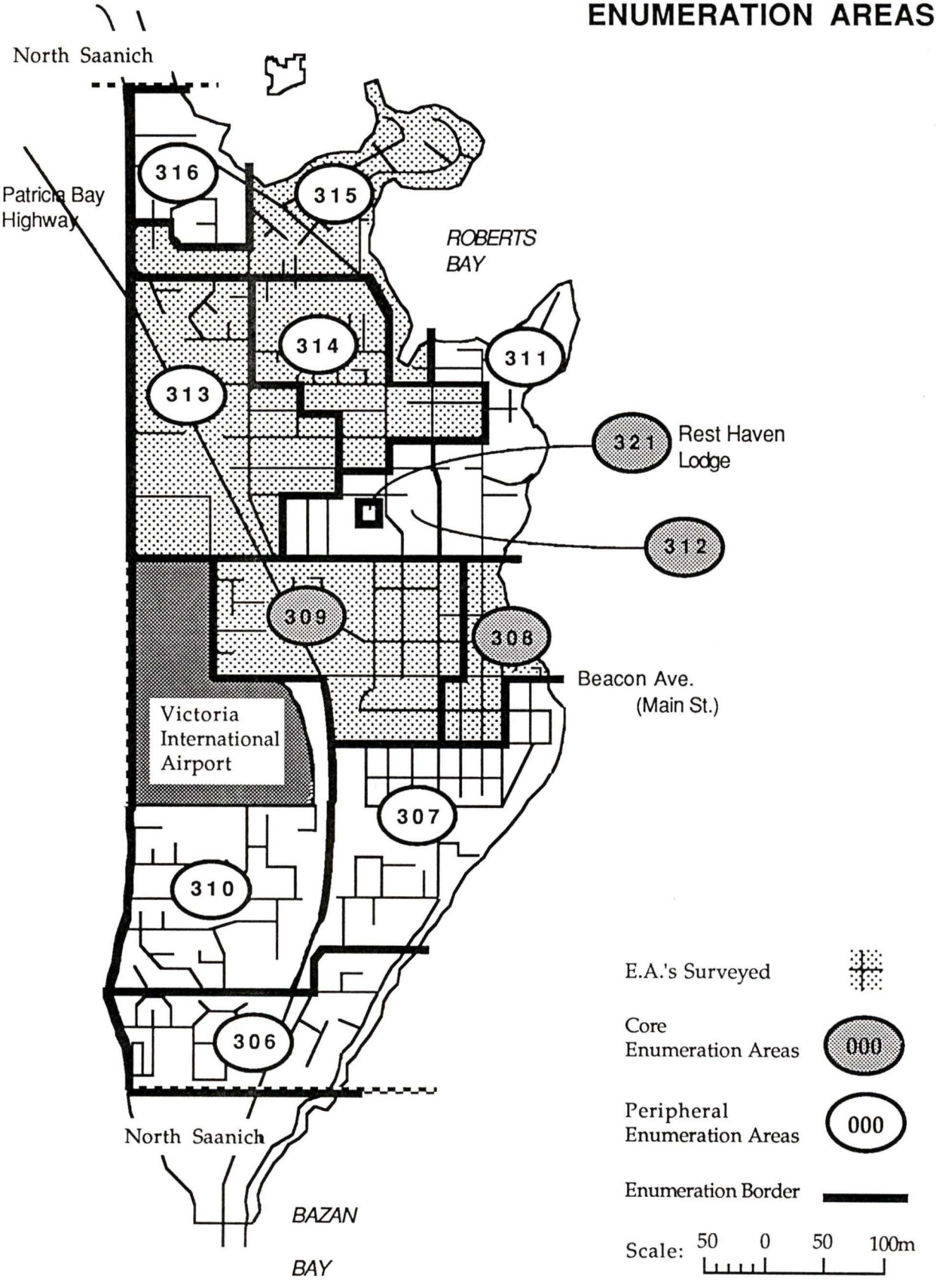
suitable for the purpose of this research. An enumeration area which contained only about two per cent of the total population of seventy-five or older. (enumeration area 310) was omitted. In another all of the elderly population was institutionalized (enumeration area 321) and for this study of the independent old-old it had to be omitted.

Because data are not readily available which contain information on the number of households of the independently living old-old in Sidney, a process to estimate it was carried out . In 1986 the population seventy-five and over was 770 (1986 Census of Canada, Regional Information Service. Capital Regional District, Victoria B.C.). This total was reduced by the number of residents of intermediate (120) and congregate care facilities (100)[5] and those living with their children (105). The resulting 445 individuals would account for about 225 households at a ratio of nearly two persons per household, which accords with expectations[6] (United Senior Citizens of Ontario, 1985a and 1985b; Hodge, 1989; B.C. Ministry of Health, n.d.).

Typically, a statistically significant sample for social research would require a ninety-five per cent level of confidence, with an error margin of plus or minus five per cent. Because the population under study is known to be heterogeneous there is a minimum of two sub-populations, male and female; this would potentially double the sample size of a homogeneous population. The use of multi-nomial questions (that is, more than two choices) instead of bi-nomial necessitates an increase in the sample size. With a sixty per cent response rate, (United Senior Citizens of Ontario, 1985a and 1985b) the sample size would have to increase further. The only consideration in the reduction of a typical sample is allowing for a finite correction factor (applied when an element is not returned to the population after selection).

Figure: 3.6

SIDNEY, BRITISH COLUMBIA ENUMERATION AREAS



A typical formula used to determine the sample size is (Cochran, 1977):

$$n = \frac{P(1-P)}{(E/Z)^2 + \frac{P(1-P)}{N}}$$

where:

n = sample size
P = per cent of attribute in universe (0.5 is the most conservative estimate which can be used)
E = sample accuracy of precision ($\pm$5%)
Z = the Z coefficient for the selected confidence level (Z = 1.96 for a 95% confidence level)
N = size of the universe (household population 75+ living in Sidney - 225)

With these basic assumptions, the number of respondents required to achieve the identified precision and confidence levels appears below

$$n = \frac{0.5(1-0.5)}{(0.05/1.96)^2 + \frac{0.5(1-0.5)}{225}}$$

$$n = 224.42$$

It is apparent that the whole population of 225 would have to be surveyed in order to achieve a statistically significant sample. Because it was expected that climatic factors associated with seasonal change would affect the results consideration was given to completing the research with the subjects during a single season. As summer was the most favourable period for weather conditions it seemed appropriate to choose that time in order to eliminate the obvious weather associated difficulties people would experience. The summer of 1989 was chosen for the survey period. During the pre-survey conducted in late spring it was found that limited research resources and the mechanical requirements of obtaining respondents would result in the opportunity of interviewing approximately five to six individuals per week. This points to a survey size of seventy to eighty subjects. This would approach the equivalent of one-third of the estimated number of households in the study population.

A stratified sample was developed to ensure that the population living both close to and distant from the town centre would be represented. This was accomplished by using two groups of enumeration areas in the sample selection process. As a higher proportion of the population lived in the peripheral areas, three peripheral and two core enumeration areas were selected (Figure 3.6). Selection was accomplished using a random number generator. The boundaries of the enumeration areas (Statistics Canada, 1986a: map G86-13 59006) were plotted on the Sidney zoning map (Revision 04/04/89) and street names and numbers were added to facilitate their identification in the field.

3.7.1 Sample Frame, Obtaining Consent, and Increasing Response Rate

Several steps were necessary in order to develop a sample frame. The first was to identify the population seventy-five and older in the selected enumeration areas. This required the creation of a list which identified surnames and phone numbers for each residential address. To accomplish this published sources, such as the *Victoria City Directory*, 1989, provincial and municipal voters lists, and the *Victoria and area Telephone Directory* (1989) were referred to. This resulted in a list of all of the households in each enumeration area. Therefore, under ideal conditions at least one resident in each household would be contacted, hopefully leading to a member of the target population. A letter of introduction (Appendix C) describing the survey, which included a request for the participation of the recipient if he or she qualified, was hand delivered to each address. The importance of the study and the fact that all information given would be held confidential was clearly explained. Where there was controlled access into a building and a letter could not be hand delivered one was mailed. In all cases of hand delivered letters the households were telephoned no later than three days after delivery and usually the following day. This was done in the hope that the contents of the letter would be current in the memory of household members. In the case of mailed deliveries four days were allowed before telephone contact was made. Unanswered calls were repeated twice more if necessary to make contact. The household was called again on the morning

of the day following and the afternoon of the next day. When no phone number could be found for a residence the researcher made a personal appearance to solicit that person's participation. Such visits were repeated twice if there were no responses initially.

This rather laborious procedure was developed to ensure a random and representative sample. The use of a snowball sampling procedure (Sudman, 1976) where individuals identify other individuals in "rare populations" was considered but not used because, as Sudman (1976) points out, under-sampling of those separated from their peer community can be expected.

Finally, in order to maximize participation of the old-old by reducing the anxiety of potential subjects the survey was announced in three ways:

(1) A letter was sent to the Silver Threads organization in Sidney for public posting. This was augmented by a personal visit to the director.
(2) A local newspaper that was targeted to the retired community was contacted and the research was described and reported as part of the news content.
(3) letters sent to each interviewee household contained phone numbers at the University of Victoria where this research could be confirmed as legitimate.

The legitimacy was established further by means of a letter sent to the Sidney detachment of the RCMP which explained the research in case inquiries were made of that office (Appendices D - F).

3.7.2 The Interview

In order to avoid external distractions, provide a comfortable setting and improve the response rate the interviews typically were carried out in the homes of the respondents. Each respondent was told before the interview that he or she was participating voluntarily and that he or she would not be asked to either read or write. This was done in order to reduce the potential

for self- screening. Interviewer related variance was eliminated by having all interviews done by the author.

In the pre-survey it was revealed that women may not be comfortable with a male interviewer in their homes. In one case in the pilot study a woman who lived alone refused admittance to the male interviewer, but she was prepared to give a phone interview. Therefore, to reduce this problem and ensure a greater degree of representativeness, individuals were given the option of being interviewed by telephone. Male subjects also were offered the option of a telephone interview if a personal interview was not acceptable. Alternatively, it was suggested a friend or relative might be present during the interview if it would make the subject more comfortable.

3.7.3 Response Rate

The response rate, approximately sixty per cent of an estimated 125, was affected by several factors. Adult children of parents who qualified as participants occasionally requested that their parents not be interviewed. There were also individuals who could not be reached by phone or at their homes, those who were too busy and those who did not keep appointments.

3.8 ANALYSIS OF INTERVIEW DATA RESULTS

In light of the fact that this study was designed to provide a certain amount of baseline data on the seventy-five and older population residing outside institutional settings, the data analysis was principally descriptive. The StatsView 512+ package was employed for the analysis. The primary statistical techniques used were cross tabulations and frequency counts. The significance of the associations were tested using the chi square. Relationships were considered to be statistically significant at the 0.05 level (United Senior Citizens of Ontario, 1985a and 1985b).

3.9 PARTICIPANT OBSERVATION

Qualitative methods of research also are appropriate for understanding the needs of the older population (Lawton, 1987:352). Indeed there has been a plea for the use of more qualitative methods in gerontological research (Marshall, 1987:10). Unlike interviews or questionnaires, participant observation requires no significant changes in method to be effective with the old-old. Unquestionably a prime advantage of this method is that it allows the actor's definition of experience, perception and behaviour to be given central importance. By recognizing the subject's perception of the situation that person's reality is presented to the observer.

There is little to suggest that the qualitative method of research is better for understanding the specific concerns of the elderly in contrast to the general population. Rather, it provides a different viewpoint that complements the quantitative results. The value of the qualitative approach rests in part with the recognition of the respondents as partners in the research activity (Norris, 1987:73). With the awareness that it is how the individual experiences his or her circumstances that is important, the researcher is less inclined to see a problem in the light of his attitudes and beliefs and more apt to understand the problem from the perspective of the study group (Ryff, 1984).

One of the most commonly used methods in qualitative research is that of participant observation (Sayer, 1984:221; Ley and Samuels, 1978:121). It "... enables a sharing of activities, an understanding of meanings and actions and an appreciation of the logic and context of behaviour" (Eyles,1986:340). This method of inquiry has been successful in helping researchers understand several issues concerning the elderly from what Golant (1979:7) calls a geographer's "synthesizing, holistic approach" (see Rowles, 1983; 1978; Sullivan, 1982).

Participant observation in this study was done to acquaint the researcher with the range of the experiences, barriers, and potential problems typically encountered by the old-old in the environment. Because the researcher accompanied the subject it was unnecessary to rely entirely on the memory of

the subject for relevant information as it was in the case of those who were interviewed. More important, the subjects interviewed may have become so accustomed to accommodating to or compensating for the environment that they may not have consciously recognized certain objects or conditions as obstacles.

The method of observation in this study followed the model proposed by Craik (1970). The experience of the action environment by the old-old as they visited the family doctor was determined both by free description and direct question (Lynch and Rivkin, 1970). Bogdan (1972:62) noted that not all data collected are of equal importance. The comments that subjects made spontaneously were, therefore, given more significance than those made in response to the observer's questions in the reporting of events and experiences and in analysis.

The researcher, of course, makes no claim to fully appreciate the experiences of the respondents. The reduction in physical capacity and the psychological stresses which usually are part of the old-old's life, cannot be fully understood by means of observations carried out by one who is not similarly affected. However, an attempt was made by the researcher to understand as well as possible the old-old's experience in accessing a family doctor. This was done by accompanying several old-old individuals on their trips to visit their family doctors.

As a result of the explanation of the research given at the time of the interview, the subjects were aware of the reasons for the participant observation process. The subjects were asked before the trip took place to comment on what they felt were problems, inconveniences, or nuisances involved in negotiating the routes from their homes to the doctors' offices and in the office buildings. The subjects during the observation process were asked also if particular features or conditions which have been identified in the literature were problems. This was done only when such features or conditions existed, but were not commented upon by the subjects. As this trip was a once only experience for the researcher and subject, no obtrusive recording equipment was used. Instead, the observations and comments were written. Lynch and Rivkin (1970) explained that there is a likelihood

that events may occur rapidly and some information may be lost. However, many conditions of the experience were identified and these observations will prove advantageous in understanding the experiences of the old-old.

3.9.1 Participants from within the Sample

The subjects for the participant observation came from the sample group. The basis for the selections was to have representation from the sample for each mode of travel and each level of self-rated mobility. A total of eight observations were expected. This would result from four modes of travel; walking, driving, public transportation, and taxi, and two self-rated mobility groups, 'unlimited mobility' and 'limited mobility'.

Random selections were made by asking the first persons interviewed, from each of the above groups (mode of travel and mobility) for permission to accompany them to the family doctor at their next appointment. In every case an attempt was made to select an alternative for each of the groups because of medical appointment schedules and research restrictions which might prevent the first person from being accompanied.

3.10 ANALYSIS OF PARTICIPANT OBSERVATION RESULTS

The analysis of the information gained from the participant observation portion of the study was used to identify the barriers and relationships which were common to participants of all mobility categories and common to those using similar modes of transportation. This also included comparisons with other research results which identified environmental barriers and problems for the elderly (OECD, 1985; Golant, 1984d, 1976; Lawton, 1976; Wilson, 1982).

The analysis of the participant observation was based on an approach suggested by Bogdan (1972) where five factors contribute to the analysis. Individuals' actions are observed and comparisons are made within both the sample group and from findings in the literature. Comments made by the individuals are recorded and confirmation of observations is requested.

Environmental influences are noted and integrated into the observation of the individuals' experience.

3.11 LIMITATIONS OF THE STUDY

Despite a careful attempt at random sampling, a limitation of this study must be recognized. The sample size was small. Because there was no sampling frame other than age by enumeration area there was no way to identify and obtain information from the non-response group. With limited information about the health of the population, it is impossible to determine whether or not the sample was biased in terms of overall health. The face-to-face interview was a precaution taken, in part, to allow for less healthy individuals to be included. The findings of this study, detailed in chapter four, however, are consistent with other gerontological studies where a linear relationship between age and health status and age and level of disability are characterized.

ENDNOTES

1 Approximately ninety-five percent of the Sidney population speaks English (Statistics Canada, 1988b).

2 The Health and Activity Limitation Survey (HALS) undertaken by Statistics Canada, 1986 used proxy respondents to ensure representation by those who would otherwise not be included (Statistics Canada, June 1988: p.1 Form 02-05).

3 The question of using a self-rated health scale with the elderly involves some controversy. Kane and Kane (1981) supported the use of self-rating health measures. Marshall (1987:396) in opposition, stated: "self-perceived health status does not closely correspond with actual physiological changes". Tornstam (1975) also suggested that much of how the elderly person feels about him or herself relies on the individual's aspiration levels. Therefore he suggested that more than self-perceptions or subjective measures be used. Rosencranz and Pihlblad (1970) determined from empirical research that self assessment was reliable (see for example, *Environmental Competence Amongst Independent Elderly Households*, 1982; Herbert and Peace, 1980; Bourg, 1975). Today self-rated health is not considered a simple objective measure, as the Canadian Medical Association (1987:5) reported:

> It is important to note, however, that how an individual perceives his or her own health is more important to how a person functions than the number of disabilities that actually exist -- that is, the better individuals think they are, the better they function.

Macheath (1984), in her research on the health and fitness of the elderly also relies on self-evaluation as a measurement tool. The present research recognizes the controversy, but also the value in self-rating measures and therefore has used an activities of daily living scale in conjunction with a self-rating scale.

4 Consideration was given to approaching general practitioners and the Ministry of Health to make available their records for the study group, but because of the confidential nature of their information access was impossible.

5 The average age of individuals living in supportive housing is estimated at eighty-two and age of entry is estimated at seventy-nine (see Watts, 1991; Geller, 1989; Brink, 1988).

6 Hodge (1989) estimates that eighty per cent of elderly men in small towns are likely to be married.

CHAPTER 4

4.0 ANALYSIS OF INTERVIEW RESULTS

From the interview data this chapter provides a descriptive profile of the sample and the population from which it was taken. Demographic, housing, health and transportation data are provided. Availability of the general practitioner and accessibility by the sample group are reported.

