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IMMIGRATION AND HEALTH CARE UTILISATION PATTERNS IN CANADA

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1.0 INTRODUCTION

A growing literature has focused on various economic impacts of immigration on the Canadian economy. The relevant studies include empirical estimates of the impact of immigration on domestic wages and employment rates, government tax revenues and expenditures and external trade and investment.

An area which, to date, has not received much attention is the relationship between immigration and health care.[1] Examination of this relationship is important for several relatively obvious reasons. One is that health care constitutes the single largest source of government expenditure and the ageing of the population will put increasing financial pressure on the government in the form of increased demands for — more expensive — health care. To the extent that immigrants are more or less intensive users of health care, on average, than Canadian-born residents, immigration can either mitigate or exacerbate the increasing demand for health care that can be expected to emerge over time.

Immigration can also affect the net financial demands placed on the government to the extent that immigrants use more medical care per dollar of taxes paid than do the native-born. Since the bulk of the financing of health care in Canada is through direct income taxation, differences between immigrants and the native-born in terms of their financial contribution to the health care system will primarily reflect differences in taxable income levels holding heath care

[1] An exception to this statement is Laroche (1997). Also see Chen, Ng and Wilkins (1996) and Wen, Goel and Williams (1996).

usage constant. Thus, if immigrants generally have lower incomes — over their lifetimes — than the native-born, on average, then immigrants will contribute less financially to the health care system than the native-born holding usage constant. In fact, evidence (to be discussed) suggests that, at least until recently, immigrants did not earn lower incomes than native-born Canadians over their working lifetimes. Moreover, the progressive tax structure reflects the principle that wealthier Canadians should subsidize access to public services by poorer Canadians. The implication of these observations is that the impact of immigration on the net financing needs of government is most appropriately evaluated by focussing on whether levels of health care demand differ between immigrants and the native-born.

Immigration patterns can also potentially affect the nature of demand for health care. For example, to the extent that immigrants have different types of demand for health care, adjustments to the distribution of expenditures on health care may be appropriate if Canadians, including immigrants, are to receive the "optimal" mix of service offerings.

As an example, consider "non-traditional" medicine such as acupuncture or homeopathy. If immigrants, say, are more inclined than the native-born to favour such non-traditional forms of medicine, an unwillingness to fund them to the same extent as traditional forms will likely suppress the usage on the health care system by immigrants — or, at least, will contribute to less satisfaction with the system of the part of immigrants, unless these different preferences led to a redistribution of funding between traditional and non-traditional medical services.

Differences across users in their preferences for traditional versus non-traditional health care also constitute support for decentralization of health care planning and delivery. The notion here is

that a decentralized decision-making process is better able to identify and address such differences.

Given that immigrants tent to cluster geographically in large cities, differences in health care utilisation preferences between immigrants and the native-born would further argue for decentralization of health care planning and delivery (other things constant), since geographical decentralization could be fairly well matched to differences in utilisation preferences.

The purpose of this report is to identify whether and in what ways immigrants to Canada use the health care system differently from native-born Canadians. The study is motivated by two primary considerations. One is to identify ways in which the Canadian health care system, by a reallocation of expenditures, might be made to yield greater satisfaction to Canadian taxpayers and users of the system. Second is to assist the planning process as the health care sector restructures to become more "community-oriented." As the characteristics of urban communities in Canada change, partly as a result of immigration, health care planners should be aware of how such changes will alter what the users of the system will be looking for in terms of "good basic" health care services, as well as whether health care is likely to be valued more or less highly in comparison to other government services.

The study is primarily empirical in nature. It reports the results of an analysis of data contained in the National Population Health Survey conducted over the period June 1994 to June 1995;[2] however, while the study is primarily empirical in nature, it also contains conceptual discussions of the potential relationships between immigration patterns and health care utilisation patterns. It also contains a set of policy recommendations. The paper proceeds as follows.

[2] For a description of the survey, see Statistics Canada (1996).

2.0 POTENTIAL LINKAGES BETWEEN IMMIGRATION AND HEALTH CARE

It is possible for immigrants to differ from native-born Canadians both in their overall usage of the health care system, as well as in their desired — and, perhaps, actual — patterns of usage of health care services. A variety of possibilities can underlie such differences. For example, immigrants may enjoy different "states of health" from native-born Canadians for a variety of reasons. Such differences could give rise to above- or below-average utilisation rates of the health care system by immigrants as measured by statistics such as visits to physicians, stays in hospital and so forth. Immigrants may also differ from the native-born in their specific health care utilisation patterns. For example, different genetic characteristics between immigrants and native-born Canadians might also contribute to differences in specific health care requirements to the extent that specific maladies and illnesses are more common to certain racial groups than to others. Special language needs and cultural preferences might also condition the type of health care services favoured by immigrant groups relative to native-born Canadians, as well as possibly affecting the overall demand for the services offered under provincial health care plans. In particular, language and cultural "distance" may discourage some immigrants from using the health care system as much as their "objective" circumstances would mandate.

In the rest of the second section we elaborate on possible reasons for differences in both overall and specific health care utilisation patterns between immigrants and the native-born.

