Chapter 4

Use of Health Care Services by Older Adults in the United States, Great Britain and Canada

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INTRODUCTION

The major objectives of this research are to compare the accessibility of, and the predictors of use of health care services for older adults in the United States; Great Britain, including England, Scotland and Wales; and Canada, using comparable available survey data from the three countries. This research has important policy implications. Like all industrialized countries, the United States, Great Britain and Canada are experiencing an aging of their populations, a trend which demographers predict will last into the next century when approximately 20 percent of the population of all three countries will be 65 years of age or older. This increase in the proportion of the population is already creating social and political pressures in all three countries to shift national resources to programs that provide for the elderly and away from programs that provide for the welfare of younger members of the population. Increases in the proportion of the populations over 65 years of age will increase the need for health and social services for the older adult population.

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In comparison with Great Britain and Canada, the United States has tended to rely relatively more on individual, rather than government, solutions to social problems, particularly in the area of health care services (Hollingsworth, 1986; Starr, 1982). Thus, the shift in national priorities from the young to the elderly has the potential in the U.S. to lead to intergenerational conflict. However, a recent survey by the American Association of Retired Persons found that the overwhelming majority of young and middle-aged adults in the U.S. support increased spending for social programs for older adults. There are many factors influencing this change of philosophy among the U.S. public. A major factor is that most women now find it necessary to work to help support their families, and therefore, have less time than they may have had in the past to care for elderly relatives. Other factors include the increased geographic mobility of the American family which makes it less feasible to care for older relatives than in the past. While there is increasing popular support for government solutions to the problems of older people and their families, research suggests that the government programs that were designed to help older people increase their access to health care resources, particularly as those programs were modified in the 1980s, have not been without their problems. Thus, the purpose of this research is to examine the British experience with the National Health Service, and the Canadian experience with National Health Insurance, to determine what lessons there might be in those experiences for the U.S. as it attempts to revise its health care delivery system to meet the increased needs for health care services for older people in a way that is, at the same time, fiscally responsible.

Data for older adults in the U.S. will be taken from the National Center for Health Statistics' national Health Interview Surveys for 1984 (NCHS, 1986). Data for older adults in Great Britain will be taken from the Office of Population Censuses and Surveys' national General Household Survey for 1985 (OPCS, 1987). Data for Canada will be taken from Statistics Canada's General Health and Social Survey for 1985 (Statistics Canada, 1987). Each of these three datasets include a special supplement on the aging population of that country.

Theoretical Framework

The theoretical framework used for the research will be the health care services utilization framework developed by Andersen and Newman (1973). There are three major types of predictor variables in the health care services utilization framework. First, are the need variables, including objective and subjective evaluations of health status. Second, are the enabling variables consisting of family level variables, including income, public and private health insurance coverage, and access to transportation; as well as community level measures of availability of health care services, usually measured using proxy measures such as urban/rural residence and region of
country of residence. Third, are the *predisposing variables* which include demographic characteristics, social structure characteristics and health belief variables. This research will focus particularly on the effects of the need and enabling variables since past research has shown them to be most predictive of use of health care services.

The major variables in this model for which comparable measures are available in the three countries are presented in Figure 1. The dependent variables that will be analyzed are the use of hospitals, physicians, home nurses and homemaker services,

