

# SEDAP

A PROGRAM FOR RESEARCH ON

## **SOCIAL AND ECONOMIC DIMENSIONS OF AN AGING POPULATION**

**Health Status of On and Off-reserve Aboriginal Peoples:  
Analysis of the Aboriginal Peoples Survey**

**Lori J. Curtis**

**SEDAP Research Paper No. 191**

For further information about SEDAP and other papers in this series, see our web site:  
<http://socserv.mcmaster.ca/sedap>

Requests for further information may be addressed to:  
Secretary, SEDAP Research Program  
Kenneth Taylor Hall, Room 426  
McMaster University  
Hamilton, Ontario, Canada  
L8S 4M4  
FAX: 905 521 8232  
e-mail: [sedap@mcmaster.ca](mailto:sedap@mcmaster.ca)

**Health Status of On and Off-reserve Aboriginal Peoples:  
Analysis of the Aboriginal Peoples Survey**

**Lori J. Curtis**

**SEDAP Research Paper No. 191**

May 2007

The Program for Research on Social and Economic Dimensions of an Aging Population (SEDAP) is an interdisciplinary research program centred at McMaster University with co-investigators at seventeen other universities in Canada and abroad. The SEDAP Research Paper series provides a vehicle for distributing the results of studies undertaken by those associated with the program. Authors take full responsibility for all expressions of opinion. SEDAP has been supported by the Social Sciences and Humanities Research Council since 1999, under the terms of its Major Collaborative Research Initiatives Program. Additional financial or other support is provided by the Canadian Institute for Health Information, the Canadian Institute of Actuaries, Citizenship and Immigration Canada, Indian and Northern Affairs Canada, ICES: Institute for Clinical Evaluative Sciences, IZA: Forschungsinstitut zur Zukunft der Arbeit GmbH (Institute for the Study of Labour), SFI: The Danish National Institute of Social Research, Social Development Canada, Statistics Canada, and participating universities in Canada (McMaster, Calgary, Carleton, Memorial, Montréal, New Brunswick, Queen's, Regina, Toronto, UBC, Victoria, Waterloo, Western, and York) and abroad (Copenhagen, New South Wales, University College London).

# Health Status of On and Off-reserve Aboriginal Peoples: Analysis of the Aboriginal Peoples Survey

Lori J Curtis  
Department of Economics  
University of Waterloo

## **Abstract:**

The government of Canada is committed to closing the health status gap between First Nation's (FN) and non-First Nation's peoples in Canada. The government of Canada is also committed to evidenced-based policy making and accountability. To provide evidence of effective programming, it must monitor the health and well-being of its First Nations and Inuit populations over time. Evidence on the health status of FN peoples living on-reserve is difficult to obtain due to limited data sources. However, the Aboriginal Peoples Survey (APS) provides information on the health status of on-reserve and off-reserve FN peoples. Important determinants of health such as socio-economic status (SES), health-care utilization and health behaviours will also be documented, as many of the government programmes offered aim to improve health status by affecting the behavioural determinants of health.

**Keywords:** health status, First Nations, Aboriginal Peoples Survey

**JEL Classification:** I10, I18, I30, I38

## **Résumé :**

Le gouvernement du Canada est déterminé à réduire l'écart entre l'état de santé des Premières nations et celui des autres résidents du Canada. Le gouvernement du Canada est également déterminé à mettre en place des politiques fondées sur des données probantes et l'obligation de rendre des comptes. Afin de donner les preuves d'une gestion efficace, le gouvernement doit évaluer sur la durée l'évolution de la santé et du bien-être de ses populations des autochtones et Inuit. Compte tenu de la rareté des sources d'information, les données sur l'état de santé des autochtones vivant hors des réserves sont difficiles à obtenir. Cependant, l'Enquête auprès des peuples autochtones fournit de l'information sur le statut de la santé des autochtones vivant sur les réserves ou hors réserves. Un certain nombre de facteurs déterminants de la santé comme le statut socio-économique (SSE), l'utilisation des services de santé et les comportements de santé seront aussi documentés, puisque plusieurs des programmes gouvernementaux offerts visent à améliorer le statut de la santé en modifiant ses déterminants comportementaux.

## **Acknowledgements:**

Access to the 2001 APS was through special agreement between Health Canada and Statistics Canada and was restricted to supplying SAS programs to Statistics Canada for processing. It was not possible to examine the data or further investigate anomalies in the results. The 1991 APS was accessed through the DLI. The author is attempting to access the data via Statistics Canada's RDC program.

The author acknowledges Social Sciences and Humanities Research Funding via Canada Research Chairs (CRC) program and Social and Economic Dimensions of an Aging Population (SEDAP II). She also acknowledges the Canadian Institutes of Innovation and the Ontario Innovation Foundation for capital funding through the CRC program.

## I. Introduction

On average, the health status of First Nation Peoples (FN) in Canada, as in many countries, is lower than that of the remainder of the population. Recent literature on FN health status covers a plethora of diseases and conditions, including but not limited to: pregnancy risk factors (Wenman et al., 2004), infant mortality (Luo et al., 2004), cardiovascular disease (Anand et al., 2001), renal transplant (Tonelli et al., 2004), self-reported health status (Tjepkema, 2002) and the use of medical services (Newbold, 1997). Almost without exception, unconditional (without controlling for any other factors) health status, no matter the measure, of FN is worse than that of the remainder of the population. It is also true that the socio-economic status and health behaviours of FN peoples are, on average, worse than that of the remainder of the population (Tjepkema et al., 2002).

Health disparities between FN and non-FN populations or within FN populations living in different areas often disappear once differences in SES is accounted for. Cass (2004) points out that researchers must be careful not to view the health disparities through a 'limited biomedical' perspective and to take into consideration the broader social determinants of health when examining the health of FN peoples. Policy makers must have some indication of why differences exist if they are going to improve the situation through evidenced-based policy levers.

Early studies (see literature review) indicate that once socio-economic status is adequately controlled, the health of off-reserve FN was in most cases not substantially different than the remainder of the Canadian population. Where health status is different, it is limited to distinct groups within the FN and non-FN populations.

This study follows that research in examining health status differentials within FN populations by examining differences between on-reserve FN and off-reserve FN peoples using the Aboriginal Peoples survey (APS). The study will then investigate changes over time by

comparing results from the 1991 APS with preliminary results from the 2001 APS.

A literature review is presented in section II, section III contains a description of the data and methods, the results are presented in section IV and section V offers a discussion and concluding remarks.

## II. Literature Review

An appreciable amount of literature exists on the health status of FN peoples<sup>1</sup>. According to Wilson and Rosenberg (2002), literature on the health of FN peoples in Canada can be assigned to one of two bodies of literature; quantitative or qualitative. This literature review focuses mainly on recent<sup>2</sup> quantitative studies, available in the medical and social sciences literature<sup>3</sup>, which examine health disparities between FN and non-FN peoples.

Since the early 1990s, following the release of the ‘Whitehall studies’ (Smith et al., 1990; Smith et al., 1990b) and the evolution of the population health paradigm (Evans and Stoddart, 1990 and Evans et al., 1994), it has been widely accepted that health is not solely determined by clinical factors and genetics; there are behavioural, social, and economic determinants of health (referred to by many as the broader determinants of health). However, many studies that examine health differentials between FN and non-FN peoples ignore the broader determinants of health. In some cases, studies which do control for SES focus on the statistically significant unconditional differences when reporting results and ignore the fact that the statistical significance disappears once adjustments are made for the broader determinants of health. Thus, in this literature review, the literature is divided into studies that examine unconditional (do not control for recognized determinants of health) health disparities and those that examine conditional (control for recognized determinants of health) health disparities. The resulting differences in conclusions of

---

<sup>1</sup>Young (2003), for example, obtained over 250 articles focussing on the health of FN peoples in Canada from a Medline search for research published between 1991 and 2001.

<sup>2</sup>Research from 1991 onwards (the first APS was available in 1991).

<sup>3</sup> Clinical studies, tending to have small sample sizes, are excluded (e.g. Hoy et al., 1998)

the two literatures is important for those attempting to make evidenced-based policy decisions.

### Unconditional Health Disparities

The literature on the unconditional health disparities between FN and non-FN peoples, research is limited to reporting over-all differences in some measure of health, focusing on a limited 'bio-medical' model (Cass, 2004) and ignoring the broader determinants of health. The studies in this literature tend to focus on single diseases or health-care utilization (rather than overall health status or well-being) in a particular populations using administrative data bases.

Martens et al. (2005) examine mortality between registered FN and all other people in Manitoba by region and gender using administrative data bases. They examine premature mortality (age- and sex-adjusted rate of death before age 75 years) rate (PMR), life expectancy from birth, and potential years of life lost (PYLL) using administrative data bases. They found that FN peoples had double the PMR of the remainder of the population (6.6 versus 3.3/1000), over twice the PYLL (158.3 versus 62.5 years of life lost/1000 for males and for females it was 103.3 versus 36.5/1000) and eight-years less in life expectancy (68.4 versus 76.1 for males and 73.2 versus 81.4 years for females). They concluded that inequalities in health status between registered FN and the remainder of the population in Manitoba were large. Other than age, sex and geographical adjustments, there were no controls for characteristic differences between the two populations.

Sin et al. (2002) examine health-care utilization for chronic respiratory diseases in Alberta using administrative data bases (adjusting for age and sex). They find that FN are 1.6 and 2.1 times more likely to have an office or emergency room visit, respectively, for one or both of the conditions but FN are less than half as likely to see a specialist and 1/3 as likely to undergo testing when compared to non-FN. FN and non-FN living in urban areas experienced slightly smaller differences but the patterns persisted. The differences in utilization patters were substantially worse (ratios almost doubled for office (3.6) and emergency room (3.2) visits and only about 1/4 of FN saw a specialist) when examining COPD alone. Although the authors

report that there are higher prevalence of smoking, poor housing and overcrowding in FN populations they match groups for age and sex only and do not control for any other characteristics.

Shah (2000) examine the change in age-, sex-adjusted admission rates in Ontario for Ischemic heart disease (IHD) from 1981 to 1997 using administrative data. They report that admission rates have been declining slightly in non-FN populations but have almost doubled in the FN populations (proxying for higher disease rates). As with the previous study, the authors point out that FN populations have undergone 'significant social, economic, and cultural changes' that are likely to impact on their health, however, there are no adjustments made for differences in these characteristics in the test and control populations.

When examining the incidence of injury in Calgary, Alberta, Karmali et al. (2005) find that FN populations are at greater risk (4 times) of injury than non-FN populations. The authors then go on to infer that FN status is a risk factor for injury however, the authors control only for age and sex (in some of the analysis) and do not compare FN populations to other marginalized populations. In a similar vein, Leslie et al. (2004) report sex and age adjusted incidence ratios for fractures as 2.25 when comparing FN to non-FN individuals. Although the study is introduced by reporting that FN peoples have a 'heavier burden' of social problems that may lead to fracture, only age and sex were adjusted for in the analysis.

Newbold (1997) uses survey data to examines health-care utilization, self-reported overall health status (SRHS) and self-reported medical conditions of FN peoples (data from the 1991 APS) as compared to the entire Canadian population (data from 1991 General Social Survey). He finds that, adjusting for age and sex, a higher proportion of FN persons report, on average, fair/poor SRHS, diabetes and hypertension when compared to the entire population. Reports of heart disease and asthma are similar in the two samples and FN peoples are less likely to visit a general practitioner (gp), on average. Although Newbold recognizes, when examining the FN and non-FN populations separately, that demographic, social, economic, cultural characteristics

and health behaviours are associated with health-care utilization, he does not adjust for these factors when examining differences in health and health-care utilization across the two populations.