4.1 SAMPLE CHARACTERISTICS

4.1.1 Age

The mean age of the sample is seventy-nine. The seventy-five to eighty-four age group accounted for eighty-eight per cent (n=65) and the eighty-five and older group equalled twelve per cent (n=9) of the interview group. This compares with national and provincial statistics of seventy-eight and twenty-two per cent, respectively (Statistics Canada, 1987). An explanation for this difference in proportion is that this sample population did not include those who are living in supportive or facility care residential environments (Table 4.1).

TABLE 4.1
AGE GROUPS

AGE									
75-79		80-84		85-89		90+		TOTAL	
(N)*	%	(N)	%	(N)	%	(N)	%	(N)	%
(49)	66	(15)	20	(6)	8	(4)	6	(74)	100

*Number (N)

4.1.2 Gender

Overall, the sample included forty-seven per cent women (n=35) and fifty-three per cent men (n=39). Sidney's population of the old-old is fifty-eight per cent female and forty-two per cent male (Statistics Canada, 1988b). The sample ratio is lower than both the provincial (sixty per cent female and forty per cent male) and federal averages (sixty-two per cent female and thirty-eight per cent male) (Statistics Canada, 1987c). Several factors explain this difference. First Hodge (1989:27-28) asserted towns have greater representations of males than larger urban places. This assertion was supported in the United Seniors Ontario (1985) study where fifty-one per cent were males. Second, Chappell and Horne (1987:2) found that more men than women live in their own homes and home ownership rates in Sidney are high. Finally, the population of the old-old in supportive housing and care facilities shows considerable bias towards women. In both Canada and British Columbia women seventy-five and older represent seventy-four and sixty-two per cent of the institutionalized population, respectively (Statistics Canada, 1989a). Thus, the proportions of males and females in the sample approximate those of the non-institutionalized old-old population (Table 4.2).

TABLE 4.2
GENDER AND AGE GROUPS

AGE	MALE		FEMALE		TOTAL	
GROUP	(N)	%	(N)	%	(N)	%
75-79	(24)	62	(25)	71	(49)	66
80-84	(9)	23	(6)	17	(15)	20
85+	(6)	15	(4)	11	(10)	14
TOTAL	(39)	100	(35)	100	(74)	100

4.1.3 Marital Status

For marital status the sample was somewhat dissimilar to the federal and provincial population of those seventy-five and older where forty per cent

and forty-four per cent of males and females, respectively, were married (Statistics Canada, 1987a). Sixty-one per cent of the sample was married (n=45). The largest difference concerned men who were married. This may be explained by the expected higher than average number of males being married who live in smaller centres (Hodge, 1989; see Chappell and Horne, 1987). Eighty-two per cent of the males in the sample were married, which compares with a predicted eighty per cent for centres up to 10,000 (Hodge, 1989:29). Women, however, were found to be less frequently married (thirty-seven per cent) and more likely to be widowed (forty-nine per cent) (Table 4.3). The marital status of the subjects did not show significant change in recent years: approximately ninety per cent had experienced no change in status in the past five years.

TABLE 4.3
MARITAL STATUS

	MALE		FEMALE		TOTAL	
STATUS	(N)	%	(N)	%	(N)	%
MARRIED	(32)	82	(13)	37	(45)	61
SINGLE	(1)	3	(2)	6	(3)	4
WIDOWED	(6)	15	(17)	49	(23)	31
DIVORCED	(0)	0	(3)	8	(3)	4
TOTAL	(39)	100	(35)	100	(74)	100

4.2 LIVING ARRANGEMENT

Because of the large number of married subjects, the living situation of the old-old included sixty-eight per cent (n=50) living with another person[1]. Almost half the women in the study were living alone, while males were primarily living with their spouses (Table 4.4). Among those living with another, two were living with friends[2], two were living with their adult children, and one was living with a brother.

TABLE 4.4
LIVING ARRANGEMENTS BY GENDER

LIVING SITUATION	MALE (N)	%	FEMALE (N)	%	TOTAL (N)	%
LIVES WITH ANOTHER	(32)	82	(18)	51	(50)	67
LIVES ALONE	(7)	18	(17)	49	(24)	33
TOTAL	(39)	100	(35)	100	(74)	100

Chi square = 6.558 p = .01

4.1.5 Period of Residency

Almost ninety-five per cent (n=69) of the subjects had lived on Vancouver Island for more than two years and approximately ninety per cent (n=65) for more than five years. The mean residency period on the island was approximately twenty-five years. Similarly, more than ninety per cent (n=69) had lived in Sidney for more than two years and seventy per cent (n=53) had been there for more than five years. The average period of residency in Sidney was sixteen years. Of the total sample only twelve per cent (n=9) had lived in their present homes for two years or less. The mean residency at the interviewee's address was slightly greater than eleven years (Table 4.5). Limited household mobility (changing residential location) of the old-old group is to be expected. Hodge (1989) found that in approximately two-thirds of towns surveyed eighty per cent or more of the elderly had lived in those towns for at least five years.

TABLE 4.5
RESIDENCY IN YEARS

VANCOUVER ISLAND								
Years <1		Years 1 - <2		Years 2 - <5		Years 5+		Total
(N)	%	(N)	%	(N)	%	(N)	%	(N) %
(0)	0	(5)	7	(4)	5	(65)	88	74 100%

SIDNEY								
Years <1		Years 1 - <2		Years 2 - <5		Years 5+		Total
(N)	%	(N)	%	(N)	%	(N)	%	(N) %
(1)	1	(4)	7	(16)	22	(53)	70	74 100%

PRESENT ADDRESS								
Years <1		Years 1 - <2		Years 2 - <5		Years 5+		Total
(N)	%	(N)	%	(N)	%	(N)	%	(N) %
(1)	1	(8)	11	(20)	27	(45)	61	74 100%

4.1.6 Housing

In Victoria CMA from 1981 to 1986 there was an increase in home ownership for those seventy-five and older from 48 to 56.5 per cent respectively (Statistics Canada, 1984 and 1989b). As ownership has increased, so also has the variety of dwelling type available. For example, condominium ownership rose from 17.8 per cent in 1981 to 24 per cent in 1986 (Statistics Canada, 1984 and 1989b). Multi-family private housing offers advantages to the old-old that the traditional single family dwellings do not. Townhouses and condominiums offer ownership tenure, but with reduced physical demands in terms of the amount of maintenance required by the owner. These responsibilities in owner occupied multi-family units are cost shared by the collective owners and the physical labour usually is carried out by individuals other than the owners. Also security is more effective in

multi-family units. Less tangible is the comfort seniors experience knowing a neighbour is close by.

A comparison of residential types is not possible with Statistics Canada data, but a survey of Capital Regional District development projects indicates that both row housing and apartments are being built in increasing numbers for seniors (Capital Regional District, 1985-1991). Ownership rates of the old-old studied in Sidney are similar to those reported in the United Seniors of Ontario (1985) study. The rental tenure at one per cent for the sample compares to three per cent in the above study. The housing types chosen by the surveyed group reflects some of the changing residential patterns for this group in general (Table 4.6).

TABLE 4.6
HOUSING TYPE AND TENURE

OWNERSHIP						RENTAL		TOTAL	
HOUSE		TOWNHOUSE		CONDOMINIUM		APARTMENT			
(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
(55)	74	(11)	15	(7)	10	(1)	1	74	100

4.1.7 Health Status and Mobility

The self assessment of health provided by the Sidney subjects indicated a positive health profile (Table 4.7). The United Senior Citizens of Ontario (1985a and 1985b) survey showed that the elderly rural population was healthier than the urban as determined by stated health problems. While self rated health and age were not significantly related, health as determined by the activities of daily living (ADL) was related to age (Table 4.8). As chapter one describes, the foremost reason for having to move from one's home is the inability to perform activities of daily living. It is important to note how this health limitation as an objective measure reveals potential problems. In a self assessment of mobility the subjects were divided in identifying

themselves as having unlimited mobility (n=41) and limited mobility (n=33). No one considered himself or herself housebound. For all but five individuals a walk around the average block was not an uncomfortable experience. Health and self rated mobility were significantly related. The better the health the greater the sense of mobility (Table 4.7).

TABLE 4.7
SELF RATED HEALTH AND MOBILITY

MOBILITY	HEALTH							
	EXCELLENT		GOOD		FAIR		TOTAL	
	(N)	%	(N)	%	(N)	%	(N)	%
UNLIMITED	(13)	32	(23)	56	(5)	12	(41)	100
LIMITED	(3)	9	(21)	64	(9)	27	(33)	100
TOTAL	(16)	22	(44)	59	(14)	19	(74)	100

Chi square = 6.697 p = .04

TABLE 4.8
AGE GROUP COMPARED TO NUMBER OF LIMITATIONS (ADL)

	NUMBER OF LIMITATIONS						TOTAL	
	NIL		ONE		TWO		(row)	
AGE	(N)	%	(N)	%	(N)	%	(N)	%
75 - 79	(43)	70	(6)	55	(0)	0	(49)	66
80 - 84	(13)	21	(2)	18	(0)	0	(15)	20
85+	(5)	8	(3)	27	(2)	100	(10)	14
TOTAL (column)	(61)	100	(11)	100	(2)	100	(74)	100

Row and column per cent Chi square = 16.0 p = .003

4.1.8 Income

The income determination of the sample cannot be considered fully reliable, with non-response at almost thirty per cent. Although the number of subjects who refused to divulge their actual income was high (twenty-two),

more than half of these individuals (ten) volunteered they had "no problems", or that their income was "adequate". It has been indicated that that while many elderly may be asset rich, that is, they may own houses which are valuable, they are cash poor (National Advisory Council on Aging, 1989). In the Capital Region District, however, it has been shown that home ownership and economic status are positively correlated (Kiansten, 1985). Gender and income differences were significant for those reporting incomes. Women, as might be expected, were less frequently represented in the upper income levels and more frequently in the lower levels (Table 4.9).

TABLE 4.9
GENDER AND MONTHLY INCOME IN DOLLARS

	GENDER					
INCOME	MALE		FEMALE		TOTAL	
(in dollars)	(N)	%	(N)	%	(N)	%
< 850	(2)	7	(8)	33	(10)	19
850 - < 1700	(11)	39	(10)	42	(21)	40
> 1700	(15)	54	(6)	25	(21)	40
TOTAL*	(28)	100	(24)	100	(52)	100

Chi square = 16.0 p = .003

* 22 missing observations

10 indicated income was adequate 12 no response

4.2 TRANSPORTATION

4.2.1 Automobiles

The most common mode of transportation for general use was the private automobile. Over three-quarters (n=57) of the subjects had British Columbia driver's licences and automobiles. There was, however, a difference between the number of male and female drivers and car owners which was statistically significant (Tables 4.10 and 4.11). The opportunity for automobile

transportation within the household was over eighty-five per cent (n=64). Of the married women (n=13) in whose households there were cars (n=9) six were licenced to drive. Twelve of the seventeen widows surveyed had licenses and cars.

TABLE 4.10

DRIVER'S LICENCES BY GENDER AND AGE

	GENDER*					
	MALE		FEMALE		TOTAL	
LICENCE	(N)	%	(N)	%	(N)	%
YES	(35)	90	(23)	66	(58)	78
NO	(4)	10	(12)	34	(16)	22
TOTAL	(39)	100	(35)	100	(74)	100
	AGE					
	75-84		85+		TOTAL	
LICENCE	(N)	%	(N)	%	(N)	%
YES	(53)	90	(5)	66	(58)	78
NO	(11)	10	(5)	34	(16)	22
TOTAL	(64)	100	(10)	100	(74)	100

*Chi square = 4.947 p = 0.03

TABLE 4.11

AUTOMOBILE OWNERSHIP BY GENDER

	GENDER					
	MALE		FEMALE		TOTAL	
CAR OWNER	(N)	%	(N)	%	(N)	%
YES	(37)	95	(23)	66	(60)	81
NO	(2)	5	(12)	34	(14)	19
TOTAL	(39)	100	(35)	100	(74)	100

Chi square = 5.836 p = .02

Ambrose (1977) identified the amount of time the elderly could travel comfortably as a consideration in evaluating transportation. One subject found any travel by car or bus uncomfortable, but over ninety per cent (n=67) could travel for more than an hour with no discomfort, and the balance of the subjects found travel of more than thirty minutes but less than an hour acceptable. The mean travel time to the general practitioners was similar for all modes of transportation, including walking (Table 4.12). Of those who had cars, over half (n=34) used their vehicles seven times a week and ten per cent (n=6) used them two or fewer times. One subject had a car and licence, but had ceased to drive.

Driving after dark has been identified as an issue for the elderly. Although not a problem during most of the spring and autumn and all of the summer, in the winter days are shorter by a few hours, the sun is lower on the horizon and the skies are more often overcast. It is, therefore, frequently dark during a few hours of the normal workday of physicians. Of those who drove, approximately one-quarter said they would either prefer not to drive after dark or would not, and another quarter would drive at night, but, for the most part, would prefer not to. This desire not to drive after dark was significantly related to age (Table 4.13).

TABLE 4.12

TRAVEL TIME BY MODE OF TRANSPORTATION TO THE OFFICE OF THE FAMILY PHYSICIAN IN MINUTES

TIME	WALK	DRIVE	BUS
MAXIMUM	30	50	10
MINIMUM	3	5	5
MEAN	12	11	8

TABLE 4.13
AGE GROUP AND WILLINGNESS TO DRIVE AT NIGHT

WILLINGNESS TO DRIVE AT NIGHT	AGE GROUP 75-79 (N)	%	80+ (N)	%	ALL AGES (N)	%
YES	(22)	55	(4)	22	(26)	45
NO	(8)	20	(8)	45	(16)	28
WILL AVOID IF POSSIBLE	(10)	25	(6)	33	(16)	28
TOTAL	(40)	100	(18)	100	(58)	100

Chi square = 5.977 p = .05

4.2.2 Bus

Although it has been shown in chapter two that the elderly are increasing their representation among automobile drivers, public transit also is considered a regular form of transportation for the old-old. Almost forty per cent (n=29) of the total sample used the bus at some time and one-third of these people were car owners. The bus was used for interurban travel by car owners who wanted to avoid the heavier traffic associated with driving in the city. When cars were in for maintenance or repair the bus was used to get to and from the garage. The availability of buses based on distance from home to the nearest bus stop was positive. Just under sixty per cent (n=42) of the subjects were no more than a block from the closest stop (Table 4.14). For eight per cent (n=6), however, the nearest bus stop, according to the subjects, was too far to be usable. Of this number four have automobiles and two do not. These latter individuals are both women. The frequency of bus use may be inferred by ownership of a bus pass. It is economically practical to have one if one is over sixty-five and a frequent user of the bus system. The infrequent use (Table 4.15) of the bus was reflected in the fact that only one person had such a pass. As was the case with automobile use, trips of more than half an hour were not difficult for those who used or could use the bus. Although

those who use the bus are few in number, it is a form of transportation which is regularly used by those who did not own cars.

TABLE 4.14
DISTANCE IN BLOCKS TO NEAREST BUS STOP

<1 BLOCK		1 BLOCK		2 BLOCKS		>2 BLOCKS		TOO FAR*		TOTAL	
(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
(10)	14	(32)	43	(11)	15	(15)	20	(6)	8	74	100

*As determined by the subject. Includes all distances

TABLE 4.15
FREQUENCY OF BUS USE PER MONTH

		FREQUENCY									
NIL		1		2		3 - 4		5+		TOTAL	
(N)	%	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
(63)	85	(3)	4	(4)	5	(2)	3	(2)	3	74	100

4.2.3 Walking

With the possible exception of young school children, walking is typically not a substitute as a mode of travel for the younger generations. For the old-old walking can be considered a mode of travel, as well as a means of exercise and a social activity. Subjects walked to shops for groceries and other goods, volunteered their services, and visited the family doctor. For more than eighty per cent (n=60) of the sample walking was a regular activity. Approximately one-half (n=37) of the subjects walked at least four times a week on a regular basis. Although five individuals could not walk around an average block comfortably, sixty per cent (n=44) regularly walked for more than half an hour at a time.

Of the five individuals who could not walk the equivalent of one block four had access to a car in the household. The fifth, a woman living alone, had no access to a car and the bus stop was too distant.

4.3 GENERAL PRACTITIONER LOCATION AND USE

Over ninety-five per cent (n=71) of the subjects had someone whom they identified as their general practitioner. Two of the three remaining individuals saw a general practitioner when they wanted to. Two of these three individuals indicated that they had seen a general practitioner in the past six months and would see the same individual again if they felt a need. The third individual had not seen a doctor in the past six months and stated that if she had a need she would visit one of the local practitioners.