2.1 Overall Usage Rates

The demand for health care is influenced by a number of factors.[3]

[3] For a summary of the empirical literature, see Phelps (1992) and Globerman and Vining (1996).

2.1.1 Age

The most prominent factor is age. Most notably, the elderly are much more intensive users of the health care system than their younger counterparts.[4] This greater usage intensity is reflected in both a higher average number of visits made to health care providers, as well as in higher average frequency and duration of hospital stays. The age-utilisation intensity profile is somewhat different for females than for males. Specifically, females are more intensive users of health care in their child-bearing years; however, they tend to be less intensive users in "early old-age", as they generally enjoy better health than males at similar ages. Nevertheless, usage increases in old age for females as well as for males.

2.1.2 Real Income

In the United States, real income levels are generally positively related to the overall demand for health care, since higher income levels facilitate the purchase of private health care insurance. The positive impact of higher real income on health care usage should be much less significant in countries such as Canada where access to health care is provided through publicly funded insurance programs.[5] Indeed, since higher real incomes can allow individuals to purchase commodities that contribute indirectly to better states of health, such as better housing, more nutritious diets and so forth, it is conceivable that wealthier individuals in government-funded health programs are more moderate users of health care than their poorer counterparts. Augmenting this latter consideration is the higher opportunity cost of time of wealthier individuals. All else constant, this would reduce their demand for health care relative to poorer

[4] This is confirmed by Laroche (1997) using Canadian data.

individuals, since visits to health care providers can be time consuming in terms of both travel and waiting times.

2.1.3 Education and Occupation

Real income levels are usually related to other socio-economic factors that can influence the demand for health care. For example, wealthier individuals are usually relatively well educated, and well-educated individuals tend to practice healthier lifestyles than their less well-educated counterparts. All other things the same, educated individuals should be less-intensive users of the health care system than less educated individuals. On the other hand, more education may enable individuals to better recognise when they are in need of health care, as well as the benefits of judicious preventative health care. Such factors would contribute to a positive relationship between attained education levels and health care utilisation intensity.[6]

Occupation status can affect health care utilisation directly to the extent that there are differences in health and safety risks across occupations. More indirectly, status and other conditioners of health status differ across occupations with factors such as security of employment and autonomy differing from job-to-job.

2.2 Immigrant Status and Usage Rates – Some Considerations

To the extent that immigrants have different age, income, education and gender profiles from

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[5] Evidence documenting this point is discussed in Globerman and Vining, op.cit.

[6] Laroche (1997) finds for Canada that higher incomes and educational attainment are, in general, associated with better health, although educational attainment and expected household income do not tend, overall, to have a significant impact on the utilisation rate of health services, perhaps suggesting the presence of offsetting factors discussed above. Individuals who reported not being in the labour force were significantly more likely to consult a health professional and to be hospitalized than those who reported being employed.

native-born Canadians, their overall usage of the health care system might differ from their Canadian-born counterparts.

2.2.1 Age

The historical post-war experience for Canada has been that immigration has had a relatively minor impact on the overall age structure.[7] The median age of arriving immigrants has been slightly below that of the receiving population. Although the numbers of immigrants increase with age, foreigners comprise a smaller proportion in relation to the Canadian-born at ages below 35-39. Beyond this age class, the native-born are relatively fewer, which means that there are more older people in the immigrant than in the Canadian-born population.[8] These differences, however, are modest. Moreover, differences in the underlying health status of immigrants compared to the Canadian-born do not seem substantial, particularly in age categories where health care usage is intensive. For example, for both males and females, age-specific death rates are lower for the immigrant than the native-born population, but the gap between the two groups narrows as age rises, particularly after age 65.[9]

2.2.2 Education

With respect to education levels, immigrants have traditionally enjoyed an advantage compared to the Canadian-born over much of the post-war period. This has been true, in part, because education has been an important screening criterion for immigration. The relative advantage of

[7] Beaujot (1992).

[8] Trovato (1994).

[9] Ibid., p.65.

immigrants compared to the Canadian-born was highest in the immediate post-war period. With the gradually improved educational profile of the Canadian-born population and the greater importance of the family and refugee classes in immigration, the more recent immigrants do not enjoy a noticeable advantage with respect to education.[10]

2.2.3 Income and Occupational Status

Income is largely related to occupational status which, in turn, is largely conditioned by educational attainment. Occupational status can also influence health status in other ways. Most directly, working in hazardous occupations can increase the risks of accidents and illness from contact with toxins and pollutants. Indirectly, prolonged periods of unemployment have been linked to emotional stress which, in turn, can contribute to higher probabilities of suffering ill-health.

Over the post-war period, on the whole, the unemployment rates of immigrants are comparable to those of the Canadian-born. Moreover, the occupational distribution of immigrants does not differ greatly from that of the Canadian-born labour force.[11] This is consistent with the observation that immigrants, as a total group, have average income levels that compare favourably to the Canadian-born. The small income advantage seems related to the slightly higher attained educational level of immigrants.

2.2.4 Recent Immigration Patterns

In sum, looking at total immigration to Canada over the entire post-war period, one is struck by the similarities between immigrants and native-born Canadians across the main socio-demographic

[10] Beaujot, op.cit., p.54.