Newbold goes on to perform multivariate regressions examining the ‘determinants’ of health-care utilization, and does control for health behaviours, SES, demographics, language, participation in traditional activities and health status and finds that Aboriginal identity is not significantly related to utilization but language (negatively) and participation in traditional activities (positively) are. He then concludes that “the connection between Aboriginal orientation and health should not be discarded.... Aboriginal health and health behaviours cannot be divorced from the larger social, political and economic realities (page205)”, ignoring the fact he ‘divorced’ the concepts in his initial analysis which finds large differences in health status between FN and non-FN.

Newbold (1998) also examines differences within FN peoples; using the 1991 APS he reports health and health-care utilization (percentage of the population reporting the characteristic or activity but no standard errors or significance tests) for North American Indians (NAI), Metis and Inuit and finds little differences in self-reports between the groups. He then examines FN living on-reserve, and off-reserve urban and off-reserve rural and Inuit; results indicate that the differences between on and off-reserve FN peoples tends to be related to whether the individual lives in a rural or urban area. On-reserve FN were less healthy and less likely to see a gp than off-reserve urban dwellers, however, the differences were small between on-reserve and off-reserve rural FN; Inuit were the worse off (Newbold concludes that this is due to their geographic isolation).

Studies in this sub-set of the literature often recognize that social, economic, cultural and behavioural conditions which are associated with health and health-care utilization are different between FN and non-FN populations but proceed to analyze health and health-care utilization differences without controlling for these factors. The literature presents health and health-care



utilization differentials (frequently ‘large’) between FN and non-FN populations and often concludes that ‘ethnicity’ or ‘aboriginal status’ is a risk factor for morbidity and mortality. The policy recommendations typically call for increased research into the pathophysiology of the diseases and differentials (Leslei et al., 2004), targeting interventions for the specific diseases (Shah et al., 2000), questioning adequacy of health-care services (Karmali, 2005); offering very limited scope for broader policy initiatives (Cass, 2004; Marmot, 2005).

### Conditional Health Disparities

On the other hand, research examining the broader determinants of health often finds that significant health disparities between FN and non-FN peoples diminish substantially or disappear after controlling for the broader determinants of health; indicating that ‘ethnicity’ or ‘aboriginality’ is not significantly related to health but cultural, social, behavioural and economic conditions relevant to the specific population are. This broadens the policy implications - indicating that health status and health-status differentials should be a concern of multi-sector policy concern not the ‘problem’ of health departments alone (Marmot, 2005).

When examining pregnancy risk factors and birth outcomes in Edmonton, Alberta, Wenman et al., (2004) find that Aboriginal (First Nations and Metis) pregnant females were less likely to be married, more likely to report incomes below the poverty line, and were younger than non-Aboriginal women. Within the Aboriginal group, Metis were more likely to be married, less likely to be below the poverty line and older, on average, than FN women. Aboriginal women (similar rates within the group) were also more likely to smoke and have diabetes and were also more likely to have had a previous birth, had their first birth before 20 and had at least one premature birth. In univariate analysis smoking, poverty, and cervical infections were related to low-birth weight but Aboriginal ethnicity was not; smoking was related to premature birth but aboriginal ethnicity, income and cervical infections were not; Aboriginal ethnicity, was related to high birth weight. After including these factors in multi-variate analysis, Aboriginal ethnicity was no longer related to any of the outcomes, only cervical infections and income were related to low birth weight. The authors state that the small sample size may be responsible for the lack of

significant results but claim that other studies also find strong associations between factors associated with being FN (lower levels of income and health behaviours) and pregnancy and birth outcomes (Johnson et al., 2002).

Luo et al. (2004) report a temporal study of FN vs nonFN neonatal, postneonatal and infant mortality in British Columbia between 1981 to 2000, using administrative data bases (almost 900,000 births), in rural and urban areas. Over the entire period, the relative risks (FN vs nonFN living in rural areas) was 1.48, 3.61 and 2.27 for neonatal, postneonatal and infant mortality, respectively. The same statistics for urban areas were 1.32, 3.62 and 2.08, respectively. However, the authors go on to examine the mortality rates in three year periods and find that while the difference between urban and rural areas persist, there is a convergence of crude mortality rates between FN and non-FN populations over time. After controlling for SES, demographics, distance to nearest hospital and previous birth outcomes the differences disappear in all years for neonatal death and by 1993 for postneonatal death and overall infant mortality in rural areas. Differences remained throughout the period between urban FN and non-FN although conditional differences were substantially lower than unconditional differences. The gap only disappears after gestational age is controlled for. The authors conclude that there is a 'need for greater attention to FN maternal and infant health in urban areas (page. 1252).'

Moving into the adult population, Anand et al. (2001) examine differentials in CVD, atherosclerosis and their risk factors between FN and non-FN by randomly selecting Aboriginals from the Six Nations reserve in Ontario and individuals of European origin from Hamilton, Toronto and Edmonton. They examined clinical signs and symptoms and risk factors (including income). For any given income Aboriginal peoples had higher rates of CVD and CVD risk factors. However, once income and risk factors were controlled for in multivariate analysis Aboriginal origin was no longer significantly related to CVD. The authors conclude 'apart from community-based prevention programmes to reduce tobacco use and obesity, immediate action to improve the socioeconomic conditions of Aboriginal people in Canada is required to avert a CVD epidemic in the near future (page 1152)'; perhaps somewhat alarmist but the need to more

closely consider SES when examining FN health is put forth.

Tonelli et al. (2004) examined renal dialysis, transplantation and death in the FN and non-FN populations in Manitoba, Saskatchewan and Alberta. They followed Aboriginal and white individuals who commenced dialysis between 1990 and 2000 until transplantation, death or 2001(end of the study). In the study population Aboriginals were younger, more likely to be in the lowest income quintile, live in rural area, have diabetes, chronic heart disease, and peripheral vascular disease but less likely to have coronary disease, hypertension or malignancy. After beginning dialysis, the age-adjusted risk of death was about 15% higher for Aboriginals than for whites. After adjusting for co-morbidities and SES Aboriginal status was no longer a significant indicator of the risk of death. Aboriginal individuals received substantially fewer transplants (about half) than their white counterparts however, this did not seem to be associated with SES and the authors point out it was possible that the higher co-morbidities in the aboriginal population may be responsible for the lower transplant rate but that the issue necessitates further research.

Using the Canadian Community Health Survey (CCHS), 2001, Tjepkema (2002) examines differences in self-reported health status (fair/poor health, one or more chronic conditions, long-term activity limitations and major depressive episode in the last year) in the off-reserve population between those who self-identify as Aboriginal (North American Indian, Metis, Inuit/Eskimo) and those who did not. He first controls only for age and sex and finds that off-reserve Aboriginals were much more likely than off-reserve non-Aboriginals to report poor health (odds ratios are 2.3 for fair/poor srhs; 1.6 for chronic conditions; 1.8 for activity limitations; and 1.9 for depression). The odds ratios fall substantially after controlling for SES (1.5; 1.5; 1.4; and 1.5, respectively) and decline even further once health behaviours are controlled for (1.3 for all measures except activity limitation which is no longer significantly different). He concludes that differences in health status between off and on-reserve Aboriginals can be partly explained by SES and health behaviours. Tjepkema (2002) briefly studies health-care utilization and finds that on average, off-reserve Aboriginal and non-Aboriginals have

similar unconditional utilization patterns in the provinces but reported more unmet health-care needs.

Finally, Wilson and Rosenberg (2002) examine the associations between poor health status and demographics, SES, health-care utilization, and place of residence (on reserve, off-reserve (census metropolitan area (CMA)), other urban, other rural) in the 1991 APS. They find that lower income and education, not being married, being older, visiting a physician, and not participating in the labour force are all associated with higher probability of reporting poor health status. Controlling for these factors, compared to Aboriginals living on reserve, only those living in a CMA are less likely (about 20%) to report poor health; there were no differences between reserve dwellers and other urban and other rural dwellers. This study, like others, finds differences between mostly urban and mostly rural populations.

In sum, the literature indicates that while there are large ‘unconditional differences’ in health status (multiple measures) between FN and non-FN or Aboriginal and non-Aboriginal populations. These ‘large’ differences diminish substantially (typically disappearing) once controlling for the differences in demographics, SES, and health behaviours between the two populations. In many of the studies controlling for these factors, the authors concluded that attention should be drawn to the socio-economic conditions in which the FN or Aboriginal populations live.

### III. Data and Methodology

#### III.a. Data

Data are drawn from the 1991 Aboriginal Peoples Survey (APS) and the 2001 APS (for complete descriptions of the surveys see Statistics Canada, 1995 and 2003). The 1991 APS represents a national survey of persons who self-reported as having an Aboriginal identity and live on-reserve, in settlements or off-reserve. The proportion of the Canadian population that identified

an Aboriginal origin and/or were registered under the Indian Act were also included but those living in institutions were excluded. Respondents were identified from the 1991 Canadian census from registration under the Indian Act. Personal interviews were conducted by individuals able to speak Aboriginal languages and English with the respondent (or a proxy within the household). Information was obtained on perceived health status, diagnosed health problems, use of health-care professionals, education, employment, income and language. In some cases (e.g. income) information is supplemented with data from the 1991 Canadian census.

Overall, the survey achieved a response rate of over 75%. The total sample size of those reporting an Aboriginal identity within the APS was 25,122. The APS may under-represent some groups, as some refused to participate in the census (such as the Mohawks near Montreal), excluding them from consideration in the APS. Further, there was some attrition in communities who participated in the census but not the APS. Although the complete effect is unknown, it is likely that differences between on- and off-reserve are downplayed in the resulting sample.

The 2001 APS was similar in nature to the 1991 survey. Respondents were selected based on their responses regarding aboriginal identity and origins in the 2001 census. Due to budget limitations, the survey concentrated on the largest reserves in each province. When the largest reserves would not participate, smaller ones were selected. The response rates on and off-community were over 80%.

Measures health status and health-care utilization are based on self-reports and therefore may be subject to recall bias and problems with awareness and context of the respondents. Although they are not a direct measure of health-care need, numerous studies (including many in the Aboriginal literature) have demonstrated that they are a good proxy of need for health care. Research also suggests that self-assessed health performs better as a predictor of future mortality than other measures of health status (Bailis, et al., 2003). It is also worthy to note that the information collected in the survey is not representative of the entire population of on-reserve FN peoples in Canada.

### III.b. Methodology

This study examines the 1991 and 2001 APS for differences in health status and health-care utilization between on- and off-reserve peoples. The 1991 survey focuses on those individuals identifying as Aboriginal (North American Indian, Metis or Inuit) and the 2001 APS focuses on those reporting Aboriginal ancestry. The two surveys offer information on whether or not the individual is registered under the Indian Act. To ensure sample comparability, this report focuses on those claiming to be registered FN (North American Indian or Inuit) although the statistics for all FN are reported for the audience to compare and the regression results for this group are reported in Appendix Three. Registered Indians are eligible for Non-Insured Health Benefits and thus, focussing on this group eliminates possible this policy difference between registered and non-registered FN or Aboriginal groups.

First, unconditional self-reported health status, diagnosed diseases, and health-care utilization are summarized (dependent variables). The dependent variables are dichotomous (respondent reported yes or no). The proportion of the population living in each state is reported for FN living on- and off-reserve. These data offer similar information to that obtained from other studies in the literature that do not control for the broader determinants of health.