**Fig. 1. List of Comparable Variables Available for U.S. (HIS), British (GHS) and Canadian (GHSS) Datasets**

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>HIS 1984</th>
<th>GHS 1985</th>
<th>GSS 1985</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of Health Care Services</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consulted with doctor in past yr.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Home visit with doctor in past yr.</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hospitalized in past yr.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Use of nurses</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Use of homemakers</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Need Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-assessed health status</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Enabling Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family/household income</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Medicare coverage</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Medicaid coverage</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Private insurance coverage</td>
<td></td>
<td></td>
<td>X</td>
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<tr>
<td><strong>Predisposing Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Sex</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
since comparable data are available from all three countries. The first major hypothesis of this research is that older adults in Great Britain and Canada will have greater access to physician, hospital, nursing and homemaker services than will older adults in the U.S. The second hypothesis is that the predisposing variables will be related to the use of health care services in similar ways in the three countries: specifically, use of all services will increase with age in all three countries; older women will tend to use the services of physicians, home nurses, and homemakers more than older men; and older men will tend to have the greatest use of hospitals. The third hypothesis is that the need variable, health status, will have a positive effect on the use of health care services in all three countries, with those in greatest need using the most care, although the patterns of access to care are expected to differ. This hypothesis is expected because all three health care systems are designed to assure that those older people who need health care will have access to that care. However, each system has somewhat different priorities and these priorities can be expected to result in differential access to services among the systems. The fourth hypothesis is that the enabling variables will have the most pronounced effect on use of all health care services in the United States. Unfortunately, this hypothesis can only be tested by comparing the U.S. with Canada because of lack of comparable data in Great Britain. Specifically, increases in income in the United States will tend to increase the use of physician services, home nurses and homemakers, while hospital services, which are more adequately protected by Medicare and Medicaid, will not be as affected by income. In addition, use of health care services by older adults in the United States will be greater when the older adults are covered by one of the two major public health insurance programs, Medicare or Medicaid, or by supplementary private insurance.

REVIEW OF LITERATURE

The major objectives of this research are to compare (1) the accessibility, and (2) the predictors of health care services utilization among older adults in the United States, Great Britain, and Canada. While the majority of older adults in industrialized countries are reasonably healthy and, therefore, capable of leading independent lives, there are many older people with intensive health care needs, including especially those with multiple chronic conditions that account for the large proportions of the health care budgets of all three countries that are devoted to care of the elderly. The United States and Great Britain represent two extremes on a continuum of types of health care financing systems for the elderly. Great Britain provides health care services to the elderly through the National Health Service which is available to all citizens regardless of age or income. The underlying public policy assumption of the British system is that integrating the elderly into the national system is both more efficient and involves less
risk of segregating the elderly from the general welfare of the younger citizens in the
country. The British NHS has been modified to take into account the special circum-
stances of the elderly, especially their low income and the more demanding nature of
their health care problems. For example, pensioners can obtain prescription medicines
without an additional charge and general practitioners are paid a higher additional fee
for treating patients over 65 (Nusberg, 1984; Roemer, 1985).

United States

In the United States, health care services for the elderly are financed through a
combination of government programs and private insurance. Medicare is a type of
national health insurance developed especially for older adults. It is funded primarily
through contributions from employees and employers, as well as by retired people
themselves through monthly premiums. More recently, the program has been supple-
mented through general tax revenues. Medicare is not a comprehensive program
however. Medicare currently has a complicated system of deductibles and coinsurance
payments and excludes many health services that are covered by the NHS in Great
Britain. The result is that only 40–50 percent of the health care expenses of older adults
are covered by Medicare in the U.S. The basic emphasis of the Medicare system is on
individual responsibility, especially for routine care.

In addition to Medicare, the U.S. also has a program called Medicaid that is funded
jointly by the federal government and the individual states. The program was devel-
oped especially to help certain categories of low income people gain access to health
care services. Eligibility and coverage vary from state to state but for those older adults
who qualify, Medicaid will pay Medicare deductibles and co-insurance payments and
will pay for some of the health care services not covered by Medicare. However,
Medicaid coverage does not assure equal access to health care services since private
physicians and private hospitals (either nonprofit or proprietary) may choose whether
or not to accept Medicaid payment. Private insurance, (so-called Medigap insurance)
is also used to supplement Medicare coverage for those older people who can afford
these policies. Such coverage is not widespread because of the costs involved. In 1984,
only 7 percent of the health care costs of older adults in the U.S. were paid for by private
insurance.