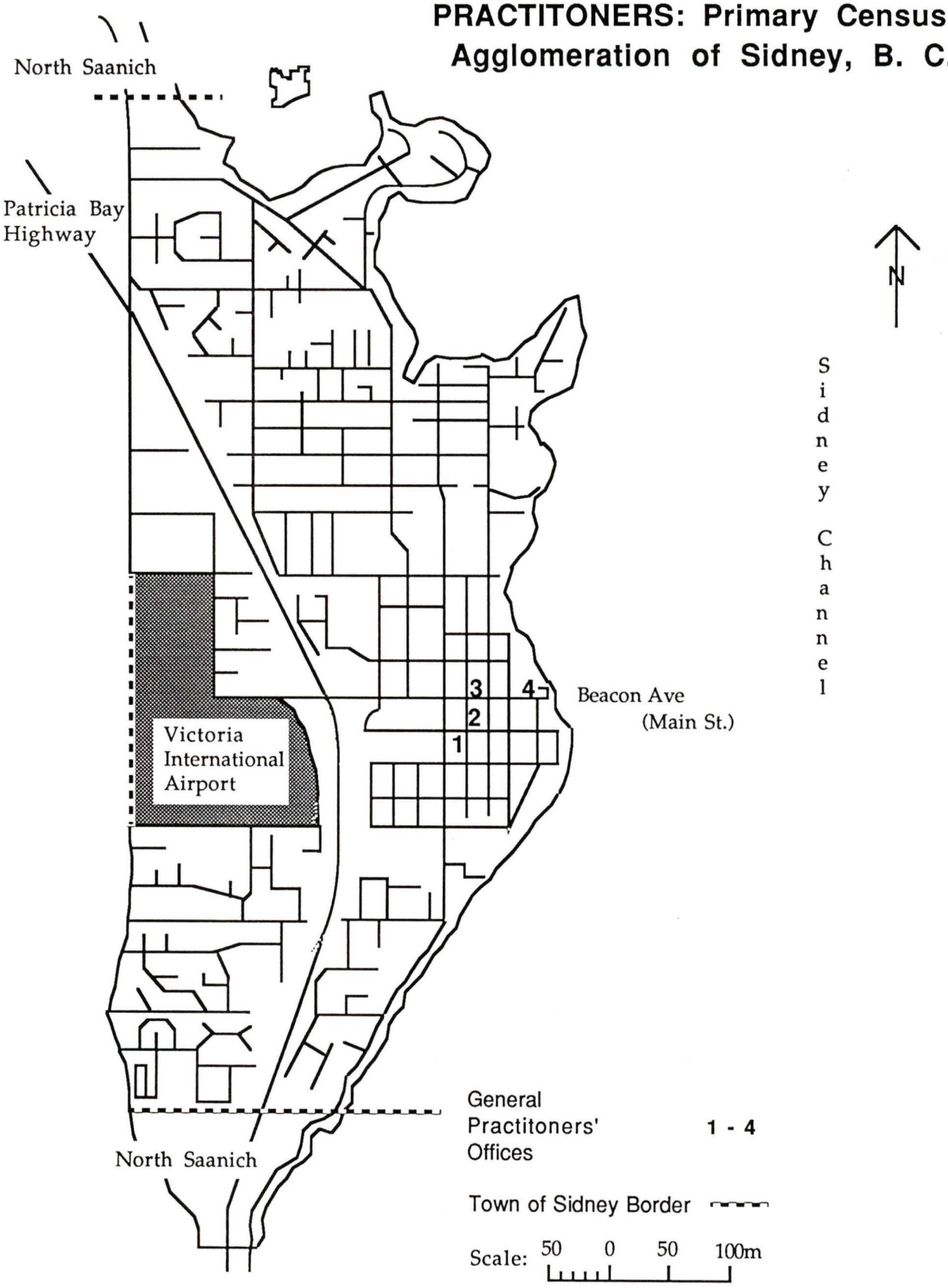
Two major factors appear to affect why the subjects change their general practitioners. The first is the subject's change of residence. Fifty-two per cent (n=38) changed their physicians within one year of the time they moved to Sidney or to their present addresses in Sidney. The second is the retirement and replacement of their previous general practitioner. This second reason accounted for fifteen per cent of the changes in physicians (n=12). Ten years was the average time the sample had been with their doctors. Approximately eighty-five per cent (n=60) of the respondents had been with their physicians for more than two years. Among the fifteen per cent (n=11) who had changed within the last two years only one individual did not select a doctor who had an office in Sidney. Three individuals stated specifically that they had been dissatisfied with their general practitioners and had found others, one in Victoria, a friend of the family, and two in Sidney, of their own gender.

4.4 AVAILABILITY

Availability directly affects accessibility. All the offices of general practitioners in Sidney PCA are located within the boundaries of the town. They operate from four discrete locations (Table 4.16 and Figure 4.1). The town has fourteen general practitioners, or approximately one per

Figure: 4.1

LOCATION OF GENERAL PRACTITONERS: Primary Census Agglomeration of Sidney, B. C.



1200 residents which can be considered a satisfactory standard of availability.[3]

TABLE 4.16
LOCATION OF GENERAL PRACTITIONERS IN THE PCA OF SIDNEY*

LOCATION 1 2425 Bevan Ave	LOCATION 2 9775 Fourth St.
Cadger, E.M. Farmer, U.V. Groves, J.S. Mofoot, A.G. Smith, L.W. Walsh, P.B.	Burke, J.H. Cowan, L.Y. Cowan, C. Dimoff, S. Izzat, J.A.
LOCATION 3 **2453 Beacon Ave.**	**LOCATION 4** **2506 Beacon Ave.**
Hartick, T.R. Marsh, A.A.	Lebbetter, T.A.

*See Table 5.1 for corresponding environmental data for these locations.

4.5 POTENTIAL ACCESSIBILITY

4.5.1 Effective Accessibility

Medicare provides fee free service for appointments with the general practitioner as part of the health care plan. Any economic costs are therefore related to transportation costs (National Advisory Council on Aging, 1991:69; Hodgart, 1978). When asked if it cost money to get to their family physician more than eighty-five per cent (n=62) said it did not cost any money. When probed to acknowledge gas, maintenance, and automobile insurance and other costs ninety-nine per cent (n=73) said the cost was affordable. One individual who has just started to use a taxi as her mode of transportation to the doctor's office indicated that transportation costs were too high (this

individual did not know about the Peninsula Community Association or handydart services). For all cases, only bus and taxi expenses were known; costs of operating an automobile were unknown but considered affordable by all automobile users.

4.5.2 Hours of Operation

The normal hours of operation for general practitioners is similar to that of other professionals providing a public service. This is typically Monday through Friday from approximately 9:00 in the morning to 5:00 in the evening. These hours of business define part of the physician's availability. In addition, however, house calls increase that availability if they are made. Six individuals had asked their physicians to make house calls and in all cases the house calls were made. To identify another potential problem with availability, the subjects were asked if there had been somewhere else they had to go to receive the services they would normally expect to get from their general practitioners. Approximately ninety per cent (n=66) had not. Six of the eight used the local hospital, and of the two others, one had seen her previous physician, and the other had visited a general practitioner in the same medical building as his own regular doctor. These alternative arrangements occurred only once for each individual. All subjects indicated that they visited their doctor as often as they would like.

4.6 LOCATIONAL ACCESSIBILITY

For the majority of subjects the doctors they used were located in Sidney (n=60). The farthest any subject (n=6) travelled was to the city of Victoria (Figure 4.2). Of these, five were "relict patterns" (pattern of use based on previous residential location) and one general practitioner was selected by the respondent because he was a family friend. All but one of the subjects who had family doctors outside Sidney had cars in the households in which they resided. Contrary to what might be expected because of mode of travel, there was no significant difference in the location of general practitioners for men

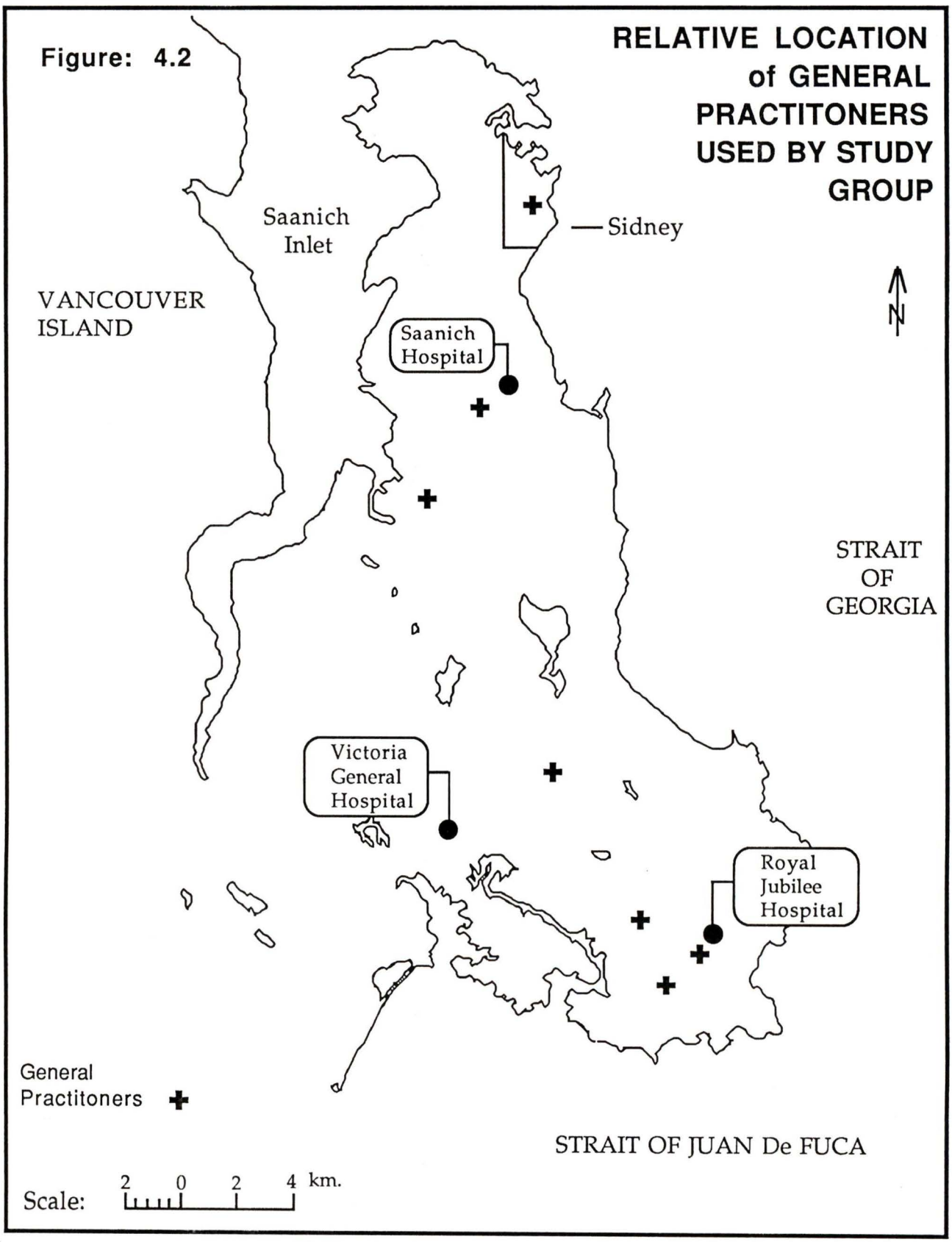


Figure: 4.2
RELATIVE LOCATION of GENERAL PRACTITONERS USED BY STUDY GROUP
Saanich Inlet
Sidney
VANCOUVER ISLAND
Saanich Hospital
N
STRAIT OF GEORGIA
Victoria General Hospital
Royal Jubilee Hospital
General Practitoners
STRAIT OF JUAN De FUCA
Scale: 2 0 2 4 km.

and women (Table 4.17). Similarly, there was no significant difference in the amount of time it took to get to the general practitioner's office for men and women (Table 4.18). There is one missing observation because one individual could not identify the time it took to visit a general practitioner. Although it is not known if mobility was a determining factor in the process of choosing a family physician, Table 4.19 indicates that four individuals with limited mobility went outside Sidney.

There was, however, a significant difference in mode of travel between men and women (Table 4.20). As a primary mode of transportation almost three-quarters (n=53) of the subjects travelled by private car and slightly over one-quarter (n=19) walked. Of those who walked, fourteen owned cars and eight of these people drove cars as a secondary mode of travel. Two subjects used the bus and no one used a taxi[4] or any other mode as their principal transportation. Taxis were used as an alternative by four individuals, and of these two owned their own automobiles.

TABLE 4.17
GENERAL PRACTITIONER LOCATION BY GENDER AND AGE

	GENDER					
LOCATION OF	MALE		FEMALE		TOTAL	
PHYSICIAN	(N)	%	(N)	%	(N)	%
SIDNEY	(30)	77	(30)	86	(60)	81
SAANICH PENINSULA	(5)	13	(3)	8	(8)	11
VICTORIA	(4)	10	(2)	6	(6)	8
TOTAL	(39)	100	(35)	100	(74)	100
	AGE					
LOCATION OF	75-84		85+		TOTAL	
PHYSICIAN	(N)	%	(N)	%	(N)	%
SIDNEY	(51)	80	(9)	90	(60)	81
SAANICH PENINSULA	(7)	11	(1)	10	(8)	11
VICTORIA	(6)	9	(0)	0	(6)	8
TOTAL	(65)	100	(9)	100	(74)	100

TABLE 4.18

TRAVEL TIME IN MINUTES TO GENERAL PRACTITIONER BY GENDER AND AGE

	GENDER					
TRAVEL	MALE		FEMALE		TOTAL	
TIME (minutes)	(N)	%	(N)	%	(N)	%
< 15	(31)	79	(26)	76	(57)	78
15 < 30	(7)	18	(6)	18	(13)	18
30 < 60	(1)	3	(2)	6	(3)	4
TOTAL	(39)	100	(34)	100	(73*)	100

	AGE					
TRAVEL	75-84		85+		TOTAL	
TIME (minutes)	(N)	%	(N)	%	(N)	%
< 15	(49)	78	(8)	80	(57)	78
15 < 30	(11)	17	(2)	20	(13)	18
30 < 60	(3)	5	(0)	0	(3)	4
TOTAL	(63)	100	(10)	100	(73*)	100

* 1 missing observation

TABLE 4.19

GENERAL PRACTITIONER LOCATION BY MOBILITY

	MOBILITY					
LOCATION OF	UNLIMITED		LIMITED		TOTAL	
PHYSICIAN	(N)	%	(N)	%	(N)	%
SIDNEY	(31)	76	(29)	88	(60)	81
SAANICH PENINSULA	(5)	12	(3)	9	(8)	11
VICTORIA	(5)	12	(1)	3	(6)	8
TOTAL	(41)	100	(33)	100	(74)	100

TABLE 4.20

TRANSPORTATION MODE TO GENERAL PRACTITIONER: BY GENDER AND AGE

	GENDER*					
MODE OF	MALE		FEMALE		TOTAL	
TRAVEL	(N)	%	(N)	%	(N)	%
CAR	(33)	85	(20)	57	(53)	71
BUS	(2)	5	(0)	0	(2)	3
WALK	(4)	10	(15)	43	(19)	26
TOTAL	(39)	100	(35)	100	(74)	100
	AGE					
MODE OF	75-84		85+		TOTAL	
TRAVEL	(N)	%	(N)	%	(N)	%
CAR	(48)	75	(5)	50	(53)	72
BUS	(0)	0	(2)	20	(2)	3
WALK	(16)	25	(3)	30	(19)	25
TOTAL	(64)	100	(10)	100	(74)	100

*Chi square = 11.374 p = .003

A medical appointment involves several activities:.travelling to and from the office, waiting for, and finally visiting with the doctor. For the well or ill old-old this experience has been identified elsewhere as potentially tiring. If the energy required in visiting the doctor is greater than the individual feels he or she can manage comfortably the decision to see the physician may be postponed. The time spent in travel was compared with the amount of time the subjects had identified they felt comfortable travelling. The results showed that no one travelled for a period longer than he or she had indicated as physically comfortable. The average time spent waiting in the reception area to see the doctor was determined to be approximately fifteen minutes. For four of the subjects their stated average waiting time was between thirty and sixty minutes. The actual time that the subjects spent with their general practitioners in the office was never identified as too long to be tiring. All interviewees rated their methods of transportation to their general

practitioners as "good", with the exception of one individual who did not enjoy having to rely on his wife's driving while he was recuperating from an operation. All but one subject indicated that the visit to the general practitioner's office was not physically exhausting.

As another indicator of accessibility, subjects were asked if they would use a public transit service to go to and from their doctors' offices in place of the method they were using at the time of the interview. Over ninety per cent (n=68) said they would not. Four individuals specifically stated that when they could no longer drive their own cars they would like to have such a service. An unsolicited response to the above question by almost half (n=37) of those interviewed indicated that, while they would not use a door to door service now, they might in the future. Of the five who would use such a service four were women. Subjects also were asked to describe the general transportation circumstances for others of their age in Sidney. One individual described the situation as poor, one said it was fair to poor, depending on where one lived in Sidney, and four described it as fair, the great majority of those responding felt it was good.

As a final measure of locational accessibility subjects were asked if they had ever avoided going to their general practitioners because of distance, bad weather or the unavailability of transportation. In all cases for all three questions the response was negative.

In an open ended question subjects were asked to provide details of any barriers or obstacles which they felt inhibited them in any way from getting to their general practitioners comfortably. These answers will be presented in the participant observation research analysis, in order to provide a better context for understanding them.

4.7 REVEALED ACCESSIBILITY (Utilization)

Felt need was determined by inquiring as to whether or not the subjects felt they saw their family doctors as often as they wanted to. In all cases the answer was yes. The expressed need of the subjects was measured by the

number of visits made to the family physicians. The mean number of visits during the six months prior to the interviews was approximately four. This ranged from no visits (n=10) to ten or more visits (n=8), with a maximum of fifteen. Women visited their physicians less often than did men and the older participants visited less than the younger. These results reflect the expected pattern (Table 4.21), but house calls or medical services received from anyone other than the subject's primary family physician are not included[5].

TABLE 4.21

FREQUENCY OF VISITS TO DOCTOR BY GENDER AND AGE GROUP DURING THE PAST SIX MONTHS

	GENDER				AGE GROUP			
FREQUENCY	MALE		FEMALE		75 - 79		80+	
OF VISITS	(N)	%	(N)	%	(N)	%	(N)	%
0 - 2	(15)	39	(21)	60	(23)	47	(14)	56
3 - 6	(13)	33	(9)	26	(14)	29	(7)	28
7 - 10	(4)	10	(4)	11	(6)	12	(2)	8
11 - 15	(7)	18	(1)	3	(6)	12	(2)	8
TOTAL	(39)	100	(35)	100	(49)	100	(25)	100

In summary, results obtained from the sample deviate from other surveys principally because of the requirement that only individuals who lived independently were interviewed. The self rated health level was higher than that of the national average, because of the requirement of independent living. The results from the application of the Activities of Daily Living scale indicated a lower level of performance of these activities with advancing years. Self rated mobility also was shown to be associated with health. A larger number of individuals had automobiles at their disposal than was expected. Additionally, the number of women with automobiles was also greater than expected. Nonetheless there was a statistically significant

difference between the genders, indicating higher rates of automobile ownership and licensing among males.