This exercise is repeated for demographic, social, economic and health behaviours characteristics of the on- and off-reserve FN (variable definitions are found in Appendix One). The health status measures are commonly found in the literature as are the demographic, social, economic and health behaviours characteristics (literature focussing on the 'broader determinants of health').

Finally, logit regressions are then performed for all of the health and health-care utilization measures. Two models are presented for each outcome in the regression analysis. Model 1 includes all of the social, demographic and economic variables as controls and examines whether or not living on a reserve is significantly related to health or health-care utilization. Model 2

adds interaction terms between reservation and all of the social and economic variables to examine whether any on-reserve differences can be explained by differences in particular on-reserve groups. The odds ratios (OR) and significance levels are reported in the regression tables. The OR can be thought of as the increased ( $>1.0$ ) or decreased ( $<1.0$ ) likelihood of the event occurring relative to the comparator (e.g. if low income (comparator is high income) has an OR of 1.5 in a logit regression on fair/poor health, then a person with low income is 50% more likely to suffer from fair/poor health as a higher income person. If the OR for university education (comparator is less than high school) is 0.5 then a university grad is half as likely to report fair/poor health as someone without a high school certificate). The regression results will offer a comparison the other literature that control for the broader determinants of health.

Access to the 2001 APS was through special agreement between Health Canada and Statistics Canada and was restricted to supplying SAS programs to a Statistics Canada employee for processing. It was not possible to examine the data or further investigate anomalies in the results. Thus, there is no information on household income or results for the medical condition of diabetes in the 2001 results.

#### IV. Results

Table one reports the proportion of on- and off-reserve FN who report the different health and health-care utilization measures for 1991. The first two columns of numbers are for all those reporting NAI and/or Inuit identity and the last two columns are for those who report they are registered under the Indian Act. The on-reserve stats for both groups are almost identical (not surprising given most on-reserve natives are registered). For both groups, a lower proportion of on-reserve FN report excellent (RI- 21% vs 28%) and a higher proportion report good and fair/poor health (RI- 16% vs 13%). More on-reserve FN report diabetes (8% vs 6%) and fewer report respiratory diseases (16% vs 18%). There are no differences in reporting hypertension or very good health in the registered Indian (RI) group (borderline significance for all FN) or in either group for CVD.

A higher proportion of off-reserve FN (both RI and all) report seeing a physician (75% vs 62%, respectively) and higher proportions of on-reserve FN report seeing a RN (37% vs 24%, a community counsellor (16% vs 6%) or a traditional healer (7% vs 5%). The stats are quite similar between the all off-reserve and RI.

Demographics, SES and health behaviours are reported in table Two. There are substantial differences between on- and off-reserve individuals. The differences are similar to those reported elsewhere in the literature. The statistics are similar for the two off-reserve groups but off-reserve RI seem to be slightly worse off. On-reserve RI are poorer (62% vs 50% report incomes of less than 10K while 2% vs 6% report incomes over 40K for on-reserve and off-reserve RI, respectively). On-reserve FN are also less educated, more likely to be unattached to the labour force, more likely to be in the youngest or oldest groups, slightly more likely to smoke (almost 2/3 of on-reserve FN report they currently smoke) and less likely to be a reformed smoker, less likely to drink (8% of on-reserve RI report drinking more than 2 drinks/day vs 12% of off-reserve RI) and basically all on-reserve FN in the study live in rural areas but 80% of off-reserve RI live in urban areas. British Columbia had the highest proportion of off-reserve RI and Manitoba had the highest proportion of on-reserve.

Table Three reports the proportion of on- and off-reserve FN who report the different health and health-care utilization measures for 2001. Similar to 1991, a lower proportion of on-reserve FN report excellent (RI- 18% vs 24%) but a lower proportion report good and fair/poor health (RI- 18% vs 19%). Fewer on-reserve FN report respiratory diseases (11% vs 16%), CVD (6% vs 7%) and hypertension (12.7% vs 13.1%). It is surprising that the statistics for diagnosed disease are better in 2001 than 1991 but SRHS seems worse.

A higher proportion of off-reserve FN (both RI and all) report seeing a physician (76% vs 64%, respectively) and higher proportions of on-reserve FN report seeing a RN (44% vs 25%), a community counsellor (16% vs 10%) but fewer see a traditional healer (13% vs 17% - quite different than 1991). The stats are quite similar between the all off-reserve and RI.



Table Four reports demographics, SES and health behaviours for 2001. As in 1991 there are substantial differences between on- and off-reserve individuals in 2001. Again, the statistics are similar for the two off-reserve groups but off-reserve RI seem to be slightly worse off. On-reserve RI are poorer (according to census data). On-reserve FN are less educated (57% vs 40% have less than highschool while only 3% of on-reserve RI have university degrees (compared to 5% of off-reserve)). On-reserve RI are more likely to be unattached to the labour force, less likely to be employed if they are attached to the labour force and more likely to be unemployed. Off-reserve RI seem to be more middle-aged than on-reserve and on-reserve RI are more likely to smoke (about 44% smoke daily (compared to almost 2/3 of on-reserve RI in 1991) and less likely to be a reformed or non-smoker. Over 90% of RI living on-reserve live in rural areas compared to only 22% of off-reserve RI. British Columbia still has the highest proportion of off-reserve RI and Manitoba the highest proportion of on-reserve RI.

The first of the regression analysis is presented in table Five. The health status measures on self-reported excellent, very good, good and fair/poor health (listed across the top of the table). The first column indicates the independent variables. The first variable of interest is reserve which indicates the individual lives on reserve. The other variables are identical to those discussed previously. The each health status coincides with two models: model 1 includes all of the control variables and model 2 includes the control variables plus interaction terms (reserve\*each control variable).

For each outcomes and each models, income is positively related to health status (individuals with lower income are less likely to report higher levels of health (OR <1.0) and more likely to report lower levels of health status (OR >1.0) and visa-versa. The poorest group is about 25% less likely to report excellent or very good health and about 50 to 75% more likely to report poor health, depending on the model. The OR patterns are similar for those who report low levels of education are not in the labour force, and are female. Younger individuals are more than twice as likely and older individuals are about 1/3 as likely to report excellent health compared to the

middle aged and this pattern is reversed for fair/poor health. Living in a rural area is not significantly associated with health. FN from the Atlantic provinces and those west of Ontario are less likely than those living in Ontario to report excellent health status and FN from Quebec are significantly less likely to report fair/poor health status.

Those living on reserve are about 28% less likely than those living off reserve to report being in excellent health status and about 30% more likely to report being in good health status in Model 1. After controlling for the interaction terms, reservation is no longer over-all significantly associated with excellent health status however specific groups (see Appendix A2-1) of a smaller proportion of on-reserve FN (higher income earners (>40K), those with middle levels of education, the youngest and those over 40 years of age) report excellent health (compared to all other health states) than do off-reserve FN. All on-reserve groups except the oldest (over 50 years of age) are more likely to report being in good health (compared to any other health state) than those living off reserve.

Table Six presents the 1991 results for diagnosed diseases. The first two columns present the log odds of having been diagnosed with diabetes, model 1 (no interaction terms) and 2 (interaction terms added), next six columns present the log odds of having been diagnosed with hypertension, CVD and respiratory problems, respectively. There are no significant differences between on- and off-reserve FN groups in reporting diagnoses of any of the conditions after the controlling for broader determinants of health (model 1). Lower levels of income (compared to households with incomes over 20K but less than 29K) increase the likelihood of being diagnosed with diabetes and CVD but decrease the likelihood of being diagnosed with respiratory problems in model 1. Higher than highschool education is related to a lower probability of diabetes and hypertension diagnosis but post-secondary education is related to a higher probability of being diagnosed with respiratory disease. In general, not being employed (either unemployed or not in the labour forces) leads to higher odds of being diagnosed with any of the diseases and older groups are more likely to have been diagnosed with one of the conditions and younger groups less likely and females are more likely to be diagnosed with any condition but CVD. Being a

drinker is significantly related to higher probabilities of being diagnosed with hypertension and respiratory problems; smokers are more likely to have respiratory problems and less likely to have hypertension and former smokers are more likely to have been diagnosed with CVD and respiratory problems. When interaction terms are added, overall on-reserve FN peoples are significantly less likely (only about 1/3 as likely) to report being diagnosed with hypertension. The interaction terms show that higher income and education groups and the youngest group are more likely to report the condition however, table 2 in appendix 2 indicates that for all groups except those who are not in the labour force the probability of reporting being diagnosed with hypertension remains lower than for those RI living off-reserve (compared to the comparator individual). The only other significant differences seen in table A2-2 is for the lowest income group where about 12% of RI on reserve report respiratory problems but on 6% of those off-reserve do.

Finally, for 1991, the probability of seeing a medical practitioner is examined in table 7. First note that the results for most control variables are as expected (seen in other literature). Those with lower incomes and lower levels of education are less likely to see a physician than those with higher incomes and educations. Those with higher levels of education are more likely to see a physician (model 1), community worker (both models) and traditional healer (both models) this effect is particularly large for university graduates (compared to highschool graduates). Females are more likely than males to visit all medical practitioners except a traditional healer where males and females are as likely to do so. Older groups are more likely to visit any of the practitioners than middle-aged (30 to 39 years) RI and younger groups are less likely to see a traditional healer and more likely to see a RN than middle-aged RI.

On-reserve RI are not significantly more or less likely to see a physician than off-reserve RI but they are more likely to see a RN and traditional healer (in model 1) and substantially more likely to see a community worker (models 1 and 2). Table 3 in appendix 3 shows the probabilities of contacts for both on- and off-reserve RI. There are few significant differences except for seeing community workers and on-reserve RI are much more likely. In most groups 5 or 6% of on-

reserve RI see a community worker compared to 1 or 2% for off-reserve RI. In the older groups that percentage increases to 8 to 17% on-reserve but remains at 1 or 2% off-reserve.

In sum, the 1991 results indicate that demographic, socio-economic and health behaviours are significantly related to health and health-care utilization in the RI population. Once these factors are controlled for living on-reserve does not, in general, lead to worse health status but is significantly associated with receiving medical attention from practitioners other than physicians (particularly for community workers).

Table Eight, Nine, and Ten present similar results from the 2001 APS. Unfortunately, due to restricted use of the data, tables similar to those found in Appendix 2 could not be generated from the results. As well, income was included as a continuous variable thus we lose some information about the association between different income groups and the given variable of interest. Given these factors, the results are remarkably similar to those of 1991.

Table 8 indicates that those with higher incomes are more likely to report excellent and very good self-reported health status and less likely to report fair/poor health status. Education and employment are related in the same manner (higher levels of education or employment are related to higher levels of health and visa versa). Females tend to report lower levels of health compared to males as do smokers compared to non-smokers. Surprisingly, are more (less) likely to report excellent (fair/poor) health status than non-drinkers. Age as is expected. Rural residence does not seem to be significantly related to self-reported health status. As in 1991, living on reserve seems to be strongly related to higher likelihood of reporting good health status (32 (model 1) to 42% (model 2) more likely than someone living off reserve). Older individuals living on-reserve are much more likely to report good health and less likely to report very good health status. Those over 65 years of age and living on reserve are much more likely to report poor health status than those who are not.

Table Nine presents the results for diagnosed disease in the RI population. Income does not appear to be significantly related however, lower levels of education is as expected. Those who

are not in the labour force and married RI are significantly more likely to report being diagnosed with all conditions and females are more likely than males to report hypertension (model 1) and respiratory problems. The age patterns are as expected except for respiratory problems where the younger and older groups have higher probability than the middle-aged groups. Those living in rural areas are less likely to report being diagnosed with all conditions. Drinking is not significantly related to any of the conditions in model 1 and only respiratory problems in model 2. RI who smoke on a daily basis are less (more) likely to report hypertension (respiratory problems) diagnosis than those who do not. Occasional smokers are less likely to report hypertension and former smokers are more likely to report being diagnosed with all conditions.