In the United States, the major policy issue in the delivery of health care services,
and therefore, in the policy oriented health care services research in the 1960s and early
1970s, was accessibility of health care, especially for vulnerable groups like the poor
and the elderly (Davis and Schoen, 1978; Kane, et al., 1976). However, in the late 1970s
and 1980s the dominant issue has been containment of costs of health care (Davis, et
al., 1990; Davis and Rowland, 1984; Ginsburg and Moon, 1984; Hadley, 1984; Hsiao
and Kelly, 1984; Long and Smeeding, 1984; Luft, 1984; Sapolsky, et al., 1981). Reforms designed to cut the cost of health care services may have also had the effect of decreasing the accessibility of health care for older adults, especially the poor. Thus, the efforts at cost containment in the 1980s have led to concerns that accessibility may once again be problematic, especially for poorer older adults (Bayer, et al., 1983; Burt and Pittman, 1985; Davis and Millman, 1983; Estes, et al., 1983; Eve, 1982, 1984, 1988a, 1988b; Eve and Friedsam 1979, 1980; Martin and Eve, 1984; Palmer and Sawhill, 1982; Yaggy, 1984). Since health and resources decline with age, the problems of health care accessibility also increase with age and cause the greatest problems for the "oldest-old," those 85 years of age and older (Manton and Soldo, 1985; Soldo and Manton, 1985; Minaker and Rowe, 1985). Furthermore, Estes, et al. (1984) have demonstrated that even with Medicare and Medicaid, when health status is controlled, income continues to be positively related to use of physicians among older adults whose health status is only fair or poor.

Great Britain

In the case of Great Britain, the existence of a virtually free National Health Service should make health care services more accessible for all groups of elderly when age, income and health are controlled. However, researchers in that country have raised questions about the adequacy of the health care services, about whether the consumers are as knowledgeable as they should be of benefits and how to obtain them, about whether the health care services are equitably distributed in the country, and about whether coverage of health care needs is sufficiently comprehensive. In fact, there was increasing controversy over these issues in Great Britain in the 1980s (Brown, 1979; Butler and Vaile, 1984; Goodman, 1980; Hollingsworth, 1986; Klein, 1983; Townsend and Davidson, 1982; Walters, 1980). However, research has shown that in spite of criticism of the welfare state in general, and the NHS in particular, the NHS continues to have strong popular support. One study, for example, found that 89 percent of the population supported continued or even increased spending for the Service (Taylor-Gooebey, 1983). A number of studies have addressed the problems of older people in gaining access to health care services in the 1980s (Barker, 1987; Hedley, et al., 1986; Jefferys, 1983; Odam, 1987; Read, 1982; Vetter, et al., 1984; Vetter, et al., 1985; Vetter, et al., 1987; Victor and Vetter, 1985, 1987). Using data from the 1980 General Household Survey, Victor and Vetter (1986) examined the links between poverty, disability and the use of health and social services among the elderly. They found no significant differences in use of health services, including physicians, between the poor and nonpoor elderly when level of disability was controlled.
Canada

The underlying philosophy of the Canadian system is equal access for all people to medically necessary health care (Hatcher, et al., 1984; Roemer, 1985). The national health care system in Canada is a federated structure. By 1960, all ten Canadian provinces had developed universal hospital insurance programs as a result of a program of federal grants-in-aid that covered about 50% of the costs, subject to federal requirements of universal access, comprehensiveness of benefits, public administration and portability between provinces. By 1971, all provinces had also adopted universal medical insurance programs in which physicians are generally paid on a fee-for-service basis according to negotiated fee schedules which vary by province. The Canadian system has been more successful in holding down health care costs than has the U.S. At the same time, the system provides a high level of health care, with days of hospital care per thousand in the population and number of physician visits per year substantially higher than in the U.S. In addition, longitudinal research has documented that differences between income classes changed to favor the poor in Canada when universal insurance was introduced. Nevertheless, some provinces continue to require that the patient pay a fee at the time service is rendered for ambulatory medical care, and, even though these expenses may be reimbursed later on, they may reduce access to health care services for some low income older adults (Nusberg, 1985).