The availability of and accessibility to physicians was for the most part of little moment. In excess of ninety per cent of the subjects chose their physicians in the Saanich Peninsula and slightly over eighty per cent had doctors in Sidney. The means of travel and travel times were typically satisfactory. Utilization rates reflected interview responses that accessibility needed only minor improvements for the old-old in Sidney.

ENDNOTES

1 In the sample no individuals who were married had spouses who were living in other residences.

2 All of the subjects who were living with people other than their spouses were women.

3 Table 2.2 refers to all physicians and population per physician by province. This cannot be compared with general practitioners only who are operating in the small study area of Sidney.

4 One individual's mode of transportation had just changed to the taxi. This individual's son had recently moved out of town and was no longer able to drive his mother as he had in the past. During the period about which the subject was being asked (the previous six months) the son's automobile had been the normal mode of travel. However, the situation had changed with her son's move and it did not appear likely that he would be able to drive her in the future.

5 One subject had two family physicians, one whom she had before her husband's death and one obtained afterwards. Although she saw her newer doctor most regularly, she had visited her previous physician recently.

CHAPTER 5

5.0 PARTICIPANT OBSERVATION, MICRO-ENVIRONMENT, AND REPLIES TO A FREE RESPONSE QUESTION

This chapter is designed to address three aspects of the research. Participant observation experiences, the micro-environment in and around the general practitioners' office, and comments made with respect to a free response question are discussed.

The goal of the participant observation was to determine as closely as possible the total experience of some of the subjects as it related to the trip to and from the general practitioner. The nature of the sub-sample included a planned mix determined by mode of transportation to the family physician and self rated mobility. In the first part of the chapter a description of the travel experience and relevant personal data are provided for each individual in the order that they were seen[1]. The second section of the chapter describes in significant detail the environment with which any patient using the services of a general practitioner in Sidney must interact. The third section deals with the participants' comments in the free response question concerning what they felt worked or did not work for them in obtaining services from their general practitioners.

5.1.1 Case 1: Mrs. K

Mrs. K is an eighty-one year old widow of five years and has lived in Sidney since her husband's death. She has lived at her present address for one year. Mrs. K has a daughter who lives with her and is willing to drive her mother. Although Mrs. K has a driver's licence and access to a car, her preferred method of local travel is by foot. Alternatively, for extended travel within the peninsula she prefers to use public transportation.

Mrs. K said that she was in excellent health and had unlimited mobility: her activities of daily living scale (ADL) score was eight out of eight. To help

understand Mrs. K's mobility and energy it should be noted that she normally walks at least seven times a week for up to an hour at a time. She does this in order to visit with friends and relatives and for the enjoyment of walking.

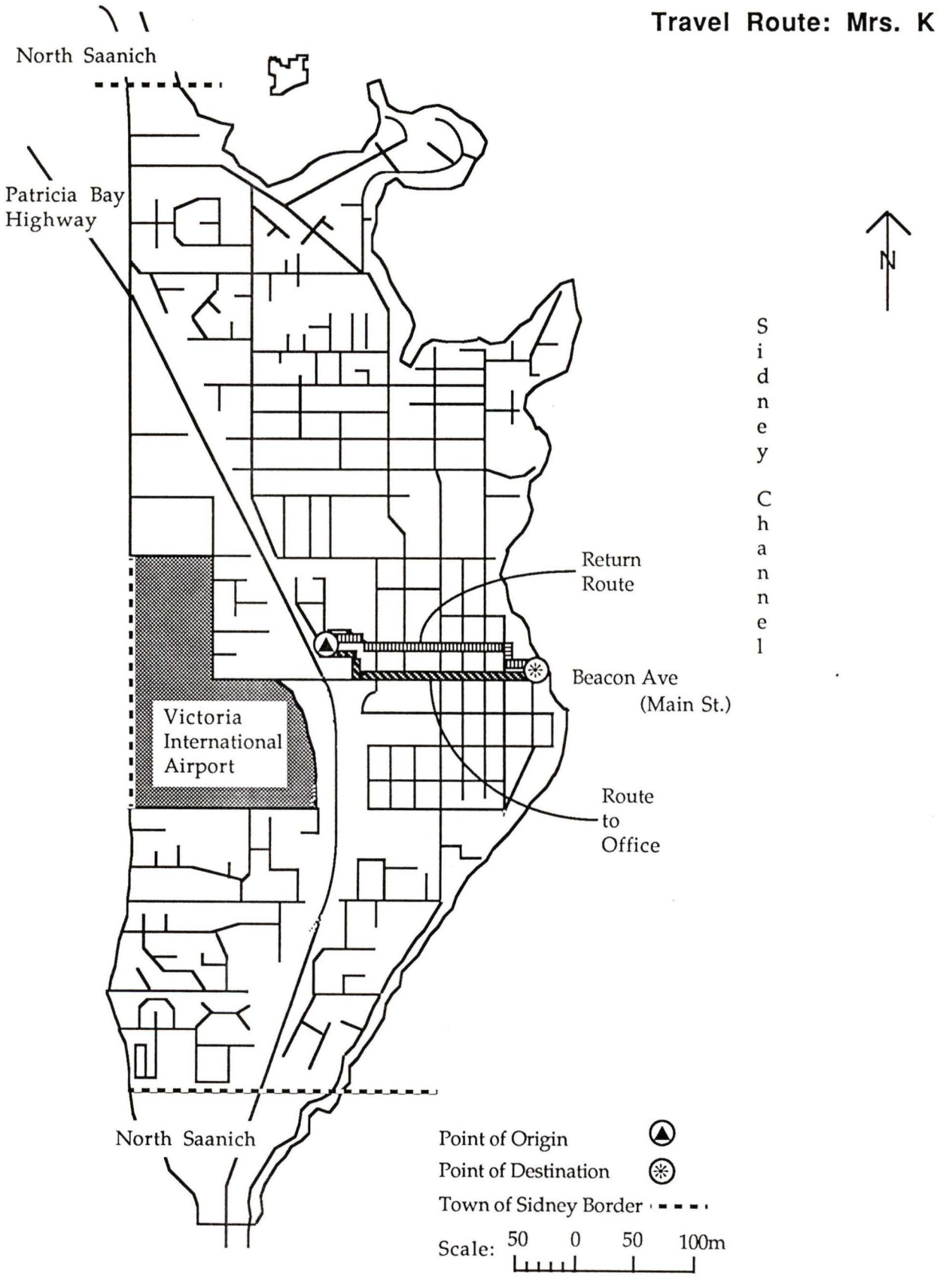
The walk to the doctor's office with the subject took place while the weather was cloudy, with frequent sunny periods, the temperature was approximately sixteen degrees and there was no appreciable wind. On this midweek day both foot and vehicle traffic were identified by Mrs. K as being typical during her walks to the doctor's office. When Mrs. K originally moved to Sidney her home and doctor's office were in the same building. She selected this physician as her family doctor at that time and has been using him since. At present she averages a visit to the doctor once every two and one-half months.

The nature of the walk to the doctor's office included a wide variety of walking surfaces and conditions. One condition which was absent in the environment was any significant grade. Mrs. K departed her no-step house located at the end of the street, walked down the asphalt driveway and crossed the south end of the cul-de-sac onto an approximately two-metre wide strip of ground typically found at the shoulder of a road (Figure 5.1). The ground was trodden down where others had walked the same route, weeds grew wild and the surface was slightly furrowed. There someone had detached the fence which now allowed passage to a paved path used by both pedestrians and cyclists. Mrs. K stopped as we were about to step onto the path and checked the pathway for cyclists which she remarked were of some concern to her. The asphalt way was in minor disrepair. The surface in places was uneven and broken and plants were beginning to break through. This condition posed no problem for Mrs. K. Stepping over a low concrete divider ,the type often used to define parking stalls, she cut across the back of a service station's paved parking lot (100 metres). Mrs. K was aware of the traffic around her.

She walked along the sidewalk of the main street of Sidney at a pace such that she overtook a number of other pedestrians of varying ages. Walking on the sidewalk was no problem: Mrs. K manoeuvred around both stationary and slower pedestrians. The crossing of street corners with traffic lights was done without difficulty: when Mrs. K crossed at a "don't walk" sign she

Figure: 5.1 SIDNEY, BRITISH COLUMBIA

Travel Route: Mrs. K



suggested, when asked, that there was no hazard and therefore no reason to wait. At the same time she made no use of the curb cuts located at the corners. Where there were no light controls at street crossings the subject made certain that it was safe before proceeding.

The doctor's office was in a building which provides commercial, retail, professional and residential functions. Entry was made by way of a covered entrance where there was a metal framed, glass door and doorway typically found in these buildings. The door was held open by a wedge being placed under it. When asked, Mrs. K said that opening the door was no problem.

Once inside Mrs. K turned to the left, walked two metres to the elevator and pressed the call button. Obviously the elevator had been designed for use by people with varying levels of physical capabilities. On the control panel floor numbers were indicated in three ways. These were standard electrically lit buttons and both raised and Braille symbols existed. In addition to the different types of symbols, the control buttons were placed at a convenient height so that people in wheelchairs could operate them easily.

The doctor's waiting room was a straight six metres walk from the elevator, the floor was smooth and polished, but not slippery. The door to the reception area was closed, but presented no difficulty for opening. Mrs. K arrived for the appointment about five minutes early, announced herself to the receptionist and sat down. The subject, when asked, suggested that there were no problems or discomfort with either moving within the building or the waiting area. The room was a comfortable temperature, there were sufficiently comfortable chairs, the floor was carpeted with a low level loop pile, and the room was well lit. The receptionist called for Mrs. K at her appointment time.

At the end of the twenty minute visit the subject mentioned that after an appointment with the doctor she often visited friends in the neighbourhood and returned home using an alternate route. Returning by that route meant walking under different conditions to those experienced on arrival. On this occasion Mrs. K took the alternate route, but did not stop to visit her friend. Exiting at the rear of the building Mrs. K descended a smooth paved surface

with an easily managed incline. At the opposite end of the paved parking lot Mrs. K climbed six stairs with no difficulty. Here she crossed the street diagonally and proceeded towards home. As there was no sidewalk Mrs. K walked along the street close to the curb. The road, she said, was a smoother walking surface than the ground. When we reached a length of road closer to her home that recently had been re-paved (within the past 24 hours) she was quite prepared and able to walk along the side which was uneven and covered with grass, weeds, and small stones or gravel. Crossings of the uncontrolled but marked intersections were handled easily. She encountered a truck travelling parallel and in the same direction which was about to make a right hand turn in front of her, at the same time as traffic moving perpendicular to her was crossing her path. Mrs. K exercised caution in crossing the street, even though she had a legal right of way indicated by a well marked cross walk. Only after being waved on by the truck driver did she proceed across the street, still exercising caution by looking both ways for more traffic. As she neared her house she crossed the street in a manner known as "J-walking." This was done so she could take a short cut across a field. This meant climbing over a fence which was in disrepair but still required stepping over slats 0.30 metres high. From here she walked across a level stretch of ground (100 metres) into her own back yard and to the back door of her house.

For Mrs. K the built environment appeared to provide no obstacles or barriers for access to her doctor's office. Her ability to negotiate and travel in the town was quite similar to that of any adult. Traffic, both foot and vehicle, was neither confusing nor disorienting. The only concern she expressed was related to the cyclists on the path in front of her home. The changes in elevation as the result of curbs, stairs, or stepping over a broken fence were negotiated easily. The doctor's office building and reception area posed no difficulty. Getting into and waiting in the reception area was simple and without inconvenience. Mrs. K was able to carry on a conversation for the entire walk, never appearing to be short of breath or exerting herself. She rated this method of travel to her doctor as good and felt comfortable with the knowledge that she could drive herself, or ask her daughter to drive if necessary.

5.1.2 Case 2: Mrs. Z

Mrs. Z is a seventy-eight year old widow of twenty-two years who has lived in Sidney at her present townhouse address for just over one year. Mrs. Z rated herself as in fair health with limited mobility. Mrs. Z's mobility limitation is a result of arthritis in her legs (a cane is used for walking). With the exception of a part time housekeeper to do heavy chores, Mrs. Z was able to meet all her own needs of daily living.

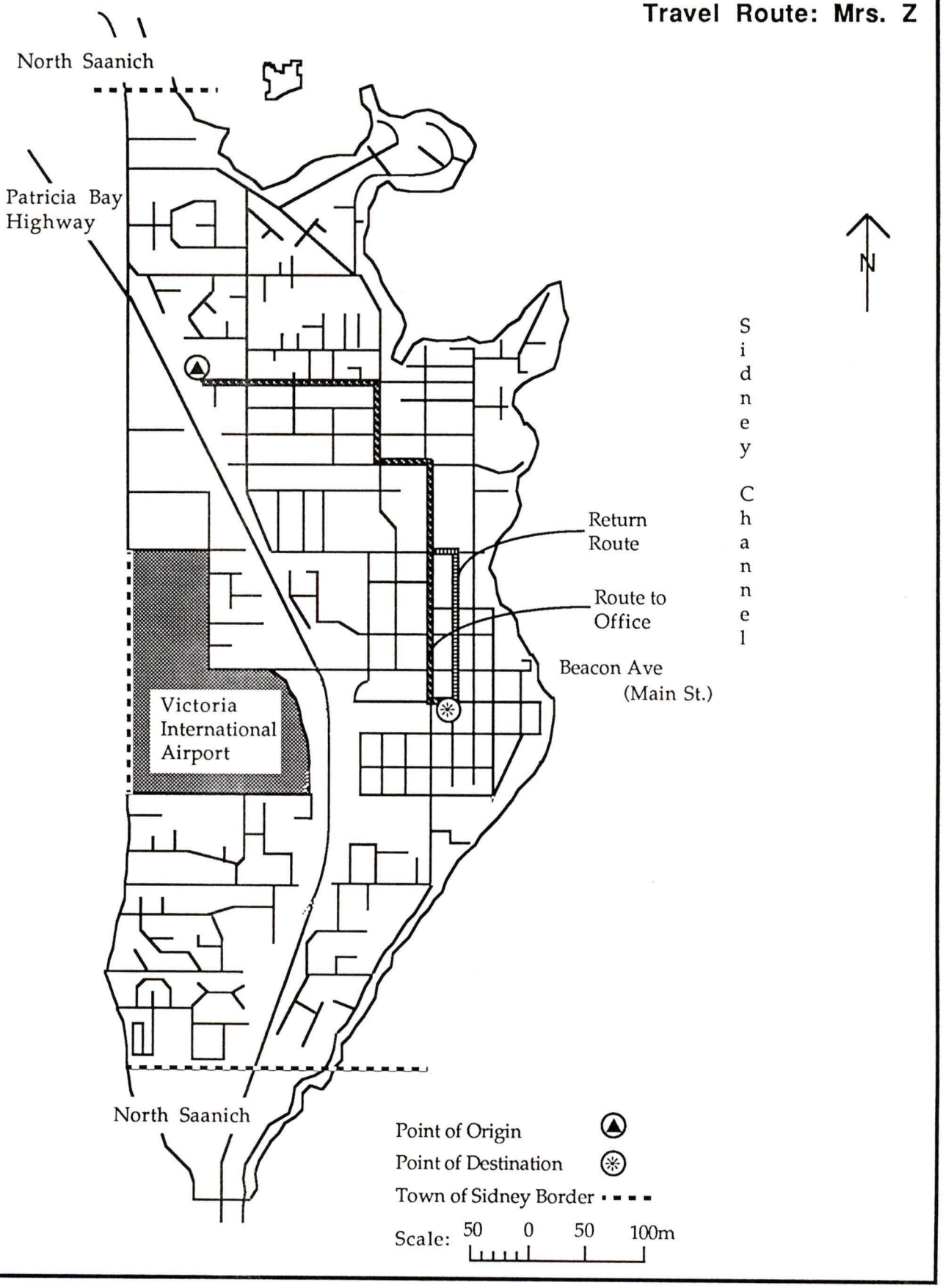
When Mrs. Z first moved to Sidney her family drove her to the doctor's office on average once a month. Recently, however, the family has moved out of town. She felt unfortunate that she did not have access to a car. Now she takes a taxi to her doctor's office. The use of a bus is precluded for Mrs. Z because of the distance the bus stop is from her home (2 blocks) relative to the distance which she can comfortably walk (around her property). When her transportation needs coincide with those of neighbours she often gets rides with them. That is an opportunity she feels is unreliable, and as yet untried with respect to getting to the doctor's office.

The taxi was called approximately ten minutes before Mrs. Z wanted to leave. When the taxi driver rang the doorbell to announce himself Mrs. Z walked to the waiting taxi (18 metres) from her door. The entrance to the house was covered, but the concrete walkway was not. The concrete surface was dry, but when wet is not slippery or difficult to walk on, Mrs. Z stated. The day was sunny, clear, there was no noticeable wind and the temperature was in the high teens. The driver did not appear to rush his client either verbally or with body language. He held the door open for her while she got in. The entry was somewhat awkward but not physically uncomfortable. The traffic was described as being average by the taxi driver. The trip to the office appeared typical (Figure 5.2). The driver took Mrs. Z to the front door of the doctor's building, and opened the taxi door for her. The exit from the taxi was awkward, but without discomfort. The trip took eight minutes. Mrs. Z walked three metres to the outer door of the doctor's building. The entrance was a flat even surface. The door was closed, but an individual exiting the building held the door open while she entered. When asked about the door

Figure: 5.2

SIDNEY, BRITISH COLUMBIA

Travel Route: Mrs. Z



the subject said it was difficult, but possible to pull open. The no step interior door to the reception area was held open with a wedge and provided no difficulty for entry. Mrs. Z was seven minutes early for her appointment.