Living on reserve is only significantly related to reporting diagnosis of hypertension in model 1 and this seems to be driven by the higher educated and females who live on reserve (although significance is questionable) and those who are not employed and live on reserve seem to be better off on reserve.

Results in table 10 indicate, like 1991, RI on reserve are less likely to see a physician and more likely to see a RN or traditional healer. On-reserve RI are less likely to see a community worker; strikingly different than 1991 however, some on-reserve groups, particularly the elderly are in fact more likely to see a community worker than their off-reserve counterpart (the oldest two groups are also much more likely to see a traditional healer).

To summarize, the results are quite similar to the over-all results found in 1991. Once the broader determinants of health are adjusted for, living on- or off-reserve does not seem to be significantly related to illness patterns (except self-reported good health status) but does seem to be related to utilization patterns.

## V. Discussion and Conclusions

### V.a. Discussion

The government of Canada is committed to further action to close the gap in health status

between Aboriginal and non-Aboriginal Canadians as a result, it is necessary that information on the health status differences of Aboriginal Canadians be available. In many previous studies, no statistically significant relationship was found between the FN health status and that of non-FN, once SES was taken into account, i.e., being a FN person was not associated with lower levels of health status, when compared to non-FN peoples with similar SES characteristics in the off-reserve population. Indicating that SES was a strong indicator of health status in the FN population.

Unfortunately, most Statistic Canada surveys, contain no information on on-reserve populations thus, evidence on the health status gap between on-reserve FN peoples and those living off-reserve was not available. However, the Aboriginal Peoples Survey (APS) offers information on FN peoples living on- and off-reserve. This study examines the health status differentials between on- and off-reserve FN populations. Although this does not offer us definitive information on the health status gaps of FN versus non-FN peoples it does give us another piece of information when examining the health status of FN peoples.

Recent literature on health status differences in Canada covers many diseases and conditions, including: pregnancy risk factors (Wenman et al., 2004), infant mortality (Luo et al., 2004), cardiovascular disease (Anand et al., 2001), renal transplant (Tonelli et al., 2004), self-reported health status (Tjepkema, 2002) and the use of medical services (Newbold, 1997).

Almost without exception, unconditional (without controlling for any other factors) health status, no matter the measure, of FN is worse than that of the remainder of the population. However, socio-economic status and health behaviours of FN peoples are, on average, worse than that of the remainder of the population (Tjepkema et al., 2002). Health disparities between FN and non-FN populations or within FN populations living in different areas often disappear once differences in social, economic, demographic, health behaviours, and/or cultural differences are accounted for (Anand et al., 2001; Tonelli et al., 2004; Luo et al., 2004; Wenman et al., 2004;

Newbold, 1997 & 2002). Very little of the literature addresses the difference between on- and off-reserve FN peoples (Wilson and Rosenberg (2002) is an exception).

When comparing on- and off-reserve FN peoples in this study, results were similar to those found in other literature when comparing FN to non-FN peoples. Unconditionally on-reserve Registered Indians (RI) have lower health status and lower health-care utilization patterns than off-reserve; there is a substantial gap in health and health-care utilization between on and off-reserve RI. However, on-reserve FN groups also have, on average, lower SES and health behaviours than off-reserve RI.

Conditionally (after controlling for SES, health behaviours and demographics) on-reserve RI are not that different than off-reserve RI when it comes to health status. There are some interesting differences when you examine individual groups more closely. On-reserve FN are more likely to report being in good health status, seems to be driven by the older population, and somewhat less likely to report excellent health status (again driven by the older population). On and off-reserve RI are equally likely to report fair/poor or very good health. Over-all living on reserve has little effect on diagnosed disease but, again, some individual groups report differently. The unemployed on-reserve report less hypertension and those who are not in the labour force are less likely to report hypertension and respiratory diseases. Those who are greater than 50 years of age and live on-reserve more likely to report CVD.

When examining the differences over the two time periods it is very interesting to note that unconditionally RI, on average, seem to have lower levels of diagnosed disease and higher levels of health-care utilization in 2001 than in 1991 but they report lower self-reported health status in 2001 when compared to 1991. The results from the multivariate analysis are similar over the time period.

As far as utilization is concerned, on-reserve RI are less likely to visit a physician, and more likely to visit a RN or other health care practitioner. On-reserve individuals who have lower

levels of education may have lower utilization patterns and older individuals are much more likely to see alternative practitioners (particularly, traditional healers).

As noted in the methodology section, there are some potential shortfalls in using these data. The APS on-reserve population may not be representative of the Canadian on-reserve population due to sampling strategies for this group. Care must be taken when extrapolating these results to the entire population. However, the survey offers information on FN peoples that is not available elsewhere and thus, is the best available to date. Self-reports are used in the study which may lead to recall bias and in some cases, cultural biases (however, this may be in this population where all individuals are Registered North American Indians or Inuit).

#### V.b. Conclusions

In most cases health status is similar between on and off-reserve RI. Health-care utilization differs whether one lives on- or off-reserve. The lack of difference after controlling for SES, demographics and health behaviours indicate closer attention should be paid to these factors when addressing health status gaps in the population.

It is unclear whether different health-care utilization patterns are 'bad'. Western ideals for medical treatment may not be in the best interest of FN populations. This is certainly an area which deserves further research.

It is very important that it be noted that diminishing health differences once controlling for social, economic, demographic, health behaviours, and/or cultural differences do not indicate that there is no gap or a problem does not exist. This result should bring further attention to the need to focus on the differences in the broader determinants of health (Anand et al., 2001; Tonelli et al., 2004; Luo et al., 2004; Wenman et al., 2004; Newbold, 1997 & 2002) for marginalized populations such as FN populations.



Cass (2004) points out that researchers and policy makers must be careful not to view the health disparities through a 'limited biomedical' perspective but take into consideration the broader social determinants of health when examining the health of FN peoples. And finally, Marmot (2005) calls for an inter-sectoral government approach when dealing with health disparities. Not only should departments of health be involved but also government departments responsible for income support, education, housing, and any other departments responsible for any of the broader determinants of health.

## References

- Anand, Sonia S, Salim Yusuf, Ruby Jacobs, A Darlene Davis, Qilong Yi, Hertzell Gerstein, Patricia A Monague, Eva Lonn (2001) "Risk Factors, atherosclerosis, and cardiovascular disease among Aboriginal people in Canada: the Study of Health Assessment and Risk Evaluation in Aboriginal Peoples (SHARE-AP)" *Lancet*, 358(October 6):1147-53.
- Bailis, Daniel, Alexander Segall, Judith G. Chipperfeld (2003), "Two views of self-rated general health status" *Social Science & Medicine*, 56:203-217.
- Cass, Alan (2004) "Health Outcomes in Aboriginal Populations" *CMAJ* 171(6):597-98.
- Evans, Robert and Gregory Stoddart, (1990) "Producing Health, Consuming Health Care." *Social Science & Medicine*, 31(12): 1347-1363.
- Evans, Robert., Morris L. Barer and Theodore R. Marmor (editors) (1994) Why are Some People Healthy and Others Not?: The Determinants of Health of Populations, Aldine de Gruyter, New York.
- Johnson D, Jin Y, Truman C. (2002) "Influence of Aboriginal and socioeconomic status on birth outcome and maternal mortality" *Journal of Obstetrics and Gynaecology Canada*, 24:633-40.
- Karmali, Shahzeer, Kevin Laupland, A. Robert Harrop, Christi Findlay, Andrew W. Kirkpatrick, Brent Winston, John Kortbeek, Lindsay Crowshoe, Morad Hameed (2005) "Epidemiology of severe trauma among status Aboriginal Canadians: a population-based study" *CMAJ* 172(8):1007-11
- Leslie, William D., Shelley Derksen, Colleen Metge, Lisa M. Lix, Elizabeth A. Salamon, Pauline Wood Steiman, Leslie L. Roos (2004) "Fracture risk among First Nations people: a retrospective matched cohort study" *CMAJ* 171(8):869-73
- Luo, Zhong-Cheng, William J Kierans, Russell Wilkins, Robert M Liston, Soo-Hong Uh, and Michael S Kramer (2004) "Infant mortality among First Nations versus non-First Nations in British Columbia: temporal trends in rural versus urban areas, 1981–2000" *International Journal of Epidemiology*, 33:1252–1259
- Marmot, Michael (2005) "Social Determinants of Health Inequalities" *Lancet* 365(March): 1099-104
- Newbold, Bruce K. (1998) "Problems in Search of Solutions: Health and Canadian Aboriginals"

- Newbold, Bruce K (1997) "Aboriginal Physician Use in Canada: Location, Orientation and Identity" *Health Economics.* 6:197-207.
- Shah, Baiju R., Janet E. Hux and Bernard Zinman (2000) "Increasing Rates of Ischemic Heart Disease in the Native Population of Ontario, Canada", *Archives of Internal Medicine* 160(June):1862-66.
- Smith, Davey George, Mel Bartley and David Blane, (1990) "The Black Report on Socioeconomic Inequalities in Health 10 years On" *British Medical Journal*, Vol.301 pp.373-7.
- Smith, Davey George, Martin J. Shipley and Geoffrey Rose, (1990b) " Magnitude and Causes of Socioeconomic Differentials in Mortality: Further Evidence from the Whitehall Study" *Journal of Epidemiology and Community Health*, Vol. 44 pp. 265-70
- Statistics Canada (1995) "1991 Aboriginal Peoples Survey: Microdata file - Adults - User's Guide" available through University of Waterloo DLI - TriUniversity Data Sources <http://tdr.uoguelph.ca/users/d/DEMOG/APS/1991/DOCS/aps91gid.pdf>
- Statistics Canada (2003) "Aboriginal Peoples Survey 2001: Concepts and methods guide" Published by authority of the Minister responsible for Statistics Canada, © Minister of Industry, 2003 Catalogue no. 89-591-XIE.
- Tjepkema, Michael (2002) "The Health of the Off-reserve Aboriginal Population" Supplement to *Health Reports*, Volume 13, Statistics Canada Catalogue 82-003.
- Tonelli, Marcello, Brenda Hemmelgarn, Braden Manns, George Pylypchuk, Clara Bohm, Karen Yeates, Sita Gourishankar, John, S, Gill (2004) "Death and renal transplantation among Aboriginal people undergoing dialysis" *CMAJ* 171(6):577-82.
- Wenman, Wanda M., Michel R. Joffres, Ivanna V. Tataryn, and the Edmonton Perinatal Infections Group (2004) "A prospective cohort study of pregnancy risk factors and birth outcomes in Aboriginal women" *CMAJ*, 176(6):585-89
- Wilson, Kathleen and Mark W. Rosenberg (2002) "Exploring the Determinants of Health for First Nations Peoples in Canada: Can Existing Frameworks accommodate Traditional Activities?" *Social Science & Medicine*, 55:2017-2031.