[11] Ibid.

factors that are likely to influence overall rates of health care utilisation. To be sure, the socio-demographic profile of recent immigrants to Canada differs from that of immigrants from earlier post-war periods. In particular, recent immigrants tend to be older, less well-educated, relatively less well-off financially and more likely to be unemployed than earlier vintages of immigrants in a comparison to the Canadian-born. Nevertheless, the demographic and socio-economic differences between the Canadian-born and recent immigrants do not appear to be substantial enough, on average, to contribute to marked differences in overall health care usage between the two groups, although this is a testable hypothesis, in principle.

Socio-economic differences within the overall category of immigrants to Canada also appear to be increasing over time. For example, "Third World" immigrants who arrived in the 1960s or earlier succeeded as well or better economically than most other immigrants.[12] More recent vintages of Third World immigrants contain relatively higher proportions of persons selected on the basis of family reunification and humanitarian concerns. As a consequence, they have lower average educational attainment, less active participation in the workplace, lower average incomes and, significantly, less proficiency in the official languages than immigrants to Canada selected under the independent and other immigration categories. Again, it is an empirical matter whether these differences contribute to significant differences in overall health care usage among different immigrant groups.

2.3 Cultural Considerations

Differences between immigrant groups and native-born Canadians that are of a more purely "cultural" or "ethnic" nature can also potentially influence overall rates of health care utilisation.

For example, the limited proficiency of many recent immigrants in English (or French in Quebec) might reduce the satisfaction they expect to receive from the health care system. For example, communications difficulties between immigrants and service providers might make their interactions less "productive" than those between service providers and Canadian-born patients. Limited language proficiency might also reduce the overall demand for health care on the part of recent immigrants by contributing to or exacerbating a lack of knowledge about how and where to access health care services.[13]

Ethnic groups may also differ in their attitudes towards using the health care system relative to other forms of help. For example, it has been suggested that the Chinese rely more on non-medical and palliative strategies than do Anglo-Saxons. In particular, they rely more upon outside care from family members and relatives. It has also been reported that Koreans do not want to admit they are sick or to show any signs of weakness, which lowers their propensity to use conventional health care services.[14]

Some cultural attributes conditioning health care utilisation, such as language proficiency, may well diminish in importance over time, as the immigrants involved learn English or French and/or as their descendants are fully integrated into Canadian culture. Other cultural attributes, such as attitudes towards reliance upon family versus professional health care workers, may persist for generations.

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[12] See Lanphier (1979).

[13] For some evidence that limited proficiency in the local language can be a barrier to accessing health care, see Blackwell, et.al. (1995).

[14] See Ujimoto (1994).

Since this study focuses exclusively on immigrants' usage of health care services compared to that of native-born Canadians, we do not consider the more narrow question of how usage patterns of Canadian-born descendants of recent immigrants differ from those of their immigrants parents.[15] In effect, our study assumes that Canadian-born descendants of recent immigrants consume health care in the same way as other native-born Canadians of similar age, income level and so forth.

2.4 Immigration and Usage Patterns

Immigrants may differ from native-born Canadians in their specific health care usage patterns for a number of possible reasons. One is heredity characteristics, including emotional and psychological differences, that predispose ethnic groups to different health care risks. Available evidence indicates, for example, that the immigrant population in the United States exhibits better survival probabilities than the American-born population in major cause-of-death categories such as cancer, cardiovascular disease, accidents and violence. In France, immigrant males have reduced odds of death from cardiovascular complications, cancers and alcoholism but have a higher risk of death from accidents and violence. In Australia and Great Britain, immigrants fare better than the native-born in terms of mortality connected with degenerative and chronic diseases, but they fare less well in terms of violence and accidents.[16]

Immigrants and Canadian-born may also differ in their "subjective" preferences toward different types of medical interventions, e.g. preventative versus curative protocols or traditional versus alternative medicines. For example, one recent survey found that almost 60 percent of the

[15] In any case, the Statistics Canada Survey does not permit this latter comparison.

[16] Trovato, op.cit.

survey respondents had used complementary health therapies; however, only around 46 percent of the Chinese language respondents had used complementary therapies such as vitamins, chiropractic therapy, naturopathy and acupuncture. Satisfaction with the complementary therapies received was generally quite high: almost 74 percent of respondents rated them good or excellent; however, only 42.5 percent of the Chinese language respondents considered the alternative treatments they had received to be good or excellent.[17] Of the entire sample of respondents, about 75 percent wanted more complementary therapies to be at least partially funded by government as compared to 60 percent of Chinese respondents.

In terms of health care utilisation patterns in Canada, Chen, Ng and Wilkens (1996) find that, when adjusting for age, the hospitalization rates of non-European immigrants are significantly lower than those of both European immigrants and of non-immigrants, and that immigrants and non-immigrants have a similar utilisation rate of physicians services. In an econometric study based upon the 1985 and 1991 cycles of the GSS, Laroche (1997), reaches the overall conclusion that immigrants do not constitute a special burden to the health care system as their health and usage of health services are not significantly different from their non-immigrant counterpart.