The reception area was easily approached. The area was furnished with comfortable chairs and although the office was busy, there were enough seats. Mrs. Z commented that the reception room was cool and she felt an uncomfortable draft. In addition, she later mentioned that the doctor's examination room was cold. While the reception room was bright and otherwise comfortable, Mrs Z said that she had once caught her heel in the carpet pile and thought that another surface might be better suited for the office.

After her medical appointment was completed (16 minutes) the receptionist phoned for a taxi which took only five minutes to arrive. The driver came into the office, asked for Mrs. Z and appeared in no way trying to hurry his client. He held the outer door open and also opened the car door. The return trip was similar to the one on arrival. It was of equal length and without incident or difficulty.

Mrs. Z identified the degree of strength normally required in opening the outer door to be excessive. The temperature of both the reception area and examination room and the nature of the carpeting she described as minor problems. She did comment that the trip to and from the doctor by taxi was approximately nine dollars and that "it added up quickly for a pensioner." When asked if she used volunteer drivers from the Peninsula Community Association (PCA) or the handydart service she said that she was unaware of both services. Mrs. Z, although walking with a cane because of her arthritis, was quite able to get to and from her doctor's office with the use of a taxi, and although she considered it costly she rated it as good.

5.1.3 Case 3: Mr. C

Mr. C immigrated to his present address in Sidney from the United Kingdom eight years ago. He is an eighty-five year old widower who moved

here shortly after his wife's death. Mr. C assesses his health as fair and his mobility as limited. Although he has a housekeeper who comes in once every two weeks, Mr. C is capable of doing his own housework. He walks for approximately thirty minutes six times a week and works in his flower and vegetable garden frequently.

Mr. C had a British driver's licence, but he did not apply for a new one when he came to Canada. He has a friend who drives him to church and his housekeeper occasionally drives him to the grocery store. He reports that riding in a car for approximately 30-45 minutes is quite comfortable, but "after that it can be somewhat uncomfortable." Mr. C has two primary methods of travel, the local bus service, which he uses approximately three times a week, and walking. When going to town Mr. C uses a cane for extra support. He has had the same doctor for the eight years he has lived in Sidney and his medical needs are such that he visits the doctor every two weeks. These visits almost always are made by bus.

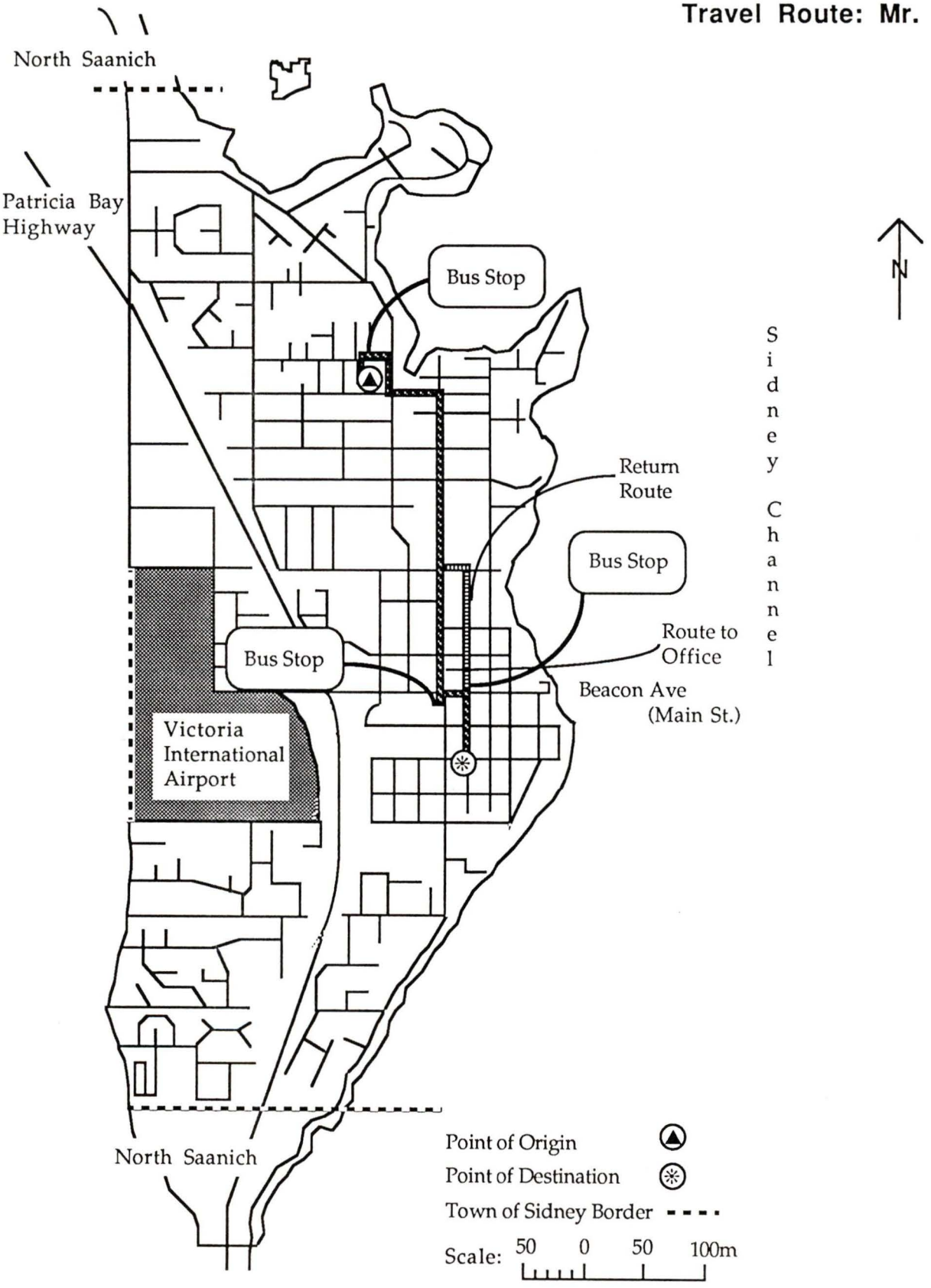
The bus service which he uses runs every hour near the hour. Mr. C, therefore, times his departure from home to coincide with the bus schedule, which he said was very reliable. Leaving home Mr. C walked down his asphalt driveway to the paved road (Figure 5.3). This part of the road is a cul-de-sac and had no traffic at that time (there is no sidewalk). At the end of the cul-de-sac there was a concrete pedestrian walk in good repair which ended at a section of undeveloped mowed grassland. This terrain was slightly uneven and there was a well worn footpath leading directly to the opposite side of the field, Mr. C's intended direction. At the opposite side of the field the path to the street was covered with loose gravel, dirt, and grass. The bus stop Mr. C used is immediately in front of the path's exit. Up to this point the walk was easily negotiated. Mr. C was cautious where the ground was most uneven, but it was easily managed in four minutes.

The bus stop had neither a bench nor shelter. On this occasion the wait in the open was not a factor. The weather was slightly overcast, mild (mid-teens), and there was little wind. He waited a four or five minutes for the bus to arrive. The step up from the curb onto the bus was small and required a minimum of effort to embark. Both sides of the doorway had handles and

Figure: 5.3

SIDNEY, BRITISH COLUMBIA

Travel Route: Mr. C



Mr. C used one of these as an aid in entering the bus. The driver waited until Mr. C was seated before leaving the stop. This meant that balance, which has been identified as a problem for the elderly negotiating bus rides, was not a problem. Mr. C said that it was rare when he had to stand in the bus. The windows were large and clear, making it easy to see where he was. It took six minutes to arrive at the stop closest to the doctor's office. The traffic on the road and the bus ride was described as being typical.

Mr. C easily disembarked, as his weight on the step at the exit opened the door. For Mr. C this meant that he did not need his hands to open or hold open the door, thus making it easy for him to step down and out of the bus. The bus stop was on the southwest side of an intersection; Mr. C wanted to be on the south-east side. He walked back to the corner of the street from the bus stop and crossed (east) with the traffic lights (the manual pedestrian signal was operated by another pedestrian). The street corners had curb cuts which he used to advantage. It was a one block walk (100 metres) to the corner where a turn to the south was required. He then walked to the end of the block (100 metres) where the street was crossed at a crosswalk. There was no automobile traffic interfering with this crossing. Mr. C stepped over the curb and prepared to enter the building where his doctor is located.

Mr. C walked to the closed door of the covered no-step entrance and proceeded to pull it open without any difficulty. The inner office door was open. He announced himself to the receptionist, took a seat and waited to be called. It was nearly forty minutes before Mr. C was called. This was a result of the appointment having been set on the hour. Since Mr. C took the bus on the hour previous to the hour of the appointment he had to wait a long time. Mr. C mentioned that his wait was longer than he normally experienced (30 minute average). When asked about the environment of the reception room's lighting, heating and seating Mr. C said that he found it to be comfortable and convenient.

After the appointment was over Mr. C walked back the way he had come. The only difference was that it was necessary to cross to the north side of Beacon Avenue, the town's main street, where there are motor traffic lights, as well as pedestrian lights. At the bus stop there was no shelter, but there

was a bench which Mr. C used. The return trip was virtually the reverse of the trip to the doctor's office in length of time, direction, and convenience. The bus stop where Mr. C disembarked was slightly farther away from the path's entrance (125 metres) and on the opposite side of the street. Neither of these factors posed a problem. Crossing of the street was done at the corner without the aid of a designated crosswalk. There was no significant vehicle traffic at that time. The walk back to the house differed only in that four young cyclists came towards Mr. C, but they conveniently moved from the path as they neared him. This minor encounter was of no concern to Mr. C.

The whole experience was neither tiring nor difficult for Mr. C. This method of getting to the doctor's office he felt was one which is good and convenient. The time waiting in the doctor's reception room would have been less if the appointment had been set closer to the half hour. Mr. C was never asked if there was a time he preferred, nor did he ask for a time that was more in keeping with the bus schedule.

5.1.4 Case 4: Mr. M

Mr. M is seventy-five years old and has been living with his wife of fifty years in the town of Sidney for the past nine years. They have lived at their present address for five months. Their townhouse is part of a development which contains over ninety units. This community has an occupancy covenant requiring residents to be at least forty-five years old. Mr. and Mrs. M, moved here, in part, to be close to the community hospital and to public transportation.

Mr. M rates his health as fair and his mobility as limited. Recent open heart surgery appeared to be a contributing factor in this self evaluation. While he described himself as "on the mend," he believed it would be another six months before he would change his self rated health to good, which he thoroughly believed would occur. His ability to perform the activities of daily living reflected positively this belief.

Although one of the reasons for moving to their present location was to be close to the bus stop, Mr. and Mrs. M have yet to use the bus. They were looking to the future when they would no longer be able to drive their car. They have one car and both drive. On average the car is used seven days a week. Normally, one spouse would drive to the destination and the other would drive home; Mr. M identified this arrangement as being satisfactory. One of the reasons for their frequent driving is to find a location from which to begin walks. Following the suggestion of his doctor, Mr. M walks two or three times daily, with one of these walks averaging forty-five minutes. Generally, he walks with his wife.

Mr. M has been with his family physician since his arrival in Sidney. Visits to the doctor always are made by automobile. Because of his recent surgery visits early this year were made as a passenger while his wife drove. He averages one visit every six weeks and will continue on this schedule for the next few months. As his health has improved, Mr. M has started driving again. His previous complete reliance on his wife's driving caused him to rate being driven to the doctor's office as unsatisfactory.

On the day that Mr. M was observed going to his medical appointment the weather was sunny, the air temperature was in the upper teens and there was no significant wind (Figure 5.4). Their car is a late model and is full-sized. The subject left the house and locked the door while his wife backed the car out of the garage. The uncovered walkway to the car was an even, smooth surface. Mrs. M drove and Mr. M sat in the passenger seat in the front of the car. At a blind corner within the housing complex a mirror was mounted as a safety aid to improve the driver's vision of any oncoming traffic. This meant that reflex action in response to an oncoming car would not have to be as quick as it would otherwise. The drive out of the housing development was without incident. The driver's skill was of no apparent concern to the participant. The drive to the doctor's office was quite direct and required little in the way of navigational skills. Traffic was described as typical for a weekday. The drive to the office could require as little as travel on three streets with two turns, once out of the residential complex. Mrs. M, however, took a longer route which brought her to the corner of the main street where there were traffic lights. This appeared to be a logical decision and added no

time to the trip, but it added to the safety of it by avoiding an intersection which had only stop signs to aid the control and flow of traffic. The doctor's office has a lot at the rear where the car was parked. At this point Mrs. M went off to another destination while Mr. M started towards the outer office doors. The trip had taken eight minutes.

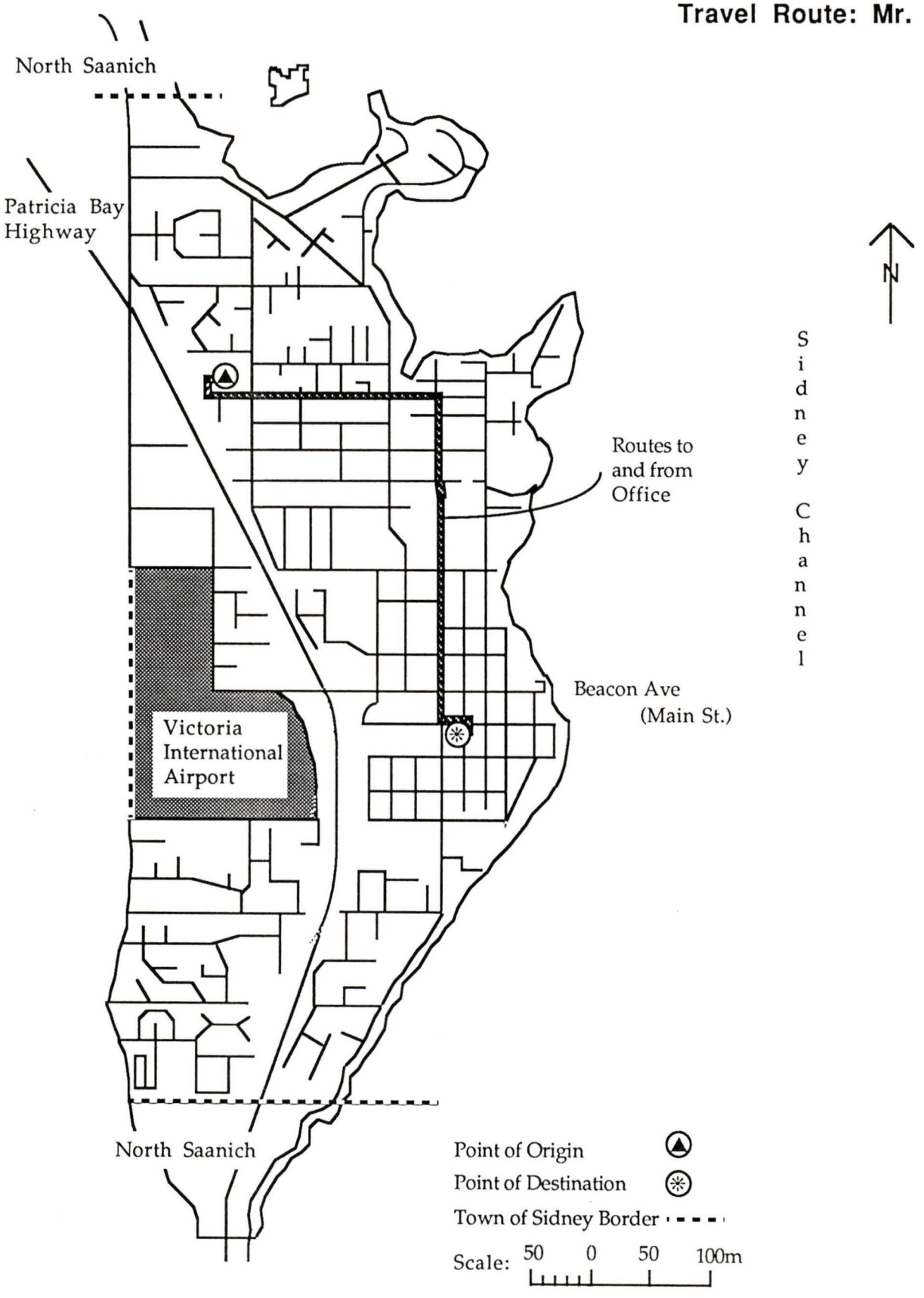
There was activity in the office parking area but it was not a problem to negotiate, since no cars were in motion at this time. The (rear) entrance was level, smooth, and covered with asphalt. Mr. M easily opened the outer door. Inside the outer area the floor was easy to walk on and caused no concern with regard to footing. The door to the reception office was open and Mr. M walked up to the receptionist to announce his arrival. Mr. M was admitted to the examination room precisely on time, but he had arrived ten minutes early for his appointment. The reception room's environment was described as comfortable in terms of lighting, temperature, and seating. This was in response to direct inquiry by the observer; none of these issues had been mentioned before the questions were raised.

When the twenty minute medical appointment was over, Mrs. M was waiting for her husband. Often a trip to the doctor would be a multi-purpose trip and other activities would take place before the return trip would begin. In this case, the trip home was a direct one. It was virtually the reverse of the trip to the office in time, distance, and direction.

Mr. M felt that there were no barriers or obstacles to his visit to the physician when an appointment was made. Mr. M walked with a stability and speed which appeared like that of many elderly adults. A problem that he remarked upon was that it was impossible to see a doctor either in the evening or on a weekend without going to the hospital. He had faced that necessity recently and his wife had driven him to the hospital. As an alternative, Mr. M suggested that if his wife were unable to drive him he could have phoned the emergency number (911) and received adequate transportation.