Table One: Proportion Reporting Given Characteristic  
On-reserve and Off-reserve, 1991

|               | NAI and Inuit |        | Registered Indians |        |
|---------------|---------------|--------|--------------------|--------|
|               | Off           | On     | Off                | On     |
| Health Status |               |        |                    |        |
| Self-reported |               |        |                    |        |
| excellent     | 0.290         | 0.213* | 0.276              | 0.213* |
| very good     | 0.324         | 0.305^ | 0.320              | 0.306  |
| good          | 0.266         | 0.326* | 0.277              | 0.326* |
| fair/poor     | 0.119         | 0.155* | 0.127              | 0.155* |
| Diagnosed     |               |        |                    |        |
| diabetes      | 0.057         | 0.083* | 0.063              | 0.083* |
| hypertension  | 0.118         | 0.132^ | 0.126              | 0.133  |
| CVD           | 0.068         | 0.071  | 0.067              | 0.071  |
| Respiratory   | 0.182         | 0.160* | 0.175              | 0.159^ |
| Utilization   |               |        |                    |        |
| Doctor        | 0.752         | 0.620* | 0.744              | 0.620* |
| RN            | 0.237         | 0.366* | 0.244              | 0.367* |
| Community     | 0.056         | 0.159* | 0.060              | 0.159* |
| Traditional   | 0.043         | 0.070* | 0.048              | 0.070* |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table Two: Proportion Reporting Given Characteristic  
On-reserve and Off-reserve, 1991

|                   | NAI and Inuit |        | Registered Indians |        |
|-------------------|---------------|--------|--------------------|--------|
|                   | Off           | On     | Off                | On     |
| Income            |               |        |                    |        |
| less than 10K     | 0.469         | 0.618* | 0.494              | 0.616* |
| 10K-19K           | 0.239         | 0.232  | 0.247              | 0.233  |
| 29K-39K           | 0.084         | 0.041* | 0.073              | 0.041* |
| 40K or over       | 0.074         | 0.019* | 0.062              | 0.019* |
| Education         |               |        |                    |        |
| less highschool   | 0.553         | 0.761* | 0.586              | 0.762* |
| post secondary    | 0.300         | 0.183* | 0.291              | 0.183* |
| university        | 0.038         | 0.011* | 0.028              | 0.010* |
| Labour Force (LF) |               |        |                    |        |
| unemployed        | 0.148         | 0.153  | 0.160              | 0.153  |
| not in LF         | 0.382         | 0.545* | 0.416              | 0.543* |
| female            | 0.570         | 0.483* | 0.586              | 0.483* |
| Age               |               |        |                    |        |
| 15 to 19 years    | 0.158         | 0.171^ | 0.157              | 0.170^ |
| 20 to 24          | 0.148         | 0.149  | 0.155              | 0.145  |
| 25 to 29 years    | 0.152         | 0.134^ | 0.154              | 0.134^ |
| 40 to 49 years    | 0.148         | 0.134^ | 0.143              | 0.135  |
| 50 to 64 years    | 0.102         | 0.128* | 0.103              | 0.128* |
| 65 years and over | 0.040         | 0.071* | 0.039              | 0.071* |
| Health Behaviours |               |        |                    |        |
| drinker           | 0.132         | 0.076* | 0.116              | 0.076* |
| smoker            | 0.547         | 0.597* | 0.554              | 0.597* |
| former smoker     | 0.184         | 0.141* | 0.182              | 0.141* |
| Residence         |               |        |                    |        |
| rural             | 0.217         | 1.000* | 0.203              | 1.000* |
| Atlantic          | 0.000         | 0.057* | 0.000              | 0.058* |
| Quebec            | 0.091         | 0.132* | 0.084              | 0.134* |
| Manitoba          | 0.122         | 0.198* | 0.148              | 0.198* |
| Saskatchewan      | 0.103         | 0.160* | 0.127              | 0.160* |
| Alberta           | 0.162         | 0.119* | 0.155              | 0.120* |
| British Columbia  | 0.224         | 0.198* | 0.230              | 0.197* |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table Three: Proportion Reporting Characteristic  
On-reserve and Off-reserve, 2001

|               | NAI and Inuit |                    | Registered Indians |                    |
|---------------|---------------|--------------------|--------------------|--------------------|
|               | Off           | On                 | Off                | On                 |
| Health Status |               |                    |                    |                    |
| Self-reported |               |                    |                    |                    |
| excellent     | 0.242         | 0.183 <sup>^</sup> | 0.234              | 0.181 <sup>^</sup> |
| very good     | 0.347         | 0.293 <sup>^</sup> | 0.311              | 0.291 <sup>^</sup> |
| good          | 0.241         | 0.337 <sup>^</sup> | 0.258              | 0.339 <sup>^</sup> |
| fair/poor     | 0.167         | 0.184 <sup>^</sup> | 0.191              | 0.184 <sup>^</sup> |
| Diagnosed     |               |                    |                    |                    |
| diabetes      | 0.003         | 0.008 <sup>^</sup> | 0.005              | 0.009 <sup>^</sup> |
| hypertension  | 0.115         | 0.125 <sup>^</sup> | 0.131              | 0.127 <sup>^</sup> |
| CVD           | 0.065         | 0.059 <sup>^</sup> | 0.066              | 0.059 <sup>^</sup> |
| Respiratory   | 0.163         | 0.112 <sup>^</sup> | 0.161              | 0.111 <sup>^</sup> |
| Utilization   |               |                    |                    |                    |
| Doctor        | 0.738         | 0.648 <sup>^</sup> | 0.763              | 0.641 <sup>^</sup> |
| RN            | 0.245         | 0.433 <sup>^</sup> | 0.252              | 0.435 <sup>^</sup> |
| Community     | 0.062         | 0.154 <sup>^</sup> | 0.097              | 0.155 <sup>^</sup> |
| Traditional   | 0.152         | 0.127 <sup>^</sup> | 0.167              | 0.126 <sup>^</sup> |

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table Four: Proportion Reporting Characteristic  
On-reserve and Off-reserve, 2001

|                   | NAI and Inuit |                    | Registered Indians |                    |
|-------------------|---------------|--------------------|--------------------|--------------------|
|                   | Off           | On                 | Off                | On                 |
| Education         |               |                    |                    |                    |
| less highschool   | 0.308         | 0.565 <sup>^</sup> | 0.391              | 0.565 <sup>^</sup> |
| highschool        | 0.141         | 0.089 <sup>^</sup> | 0.134              | 0.089 <sup>^</sup> |
| some post sec     | 0.206         | 0.175 <sup>^</sup> | 0.209              | 0.174 <sup>^</sup> |
| post secondary    | 0.264         | 0.148 <sup>^</sup> | 0.215              | 0.148 <sup>^</sup> |
| university        | 0.081         | 0.023 <sup>^</sup> | 0.051              | 0.023 <sup>^</sup> |
| Labour Force (LF) |               |                    |                    |                    |
| employed          | 0.618         | 0.390 <sup>^</sup> | 0.519              | 0.390 <sup>^</sup> |
| unemployed        | 0.084         | 0.119 <sup>^</sup> | 0.100              | 0.120 <sup>^</sup> |
| not in LF         | 0.290         | 0.472 <sup>^</sup> | 0.368              | 0.472 <sup>^</sup> |
| female            | 0.537         | 0.500 <sup>^</sup> | 0.569              | 0.501 <sup>^</sup> |
| Behaviours        |               |                    |                    |                    |
| daily smoker      | 0.349         | 0.438 <sup>^</sup> | 0.391              | 0.437 <sup>^</sup> |
| occasional        | 0.083         | 0.149 <sup>^</sup> | 0.118              | 0.151 <sup>^</sup> |
| former smoker     | 0.239         | 0.163 <sup>^</sup> | 0.225              | 0.164 <sup>^</sup> |
| never smoker      | 0.324         | 0.245 <sup>^</sup> | 0.260              | 0.190 <sup>^</sup> |
| Age               |               |                    |                    |                    |
| 15 to 19 years    | 0.134         | 0.167 <sup>^</sup> | 0.137              | 0.167 <sup>^</sup> |
| 20 to 24 years    | 0.099         | 0.116 <sup>^</sup> | 0.116              | 0.115 <sup>^</sup> |
| 25 to 29 years    | 0.106         | 0.114 <sup>^</sup> | 0.106              | 0.114 <sup>^</sup> |
| 40 to 49 years    | 0.220         | 0.172 <sup>^</sup> | 0.192              | 0.173 <sup>^</sup> |
| 50 to 64 years    | 0.156         | 0.136 <sup>^</sup> | 0.152              | 0.136 <sup>^</sup> |
| 65 years and over | 0.045         | 0.065 <sup>^</sup> | 0.052              | 0.066 <sup>^</sup> |
| Residence         |               |                    |                    |                    |
| rural             | 0.233         | 0.906 <sup>^</sup> | 0.217              | 0.906 <sup>^</sup> |
| Newfoundland      | 0.024         | 0.008 <sup>^</sup> | 0.015              | 0.003 <sup>^</sup> |
| PEI               | 0.003         | 0.002 <sup>^</sup> | 0.002              | 0.002 <sup>^</sup> |
| Nova Scotia       | 0.030         | 0.037 <sup>^</sup> | 0.014              | 0.036 <sup>^</sup> |
| New Brunswick     | 0.028         | 0.014 <sup>^</sup> | 0.021              | 0.015 <sup>^</sup> |
| Quebec            | 0.159         | 0.077 <sup>^</sup> | 0.071              | 0.079 <sup>^</sup> |
| Ontario           | 0.296         | 0.114 <sup>^</sup> | 0.271              | 0.115 <sup>^</sup> |
| Manitoba          | 0.078         | 0.215 <sup>^</sup> | 0.125              | 0.218 <sup>^</sup> |
| Saskatchewan      | 0.066         | 0.195 <sup>^</sup> | 0.123              | 0.190 <sup>^</sup> |
| alberta           | 0.137         | 0.192 <sup>^</sup> | 0.149              | 0.192 <sup>^</sup> |
| British Columbia  | 0.179         | 0.142 <sup>^</sup> | 0.210              | 0.146 <sup>^</sup> |

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table Five: Logit Regressions Self-Reported Health Status  
Registered First Nations, 1991