Comparisons of the Three Countries

Each form of health care coverage has its own advantages and disadvantages. While the major hypothesis of this research is that health care is more accessible to older adults in Great Britain and Canada, it is also important to carefully examine the effects of age, sex, income and health within each of the three countries (Nusberg, 1984; Abel-Smith, 1983).

While there are many studies that have examined the use of health care services in the United States, and others that have examined the use of health care services in Great Britain, there are very few studies that have focused on a comparison of the use of health care services by older adults in the two countries. One exception is the classic study by Ethel Shanas and her colleagues which compared samples of older people in the U.S., Great Britain and Denmark (Shanas, et al. 1968). That study, however, focused on many issues related to quality of life of older people, not just health care and, thus, did not treat health care in great depth. More recent studies have not been found that have made the comparisons that will be made in this research. Comparison of the use of health care services in the three countries would be interesting from a theoretical perspective because Great Britain, Canada and the U.S. have such different health care
delivery systems and yet find themselves facing very similar health care policy issues related to the older adult population (Crichton, 1981).

RESEARCH METHODOLOGY

This research used comparable datasets from the U.S. for 1984, from Great Britain for 1985, and from Canada for 1985. Data for the U.S. were taken from the national Health Interview Surveys for 1984, (NCHS, 1986). The HIS, conducted by the national Center for Health Statistics, a division of the U.S. Public Health Service, is an ongoing survey of a nationally representative sample of approximately 116,000 individuals, 11,497 of whom are over the age of 65. The HIS has been extensively field tested to establish the reliability and validity of the interview questionnaire.

Data for older adults in Great Britain are available from the General Household Survey, a continuous ongoing survey of a sample of the general non-institutionalized population. Approximately 32,000 people in 14,000 households in Great Britain, are surveyed each year by the Office of Population Censuses and Surveys (OPCS, 1986). Fourteen percent of the sample, or 4,156 respondents, are aged 65 years or over. The GHS has been extensively field tested to insure reliability and validity.

In 1985, the General Social Survey was initiated by Statistics Canada (Statistics Canada, 1987). That year, the data were collected with special emphasis on health and the elderly. A national sample of all noninstitutionalized persons 15 years of age and older living in all ten provinces were interviewed. People aged 65 and over were oversampled. Data were collected from approximately 13,000 people, 3130 of whom were older adults. Studies of reliability and validity were conducted to insure that the data are as accurate as possible.

Two of the greatest methodological problems in doing secondary analysis of preexisting datasets is that not all variables are measured that the researchers would have liked, and not all variables are measured exactly as the researchers would preferred. This problem is compounded in this research by using data from three different sources, the American National Center for Health Statistics, the British Office of Population Censuses and Surveys, and Statistics Canada. These different agencies ask similar questions in different ways and include different response categories to questions. Furthermore, because of differences in culture and in the health care delivery systems in the three countries, it does not always make sense to ask exactly parallel questions, and, even where it does, the questions may not have the same meaning in one country as in another (Pfanz and Schach, 1976). The operational definitions of variables which are measured in comparable ways and which have comparable meanings in all three countries are summarized in Figure 1.
Inspection of Figure 1 reveals that there are comparable measures of the major dependent variables (use of physicians, hospitals, nurses, and homemakers) as well as of the major categories of predictors variables including age, sex, and health status. Comparable measures of income were only available for Canada and the United States. In addition, measures of coverage by Medicare, Medicaid and private health insurance were available in the U.S. These measures will be discussed in more detail with the presentation of results below.

Research findings are presented in Figures 1 through 24. Missing data was not a significant problem in these datasets, except for the measures of annual income for the United States and Canada. Results using these variables are presented in Figures 18 through 21. For the U.S. data, there was missing data for 1895 of the 11,497 respondents. For the Canadian data, there was missing data for 853 of the 3130 respondents. For all other variables in all three datasets missing cases are less than 50 and have a negligible effect on the results reported. Missing data are not reported to keep the figures as simple as possible.