3.0 THE SURVEY

Statistics Canada's National Population Health Survey (NPHS) is a longitudinal survey that will collect information from the same panel of respondents every two years for up to two decades.

[17] As cited in Ramsay (1997, p.20). The survey also notes that women were more likely than men to use complementary therapies, but age did not seem to be a factor conditioning the use of complementary therapies.

Data collection for the first wave began in June 1994 and finished in June 1995. The analysis in this study is based on the first wave survey results.

The target population of the NPHS consists of household residents in all provinces and territories, except persons living on Indian reserves, on Canadian Forces bases, or in some remote areas. The survey collects most of the information from a single household member. An initial sample of 20,000 households was surveyed. Some provinces chose to increase the sample size to increase the utility of the survey. This resulted in a final sample size of 26,430 households after including provincial buy-ins and households eligible to be rejected. The final response rate was approximately 88 percent of households.

3.1 Overview of Main Findings

Some of the basic findings of the survey support the broad generalisations made earlier in this report. For example, the proportion of people who describe their health as excellent or very good declines with age. There is also a strong positive association between self-rated health and socio-economic status, as measured by educational attainment and income adequacy. Similarly, people with higher incomes were more likely to report excellent or very good health than those in lower income groups.

Despite generally high levels of self-assessed health, around 55 percent of all adults reported at least one chronic condition. The most common conditions were allergies, back problems, arthritis and rheumatism, and high blood pressure. Approximately 17 percent of the adult population had experienced an injury severe enough to limit their daily activity during the 12 months before the NPHS interview. Smokers were slightly more likely than non-smokers to describe their health as fair or poor. Alcohol consumption was associated with the likelihood of

having had an injury in the year prior to the survey. Overweight individuals were less likely than others to report themselves to be in excellent or very good health.

Physicians and dentists are the most frequently consulted health care professionals. In 1994, 77 percent of Canadian adults reported that they had consulted a physician in the previous year and 55 percent a dentist. Women were somewhat more likely than men to have seen a physician, but there were no gender differences in terms of contacts with other health care professionals. The frequency of consulting physicians is greatest at older ages. There was little relationship between income and the likelihood of having visited a physician in the previous year. By contrast, the proportion who had visited a dentist tended to rise with household income, a result which is unsurprising given the much larger role private insurance plays in paying for dental care.

Use of the services of health care professionals varies by province. For example, rates of physician consultation ranged from 70 percent in Quebec to 82 percent in Prince Edward Island. The reasons for these differences are unclear from the survey, although there are also regional differences in smoking and drinking propensities, as well as in physical activity. Differences across provinces in accessibility of health care services do not appear to be relevant, as only 4 percent of the population aged 15 and over reported that there was a time during the previous 12 months when they had needed health care or advice but did not receive it. This proportion did not differ noticeably by demographic or socio-economic characteristics.

A strikingly high 77 percent of the adult population reported using at least one prescription or over-the-counter medication in the month prior to being interviewed. Women were more likely than men to report using at least one prescription. Headache medications and

analgesics were the most commonly used. In contrast, a relatively small 15 percent of adults used some form of alternative medicine in the 12 months prior to the survey. The most common alternative health care was chiropractic services. Around 11 percent of the population had consulted a chiropractor in the previous year, whereas only 2 percent used homeopathy and another 2 percent received massage therapy. Women were somewhat more likely to use alternative medicine than men, while members of wealthier households were somewhat more likely to use alternative medicine than members of poorer households. The use of chiropractors, in particular, is higher in provinces where chiropractors are registered under a provincial health care plan.

Overall, immigrants were less likely than the Canadian-born to have a chronic condition: 50 percent versus 57 percent. However, as their length of time in Canada increases, so does the reporting of chronic conditions after adjusting for the age structure of any particular cohort.[18]

4.0 SUMMARY OF SURVEY ANALYSES

In this section we report the results of our own analysis carried out largely by stratifying the responses of immigrants and non-immigrants, e.g. by conditioning variables such as income, age and so forth.

Before reviewing the main findings, it is useful to identify what one might expect to find based upon the preceding discussion in the report. Perhaps the most prominent overall finding one would anticipate is that immigrants and Canadian-born individual will have similar health care utilisation profiles. Specifically, the differences in demographics, at least between all living

[18] Three cohorts were studies: those who emigrated within the past 5 years; those who emigrated between the previous 6 to 10 years and those who emigrated more than 10 years prior to the survey.

cohorts of immigrants and all living native-born Canadians are not so large as to contribute to substantial differences in underlying demands for health care services. Newer vintages of immigrants have somewhat different economic and demographic profiles from earlier vintages, and might therefore have different patterns of health care utilisation. While we do not structure a direct comparison between different vintages of immigrants, we do compare different groups of immigrants. Specifically, the NPHS subdivides immigrants into the following four categories:

1. Immigrants from the U.S. and Mexico (Category 1),
2. Immigrants from South America and Africa (Category 2),
3. Immigrants from Europe and Australia (Category 3),
4. Immigrants from Asia. (Category 4).

Confidentiality provisions of the survey prohibited a finer disaggregation of the reported data.