| Health Status     | Excellent |        | Very good |        | Good   |        | Fair/Poor |        |
|-------------------|-----------|--------|-----------|--------|--------|--------|-----------|--------|
|                   | 1         | 2      | 1         | 2      | 1      | 2      | 1         | 2      |
| Reserve Income    | 0.715*    | 0.601  | 1.043     | 1.081  | 1.314^ | 2.330^ | 0.943     | 0.540  |
| less than 10K     | 0.779^    | 0.739^ | 0.748^    | 0.769^ | 1.266^ | 1.288^ | 1.581^    | 1.721^ |
| 10K-19K           | 0.814^    | 0.803  | 0.802^    | 0.780* | 1.281^ | 1.398^ | 1.393^    | 1.365  |
| 29K-39K           | 0.945     | 0.896  | 1.092     | 1.245  | 1.010  | 0.946  | 0.858     | 0.788  |
| 40K or over       | 1.095     | 1.111  | 1.358^    | 1.406^ | 0.785  | 0.730  | 0.334^    | 0.304^ |
| Education         |           |        |           |        |        |        |           |        |
| less highschool   | 0.827^    | 0.771^ | 0.792^    | 0.788^ | 1.311^ | 1.459^ | 1.742^    | 1.689^ |
| post secondary    | 1.052     | 1.071  | 0.890     | 0.849  | 1.118  | 1.232  | 1.273     | 1.078  |
| university        | 1.283     | 1.204  | 0.761     | 0.774  | 1.132  | 1.249  | 0.820     | 0.628  |
| Labour Force (LF) |           |        |           |        |        |        |           |        |
| unemployed        | 0.927     | 0.893  | 1.122     | 1.244^ | 0.969  | 0.935  | 1.052     | 0.997  |
| not in LF         | 0.743*    | 0.731* | 0.934     | 0.950  | 0.972  | 0.960  | 1.974*    | 2.061* |
| Sex               |           |        |           |        |        |        |           |        |
| female            | 0.737*    | 0.727* | 1.054     | 1.107  | 1.140^ | 1.160^ | 1.184^    | 1.151  |
| Age               |           |        |           |        |        |        |           |        |
| 15 to 19 years    | 2.087*    | 2.362* | 1.649*    | 1.478* | 0.596* | 0.591* | 0.200*    | 0.161* |
| 20 to 24          | 1.523*    | 1.484* | 1.077     | 1.015  | 0.893  | 0.903  | 0.498*    | 0.562* |
| 25 to 29 years    | 1.077     | 1.058  | 1.287^    | 1.199  | 0.979  | 1.086  | 0.434*    | 0.399* |
| 40 to 49 years    | 0.735*    | 0.770^ | 0.850^    | 0.802^ | 1.274^ | 1.346^ | 1.403^    | 1.403^ |
| 50 to 64 years    | 0.489*    | 0.527* | 0.623*    | 0.569* | 1.303^ | 1.673* | 2.388*    | 1.980* |
| 65 years and over | 0.292*    | 0.351* | 0.543*    | 0.739  | 1.082  | 1.295  | 3.182*    | 2.106* |
| Health Behaviours |           |        |           |        |        |        |           |        |
| drinker           | 0.822^    | 0.818^ | 1.180^    | 1.189^ | 0.935  | 0.925  | 1.098     | 1.127  |
| smoker            | 0.671*    | 0.674* | 1.038     | 1.029  | 1.341* | 1.334* | 1.176^    | 1.169  |
| former smoker     | 0.816^    | 0.823* | 1.090     | 1.081  | 1.168^ | 1.147  | 1.015     | 1.017  |
| Residence         |           |        |           |        |        |        |           |        |
| rural             | 1.005     | 1.000  | 0.999     | 0.990  | 0.936  | 0.924  | 1.160     | 1.185  |
| Atlantic          | 0.808     | 0.805* | 1.090     | 1.081  | 1.098  | 1.088  | 1.009     | 1.023  |
| Quebec            | 1.210^    | 1.190  | 1.034     | 1.038  | 1.013  | 1.013  | 0.618*    | 0.632^ |
| Manitoba          | 0.836^    | 0.830^ | 0.995     | 0.991  | 1.151  | 1.148  | 1.074     | 1.100  |
| Saskatchewan      | 0.699*    | 0.696* | 1.104     | 1.107  | 1.107  | 1.114  | 1.200     | 1.207  |
| Alberta           | 0.781^    | 0.781^ | 1.378*    | 1.381* | 0.834^ | 0.834^ | 1.078     | 1.077  |
| British Columbia  | 0.669*    | 0.670* | 1.031     | 1.042  | 1.214^ | 1.212^ | 1.273^    | 1.266^ |
| Reserve*          |           |        |           |        |        |        |           |        |
| less than 10K     |           | 1.136  |           | 0.929  |        | 0.969  |           | 0.833  |
| 10K-19K           |           | 1.039  |           | 1.049  |        | 0.817  |           | 1.041  |
| 29K-39K           |           | 1.183  |           | 0.622  |        | 1.260  |           | 1.310  |
| 40K or over       |           | 0.720  |           | 0.944  |        | 1.513  |           | 1.549  |
| less highschool   |           | 1.250  |           | 1.001  |        | 0.698  |           | 1.396  |
| post secondary    |           | 0.985  |           | 1.128  |        | 0.714  |           | 1.855  |
| university        |           | 1.456  |           | 0.873  |        | 0.702  |           | 2.649  |
| unemployed        |           | 1.108  |           | 0.758  |        | 1.079  |           | 1.131  |
| not in LF         |           | 1.031  |           | 0.943  |        | 1.015  |           | 0.939  |
| female            |           | 1.031  |           | 0.896  |        | 0.951  |           | 1.066  |
| 15 to 19 years    |           | 0.741  |           | 1.329  |        | 0.990  |           | 1.565  |
| 20 to 24          |           | 1.047  |           | 1.204  |        | 0.950  |           | 0.766  |
| 25 to 29 years    |           | 1.045  |           | 1.232  |        | 0.773  |           | 1.220  |
| 40 to 49 years    |           | 0.874  |           | 1.180  |        | 0.866  |           | 0.978  |
| 50 to 64 years    |           | 0.834  |           | 1.243  |        | 0.596^ |           | 1.444  |
| 65 years and over |           | 0.672  |           | 0.592^ |        | 0.718  |           | 2.082^ |
| Number obs        | 9127      | 9127   | 9127      | 9127   | 9127   | 9127   | 9127      | 9127   |
| Pseudo R2         | 0.068     | 0.069  | 0.025     | 0.027  | 0.021  | 0.024  | 0.151     | 0.155  |

\* statistically different at the 1% level

^ statistically different at the 5% level



Table Six: Logit Regressions Diagnosed Disease  
Registered First Nations, 1991

| Chronic Diseases  | Diabetes |        | Hypertension |        | CVD    |        | Respiratory |        |
|-------------------|----------|--------|--------------|--------|--------|--------|-------------|--------|
|                   | 1        | 2      | 1            | 2      | 1      | 2      | 1           | 2      |
| Reserve Income    | 1.183    | 1.801  | 1.027        | 0.320^ | 0.947  | 0.914  | 1.044       | 1.023  |
| less than 10K     | 1.171    | 1.250  | 1.062        | 1.028  | 1.675^ | 1.956^ | 0.826       | 0.654^ |
| 10K-19K           | 1.457^   | 1.712^ | 1.062        | 0.877  | 1.360  | 1.450  | 1.068       | 0.930  |
| 29K-39K           | 1.123    | 1.271  | 0.983        | 0.664^ | 0.628  | 0.634  | 0.816       | 0.687^ |
| 40K or over       | 1.334    | 1.225  | 1.248        | 0.940  | 0.648  | 0.609  | 0.760       | 0.695  |
| Education         |          |        |              |        |        |        |             |        |
| less highschool   | 1.250    | 1.181  | 0.890        | 0.787  | 0.736  | 0.695  | 1.269       | 1.416^ |
| post secondary    | 1.097    | 1.096  | 0.718^       | 0.596^ | 0.835  | 0.810  | 1.496^      | 1.619^ |
| university        | 0.112^   | 0.106^ | 0.723        | 0.547^ | 0.592  | 0.558  | 0.974       | 0.859  |
| Labour Force (LF) |          |        |              |        |        |        |             |        |
| unemployed        | 1.181    | 1.774^ | 1.225        | 1.311  | 0.868  | 0.825  | 1.414*      | 1.562* |
| not in LF         | 1.516^   | 1.933  | 1.292^       | 1.248  | 1.350^ | 1.530^ | 1.385*      | 1.552* |
| Sex               |          |        |              |        |        |        |             |        |
| female            | 1.292^   | 1.060  | 1.179^       | 0.960  | 0.884  | 0.812  | 1.421*      | 1.519* |
| Age               |          |        |              |        |        |        |             |        |
| 15 to 19 years    | 0.173*   | 0.234* | 0.239*       | 0.288* | 0.500^ | 0.492^ | 0.740^      | 0.763  |
| 20 to 24          | 0.276*   | 0.285* | 0.390*       | 0.367* | 0.445* | 0.520^ | 0.546*      | 0.572* |
| 25 to 29 years    | 0.497*   | 0.559^ | 0.620*       | 0.667^ | 0.597^ | 0.626  | 0.842       | 0.993  |
| 40 to 49 years    | 2.110*   | 2.042* | 1.850*       | 2.024* | 2.031* | 1.853^ | 1.192       | 1.121  |
| 50 to 64 years    | 3.936*   | 4.142* | 3.569*       | 4.077* | 3.815* | 3.648* | 1.958*      | 1.681* |
| 65 years and over | 3.680*   | 4.019* | 5.030*       | 5.037* | 8.252* | 7.073* | 3.104*      | 2.460* |
| Health Behaviours |          |        |              |        |        |        |             |        |
| drinker           | 0.837    | 0.852  | 1.666*       | 1.648* | 0.787  | 0.804  | 1.385^      | 1.412* |
| smoker            | 0.981    | 0.998  | 0.813^       | 0.817^ | 1.037  | 1.045  | 1.358*      | 1.356* |
| former smoker     | 1.076    | 1.065  | 1.170        | 1.166  | 1.309^ | 1.309^ | 1.368*      | 1.371* |
| Residence         |          |        |              |        |        |        |             |        |
| rural             | 1.027    | 1.011  | 0.827        | 0.811^ | 0.790  | 0.794  | 0.873       | 0.894  |
| Atlantic          | 0.856    | 0.865  | 1.692^       | 1.687^ | 0.846  | 0.885  | 0.731       | 0.725  |
| Quebec            | 0.669^   | 0.666^ | 0.719^       | 0.719^ | 0.655^ | 0.662^ | 0.656*      | 0.667* |
| Manitoba          | 1.068    | 1.054  | 1.189        | 1.210  | 0.882  | 0.894  | 0.903       | 0.900  |
| Saskatchewan      | 0.896    | 0.887  | 0.914        | 0.911  | 0.824  | 0.826  | 0.808^      | 0.801  |
| Alberta           | 0.801    | 0.798  | 1.101        | 1.100  | 0.643^ | 0.649^ | 0.949       | 0.939  |
| British Columbia  | 0.469*   | 0.465* | 0.847        | 0.840  | 0.845  | 0.838  | 0.795^      | 0.782^ |
| Reserve*          |          |        |              |        |        |        |             |        |
| less than 10K     |          | 0.885  |              | 1.202  |        | 0.692  |             | 2.050^ |
| 10K-19K           |          | 0.710  |              | 1.712^ |        | 0.843  |             | 1.610^ |
| 29K-39K           |          | 0.799  |              | 3.243^ |        | 1.092  |             | 1.833  |
| 40K or over       |          | 1.611  |              | 2.587^ |        | 1.725  |             | 1.577  |
| less highschool   |          | 1.058  |              | 1.999  |        | 1.307  |             | 0.691  |
| post secondary    |          | 0.940  |              | 2.498^ |        | 1.184  |             | 0.722  |
| university        |          | 0.996  |              | 3.135  |        | 1.252  |             | 1.437  |
| unemployed        |          | 0.370^ |              | 0.846  |        | 1.133  |             | 0.764  |
| not in LF         |          | 0.581^ |              | 1.109  |        | 0.738  |             | 0.735  |
| female            |          | 1.474^ |              | 1.548^ |        | 1.224  |             | 0.860  |
| 15 to 19 years    |          | 0.484  |              | 0.525  |        | 0.978  |             | 0.937  |
| 20 to 24          |          | 0.945  |              | 1.139  |        | 0.570  |             | 0.880  |
| 25 to 29 years    |          | 0.754  |              | 0.803  |        | 0.869  |             | 0.538^ |
| 40 to 49 years    |          | 1.085  |              | 0.782  |        | 1.253  |             | 1.153  |
| 50 to 64 years    |          | 0.929  |              | 0.721  |        | 1.117  |             | 1.381  |
| 65 years and over |          | 0.889  |              | 0.926  |        | 1.401  |             | 1.545  |
| Number obs        | 9106     | 9106   | 9092         | 9092   | 9092   | 9092   | 9082        | 9082   |
| Pseudo R2         | 0.160    | 0.165  | 0.144        | 0.150  | 0.149  | 0.152  | 0.060       | 0.064  |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table Seven: Logit Regressions Health Care Utilization  
Registered First Nations, 1991