RESULTS

The difference of means of the health care service utilization variables were used to test the hypothesis that health care services are more accessible for older adults in Great Britain and Canada than for older adults in the United States. The results of the t-tests for the differences of means are discussed below.

The comparable measure of physician utilization available for the three countries is whether or not the older adult saw a physician in his office in the past year. As shown in Figure 2, more than 80 percent of older adults in the U.S. had seen a physician in the past year, as had older Canadians in 1985, compared to only 57 percent of older adults in Britain in 1985 (p<.01). However, nearly one-third of the older Britons reported seeing a physician in their home in the past year—an option which is virtually unavailable in the U.S. Two-thirds of older adults in Britain had seen a physician either in the office or at home in the past year in 1985.

There was only one comparable measure of hospital utilization in the past year available for all three countries—whether or not the respondents were hospitalized. Figure 3 shows that nearly 20 percent of the older Americans and older Canadians had been hospitalized in the past year compared to only 11 percent of older Britons (p<.01).

There were two measures of health related social services available in the datasets—use of visiting nurses/district nurses/personal care nurses, and use of homemaker/home help services. In the U.S., older adults were asked if they had used these services in the past year; in Canada, they were asked if they were currently using them; and in Britain, they were asked if they had used the service in the past month. As
shown in Figure 4, only 2.9 percent of older adults in the U.S. reported using a visiting nurse in the past year in 1984, compared to 4.5 percent of older Britons in 1985 who reported seeing a district nurse in the past month (p<.01). Less than one percent of older Canadians reported currently using a nurse for personal care in 1985 (p.01). Reference to Figure 5 shows that only 1.5 percent of older Americans had used a homemaker service in the past year in 1984, compared to nearly six percent of older Canadians who reported current use, and nearly nine percent of older Britons who had used home help in the past month (p<.01).

Thus, the first research hypothesis was not confirmed for all comparable measures of health care services utilization. Older Americans and Canadians were much more likely to have seen a physician for an office visit—a percentage difference of 15 percent when the U.S. and Great Britain are compared and 17 percent when the comparison is between Great Britain and Canada. However, older Britons were the only group who had visits from physicians in their home. Older Americans and older Canadians were twice as likely to have been hospitalized. Older Britons were much more likely to have had a visit from a nurse in their home, and to have used a home help. Older Canadians were much more likely than older Americans to have used homemaker services. Thus, the patterns of use of health care services is more complex than originally hypothesized. The Americans and Canadians are very similar in terms of use of physicians and hospital, and the British, while providing fewer expensive physician and hospital visits overall, provide more home visits from physicians, nurses and home helps.

**Fig. 2. Percent of Older People with Physician Visit in Past Year**

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>GB-Surgery</th>
<th>GB-Home</th>
<th>GB-Surgery/home</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>81.9</td>
<td>56.7</td>
<td>29.5</td>
<td>66.8</td>
<td>83.9</td>
</tr>
</tbody>
</table>

Fig. 3. Percent of Older People Hospitalized in Past Year

Fig. 4. Percent of Older People with a Home Visit from a Nurse
Having examined the data for the first hypothesis, the use of health care services was additionally examined inside each country to determine how use of the services was affected by age and sex (Hypothesis 2), health status (Hypothesis 3), and income and public and private insurance coverage (Hypothesis 4). The results of the analyses of variance within age groups (65–74 years, 75–84 years and 85 years or older in the United States and Britain; 65–69 years, 70–74 years, 75–79 years, and 80+ years) are presented below in Figure 6 for comparisons of the use of physician services, in Figure 7 for comparisons of the use of hospitals, in Figure 8 for comparisons of the use of home nursing services, in Figure 9 for comparisons of the use of homemaker services. Among the older Americans, having been hospitalized, having seen a visiting nurse, and having used a homemaker service, all increased with age (p<.05 in all cases). Percent of older Americans who had seen a physician in the past year increased from the 65–74 year-old category, to the 75 to 84 category, but then decreased slightly. Among older Britons, having seen a physician in his surgery decreased with age while having seen a physician at home increased with age (p<.05). Use of hospitals also increased with age (p<.05). Use of district nurses and home helps all tended to increase with age (p<.05). For older Canadians in 1985, the percent seeing a physician increased up through the age groups 75 to 79 and then declined slightly. The percent having been
hospitalized, the percent seeing a personal care nurse and the percent using a homemaker all increased with age.