Figure: 5.4

SIDNEY, BRITISH COLUMBIA
Travel Route: Mr. M



5.1.5 Case 5: Mr. W

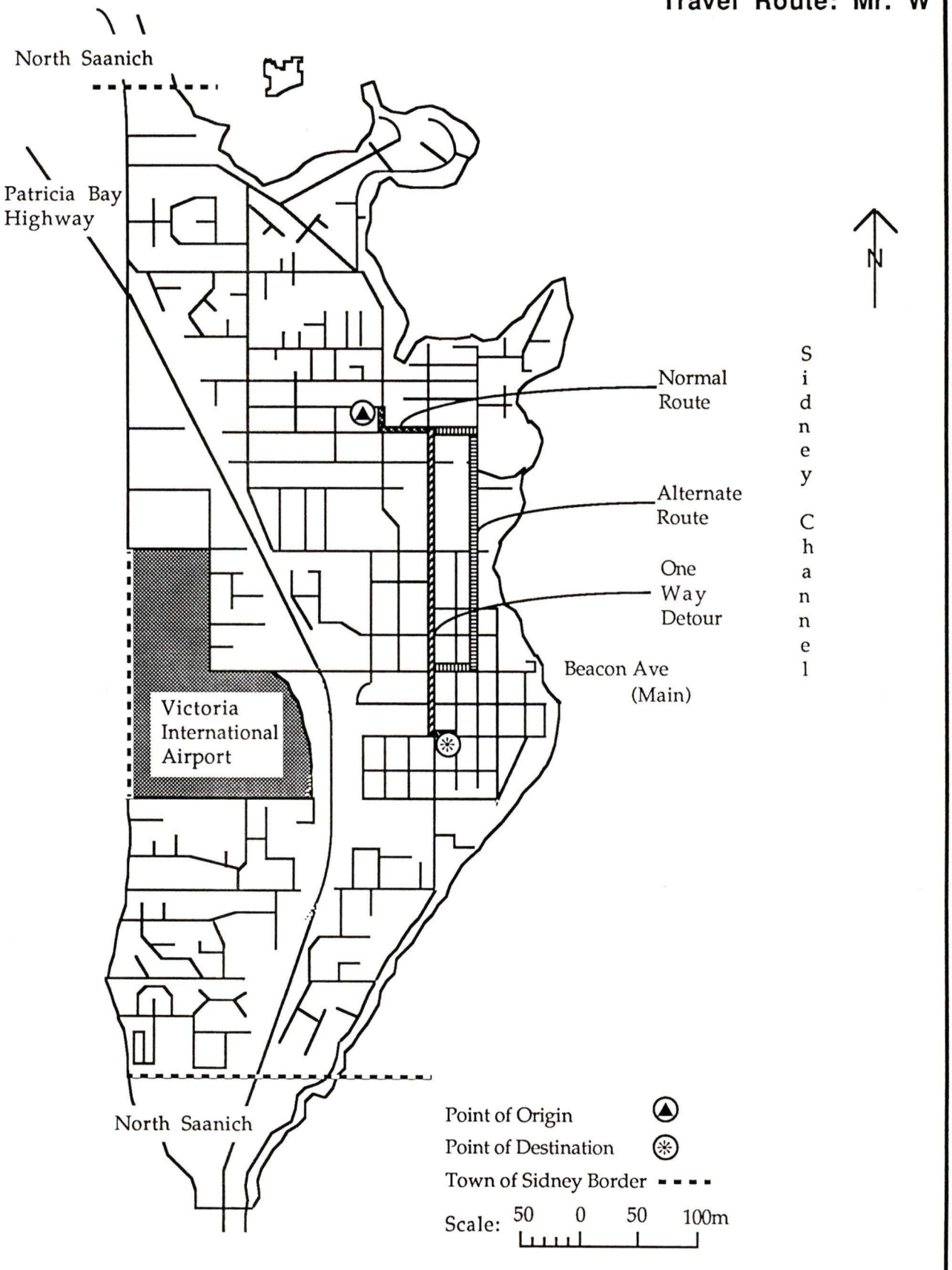
Mr. W is a seventy-eight year old widower of six years. He has lived in Sidney for four years at his present address. Mr. W goes out for walks approximately three times a week for both exercise and the pleasure of getting out. In addition, he uses an exercise cycle regularly and has recorded over 8,000 kilometres on it in the past two years. Mr. W performs all his own domestic chores both inside and outside his home. He has a driver's licence and owns a car which he uses approximately three times a week. He enjoys automobile travel and rates his mobility as unlimited and his general health as good. While he can and does drive at night it is something which he tries to avoid. The local bus stop is approximately two minutes from his home, but he has never used it, choosing instead either to drive or walk to his destinations. As with many of the subjects interviewed, Mr. W has a family doctor near the centre of town. This physician was chosen when he arrived in Sidney, in part because of his proximity to Mr. W's home. His normal medical schedule requires a visit approximately once every two months.

To get to his physician Mr. W always drives. His estimated driving time was ten minutes and his stated average waiting room time was one hour. The trip home was identified as taking approximately the same amount of time as the trip to the office. On the day of the observation the temperature was approximately thirteen degrees, with no significant wind, but a light rain was falling. The appointment was for 15:00.

Mr. W prepared to leave the house at approximately 14:45, in order to arrive at the office in sufficient time without having to rush. The car was in the driveway facing the road (Figure 5.5). It was a full sized two door American model. As he prepared to enter the street, Mr. W was cautious because of children using the road as a play area. Once on the street it was a short distance (20 metres) to the corner where he turned south. Even though driving directly south from there would make the trip to the doctor's office more direct, Mr. W proceeded to the corner, turned east and drove one block. From there he turned south. This was done to take advantage of the traffic lights at the main street which he would have to cross in five blocks. This

Figure: 5.5

SIDNEY, BRITISH COLUMBIA
Travel Route: Mr. W



plan of action supported his interview comment where he described previous lack of traffic lights as a difficulty in getting to his family doctor.

This particular drive to the doctor's office was slightly altered from the normal route taken because of work occurring on one of the roads normally travelled. The detour required a one block diversion to allow Mr. W to use the traffic lights at the main street. This change in his regular driving pattern was apparently easily handled, but it appeared clear that the opportunity of using traffic lights was an important one. Once across the main street, Mr. W drove south one more block. Traffic was light so that when he wished to turn left, across the path of traffic, there was no problem in doing so. Parking was permitted on both sides of the street and it was Mr. W's preference to park as close to the front of the building as he could. While this was a preferred parking place, Mr. W had the options of using the parking lot provided for patrons or parking on an adjacent street. His parking preference was based on the ease of getting back on the route to his home, or other destinations, after his appointment. The trip had taken approximately six minutes.

Mr. W disembarked from his car, walked to the curb and stepped up to the sidewalk without any sign of discomfort or inconvenience; this was verified by direct questioning. It was a short, five metre walk from the car to the office outer door. This, as well as opening the door and walking to the receptionist's station, was done with little apparent effort. While waiting for his appointment Mr. W was asked if he found any inconveniences in entry or in the reception area with respect to design features, furnishings, or his comfort in general. To these questions Mr. W said he found the environment quite comfortable and easy to deal with. After approximately fifteen minutes Mr W was called in for his appointment.

The return trip to Mr. W's home was similar to the trip to the office, and with the exception of the detour which he avoided, it took five minutes. Mr. W said that he often did other chores, such as shopping, when he visited the doctor; on this occasion, however, he returned directly home. Again, in front of his home children were playing on the street and he approached the area with caution.

The entire experience of visiting the family physician for Mr. W appeared to be one which occurred without difficulty. What is notable is that in the interview he stated that the average time spent waiting to see the doctor was one hour.

5.1.6 Case 6: Mrs. L

Mrs. L is a seventy-eight year old widow of four years. She has lived in Sidney for twenty-two years and moved to her present residence, a second floor walk-up apartment, shortly after her husband's death. She maintains her residence by herself and rates her general health as good, but her mobility as limited. Mrs. L has neither a car nor a driver's licence. Access to local goods and services is accomplished by walking, while the public transportation system is used for trips into Victoria. Mrs. L has a married son living in Sidney who is prepared to drive his mother to the doctor, among other places, when she asks, but she rarely uses this option, preferring to be independent.

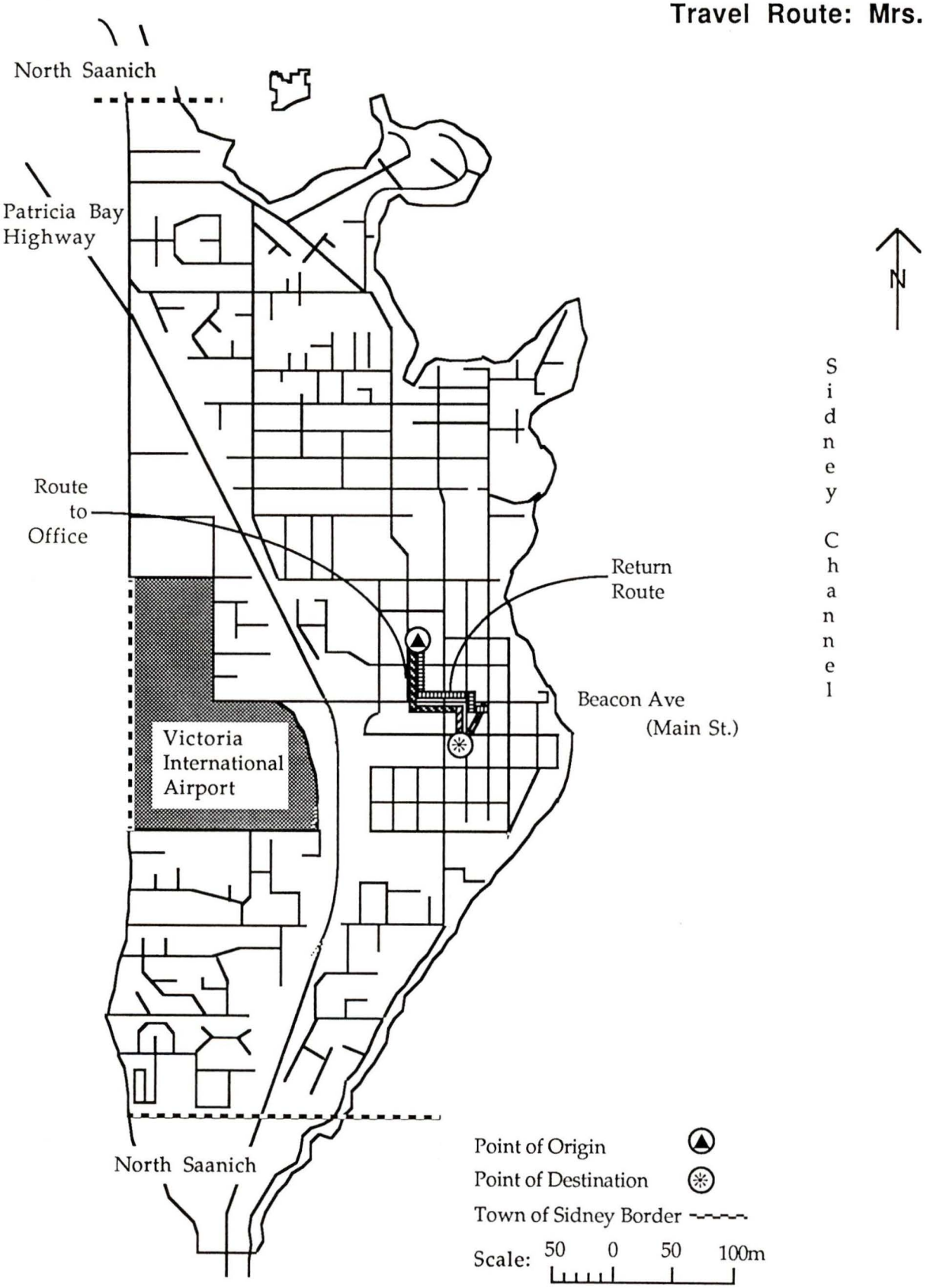
Mrs. L has been seeing the same doctor for ten years, and generally has an appointment at monthly intervals. On this occasion Mrs. L was recovering from a viral infection and was not feeling at her best, but she still felt well enough to walk to her doctor's office. The weather was rainy and windy with a temperature of twelve degrees. The appointment was made on a weekday at 11:20, a time identified as normal for a visit to the doctor.

The trip to the doctor began as Mrs. L entered the carpeted interior hall of her apartment building (Figure 5.6). The walk to the top of the stairs is short, about ten metres. The stairs were easily managed and the handrail was used for security. The door at the bottom of the stairs leads to a concrete entrance pad which is rough enough to provide good traction, yet smooth enough to be easily and comfortably walked upon.

Access from the apartment building to the street is over a space shared by both pedestrians and cars, something Mrs. L did not consider a problem. On this occasion there were no moving cars in the area. The street has a well

Figure: 5.6

SIDNEY, BRITISH COLUMBIA
Travel Route: Mrs. L



maintained sidewalk where she walked (50 metres) to the corner. The sidewalk (100 metres) of the second block had a portion in a poor state of repair, but it posed no difficulty for walking. At Beacon Avenue where Mrs. L crossed there are no traffic lights, but there is a pedestrian crosswalk marked on the pavement and a large traffic sign above it indicating its presence. It should be noted that this crossing is not at the street corner but toward the centre of the block. It was there that Mrs. L exhibited her greatest concern for her safety. Stepping from the curb with caution, she mentioned that "sometimes the traffic does not stop." It was clear that caution was being exercised as she crossed the street. She checked for traffic in both directions. Once across the street she walked along the sidewalk (75 metres). She felt safer walking there than cutting across a parking lot and driveway which she knew to be a shorter route to the doctor's office. This concern was valid. A car came towards her in the driveway from the lot she mentioned as providing a shorter route and approached the street at a speed that concerned Mrs. L. This car made it necessary for her to stop quickly, in order to let it pass by and enter the main flow of traffic. Again, she mentioned the need to pay attention to cars. Although Mrs. L does not use a cane and can easily step over curbs, she is not as agile as a younger person and the sudden stop almost put her off balance. At the next street corner there was a manually activated pedestrian traffic light which Mrs. L stated she always used. The next leg of the journey was walking to the corner, turning south and continuing to the next corner across from her doctor's office building (a total of 200 metres).

There was a crosswalk at the corner indicated by white lines on the road, but there was no overhead sign or light. While Mrs. L was occupying the crosswalk a car drove through it, making it necessary for her to stop in the road to avoid being hit, or coming uncomfortably close to being hit. Again, Mrs. L volunteered that she always watched for traffic when crossing the road because of the potential for a serious accident. When asked, Mrs L stated that the traffic on this day was typical. The building's entrance was clear of any obstructions and the door was not difficult for her to open. Inside there is a hall which serves as an access, on one side to a drug store and on the other to a reception area which services six doctors in general practice. The door to the reception room was open. The floor was level and the doorway did not have a sill. Mrs. L entered, identified herself to the receptionist and sat down to

wait for her appointment. The walk had taken eighteen minutes from the front door of her apartment to the reception area. This meant that Mrs. L was ten minutes early for her appointment. At this time the subject was asked about the weather. The rain and wind were not sufficiently strong to be any more of a problem than deciding what to wear outside, Mrs.L replied. When asked about the office environment in terms of comfort and convenience she replied that it was comfortable and satisfactory. Twenty minutes after arriving she was called for her appointment. After it was complete (thirty minutes) Mrs. L prepared to leave. Upon exiting the reception area it was necessary to go to the drug store across the hall to pay for medication which she had just received. The door was open, easy to enter and the store brightly lit. The invoice had been prepared and the procedure took just a few minutes to complete. When leaving the building Mrs. L indicated that since it was lunch time, she would eat at a local restaurant and then pick up a prescription at another drug store where prices were lower, as she frequently did. The wind and rain had stopped, but the air temperature had not appreciably changed.

The restaurant was on the main street, in the block diagonally opposed to where she was standing. Normally, Mrs. L would use an unmarked rear door to avoid having to walk half way around the block, and this time was no exception. This short cut meant walking through a paved lot similar to the one avoided earlier. When questioned, Mrs. L stated that there was far less traffic here and it was easy to walk near the back of the buildings if traffic were a problem. She entered the unmarked rear door of the restaurant, got her food from a self-serve counter, paid for her meal, found a table and ate her lunch. When finished she left via the front door and walked to the street corner in the direction of both the second drug store and her home. Using the traffic lights she crossed to the diagonally opposed corner. At no time did she appear to have any trouble negotiating the sidewalks or street crossings. Her walking pace was neither slow nor fast. Midway along the block she easily entered the drug store and made a purchase. Completing her trip home required going to the corner (25 metres) of her street and proceeding another block north. From this corner it was a short distance (50 metres) to her apartment building. She easily opened the apartment building door and climbed the stairs to her suite.

The return trip took longer than the trip out because, as was the case with many other subjects interviewed, going to the doctor often is part of a multi-purpose trip. In addition to eating lunch, Mrs. L frequently would meet acquaintances at the restaurant and enjoy social interaction with them. Even though Mrs. L did not stop on her way home to make purchases other than her medication, she often did. Mrs. L did not find the visit to her doctor tiring. During the interview Mrs. L had identified walking as a good way to get to the doctor. Even with the wind and rain on the way and the fact she was recuperating from a viral infection, Mrs. L still considered walking as the best way to get to her appointment. Also she said she knew her son would have driven her if she had not felt up to the walk.

5.1.7 Commentary on the Observations

The participants revealed that very little difficulty was involved in gaining access to their family practitioners. However, what was revealed to the observer was that numerous traffic situations requiring quick responses were potentially hazardous to the old-old. For the six participants the natural environment provided no barriers in getting to the doctor's office but the main street presented traffic hazards. Five of the individuals were required to cross the main street in order to get to their physicians. The sixth, although not crossing the street, walked along it and had to deal with the intersecting traffic. For all individuals the motor traffic was of concern and must be considered the largest single problem.