Categories 2 and 4 consist of relatively more recent vintages of immigrants, given the emphasis on immigration from non-traditional source countries over the past 25 years (Marr 1992). As will also be discussed, immigrants in categories 2 and 4 tend to be younger than those in categories 1 and 3. Hence, a comparison of health care utilisation patterns across the various reported immigrant categories captures a good deal of the possible within-immigrant group differences in health care utilisation patterns.

4.1 Basic Usage Characteristics

The observable differences between Canadian-born respondents and respondents from the four immigration categories are quite modest. In particular, there are no dramatic differences across the groups in their frequencies of visits to general practitioners in the past year (see Table 1). If

anything, immigrants in Category 2 (US and Mexico) and 3 (Europe and Australia) are somewhat more frequent visitors to general practitioners than are native-born and other categories of immigrants.

Table 1
Number of Visits to a General Practitioner
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	21.6	18.2	20.7	19.6	22.4
1 - 2	31.6	36.0	37.3	34.5	34.4
3 - 5	21.6	20.0	24.0	22.1	24.4
6 - 8	8.3	11.4	7.3	9.6	6.0
> 8	11.9	14.4	10.7	14.2	12.8

Canadian-born individuals and immigrants in Category 3 are marginally more inclined than other respondents to make more frequent visits to other medical doctors, mostly specialists (see Table 2). Once again, European and Australian immigrants are more intensive users of medical doctors than are other immigrants or the native born. Asian immigrants are relatively light users.

Table 2
Number of Visits to Other Medical Doctors
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	74.6	70.7	75.4	71.2	79.4
1 - 2	16.4	18.6	15.6	18.6	12.8
3 - 5	5.4	4.9	4.3	5.6	4.4
6 - 8	1.6	1.5	3.0	2.3	1.5
> 8	2.0	1.5	1.7	2.3	1.9

Respondents in immigrant categories 2 (South American and African) and 4 (Asian) are somewhat less intensive visitors to nurses for care and advice (see Table 3) and to chiropractors (see Table 4) than are respondents from categories 1 and 3. There are less-consistent differences between Canadian-born and immigrants in categories 1 and 3.

Table 3
Number of Visits to a Nurse for Care/Advice
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	91.8	89.4	96.7	92.8	99.3
1 - 2	4.5	6.1	2.3	3.8	1.6
3 - 5	1.5	1.5	0.7	1.0	0.4
6 - 8	1.1	0.8	0.3	2.4	0.7
> 8	1.1	2.2	0.0	0.0	0.0

Table 4
Number of Visits to a Chiropractor
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	89.4	86.7	93.7	91.2	94.5
1 - 2	2.9	4.2	2.3	2.4	1.5
3 - 5	2.6	2.3	1.7	2.0	0.9
6 - 8	1.7	2.7	0.3	1.4	0.9
> 8	3.4	4.1	2.0	3.0	2.2

The Canadian-born tend to be slightly more represented in the two most frequent categories of visitors to social workers and counselors than are the various categories of immigrants. However, the most remarkable point is the infrequency of use of such services among sample respondents (see Table 5).

Table 5
Number of Visits to a Social Worker/Counselor
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	94.3	93.6	92.7	96.1	97.6
1 - 2	2.6	3.0	4.3	2.0	1.1
3 - 5	1.4	2.3	2.0	0.6	0.7
6 - 8	0.5	0.8	0.0	0.6	0.4
> 8	1.2	0.3	1.0	0.7	0.2

Most of the various immigrant groups (except Asians) tend to visit physiotherapists more frequently than Canadian-born respondents, with category 2 respondents being the most frequent of the various immigrant categories (see Table 6). This is indicated by the somewhat higher percentages in the latter two categories of uses. Asians were again the least frequent visitors along with the native born.

Table 6
Number of Visits to a Physiotherapist
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	93.0	90.9	92.4	92.3	93.6
1 - 2	1.6	1.9	0.3	1.2	0.8
3 - 5	1.3	1.5	2.0	1.6	1.5
6 - 8	1.1	1.9	0.7	1.4	0.9
> 8	3.0	3.8	4.6	3.5	3.2

Virtually no respondents reported visiting a psychologist or a speech or occupational therapist in the year prior the survey. Given the very limited use of these services, no table of responses is shown. Suffice to note that around 98 percent of all respondents indicated that they had visited neither a psychologist nor a speech/audio/occupational therapist in the past year.

Similarly while category 3 immigrants tend to be the most represented in the group of intensive users of dental services, the differences among groups of immigrants and the native-born in this category of service are quite small (see Table 7).

Table 7
Number of Visits to a Dentist/Orthodontist
(Percentage of Reporting Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	47.8	45.8	43.9	45.7	49.8
1 - 2	41.8	42.1	42.5	41.4	40.0
3 - 5	7.8	10.2	11.0	9.6	7.3
6 - 8	1.5	1.5	2.3	1.9	2.0
> 8	1.1	0.4	0.3	1.4	0.9

Respondents among the immigrant category 1 and among Canadian-born respondents were slightly more likely than other respondents to report having seen or talked to an alternative health care provider in the 12 months prior to the survey; however, the overwhelming majority of respondents in all categories reported not having seen or talked to an alternative health care provider. For example, the highest percentage (6.4) was reported by immigrants in category 1 followed by 5 percent of the Canadian-born. The lowest percentage (2.3) was reported by category 2 respondents. The most frequently cited alternative health care provider cited by all respondents was massage therapist.