The differences in the patterns of use of health care services are clear and very marked. In the U.S. and Canada, the percent having an office visit with a physician is very high—more than 80 percent—for all the older age groups, increasing only slightly into the oldest age groups, while office visits decline sharply and home visits increase sharply with age in Britain. In Britain, less than 40 percent of the oldest-old adults have had an office visit with a physician in the past year, but nearly 60 percent have had a home visit. The older adults in the U.S. are the most likely to be hospitalized at all ages, and the likelihood of being hospitalized increases with age. One-fourth of the 85 year old and older adults were hospitalized in the U.S. in the past year. Older Canadians are only slightly less likely to be hospitalized and that likelihood also increases with age. Older Britons, by contrast, are only about half as likely to be hospitalized and increases with age are less dramatic. The percent of the 85+ population with a hospitalization is only 15 percent. Use of visiting nurses, and homemakers increases with age in all three countries but the contrast between the very modest increases in the U.S. and Canada and the large increases in Britain is noteworthy. In the U.S. in 1984, seven percent of the oldest-old had seen a visiting nurse, and five percent had used a homemaker service in the past year. By contrast in Britain, 18 percent of the oldest-old had seen a district

Fig. 6. Percent of Older People with Physician Visit in Past Year by Age

![Bar chart showing percent of older people with physician visits in the past year by age group and country.](chart.png)

- 65-74 US & GB; 65-9 Ca
- 75-84 US & GB; 70-4 Ca
- 85+ US & GB; 75-79 Ca
- 80+ Canada

\* p < .05
Fig. 7. Percent of Older People Hospitalized in Past Year by Age

United States * 23 25
Great Britain * 9 13 15
Canada * 18 22 24

65-74 US&GB; 65-9 Ca 75-84 US&GB; 70-4 Ca 85+ US&GB; 75-9 Ca 80+ Canada
* P < .05

Fig. 8. Percent of Older People with a Home Visit from a Nurse by Age

US-Past year * 2 4 7
GB-Past month * 2 6 18
Canada-Currently 0 0 0 1

65-74 US&GB; 65-9 Ca 75-84 US&GB; 70-4 Ca 85+ US&GB; 75-79 Ca 80+ Canada
* P < .05
nurse, and 33 percent had used a homemaker service *in the past month* in 1984. Also in contrast to the United States, 14 percent of the oldest-old in Canada were currently using homemaker services, although oldest-old Americans were more likely to have used a visiting nurse. Thus, the prediction in Hypothesis 2 that use of services would increase with age, is confirmed in all three countries for all health care services except use of physicians, although there are significant inter-country differences in the strength of the effect of age.

Analyses of variance of sex by use of the health care services, presented in Figures 10, 11, 12 and 13, reveal that, in the U.S., older women were significantly \((p<.05)\) more likely to have seen a physician, to have used a visiting nurse service, and to have used a homemaker service. In 1984, older men were not significantly more likely to have been hospitalized, as is usually observed. Among the older Britons, older women were significantly more likely to have seen a physician at home, to have seen a district nurse, and to have used a home help service \((p<.05\text{ for the three variables})\). Older men were more likely to have seen a physician in his office and to have been hospitalized \((p<.05\text{).}\)

For older Canadians, older women were significantly more likely to have seen a physician in the past year, less likely to have been hospitalized, and more likely to have used a homemaker service. Thus, the prediction from Hypothesis 2, that older men
would tend to use hospital services more than older women, and that older women would tend to use the other health care services the most, is generally found to be true.