| Utilization       | Medical Doctor |        | Registered Nurse |        | Community Worker |        | Traditional Healer |        |
|-------------------|----------------|--------|------------------|--------|------------------|--------|--------------------|--------|
|                   | 1              | 2      | 1                | 2      | 1                | 2      | 1                  | 2      |
| Reserve Income    | 0.914          | 0.653  | 1.403*           | 1.196  | 2.433*           | 5.731* | 1.671^             | 1.688  |
| less than 10K     | 0.812^         | 0.747^ | 0.920            | 1.024  | 1.124            | 1.140  | 1.099              | 1.046  |
| 10K-19K           | 0.830          | 0.715^ | 0.925            | 0.960  | 1.022            | 0.898  | 1.156              | 1.015  |
| 29K-39K           | 0.924          | 0.955  | 0.901            | 0.841  | 0.929            | 0.944  | 1.274              | 1.378  |
| 40K or over       | 0.945          | 0.956  | 0.799            | 0.823  | 0.553^           | 0.539  | 0.788              | 0.613  |
| Education         |                |        |                  |        |                  |        |                    |        |
| less highschool   | 0.569*         | 0.521* | 1.124            | 1.028  | 1.215            | 2.368^ | 0.878              | 0.822  |
| post secondary    | 0.934          | 0.830  | 1.117            | 1.074  | 1.239            | 1.788  | 1.980^             | 2.520^ |
| university        | 1.699^         | 1.542  | 1.144            | 0.957  | 2.201^           | 4.365* | 5.343*             | 7.275* |
| Labour Force (LF) |                |        |                  |        |                  |        |                    |        |
| unemployed        | 0.983          | 0.970  | 0.963            | 0.864  | 1.073            | 1.215  | 1.008              | 1.170  |
| not in LF         | 1.054          | 1.136  | 1.161^           | 1.119  | 1.251^           | 1.351  | 0.991              | 0.967  |
| Sex               |                |        |                  |        |                  |        |                    |        |
| female            | 2.510*         | 2.884* | 1.676*           | 1.692* | 1.453*           | 1.329^ | 1.207              | 1.064  |
| Age               |                |        |                  |        |                  |        |                    |        |
| 15 to 19 years    | 0.916          | 0.876  | 1.269^           | 1.447^ | 0.814            | 0.941  | 0.694              | 0.768  |
| 20 to 24          | 0.975          | 1.073  | 1.279^           | 1.405^ | 0.808            | 1.048  | 0.596^             | 0.571^ |
| 25 to 29 years    | 0.905          | 0.909  | 1.460*           | 1.610* | 1.257            | 1.623^ | 0.546^             | 0.594^ |
| 40 to 49 years    | 1.320^         | 1.246  | 1.367*           | 1.554* | 1.451^           | 1.491  | 1.122              | 1.283  |
| 50 to 64 years    | 2.202*         | 2.051* | 1.673*           | 1.544* | 1.781*           | 1.182  | 1.289              | 0.815  |
| 65 years and over | 3.788*         | 3.231* | 2.919*           | 2.120* | 2.999*           | 2.073^ | 1.663^             | 1.823  |
| Health Behaviours |                |        |                  |        |                  |        |                    |        |
| drinker           | 0.879          | 0.887  | 0.845            | 0.850  | 1.148            | 1.152  | 0.638^             | 0.641^ |
| smoker            | 1.098          | 1.096  | 1.034            | 1.042  | 0.995            | 1.003  | 1.571*             | 1.618* |
| former smoker     | 1.279^         | 1.286^ | 0.966            | 0.978  | 1.120            | 1.131  | 1.359^             | 1.397^ |
| Residence         |                |        |                  |        |                  |        |                    |        |
| rural             | 0.600*         | 0.604* | 1.460*           | 1.480* | 1.521^           | 1.559^ | 1.008              | 1.051  |
| Atlantic          | 1.746^         | 1.747^ | 0.786            | 0.797  | 1.479            | 1.482  | 0.656              | 0.711  |
| Quebec            | 0.747^         | 0.753^ | 1.059            | 1.063  | 0.658^           | 0.665^ | 0.441^             | 0.437^ |
| Manitoba          | 0.821^         | 0.823^ | 1.090            | 1.096  | 1.305^           | 1.310^ | 1.257              | 1.230  |
| Saskatchewan      | 0.921          | 0.924  | 0.871            | 0.866  | 1.681*           | 1.660* | 1.946*             | 1.925* |
| Alberta           | 1.225^         | 1.227^ | 0.963            | 0.967  | 1.377^           | 1.365^ | 2.111*             | 2.137* |
| British Columbia  | 1.046          | 1.048  | 0.689*           | 0.681* | 1.519^           | 1.485* | 1.062              | 1.072  |
| Reserve*          |                |        |                  |        |                  |        |                    |        |
| less than 10K     |                | 1.230  |                  | 0.781  |                  | 1.013  |                    | 1.137  |
| 10K-19K           |                | 1.392  |                  | 0.915  |                  | 1.244  |                    | 1.352  |
| 29K-39K           |                | 0.915  |                  | 1.253  |                  | 1.031  |                    | 0.751  |
| 40K or over       |                | 1.016  |                  | 0.966  |                  | 1.190  |                    | 2.197  |
| less highschool   |                | 1.347  |                  | 1.404  |                  | 0.322^ |                    | 0.988  |
| post secondary    |                | 1.421  |                  | 1.216  |                  | 0.513  |                    | 0.529  |
| university        |                | 1.335  |                  | 1.993  |                  | 0.250^ |                    | 0.329  |
| unemployed        |                | 1.034  |                  | 1.292  |                  | 0.819  |                    | 0.704  |
| not in LF         |                | 0.875  |                  | 1.127  |                  | 0.912  |                    | 0.955  |
| female            |                | 0.757^ |                  | 0.993  |                  | 1.153  |                    | 1.256  |
| 15 to 19 years    |                | 1.101  |                  | 0.746  |                  | 0.769  |                    | 0.886  |
| 20 to 24          |                | 0.838  |                  | 0.811  |                  | 0.672  |                    | 1.089  |
| 25 to 29 years    |                | 0.993  |                  | 0.809  |                  | 0.643  |                    | 0.794  |
| 40 to 49 years    |                | 1.129  |                  | 0.737  |                  | 0.967  |                    | 0.761  |
| 50 to 64 years    |                | 1.120  |                  | 1.125  |                  | 1.750^ |                    | 2.087^ |
| 65 years and over |                | 1.279  |                  | 1.655^ |                  | 1.620  |                    | 0.889  |
| Number obs        | 9118           | 9118   | 9064             | 9064   | 9039             | 9039   | 8990               | 8990   |
| Pseudo R2         | 0.093          | 0.094  | 0.054            | 0.058  | 0.099            | 0.106  | 0.072              | 0.080  |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table Eight: Logit Regressions Self-Reported Health Status  
Registered First Nations, 2001