The vast majority of all respondents saw their general practitioner (most recently) in a health professional's office. Category 3 and 4 immigrants were more likely to see GPs in the latters' offices than the other respondents, while category 2 respondents were substantially more likely to see GPs in walk–in clinics. The latter difference is notable. For example, around 19 percent of respondents in category 2 reported seeing a GP (most recently) in a walk-in clinic.

The next highest reporting groups were Canadian-born and category 4 respondents with around 10 percent reporting the most recent contact being a walk-in clinic.

4.2 Reported Health Status

Respondents were asked to comment on whether or not they suffered from a broad variety of chronic conditions ranging from asthma to cancer. One relatively consistent finding is that respondents from immigrant categories 2 and 4 reported lower incidences of chronic health conditions than did Canadian-born and other immigrant respondents. This was especially noticeable for "age-related" conditions such as high-blood pressure, diabetes and heart disease. For such age-related chronic conditions, category 3 immigrants reported higher percentages of respondents suffering from the condition than any other group of respondents. The ostensible reason would seem to be the higher percentage of category 3 respondents who reported that they were retired. Specifically, fully 34 percent of respondents in category 3 reported that they were retired compared to around 31 percent of category 1 and around 18 percent of Canadian-born respondents. In contrast, less that 9 percent of category 2 and 4 immigrants reported that they were retired. The suggestion here is that category 2 and 4 immigrants are younger and more vital than other immigrants, as well as the Canadian-born, and the more generally limited use of health care services by the former reflects this difference. We shall explore this likelihood in more detail below.

Respondents were also offered a menu of physical activities and asked to indicate their frequency of participation in those activities. The list was comprehensive and therefore quite eclectic making it difficult to summarize the results in any meaningful way; however, what is perhaps most salient about the results is that the Canadian-born were more likely to have

participated in at least one of the listed physical activities than respondents from the various immigrant groups — with the exception of respondents from category 1. Since the list of activities includes such "moderate" activities as walking and gardening, the fact that the vast majority of respondents say that they are active in some way comes as no surprise. The fact that younger cohorts are less likely to do "something" compared to older cohorts of immigrants and to Canadian-born is also unsurprising, as the opportunity costs of the former to engage in exercise are likely to be higher than those of the latter.

4.3 Treatment Regimes

Older people are not only more frequently sick than younger people, they also suffer from more complex health problems that are more likely to require in-patient treatment regimes. This assertion is supported by the following findings. First, the percentages of category 1 and 3 immigrants reporting that they had been overnight patients in a hospital or a nursing home in the year prior to the survey were higher than the percentages for category 2 and 4 immigrants. The percentage of Canadian-born respondents indicating that they had been overnight patients (around 11 percent) was well below the 17 percent reported for category 1 immigrants, but above the 8 – 9 percent reported by category 2 and 4 patients (see Table 8).

Table 8
Overnight Patient in Hospital/Nursing Home
(Percentage of Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
yes	10.6	16.7	8.0	11.2	8.6
no	89.4	83.3	92.0	88.8	91.4

Respondents were also asked to identify the number of nights they had been patients in a hospital or a nursing home. Category 1 and (especially) category 3 immigrants had the highest percentages of respondents in the most frequent categories (see Table 9).

Table 9
Number of Nights Overnight Patient in Hospital/Nursing Home
(Percentage of Sample)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
1	16.8	15.9	29.2	12.0	25.6
2 - 3	25.6	22.7	25.0	22.8	35.9
4 -6	21.8	27.3	25.0	20.3	7.7
7 - 10	14.3	9.1	16.7	12.7	7.7
> 10	21.5	25.0	4.1	32.3	23.1

For example, approximately 45 percent of category 3 immigrants who reported spending any time in a hospital or nursing home spent 7 or more nights as an in-patient. This compares to a reported 34 percent for category 1 immigrants; 31 percent for category 4 immigrants and 21 percent for category 2 immigrants. The number for Canadian-born respondents was 36 percent. While age would seem to explain a good deal of the differences across groups in extended hospital stays, the marked differences between category 2 and 4 immigrants is not as easily explained by this obvious factor, nor is the relatively high percentage reported by Canadian-born respondents. One plausible additional explanation is that the Canadian-born are more prone to disabling injuries than are immigrant respondents. For example, around 18 percent of Canadian-born respondents reported that they had suffered an injury causing activity limitation in the period prior to the sample. The highest percentage from an immigrant respondent group (15 percent) was reported by category 1 immigrants.

The general pattern with respect to medication and pharmaceutical usage is similar to the

broad usage patterns outlined above. Namely, category 2 and 4 immigrants were generally less likely to use conventional medications that other respondents. This was especially marked for medications designed to address age-related conditions such as heart disease and high blood pressure. Canadian-born respondents were sometimes more likely and sometimes less likely than respondents in immigrant categories 1 and 3 to report using medications. As a summary statement, over 30 percent of respondents in immigrant categories 2 and 4 reported that they used none of the drugs listed in the survey, whereas only around 20 percent of the other respondents indicated that they had used no drugs.