Pedestrians are vulnerable regardless of whether one is in the right or not. On two occasions Mrs. L felt obliged to yield her right of way to a car for her safety. Her single expressed concern was made in reference to this vulnerability. Mrs. K was not particularly concerned with the traffic as she walked parallel with it on the main street. However, she was not required to cross the main street to get to her doctor's office. She was, nevertheless, aware of the traffic and cautious on her trip home. The expressed concern related not to the volume of traffic, but to the fact that it moved too quickly or

it did not follow the rules of the road. Cars went through occupied crosswalks and did not always yield where they should.

Restricted vision at a well marked crosswalk, which Mrs. L used, also was a problem. She felt that it was difficult for her to see the traffic and for drivers to see her. Because the main street is commercial trucks often are parked close enough to the crosswalks to interfere with a safe lines of vision. No one considered that the pedestrian lights changed too quickly, or thought them confusing.

For an automobile driver the traffic appeared less significant. As a driver Mr. W made certain that he crossed the main street where there were traffic lights. In the interview he identified the addition of these lights as a factor in reducing obstacles to comfortable driving. Mr. and Mrs. M also purposely took a route that brought them to the street corners where there were lights. An unknown detour owing to road work did not pose a problem for Mr. W when he came upon it. It appeared that he assessed the situation, determined his course of action and carried it out with no problem. Only Mr. W encountered children playing on the street and this posed no problem. Finding a parking place and parking were not difficult for either driver. For both of these individuals and Mrs. Z the walking environment was almost entirely limited to the private property of the buildings in which their respective doctors worked.

Bus travel appeared to be a satisfactory experience for the single participant using the service. For Mr. C the bus stop was conveniently close to home, the walking surface to the bus stop provided adequate footing, although it was not perfectly smooth and hard. The scheduled arrival time was accurate and frequency was acceptable. The bus design and the attitude of the driver also contributed to its convenience. The distance between the bus stop and the doctor's office required a short walk equal to approximately half a block. Although it was not necessary for Mr. C to cross the main street on arrival, it was for the return trip.

The taxi was quick and efficient. But door to door service was perceived to come at a cost which the participant felt was "expensive, especially for a

retired person". This may no longer be considered a problem because of the availability of a no cost transportation option available in the community (the Peninsula Community Association).

The experiences of the six individuals travelling to the family physician indicated that the pedestrian was at the greatest exposure to danger. None found their mode of transportation to be inadequate, except in terms of cost. When Mrs. Z was asked if she would use a door to door public transportation service she replied: "wouldn't that be wonderful." As with several subjects, she was not aware of either the Peninsula Community's volunteer driver program nor the handydart parallel transit system.

5.8 MICRO-ENVIRONMENTS OF OFFICES AND ADJACENT AREAS

The micro-environments of the general practitioners' offices and adjacent areas have been identified as potential barriers to accessibility for those with problems of mobility. The three areas considered are the exterior parking lots, sidewalks and entrances; the doors, thresholds, and elevators; and the interior lighting, heating and seating (Table 5.1).

The exterior areas of the buildings were for the most part adequately designed and convenient. Of the four locations in the study area where general practitioners operate only two had private parking and neither had priority parking for the handicapped (Figure 4.1). Where parking was available the buildings were easily entered. Three office buildings were entered at grade. One of these had a grade entrance at the street and a ramp entrance from the parking lot. The fourth building had a ramp leading to the only exterior door. Sidewalks in the general area of all buildings had curb cuts for easy grade change. At the entrance area of only one building were cracks in the sidewalk considered potentially hazardous according to

TABLE 5.1
BUILT ENVIRONMENT OF SIDNEY, B.C. GENERAL PRACTITIONERS' OFFICES

		OFFICE LOCATION			
		1	**2**	**3**	**4**
PARKING					
Private Parking		yes	no	no	yes
Handicapped Parking Avail.		no	no	no	no
Barriers in Parking lot		no	n/a	n/a	no
SIDEWALKS					
Curb cuts		yes	yes	yes	yes
Cracks in Sidewalk >2.54 cms.		no	no	yes	no
ENTRANCE					
Grade > 1:12		no	yes	no	no
Steps at entrance		no	no	no	no
No. of thresholds > 2.54 cms.		nil	nil	nil	nil
DOORS(Exterior/Interior)					
Manual 1	(Ext)	yes	yes	yes	yes
	(Int)	yes	yes	yes	yes[2]
More than 6.8 kgs.	(Ext)	yes[3]	no	no	n/a[2]
pressure to open	(Int)	no	no	no	no
Door sticks	(Ext)	no	no	no	no
	(Int)	no	no	no	no
Width > 81 cms.	(Ext)	yes	yes	yes	yes
	(Int)	yes	no	yes	yes
Manoeuvre	(Ext)	yes	no[4]	yes	yes
with wheelchair	(Int)	yes	yes	yes	yes
Grab bars	(Ext)	no	no	no	no
at entrance	(Int)	no	no	no	no
Carpet	(Ext)	no	no	no	no
(impedes wheelchair)	(Int)	no	no	no	no
ELEVATORS					
Doors > 81 cms.		n/a	yes	yes	yes
Call button ht. <120 cms.		n/a	no	no	yes
Car control button ht. <120 cms.		n/a	no	no	yes

1 = 2425 Bevan St. **2** = 9775 4th St.3 = 2453 Beacon Ave. **4** = 2506 Beacon Ave.
Exterior = Ext Interior = Int

1. All exterior doors pulled to open.
2. This door is kept open during business hours.
3. There are two exterior doors, both required more than 6.8 kgs. of force to open.
4. Ramps with a grade more than 1:12 makes entry by wheelchair difficult.

established standards. At the exterior entrance of one of the buildings where a ramp had been retro-fitted, one may assume to facilitate entry, the grade was such that it would be difficult for wheelchair access (see endnote 10 Chapter 2).

Access to the buildings and offices with one exception was relatively easy for the older patient. Except for one exterior door none required more than the 6.8 kilograms of force, identified as an upper limit for the handicapped and elderly. Although all doors were wide enough to accommodate wheelchairs, one building entrance would be difficult to use because the door opens outward onto a ramp which had, as mentioned, an incline that was too steep. Although grab bars have been recommended to help with balance, no building entrances were so equipped. Where elevators were used they all had doors wide enough for wheelchairs, but only one of the three units was equipped with wheelchair accessible call and control buttons and only one had buttons designed for the visually impaired. The interior offices in all buildings were quite similar and well designed. For all offices the lighting, temperature, floor covering, manoeuvrability, and seating was considered satisfactory.

In sum there was very little in the way of inconvenience to the elderly patient, but there were areas which could be improved to meet design standards for this group.

5.9 FREE RESPONSE COMMENTS

As part of the interview design, participants were asked at the beginning of the process to interrupt at any time with comments which they felt were relevant to the research. A number of individuals took the opportunity to voice what they thought was both positive and negative about the accessibility of general practitioners in Sidney for people of their age group (Table 5.2).

TABLE 5.2
GENERAL COMMENTS VOLUNTEERED BY THE OLD-OLD WITH REFERENCE TO OBTAINING MEDICAL CARE *

POSITIVE	NEGATIVE
MEDICAL CARE	
(7) Availability of specialists	(5) Difficulty in getting appointments
(5) Emergency phone number (911)	(3) Need for clinics
(5) Local Hospital (availability)	(2) Family doctors are in too much of a hurry
(5) General satisfaction with GP	(2) Dissatisfaction with local GP
(3) Physiotherapist available	(1) Heart specialist in Victoria
(1) X-ray facility available	(1) Expense of dental care
(1) Medical laboratory available	(1) Expense of prescriptions
	(1) Doors difficult to open
TRANSPORTATION	
(4) Bus system	(1) Difficulty in getting on bus
(1) Community transport (PCA)	(1) Visiting spouse in Victoria hospital was difficult
(1) Taxi service	(1) Community transport (lack of driver's skill)
	(1) Community transport (lack of awareness of service)
	(1) handydart (could not obtain service)
TRAFFIC	
(1) Motor traffic lights	(5) Parking problems
	(4) Motor traffic (general)
	(2) Bicycles on sidewalk
	(1) Pedestrian traffic lights (need)
	(1) Pedestrian traffic lights change too quickly
SITE and SITUATION	
(5) Services close	
(3) Flat terrain	
(3) Community and neighbours	
OTHER	(1) Stairs
	(1) Potential of snow
	(1) Lack of concern for the condition of the elderly

*Numbers of persons identifying issues in parenthesis (n).

The most frequently volunteered concern related to getting appointments. This response arose even though they all felt they got to their general practitioners as often as they would like. The concern came from the amount of time the subjects had to wait to get appointments when they phoned because they were feeling ill. It should be remembered also that all requests for house calls were honoured. Six individuals received at least one house call.

The second major issue was the expressed desire for the establishment of a health clinic. At the time of this study there were plans to provide a "wellness clinic" in Sidney as part of the Capital Regional District's "Healthy Cities 2000" program. This type of clinic has been operated in a number of other areas. The addition of this program should address a number of the concerns raised.

Some points were raised which might be considered specific to the old-old, while others were clearly less age-specific, but still significant. The availability of a wide variety of specialists in Sidney was considered convenient by several subjects, but for one subject having to go to Victoria to see a heart specialist was a problem. Also, the local hospital (Saanich Peninsula) was seen as an asset. Others felt that a local clinic to take blood pressure readings would be useful. The convenience of having a physiotherapist and a medical laboratory in town, as well as an X-ray facility, was considered advantageous. As might be expected in any user group, some individuals thought their doctors did a fine job, while others thought they rushed through their appointments. Concerns about prescription and dental costs also were expressed.

The availability of a local bus service was seen as positive and had been a contributing factor for several subjects in the decision to move to Sidney. For one individual, however, boarding the bus was a problem. With respect to interurban transportation, one woman found it difficult to get to and from the Victoria hospital by bus. Community transport (Peninsula Community Association) received mixed reviews. Driver skill was stated as a concern by one individual and the failure to make the public aware of its existence by another. Alternatively, it was seen by others as an important part of

community support system. Handydart, little used, was viewed by only one individual as not doing its job. The validity of this concern is supported by comments made by those responsible for the handydart service (Cousins, 1989; Davis, 1989).

Traffic in general was an issue. For drivers, parking was most frequently cited as a problem. The recent installation of traffic lights on the main street satisfied, for one individual, a concern for driving safety. One pedestrian mentioned sparsity of pedestrian traffic lights and the speed at which the lights changed. Cyclists on the sidewalk also were mentioned as a problem.

One individual thought that, in general, there was a lack of concern for the elderly. Alternatively, neighbours and the community were identified as part of the support that was available to them in Sidney.

These people, for the most part, appeared to face few obstacles in gaining access to family physicians. Some comments, however, are necessary to help put these findings in context. Chapter 6 will summarize the research findings.

ENDNOTES

1 All time and distance measurements which are described are approximate. They are provided to convey a sense of the times taken and distances travelled by the subjects in their journeys.

CHAPTER 6

6.0 CONCLUSION

In this chapter a summary of the findings is presented which addresses the question of accessibility to general practitioners by the old-old in Sidney. In the concluding remarks observations made as a result of the research are presented which express the reality of accessibility for the old-old who live as independent residents in their community. Recommendations also are presented.

Mobility and health losses are well known results of aging, but it is not with retirement or age sixty-five that these changes occur at statistically significant rates. At age seventy-five, or shortly thereafter, these changes become pivotal in limiting the individual's ability to maintain a satisfactory quality of life. This age group is in a period of negative transition in health and mobility and for this reason has been the focus of this study. As a result of expressed increased health care needs basic medical care is critical to the well being of the old-old and to the prevention of an unnecessary loss of quality of life. Hence an investigation of accessibility to general practitioners by this group was seen as a useful research undertaking.

Sidney's population for several decades has had a large proportion of elderly. Recent migration and demographic research has shown that towns of the size of Sidney, and especially those located close to larger urban places, are becoming destinations for a mobile elderly population. Because of the present proportion and absolute numbers of old-old in Sidney's population, and the above noted trends, this location was deemed appropriate for study.

Individuals in supportive residential environments were not included in this study. These residential settings generally have formal or informal transportation arrangements to serve the medical needs of their clients or residents. The elimination of this segment of the old-old population left a survey group living independently in the community that was anticipated to be healthier than the total population of that age group. The results of this

study demonstrated this slight but expected skew towards a better level of self-rated health.

The primary aim of this research was to determine whether or not the accessibility of family physicians was perceived as a problem by the old-old residents in the Town of Sidney. Certainly the literature would lead one to expect that problems would exist. To do this it was necessary to investigate the elements which affected accessibility: availability, distance, mode of transportation, physical environment, and the built environment of the medical office building, both exterior and interior. Accessibility has been shown to have two components, those relating to the general practitioner and those relating to the patient. Location of the general practitioner, availability, hours of operation and willingness to make house calls forms one component, and personal health of the patient, access to transportation and past behaviour pattern the other.

The individuals surveyed in this research sample were representative of an independently living, middle class, old-old population. This group was selected on the basis of being neither the extremely needy nor the wealthy; they are representative of the majority of people in their age group. A few individuals received Long Term Care home support services which are designed to promote and maintain the individual's ability to continue living in his or her own home in the community.

Climate was identified as a significant contributory factor by the majority of subjects in the decision to move to Sidney shortly after retirement. Throughout the larger part of the year travel out of doors can be done in comfort and with ease in Sidney. Specifically, for the old-old as pedestrians, there is little fear of slipping on icy or snowy surfaces. The flatness of the terrain also was commented upon as an advantage in facilitating their mobility.

A major factor in determining accessibility is service availability, the ratio of providers to users. Using standard doctor to population ratios, Sidney has an adequate number of doctors. The second aspect of availability is duration of service. In Sidney, the general practitioners operate principally on a five

day work week. Their daily office schedules approximate normal business hours, with exceptions for emergency hospital visits. Situations when individuals had to find someone other than their regular physicians resulted principally from a need for attention outside normal working hours. It is worthwhile to note that in addition to normal office hours, however, several of the respondents' physicians have made house calls and several other subjects described their physicians as prepared to make house calls if the patients thought it were necessary. While it is not known if all house calls were made outside the normal business hours of the physicians, it is known that several were and no requests for house calls were refused.

The only problem of availability reported (n=5) was in obtaining an appointment within what was considered a reasonable length of time. This affects the perception of availability and may reflect an objective reality and, therefore, be a point for further consideration. With this exception, availability as determined by standard criteria revealed no circumstances which would suggest a general problem in accessibility. The results indicate that availability for the old-old and the population as a whole is the same. By using the frequency of visits to the general practitioner (utilization) satisfactory levels of access were revealed. The felt needs expressed, where individuals defined for themselves whether or not they saw their family doctors as often as they required, also indicated satisfaction with accessibility.

In the United States medical access has been shown to be negatively influenced by economic factors. In Canada the cost of transportation has been cited as an important consideration in obtaining the services of a general practitioner. This cost for all but one subject was considered negligible. For this individual the price of transportation was an expressed concern. However, the Peninsula Community Association provides alternative transportation in Sidney, but the respondent was unaware of its existence.

Accessibility to a general practitioner is maximized by the ability to overcome the friction of the distance which exists between the patient's home and the practitioner's office. It was expected that the the old-old would patronize general practitioners located relatively close to their homes, and in most cases this expectation was realized. More than eighty per cent of the

subjects selected family physicians whose offices were located within the town of Sidney's borders. The use of doctors located nearby (the Saanich Peninsula), but outside Sidney, was the second most frequent choice. Less than ten per cent of the sample had doctors in the urban core. With the exception of one individual, having a doctor in the urban core was a relict pattern resulting from earlier residence in a core municipality. The experience of traversing the distance between the subject's home and the office of the physician indicated very little in the way of difficulty. Walking as a mode of travel occurred mostly by choice, rather than by necessity. A large number of people who walked to their family doctors also had access to cars (fourteen of nineteen). For these individuals the health benefits and the social aspects of walking were considered important.

For almost ninety per cent of the subjects automobiles were available within the household. This proportion of drivers in the old-old age group is substantially higher than has existed in the recent past and such an increase appears to be a trend. The tendency toward a higher proportion of women drivers, specifically in this age group, increases transportation options. For example, of the nine married women in whose households there were cars two-thirds were drivers. Furthermore, almost three-quarters of the widows had cars and licences. Women continue to be under represented, relative to men, as car owners, but this difference is diminishing.

The difference in mode of travel which exists between men and women is an interesting finding. Ninety-five per cent of the males had access to cars and of those approximately ten per cent walked to their general practitioners. Sixty-six per cent of the women had access to cars and almost half walked to their family doctors. As there was no significant relationship between health, mobility, and distance to the family doctor, the higher rate of use of the automobile by males may reveal more about the gender preferences than the difference of opportunity which exists between males and females.

High levels of automobile ownership and driving by the old-old must be considered in terms of the aging couple, as well as the individual. The male spouse may lose his licence as a result of aging, while his typically younger and healthier wife may be able to continue driving for another five years or

so. The woman at this time should still be able to use the bus service, but her partner likely would have suffered additional health loss and would need special transportation services, as would she in a few years. This suggests that an alternative transportation system is needed for the old-old.

The use of the bus for transportation to the general practitioner was limited to individuals with doctors in Sidney. Although bus service generally was identified as satisfactory, problems caused by the lack of benches and shelters at bus stops were reported. The difference in height between the curb and the first step of the bus also was identified as inconvenient and difficult to overcome; for one individual disembarking required descending backwards. The limited use of the bus reflected both the high level of automobile ownership and the propensity of many people to walk to the doctor's office. Anticipating the time when they could no longer drive, some respondents commented that they had moved to Sidney to be, among other things, close to what they perceived was a good public transit system.