The effect of health status on use of health care services is presented in Figures 14 through 17. In all three countries, the very clear and significant trend is for use of each of the four services to be greatest for those in the poorest health, as predicted in Hypothesis 3. Thus, in spite of the very significant differences in the three health care systems, all are effective in making care accessible to those who need it most. The patterns of use of health care services by health status once again show clearly that the U.S. and Canadian systems are both most effective in making hospital care and office based physician care accessible, while the British system is more effective in making home based care from physicians, nurses and homemakers accessible.

Results of the analyses of variance of the utilization measures by family income in the U.S., and by household income in Canada, are presented in Figures 18, 19, 20, and 21. No comparable measure of household income was available for Great Britain. In the U.S., income is not significantly related to having seen a physician in the past year, or to having been hospitalized, but is significantly inversely related to having seen a visiting nurse, and to having used a homemaker service (p<.05 in all cases). These findings are contrary to the prediction in Hypothesis 4, that use of health care services would increase with income among older adults in the United States. In Canada, household income was significantly inversely related to having been hospitalized in

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**Fig. 10. Percent of Older People with a Physician Visit in Past Year by Gender**

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US</strong></td>
<td>84</td>
<td>79</td>
</tr>
<tr>
<td><strong>GB-Surgery</strong></td>
<td>56</td>
<td>58</td>
</tr>
<tr>
<td><strong>GB-Home</strong></td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>88</td>
<td>85</td>
</tr>
</tbody>
</table>

* p < .05; ** p < .10
Fig. 11. Percent of Older People Hospitalized in Past Year by Gender

* p < .05

Fig. 12. Percent of Older People with Nurse Home Visit by Gender

* p < .05
the past year, but none of the other relationships were significant. Thus, in the U.S. and Canada, the existing health care financing mechanisms appear to have been successful in making hospital care accessible to those who need the care the most, those with low incomes who are also most likely to have the poorest health. It is interesting that use of visiting nurse services and homemaker services is inversely related to income in the United States. These services appear to be best insured (by Medicaid) for the low income elderly in the U.S.

The effects of Medicare coverage, Medicaid coverage and private health insurance coverage are presented in Figures 22, 23, and 24 respectively. These effects provide some insight into the effect of income on use of services among older adults in the United States found above. Use of physician services is significantly increased by all three types of coverage, while use of hospital services is significantly increased only by the two public forms of insurance. This pattern indicates that public insurance (both Medicare and Medicaid) is most effective in providing access to hospital care so that supplemental private insurance for hospital care provides little additional access. However, private insurance remains an important factor in accessing physician care.
Chapter 4: A Comparison of the Use of Health Care Services

Fig. 14. Percent of Older People with Physician Visit in Past Year by Health

Fig. 15. Percent of Older People with Hospital Visit in Past Year by Health
Fig. 16. Percent of Older People with Home Nurse Visit by Health

* p < .05

Fig. 17. Percent of Older People with Homemaker Visit by Health

* p < .05
Only Medicaid significantly increases access to home based services including nursing and homemaker services. It is perhaps not surprising that private insurance coverage is inversely related to use of these in-home services. Private insurance coverage of these services would be prohibitively expensive. The Medicare program also provides little in the way of in home services. It is interesting that only the very poorest elderly in the U.S. are provided these services. Perhaps these services are seen as possibly effective in preventing even more expensive nursing home care that would have to be borne by the Medicaid program, and, therefore, worth the expense.