On the other hand, immigrants in categories 2 and 4 were somewhat more likely than other respondents to use non-conventional medications. For example, 30% of category 2 and 32% of category 4 immigrants stated that they had used a drug during the past year not explicitly listed in the survey. Only around 20% of immigrants in other two categories as well as Canadian-born, indicated that they had used a drug other than those explicitly listed in the survey.

The survey results reviewed to this point clearly suggest that differences exist across categories of immigrants with respect to health status and that these differences, in turn, lead to differences in health care utilisation patterns. In particular, immigrants from "non-traditional" sources, namely South America, Africa and Asia, are generally less-intensive users of health care resources than are immigrants from other regions, as well as less-intensive users of health care than the native-born. The obvious explanation for this is that the former (as represented in the sample) are younger and generally active in the work force compared to the latter. This, in turn, suggests that over a complete life-cycle, there may be little difference in health care utilisation patterns both across immigrant groups, as well as between immigrants and native-born

Canadians. That is, a cross-section which systematically includes relatively healthier members of one immigrant category presents a misleading picture of the long-run health care resource burdens imposed upon taxpayers by that group.

5.0 HEALTH CARE UTILISATION ADJUSTING FOR AGE OF RESPONDENT

The issue addressed in this section of the paper is whether category 2 and 4 immigrants impose the same burden on health care resources over their lifetimes as other Canadian residents. A comprehensive way to do this is to re-estimate Tables 1-9 for all different age cohorts for the native-born and the four immigrant categories. This extensive statistical analysis is both costly and likely unnecessary. As noted earlier, the bulk of the average individual's health care expenditures are generated in his/her later years. Hence, it would seem of most interest to compare health care usage patterns of the elderly and "near-elderly."

5.1 Usage Patterns of Those Aged 65 and Above

Table 10 reports the number of visits to a general practitioner in the past year reported by respondents aged 65 and above. Focusing on the most frequent users, that is, those who visited six or more times, we see that immigrants in category 4 are actually the most frequent visitors to general practitioners among the elderly; however, immigrants in category 2 remain significantly underrepresented among the most frequent users in Table 10. The latter are intensive moderate users of the services of general practitioners, as seen by their dominance of the "three-to-five" visit category. Category 3 immigrants are somewhat more-intensive users of general practitioners than are the native-born, while category 1 immigrants are somewhat less-intensive users. In interpreting the information in Table 10, it is important to highlight the fact that there

were relatively few observations in the "over eight" visit cell for category 2 and 4 immigrants. Hence, the percentages reported in those cells may not be reliable.

Table 10
Number of Visits to a General Practitioner
(Percentage of Sample - 65 and Older)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	12.6	11.7	14.3	12.3	8.6
1 - 2	29.7	26.0	19.1	28.0	25.7
3 - 5	26.5	23.4	42.9	25.2	28.6
6 - 8	11.8	22.1	9.5	13.6	5.7
> 8	18.5	16.9	14.3	19.5	31.4

Table 11
Number of Visits to Other Medical Doctors
(Percentage of Sample - 65 and Older)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	71.1	65.8	72.7	69.5	65.2
1 - 2	18.5	22.4	27.3	19.8	17.1
3 - 5	7.1	3.9	0.0	6.7	14.3
6 - 8	1.5	3.9	0.0	2.3	2.9
> 8	1.7	3.9	0.0	1.7	0.0

Table 11 reports the number of visits to other medical doctors on the part of those 65 and older. The caveat must again be mentioned that the number of categories 2 and 4 respondents was quite small given the stratification of the sample by age for this activity. Category 4 immigrants do not look much different than the native-born. Specifically, they are less likely than the native-born to be the most frequent visitors to other doctors but more likely to be fairly frequent visitors. Category 2 respondents are clearly the least frequent users of other doctors' services across all groups in the sample. Category 3 immigrants look quite similar to the native-born in their use of other medical doctors, while category 1 immigrants are more likely to be very

intensive users compared to the native-born.

Table 12
Overnight Patient in Hospital/Nursing Home
(Percentage of Sample - 65 and Older)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
yes	17.8	28.6	0.0	20.4	11.4
no	81.2	71.4	100.0	79.6	88.6

Table 12 reports responses to the question whether or not the over-65 respondent was an overnight patient in a hospital or nursing home. Immigrants in categories 1 and 3 were more likely than the native-born to respond positively, while immigrants in categories 2 and 4 were less likely. Unfortunately, the small number of observation points for immigrant categories 2 and 4 did not allow us to compare the number of nights respondents spent as overnight patients. Hence, it is only possible to conclude that elderly immigrants from South America, Africa and Asia are less likely than other immigrants, as well as Canadian-born elderly, to be overnight hospital patients.