British Columbia Transit is continually improving the designs of its buses to accommodate all user groups. Currently some of the newer buses in use, and planned for, in Sidney are designed to reduce the difficulty the old-old experience in stepping up into and down from the bus. The limited number of shelters and benches creates a problem that needs to be addressed. The ability of the system to run on schedule helps to avoid any undue delays, but the desire on the part of the old-old passengers to arrive early enough so as not to miss the bus can result in a wait that would be more comfortable if they were protected from the climate and if seats were available. The attitude of the drivers and their sensitivity to the condition of the elderly is crucial to helping the old-old bus user experience a comfortable ride.

A few individuals who had lost the use of a family car were able to identify only a taxi as an alternate form of travel. In their cases the bus stop was too distant for use because of their limited ability to walk even short distances. The taxi, although versatile, is perceived to be expensive by Canadian seniors in general, as well as by the sample in Sidney. While the use of a taxi is less expensive than private automobile ownership for a

limited number of trips per month, it is perceived as more expensive and the high cost of owning and operating an automobile often is overlooked.

It has been established that two alternative sources of transportation exist, handydart and the Peninsula Community Association. The local and irregularly timed transportation needs associated with visits to the general practitioner are not well served by handydart because the system has a greater demand than it is able to meet and regular subscribers have their needs met first. The Peninsula Community Association's volunteer driving service, on the other hand, appears to be an effective alternative. It is unfortunate that many potential new clients who have experienced recent declines in mobility are unaware of the Association's existence and service.

The Peninsula Community Association provides transportation for those who need a door to door service, but do not have access to an automobile and feel they cannot afford a taxi. A limitation of the Association in helping a small, but important, group of the old-old is their restricted ability to satisfy the needs of wheelchair users. These individuals, although only a few in number, are considered to be in the greatest need. The development of a wheelchair capacity might be accomplished with new provincial or federal funds. Alternatively, some of the resources of B C Transit which are dedicated to handydart might be made available to the Association. The Peninsula Community Association then could purchase or modify a vehicle to transport members of this special user group. Publicity should continue to inform not only new residents, but also those who experience a reduction in their mobility.

The effect of distance on accessibility to the family practitioner by the old-old in the research area was found to be minimal. The medical services in Sidney are located in the approximate geographical centre of town. For car or bus users fifteen minutes was the maximum travel time required to get to these locations. Even those who walked required a maximum of thirty minutes. The experience of visiting the doctor was identified as tiring by one individual. Those who had family doctors situated outside the town, including a few in the core municipalities, used private cars as the only form of travel.

The built environment has the advantage of being relatively uninhibiting, with one exception: there is a major north-south arterial route (Patricia Bay Highway) passing through Sidney which creates a strong "edge." Because of historical factors and land use planning much of the land on the west side of the highway is non-residential and what is residential contains a population of mostly young families. On the other hand, the main street, Beacon Avenue, functions as an effective "path" and provides easy access for the pedestrian population. In essence, the town is compact and goods and services are centrally located.

As in many other urban locations, the built environment's greatest obstacle to ease of pedestrian mobility is automobile traffic. Speed rather than volume has been identified as the problem in Sidney. Pedestrians often felt intimidated when trying to cross the main street. Perhaps stricter speed limit enforcement is required. Cyclists on footpaths and sidewalks also cause concern to the old-old. Comments by the subjects indicated that the fear of being hit or knocked to the ground by cyclists were real and should not be lightly dismissed.

The accessibility to any general physician practising in Sidney is maximized by the centrality of the the doctors' locations. With almost all physicians (14) in two buildings and all offices situated relatively close together, choice among the existing physicians is ensured. An investigation of the environment of the buildings and the immediately surrounding areas revealed a minimum in the way of problems, potential or realized, to negatively affect the opportunity of access. The only problem identified concerned wheelchair access which was hampered by sticking doors, poorly designed ramps and limited "handicapped parking". It is a very positive finding of this study that substantive problems do not exist.

The old-old in Sidney are neither particularly privileged nor disadvantaged and thus typical in many ways of the Canadian old-old population. Many of these people have company and government pensions, as well as private retirement savings. No longer are the old-old economically deprived. Single women still are financially disadvantaged relative to men

and their married counterparts. For the most part these women, either single or married, have driver's licences and access to cars as family possessions. Women do not need to depend on their husbands or other male friends or relatives for transportation assistance as much as they used to.

One of the most valuable results of this research was the discovery that people who had recently experienced negative changes in their ability to travel were unaware of the Peninsula Community Association's transportation service. This supports the findings of Baker (1987) that where community resources are in place for the elderly the latter are frequently unaware of their existence. The need for transportation assistance may occur quickly, as with the loss of a spouse or the loss of a driver's licence. In order to minimize the stress the old-old might be under, it would be advantageous for them to be made aware of support systems as soon as the need occurs. Agencies supplying services to the old-old need to determine the most effective means by which their services can be made known to those for whom they are designed. The Peninsula Community Association, as indicated earlier, uses a variety of methods to inform people of their services, but additional techniques could be employed. The utilization of some of the many efficient data bases on individuals within society could provide a means of reducing the time lag between the emergence of a need and when the individual in need becomes aware of a service which is in place. A primary example of this would be the use of Motor Vehicle and Licencing records. When an old-old driver is no longer allowed to drive a mail-out could be used to inform that individual about transportation services available in the community. Since not all communities have the same services, a Forward Sorting Area (the first three parts of the alpha numeric postal code) coding could be used to sort these mail-outs. Similarly, when specific health changes occur the Medical Services Plan could have a system set up to advise potential new users of existing services. Such improvements would help to further the worthwhile goal of allowing the old-old to live in their own homes as long as possible and to enjoy a satisfactory quality of life.

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APPENDIX A

QUESTIONNAIRE

(1) When did you move to Vancouver Island or how long have you lived on the island? _____

(2) When did you move to Sidney or how long have you lived in Sidney? _____

(3) Approximately how long have you lived at this address? _____

(4a) What is your current marital status?

1. **married/common law**
2. **widowed**
3. **divorced**
4. **separated**
5. **never married**

(4b) Are you living with another now? **Y...N**

(4c) **Spouse** **Relative** **Friend**

(5) How long have you been [1-4 only] _____

(6) What was your age at your last birthday? _____

AUTOMOBILE

(7) Do you have a B.C. driver's licence? **Y...N**

(8) Does your spouse have a B.C. driver's licence? **Y...N**

(9) Do you own a car? **Y...N**

NO

(10) Do you have a car available for your use? **Y...N**

YES

(11) Do you drive yourself or does another drive for you? **Self** **Other**

(12) Approximately how many days a week do you use your car? _____

(13) What are the main purposes for driving? _____

(14) Is there a maximum amount of time you can drive before you feel tired or uncomfortable? **Or,** how far (in miles or kilometres) do you usually drive before feeling tired or uncomfortable? _____

(15) Do you drive at night? **Try to Avoid** **Y...N.**

BUS

(16) Do you know how far in time or distance the nearest bus stop is to your home? _____

APPENDIX A

(17) Do you use the local bus service? Y...N

YES

(18) How often would that be? _____

(19) Do you have a bus pass? Y...N

(20) Including walking to and waiting for the bus, what is the maximum time your average bus ride takes before you feel tired or uncomfortable?

_____

(21) What are your main reasons for taking the bus? _____

WALKING

(22) Do you ever go out for walks? Y...N

YES

(23) In an average week how often do you go for walks? _____

(24) Approximately, what is the maximum time you usually walk before you feel tired or uncomfortable? _____

(25) What are the main reasons for your walks? _____

DOCTOR

(26) Do you have a family doctor? Y...N

NO:

(27) If you were ill where would you go? _____

YES

(28) Have you changed your doctor recently? Y...N

YES

(29) Was this a result of you moving? Y...N

OR

(30) Was this a result of your doctor changing locations? Y...N

(31) How long have you been with your family doctor? _____

(32) Why did you choose this doctor? _____

(33) In the last 6 months, approximately how many times have you visited your family doctor? _____

(34) Have you asked your family doctor to make a house call in the last 6 months? Y...N

(35) Has your family doctor made house calls to you in the last 6 months? Y...N

(36) How often was that? _____

APPENDIX A

(37) Have you gone somewhere else to get the services you would normally expect to get from your family Dr. in the last six months? **Y...N**

(38) Where would that have been? _____

(39) How did you get there? _____

(40) How often would that have been? _____

(41) Can you tell me where your family doctor's office is located? _____

(42) How do you usually get there?

Bus Walk Car: *Self* *Other* Taxi Other

OTHER _____

(43) Who normally drives you there _____

(44) How long does the trip there usually take? _____

(45) On average, approximately how much time do you have to spend waiting to see the doctor? _____

(46) Does the trip home take: **more less the same** time as going to the doctor?

DIFFERENT

(47) How long does the trip home usually take? _____

(48) As a way of getting to the doctor would you rate this method as:

good fair poor unsatisfactory

(49) Would that be the only way you get to your family Dr? **Y...N**

NO

(50) What other way would you get to your family doctor?

Bus Walk Car: *Self* *Other* Taxi Other

OTHER

(51) Who do you normally go with? _____

(52) How often do you use this method to go to your family doctor?_____

(53) How long does the trip there usually take? _____

(54) Does the trip home take: **more less the same** time as going to the doctor?

DIFFERENT

55) How long does the trip home usually take? _____

(56) As a way of getting to the doctor, would you rate this method as?

good fair poor unsatisfactory

IN GENERAL

(57) Is your visit to the doctor physically exhausting? **Y...N**

(58) Does it cost you money to get to the doctor? **Y...N**

YES

APPENDIX A

(59) Would you say this is: **affordable** **expensive** **too much**

(60) How much does it normally cost? _____

(61) Do you feel you get to your family doctor as often as you would like to?
Y...N

(62) What do you consider as a barrier(s) or difficulty is in getting to your family doctor? 1 _____2. _____

Have you avoided going to your family doctor because of:

(63) The distance involved **Y...N**

(64) Bad weather **Y...N**

(65) Unavailability of transport **Y...N**

(66) Considering all the forms of transportation you use getting to your family doctor would you rate them as:
good **fair** **poor** **unsatisfactory**

(67) Do you think doctors should make (more) house calls? **Y...N**

(68) Would you use a door to door public transit service to go to and from the doctor in place of the method(s) you are now using? **Y...N**

(69) How would you describe accessibility to the family doctor for others of your age in Sidney?
good **fair** **poor** **unsatisfactory**

(70) Generally speaking, how would you rate your health?
Excellent **Good** **Fair** **Poor**

(71) How would you rate your mobility?
Unlimited mobility **Limited mobility** **Housebound**

This last question is for grouping purposes only

(72) What is your average monthly income including old age security payment?
_____

(73) Gender (by observation) **Male** **Female**

APPENDIX A

RESIDENCE

(74) Single Family House 1 Townhouse 2
Semi-Detached House 3 Row House 4
Duplex/Triplex 5 Flat. 6
Apartment
|
|-Low Rise (<5)..8
|What floor..___, Elevator.. Y...N

(75) No step..Y..1

Stairs Y _____

ADDRESS

NAME

HOME NUMBER DATE OF INTERVIEW

(76) ID NUMBER P #

WEATHER
sun cloud showers rain wind
COMMENTS

APPENDIX B

ADL EVALUATION TOOL

I have some questions about your ***ability*** to carry on different basic activities. I am interested in your ***capability***, not whether or not you ***actually*** do them.

-A-

Can you use the telephone?

1 Yes, without help
2 Yes, has easy access to phone
3 Only answers phone
4 Cannot use phone
9 Missing

-B-

Are you able to shop for groceries?

1 Yes, without help; able to go to the stores alone, can carry parcels home with or without car
2 Yes, but need some help usually, can do regular shopping alone but may need help carrying, transportation or delivery to home
3 Always need help, can shop, but cannot go alone, has no transportation or cannot carry purchases
4 Cannot shop at all
9 Missing

-C-

Are you able to shop for regular clothing?

1 Yes, without help; able to go to the stores alone, can carry parcels home with or without car
2 Yes, but need some help usually, can do regular shopping alone but may need help carrying, transportation or delivery to home
3 Always need help, can shop, but cannot go alone, has no transportation or cannot carry purchases
4 Cannot shop at all
9 Missing

APPENDIX B

-D-

Can you prepare your own meals? Do you have difficulty preparing your own meals?

1 Yes, plan and cook; can plan and prepare nutritional meals as needed for daily living
2 Can prepare simple things; could use help but can prepare simple, cooked meals
3 Only with help; unable to prepare simple meals; cannot cook although may heat water on stove
4 Completely unable to prepare meals
9 Missing

-E-

Can you do household tasks, chores?

1 Yes, without help; able to perform all necessary tasks, including heavy chores such as vacuuming, changing bedding
2 Able to perform all necessary tasks, including heavy chores such as vacuuming, changing bedding, laundry
3 Able to perform only light housekeeping tasks, such as dusting, some dishes, pulling covers up on bed
4 Cannot do housekeeping
9 Missing

-F-

Do you need help eating?

1 No help needed
2 Minimal help required; can feed self using silverware, pick up glass, occasional spills, pain or shaking, may need help cutting food but can bring it to mouth
3 Great deal of help required; can feed self but has difficulty using silverware; liquids or soup need special attention; can eat finger foods only
4 Completely dependent (tubes, I.V. hand fed)
9 Missing

APPENDIX B

-G-

Can you take a bath or shower?

1 Yes, no help required; person can physically bathe and can wash his/her hair
2 Person can bathe; may need help preparing bath, may need help getting out of tub (grab bars may be needed); shampooing is difficult, bathing may be painful; assistance would be beneficial but is not absolutely necessary
3 Always needs special equipment or assistance; can physically bathe but cannot get in and out of tub alone
4 Completely unable to bathe self
9 Missing

-H-

Do you need help walking OR are you able to ?

1 No help required; can climb up and down stairs; able to manage on own both inside and outside
2 Some help with steep steps
3 Always need help but can walk with help
4 Cannot walk even with help
9 Missing

Adapted, with permission, from Chappell and Horne, 1987;

APPENDIX C

University of Victoria
Department of Geography
P.O. Box 1700
Victoria, B. C.
V8W 2Y2

Project number 89-89
Confirmation of research,
Dr. C.N. Forward 721-7347 or
Research office 721-7968
Security office 721 7599

Dear Sir or Madam;

A survey is soon to be carried out in the Department of Geography, University of Victoria. The purpose of this survey is to learn what makes getting to the family doctor easy or difficult for those who are 75 or older who live in Sidney.

To those receiving this letter and are selected who are 75 or older we would hope that you would spare a little of your time to answer some questions by our interviewer, about your own experiences and opinions. The choice of participants will be carried out on a scientific basis, and it is important that everyone who is chosen does take part so we get a true cross section of the population.

The information you give will be strictly confidential, and only statistical totals will be used in the study. Thank you very much for your co-operation without which this research could not be carried out.

Yours sincerely,

Bruce C. McDougall,
Department of Geography

June 30, 1989
University of Victoria,
Department of Geography
P.O. Box 1700
Vict., B.C.
V8W 2Y2

Silver Threads Service
10030 Resthaven
Sidney, B.C.
V8l 3G4

To whom it may concern;

A survey is soon to be carried out in the Department of Geography, University of Victoria. The purpose of the survey is to better understand what makes it easy or difficult for those who are 75 or older to get to their family doctor in Sidney.

A letter will be put in the mailboxes of those who may be selected for this research project to advise them of this, but we would also like to let your organization know that this work is being carried out as well. We are letting you know in case any of those chosen to participate who are members of your organization and do not receive a letter may be made aware of the project by this letter.

I thank you for your consideration and time. If you should have any questions please call me at 721-7345.

Yours sincerely,

Bruce C. McDougall
Department of Geography

Project number 89-89
Contact Dr C.N. Forward, 721-7347
or the University of Victoria, 721-7968 or 721-7599

APPENDIX E

Prime Life Magazine August 89

UVic study on seniors visiting physicians

For the month of July, and continuing into August, a graduate student at the University of Victoria, Bruce McDougall, is doing his field research in Sidney. The focus of the inquiry is to identify the barriers and obstacles that older seniors (75+) encounter when trying to visit their family doctor.

The research is being done by interviewing the participants at their homes. For the convenience of the individuals being interviewed, they will neither be asked to read questions nor write answers. Mr. McDougall simply notes their responses during the interview.

As a result of this work, suggestions will be made about improvements for easier access to the family physician by this group. Letters will be placed in mailboxes throughout Sidney, and if you're interested Bruce will be contacting you as noted in the letter.

The goal is continued good health for all.

APPENDIX F

June 20, 1989
University of Victoria
Department of Geography
P.O. Box 1700
Victoria, B.C.
V8W 2Y2

Royal Canadian Mounted Police
Sidney Detachment
2440B Sidney,
Sidney, B.C.
V8L 1Y7

To whom it may concern;

A survey is soon to be carried out in the Department of Geography, University of Victoria. The purpose of this survey is to learn what makes getting to the family doctor easy or difficult for those who are 75 or older who live in Sidney.

I am writing this letter to inform you that this will be taking place in order to minimize any problems which might occur as a result of the concerns people may have as to the validity of my work. I will be carrying a Research Identity Card issued by the university at all times while the research is being carried out.

This research has been authorised by the University of Victoria Research Administration Office under project number 89-89. Confirmation of this may be obtained by telephoning the above office at 721-7968, Traffic and Security at 721-7599, or the Research Supervisor, Dr. C. N. Forward at 721-7347.

If, for any reason you wish to get in touch with me, my number is 721-7345, thank you.

Yours truly,

Bruce C. McDougall

VITA

Surname:	**McDougall**	Given names:	**Bruce Campbell**
Place of Birth:	Montreal	Date of Birth:	30 October 1946

Educational Institutions Attended:

University of Victoria	1983 to 1984
University of Manitoba	1984 to 1987

Degrees awarded:

B.A. (with Distinction)	University of Manitoba	1987

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Title of Thesis: ACCESSIBILITY OF THE OLD-OLD TO THE FAMILY PHYSICIAN: SIDNEY, BRITISH COLUMBIA, A CASE STUDY

Author: [redacted]

Bruce C. McDougall

March 18, 1992