CONCLUSIONS

In conclusion, this research has shown that the patterns of use of health care services and the predictors of the use of health care services in the United States, Canada and Great Britain do differ. Contrary to the first hypothesis of this research, older adults in the United States and Canada are more likely to use physicians than are older adults in Great Britain; however, nearly one-third of older adults in Britain have had physician visits in their homes in the past year, a phenomenon that is virtually nonexistent in the U.S. and Canada. While office visits with physicians increase slightly with age in the U.S. and Canada, office visits tend to decline dramatically with age in Britain but home visits with physicians increase with age. Older Americans and
Fig. 19. Percent of Older People Hospitalized in Past Year by Income

* p < .05

Fig. 20. Percent of Older People with Nurse Home Visit by Income

* p < .05
older Canadians are more likely to have been hospitalized in the preceding year, although this difference is decreasing in the U.S. as a result of declining hospitalizations due to the effect of prospective payment in the Medicare and Medicaid programs.

In the U.S., Great Britain, and Canada, use of hospitals increases with age, although older adults are much less likely to use hospital services in Britain than in the other two countries. The differences are due to policy differences in setting priorities for the health care delivery system in Britain, compared to Canada and the United States. In the U.S., people can generally get all the health care they want if they have public or private health insurance or discretionary income to pay for the care. The Canadian system is also biased toward hospital care. In Britain, the priorities are designed to provide the greatest good for the greatest number and access to services is limited for those people who have limited potential to benefit from the services.

Older adults in Britain are much more likely to use nurses and homemaking services than are older adults in the U.S. and Canada, and, in all three countries, use of these services increases with age and they are more likely to be used by older women than by older men. The sex difference may be due to the fact that older women are more likely than older men to be widowed with no spouse in the home to assist them when their health declines.
Fig. 22. Percent of Older People in US Using Services by Medicare Coverage

* p < .05

Fig. 23. Percent of Older People in US Using Services by Medicaid Coverage

* p < .05
Although the health care delivery systems are very different, both the U.S. and Canadian systems are reasonably accessible by the older adults with low incomes. Those older adults with the lowest incomes also tend to have the poorest health. In fact, coverage by Medicaid of low income older adults renders home based nursing and homemaker services more accessible to this group of elderly than to any other group in the United States. In all three countries, older adults with the poorest health are also the most likely to use all four of the health care services. Thus, older Americans and older Canadians use more physician and hospital services than do older Britons; however, older Britons have greater access to health and social support services in the community and are even able to get physician care in the home if their health warrants it. These differences were greatest for those most in need, those in poor health and the oldest-old.

Examination of these data have indicated that the different systems have different strengths. Clearly, the British system is strongest in the provision of home based services for older adults, including home visits from physicians and the provision of district nurses, homemakers and health visitors. These services appear to be especially heavily used by the oldest-old adults who are in the poorest health. The Canadian and American systems are especially strong in providing access to physicians in their offices and providing access to hospital services.
Based on these findings, there are two specific policy recommendations which can be made. First, it would seem that the American and Canadian policy makers should examine the structure of home service for older people in Great Britain, especially the 85-year-old and older populations of those two countries are projected to quadruple in the next forty years. This oldest-old population is the most likely to be in the greatest need for health and social support services but is the least likely to have discretionary income with which to buy these services or to pay for insurance for such services. Thus, home-based services financed by the government may be the most feasible way of providing these services. Certainly, provision of visiting nurses and homemakers primarily through the private sector in Canada and the U.S. has not been as successful in reaching the older adult population as has the British provision of these services through the public sector.

Second, the British might benefit from examining the U.S. and Canadian methods of financing expensive hospital care for older people. Both countries use forms of national insurance to finance this care. In Canada, the National Insurance system is universally available, while in the U.S. the Medicare system is available only to older adults and must be supplemented by private insurance for the middle class and Medicaid for the poor elderly. Despite their differences, both the Canadian system and the American system are more effective than the British National Health Service in making high cost hospital care available for the elderly. With the increasing effectiveness of high cost, high technology medicine in improving the quality of life of older adults, it would seem to be desirable to make such care as accessible to older adults as to younger populations.

References