The relative use of various pharmaceutical medications also provides a perspective on differences in health care resource utilisation across the elderly. In this context, the observed pattern is somewhat mixed. For example, category 1 immigrants are, on average, more likely to use pain relievers than other immigrants or the Canadian-born. Category 2 and 4 immigrants are least likely to use pain relievers. Category 1 immigrants are also, on average, more likely to use asthma medications, while category 2 immigrants are the least likely to used such medications; however, category 4 immigrants are more likely than Canadian-born to use such medications. With respect to heart medication, category 2 immigrants are again the least likely to use

medication, while category 4 immigrants are most likely; however, category 2 immigrants are the most likely to use blood pressure medication; while category 4 immigrants are the least likely. Category 2 immigrants are also more likely than other immigrants, as well as the native-born, to use insulin.

On balance, there is no consistent evidence of systematic differences in the extent of pharmaceutical usage among categories of elderly immigrants or between elderly immigrants and the elderly native-born.

5.2 Usage Patterns of Those Aged 50-64

Tables 13-15 report usage patterns for specific health care service inputs for individuals 50-60. Focusing on Table 13, it is seen that immigrants, other than those in category 4, are more intensive users than Canadian-born as measured by six or more visits to a general practitioner in the past year. Moreover, category 2 immigrants are the most intensive users of general practitioner services by this measure. As in most comparisons we have drawn, the observed differences are not dramatic.

Table 13
Number of Visits to General Practitioner
(Percentage of Sample - 50 - 64)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	20.3	9.5	22.9	19.2	14.7
1 - 2	36.1	45.2	33.3	38.4	41.2
3 - 5	22.1	21.4	18.8	19.5	25.0
6 - 8	8.8	4.8	10.4	10.6	4.4
> 8	12.7	19.1	14.6	12.3	14.7

Table 14
Number of Visits to Other Medical Doctors
(Percentage of Sample - 50 - 64)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
0	71.4	71.4	70.8	71.6	76.5
1 - 2	19.0	16.6	20.8	18.1	16.2
3 - 5	6.5	9.5	4.2	5.2	2.9
6 - 8	1.4	0.0	4.2	3.2	4.4
> 8	1.7	2.5	0.0	1.9	0.0

Table 14 reports similar results to those in Table 13. Namely, most immigrants are more intensive users of the services of other medical doctors (measured as the percentage reporting 6 or more visits) than are the native-born. In this case, category 3 immigrants are the most intensive users, while category 1 immigrants are the least intensive; however, when considering the overall distributions reported in Table 14, one most conclude again that differences across the groups represented are quite modest.

Table 15
Overnight Patient in Hospital/Nursing Home
(Percentage of Sample - 65 and Older)

	Canada	US and Mexico	South America and Africa	Europe and Australia	Asia
yes	10.0	14.3	14.6	8.3	8.8
no	90.0	85.7	85.4	91.7	91.2

Finally, Table 15 reports the percentage of respondents who reported being an overnight patient in a hospital or nursing home. Immigrants in categories 1 and 2 reported a higher percentage than the Canadian-born, while those in categories 3 and 4 reported a lower percentage.

The pattern of use with respect to pharmaceuticals is similar to that of the over-65 group. Namely, there was no systematic tendency for one sample group or another to use pharmaceuticals generally more intensively than other sample groups. Some groups tend to be more intensive users of specific drugs, while others are more intensive users of other drugs.

SUMMARY AND CONCLUSIONS

The overall pattern of health care resource utilisation across immigrants and native-born Canadians at any point in the time largely reflects differences in the age distributions of the groups. For the survey data underlying this study, specific immigrants groups had a substantially higher percentage of retired (and presumably older) people than other immigrants groups, as well as the native-born. It is unsurprising that the younger immigrant groups tended to use fewer health care resources of most types than the older groups. The former generally reported themselves as having fewer health problems, and it is well known that age is the strongest single determinant of health problems.

When immigrant groups and Canadian-born respondents are compared within similar age cohorts, the differences in health care utilisation rates largely disappear. More specifically, there is no marked tendency for individual groups of immigrants to systematically use more or less health care resources, on average, than other immigrant groups or the native-born, although the oldest cohort of category 2 immigrants does seem to be an exception to this statement.

The broad policy implication of this finding is that over a lifetime, an immigrant utilizes about the same amount of health care as a native-born Canadian. The implication is that immigrants impose neither above- nor below-average financing demands on the health care

sector. The overall impact of immigrants on health care financing therefore rests primarily upon the tax contribution of immigrants relative to the native-born.

The evidence presented here also suggests that immigrants and the native-born use health care resources in much the same ways. While there are some identifiable differences in, for example, the types of pharmaceutical drugs used, there is no marked and systematic pattern of specific groups favouring certain forms of traditional (or non-traditional) medical services relative to other groups. An implication of this finding is that the decentralization of resource allocation decisions to local community groups may be a less-pressing policy issue than previously thought. That is, there do not appear to be strong reasons for concern that specific immigrant (or Canadian-born) groups in society have strongly idiosyncratic health care needs such that polices "catering" to the average health care user would seriously discriminate against them.

To be sure, there are some differences in demand patterns, at the margin, such as in the relative demand intensities for different pharmaceuticals. Fine-tuning health care policy might require that close attention be paid to such marginal differences. [19]

[19] Possible examples are decisions by governments to fund some types of medications but not others.

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