| Health Status     | Excellent          |                    | Very good          |                    | Good               |                    | Fair/Poor          |                    |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                   | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  |
| Reserve           | 0.845 <sup>^</sup> | 0.759              | 0.942              | 1.207              | 1.324 <sup>*</sup> | 1.426 <sup>^</sup> | 0.915              | 0.680              |
| Income            | 1.008 <sup>*</sup> | 1.009 <sup>*</sup> | 1.002 <sup>^</sup> | 1.003 <sup>^</sup> | 0.998              | 0.998              | 0.990 <sup>*</sup> | 0.987 <sup>*</sup> |
| Income2           | 1.000 <sup>*</sup> | 1.000 <sup>*</sup> | 1.000              | 1.000              | 1.000              | 1.000              | 1.000              | 1.000 <sup>^</sup> |
| family size       | 0.979              | 0.982              | 1.009              | 1.009              | 1.018              | 1.018              | 1.000              | 0.992              |
| Education         |                    |                    |                    |                    |                    |                    |                    |                    |
| less highschool   | 0.724 <sup>*</sup> | 0.695 <sup>*</sup> | 0.915              | 0.965              | 1.068              | 1.041              | 1.494 <sup>*</sup> | 1.482 <sup>*</sup> |
| some post high    | 0.806 <sup>^</sup> | 0.769 <sup>^</sup> | 1.064              | 1.134              | 1.121              | 1.169 <sup>^</sup> | 1.043              | 0.951              |
| post secondary    | 1.103              | 1.097              | 0.880              | 0.859 <sup>^</sup> | 1.107              | 1.173 <sup>^</sup> | 1.042              | 0.995              |
| university        | 1.305 <sup>^</sup> | 1.294 <sup>^</sup> | 1.146              | 1.141              | 0.835              | 0.821              | 0.543 <sup>^</sup> | 0.493 <sup>^</sup> |
| Labour Force (LF) |                    |                    |                    |                    |                    |                    |                    |                    |
| unemployed        | 0.786 <sup>^</sup> | 0.771 <sup>^</sup> | 0.894              | 0.914              | 1.090              | 1.101              | 1.517 <sup>*</sup> | 1.576 <sup>*</sup> |
| not in LF         | 0.714 <sup>*</sup> | 0.663 <sup>*</sup> | 0.666 <sup>*</sup> | 0.641 <sup>*</sup> | 0.989              | 0.974              | 2.810 <sup>*</sup> | 3.261 <sup>*</sup> |
| Sex and Marriage  |                    |                    |                    |                    |                    |                    |                    |                    |
| female            | 0.772 <sup>*</sup> | 0.762 <sup>*</sup> | 0.937              | 0.941              | 1.223 <sup>*</sup> | 1.297 <sup>*</sup> | 1.110 <sup>^</sup> | 1.052              |
| married           | 1.067              | 1.053              | 1.028              | 1.031              | 1.101 <sup>^</sup> | 1.104 <sup>^</sup> | 0.814 <sup>^</sup> | 0.825 <sup>^</sup> |
| married before    | 1.087              | 1.072              | 0.797 <sup>^</sup> | 0.793 <sup>^</sup> | 1.000              | 1.012              | 1.068              | 1.071              |
| Behaviours        |                    |                    |                    |                    |                    |                    |                    |                    |
| daily smoker      | 0.592 <sup>*</sup> | 0.594 <sup>*</sup> | 1.065              | 1.059              | 1.189 <sup>^</sup> | 1.206 <sup>*</sup> | 1.719 <sup>*</sup> | 1.685 <sup>*</sup> |
| occasional smoker | 0.594 <sup>*</sup> | 0.595 <sup>*</sup> | 1.180              | 1.179 <sup>^</sup> | 1.189 <sup>^</sup> | 1.200 <sup>^</sup> | 1.500 <sup>*</sup> | 1.471 <sup>*</sup> |
| former smoker     | 0.887              | 0.888 <sup>^</sup> | 1.121 <sup>^</sup> | 1.118 <sup>^</sup> | 1.013              | 1.025              | 1.342 <sup>*</sup> | 1.331 <sup>*</sup> |
| drinker           | 1.161 <sup>^</sup> | 1.138 <sup>^</sup> | 1.029              | 1.025              | 1.123 <sup>^</sup> | 1.120 <sup>^</sup> | 0.775 <sup>*</sup> | 0.799 <sup>*</sup> |
| Age               |                    |                    |                    |                    |                    |                    |                    |                    |
| 15 to 19 years    | 2.184 <sup>*</sup> | 2.071 <sup>*</sup> | 1.356 <sup>*</sup> | 1.412 <sup>*</sup> | 0.868 <sup>^</sup> | 0.916              | 0.226 <sup>*</sup> | 0.198 <sup>*</sup> |
| 20 to 24          | 1.666 <sup>*</sup> | 1.634 <sup>*</sup> | 0.945              | 0.931              | 1.108              | 1.190 <sup>^</sup> | 0.399 <sup>*</sup> | 0.355 <sup>*</sup> |
| 25 to 29 years    | 1.462 <sup>*</sup> | 1.529 <sup>*</sup> | 0.996              | 0.994              | 0.943              | 0.939              | 0.593 <sup>*</sup> | 0.518 <sup>*</sup> |
| 40 to 49 years    | 0.752 <sup>*</sup> | 0.768 <sup>^</sup> | 0.827 <sup>^</sup> | 0.859 <sup>^</sup> | 0.904              | 0.817 <sup>^</sup> | 2.238 <sup>*</sup> | 2.384 <sup>*</sup> |
| 50 to 64 years    | 0.442 <sup>*</sup> | 0.449 <sup>*</sup> | 0.651 <sup>*</sup> | 0.725 <sup>*</sup> | 0.958              | 0.879              | 3.541 <sup>*</sup> | 3.565 <sup>*</sup> |
| 65 years and over | 0.320 <sup>*</sup> | 0.356 <sup>*</sup> | 0.572 <sup>*</sup> | 0.695 <sup>^</sup> | 1.279 <sup>^</sup> | 1.372 <sup>^</sup> | 2.339 <sup>*</sup> | 1.802 <sup>*</sup> |
| Residence         |                    |                    |                    |                    |                    |                    |                    |                    |
| rural             | 0.995              | 0.982              | 1.028              | 1.021              | 1.040              | 1.051              | 0.924              | 0.930              |
| Newfoundland      | 0.952              | 0.996              | 1.388 <sup>^</sup> | 1.398 <sup>^</sup> | 1.103              | 1.100              | 0.358 <sup>^</sup> | 0.330 <sup>*</sup> |
| PEI               | 0.928              | 0.942              | 0.983              | 1.004              | 1.466              | 1.428              | 0.607              | 0.607              |
| Nova Scotia       | 1.020              | 1.016              | 1.357 <sup>^</sup> | 1.349 <sup>^</sup> | 0.999              | 1.008              | 0.668 <sup>^</sup> | 0.660 <sup>^</sup> |
| New Brunswick     | 0.956              | 0.957              | 0.780              | 0.786              | 1.467 <sup>^</sup> | 1.444 <sup>^</sup> | 0.842              | 0.845              |
| Quebec            | 0.952              | 0.994              | 1.060              | 1.071              | 1.369 <sup>*</sup> | 1.373 <sup>*</sup> | 0.584 <sup>*</sup> | 0.533 <sup>*</sup> |
| Manitoba          | 1.052              | 1.057              | 0.912              | 0.916              | 1.412 <sup>*</sup> | 1.398 <sup>*</sup> | 0.677 <sup>*</sup> | 0.674 <sup>*</sup> |
| Saskatchewan      | 0.929              | 0.937              | 1.073              | 1.084              | 1.318 <sup>*</sup> | 1.300 <sup>*</sup> | 0.723 <sup>*</sup> | 0.726 <sup>*</sup> |
| Alberta           | 0.908              | 0.905              | 1.029              | 1.038              | 1.336 <sup>*</sup> | 1.322 <sup>*</sup> | 0.742 <sup>*</sup> | 0.756 <sup>^</sup> |
| BC                | 0.812 <sup>^</sup> | 0.823 <sup>^</sup> | 1.031              | 1.039              | 1.280 <sup>*</sup> | 1.273 <sup>*</sup> | 0.876              | 0.858 <sup>^</sup> |
| Reserve*          |                    |                    |                    |                    |                    |                    |                    |                    |
| Income            |                    | 0.996              |                    | 0.999              |                    | 1.000              |                    | 1.009 <sup>^</sup> |
| Income2           |                    | 1.000              |                    | 1.000              |                    | 1.000              |                    | 1.000              |
| less highschool   |                    | 1.232              |                    | 0.815              |                    | 1.042              |                    | 1.073              |
| some post high    |                    | 1.368              |                    | 0.776              |                    | 0.825              |                    | 1.373              |
| post secondary    |                    | 1.028              |                    | 1.133              |                    | 0.776              |                    | 1.215              |
| university        |                    | 0.917              |                    | 1.128              |                    | 1.053              |                    | 1.593              |
| unemployed        |                    | 1.115              |                    | 0.926              |                    | 0.976              |                    | 0.850              |
| not in LF         |                    | 1.251              |                    | 1.125              |                    | 1.076              |                    | 0.586 <sup>*</sup> |
| female            |                    | 1.061              |                    | 0.982              |                    | 0.846 <sup>^</sup> |                    | 1.149              |
| 15 to 19 years    |                    | 1.167              |                    | 0.846              |                    | 0.866              |                    | 1.574 <sup>^</sup> |
| 20 to 24          |                    | 1.093              |                    | 1.049              |                    | 0.780              |                    | 1.466              |
| 25 to 29 years    |                    | 0.849              |                    | 1.002              |                    | 1.021              |                    | 1.497              |
| 40 to 49 years    |                    | 0.923              |                    | 0.859              |                    | 1.405 <sup>^</sup> |                    | 0.782              |
| 50 to 64 years    |                    | 0.968              |                    | 0.646 <sup>^</sup> |                    | 1.331 <sup>^</sup> |                    | 0.945              |
| 65 years and over |                    | 0.720              |                    | 0.515 <sup>^</sup> |                    | 0.804              |                    | 2.121 <sup>^</sup> |

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table Nine: Logit Regressions Diagnosed Disease Registered First Nations, 2001

| Chronic Diseases  | Hypertension |        | CVD    |        | Respiratory |        |
|-------------------|--------------|--------|--------|--------|-------------|--------|
|                   | 1            | 2      | 1      | 2      | 1           | 2      |
| Reserve           | 1.205^       | 1.224  | 1.086  | 0.902  | 0.920       | 1.521  |
| Income            | 1.000        | 0.999  | 0.998  | 0.999  | 1.001       | 1.002  |
| Income2           | 1.000^       | 1.000^ | 1.000  | 1.000  | 1.000       | 1.000^ |
| family size       | 0.990        | 0.984  | 1.014  | 1.017  | 0.964^      | 0.968^ |
| Education         |              |        |        |        |             |        |
| less highschool   | 1.271^       | 1.224  | 1.616^ | 1.773^ | 1.207^      | 1.241^ |
| some post high    | 1.135        | 1.037  | 1.139  | 1.018  | 1.298^      | 1.290^ |
| post secondary    | 1.249^       | 1.252^ | 1.846* | 2.008* | 1.233^      | 1.251^ |
| university        | 0.964        | 0.900  | 1.763^ | 1.937^ | 0.920       | 0.892  |
| Labour Force (LF) |              |        |        |        |             |        |
| unemployed        | 1.437^       | 1.657* | 1.141  | 1.153  | 1.066       | 1.015  |
| not in LF         | 1.385*       | 1.604* | 1.438* | 1.467* | 1.388*      | 1.495* |
| Sex and Marriage  |              |        |        |        |             |        |
| female            | 1.118^       | 1.040  | 1.010  | 1.013  | 1.593*      | 1.560* |
| married           | 1.244^       | 1.245^ | 1.313^ | 1.299^ | 1.144^      | 1.135^ |
| married before    | 1.279^       | 1.270^ | 1.384^ | 1.391^ | 1.051       | 1.059  |
| Behaviours        |              |        |        |        |             |        |
| daily smoker      | 0.770^       | 0.755* | 0.996  | 1.004  | 1.178^      | 1.180^ |
| occasional smoker | 0.774^       | 0.764^ | 1.043  | 1.049  | 1.016       | 1.015  |
| former smoker     | 1.167^       | 1.155^ | 1.254^ | 1.253^ | 1.325*      | 1.327* |
| drinker           | 1.068        | 1.095  | 0.984  | 0.986  | 1.103       | 1.113^ |
| Age               |              |        |        |        |             |        |
| 15 to 19 years    | 0.195*       | 0.184* | 0.546^ | 0.449^ | 1.517*      | 1.667* |
| 20 to 24          | 0.699^       | 0.758  | 0.909  | 0.934  | 1.256^      | 1.391^ |
| 25 to 29 years    | 0.911        | 0.872  | 0.823  | 0.811  | 1.145       | 1.229  |
| 40 to 49 years    | 2.729*       | 2.885* | 2.285* | 2.127* | 1.650*      | 1.769* |
| 50 to 64 years    | 6.778*       | 7.328* | 5.149* | 4.5078 | 2.175*      | 2.205* |
| 65 years and over | 8.193*       | 7.893* | 6.793* | 5.126* | 2.491*      | 2.235* |
| Residence         |              |        |        |        |             |        |
| rural             | 0.857^       | 0.852^ | 0.737^ | 0.736^ | 0.718*      | 0.721* |
| Newfoundland      | 0.505^       | 0.476^ | 0.451^ | 0.449^ | 0.849       | 0.828  |
| PEI               | 1.665        | 1.651  | 1.195  | 1.204  | 0.766       | 0.768  |
| Nova Scotia       | 0.798        | 0.787  | 1.433  | 1.442  | 1.006       | 0.993  |
| New Brunswick     | 0.680^       | 0.671^ | 0.709  | 0.701  | 0.915       | 0.911  |
| Quebec            | 0.653*       | 0.608* | 0.638^ | 0.654^ | 0.884       | 0.886  |
| Manitoba          | 0.739^       | 0.735^ | 0.808  | 0.809  | 0.738*      | 0.736* |
| Saskatchewan      | 0.565*       | 0.570* | 0.845  | 0.829  | 0.669*      | 0.662* |
| Alberta           | 0.500*       | 0.504* | 0.907  | 0.895  | 0.682*      | 0.676* |
| BC                | 0.492*       | 0.481* | 0.704^ | 0.692^ | 0.766*      | 0.758* |
| Reserve*          |              |        |        |        |             |        |
| Income            |              | 1.004  |        | 1.003  |             | 0.993  |
| Income2           |              | 1.000  |        | 1.000  |             | 1.000  |
| less highschool   |              | 1.197  |        | 0.659  |             | 0.873  |
| some post high    |              | 1.367  |        | 1.418  |             | 0.981  |
| post secondary    |              | 0.977  |        | 0.631  |             | 0.933  |
| university        |              | 1.428  |        | 0.487  |             | 1.333  |
| unemployed        |              | 0.618^ |        | 0.998  |             | 1.209  |
| not in LF         |              | 0.586^ |        | 0.972  |             | 0.748^ |
| female            |              | 1.251  |        | 0.960  |             | 1.094  |
| 15 to 19 years    |              | 1.187  |        | 2.138  |             | 0.665^ |
| 20 to 24          |              | 0.730  |        | 0.974  |             | 0.641^ |
| 25 to 29 years    |              | 1.107  |        | 1.106  |             | 0.732  |
| 40 to 49 years    |              | 0.820  |        | 1.372  |             | 0.693^ |
| 50 to 64 years    |              | 0.727  |        | 1.830^ |             | 0.919  |
| 65 years and over |              | 1.067  |        | 2.839^ |             | 1.432  |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table Ten: Logit Regressions Health Care Utilization Registered First Nations, 2001

| Utilization       | Medical Doctor |        | Registered Nurse |        | Community Worker |        | Traditional Healer |        |
|-------------------|----------------|--------|------------------|--------|------------------|--------|--------------------|--------|
|                   | 1              | 2      | 1                | 2      | 1                | 2      | 1                  | 2      |
| Reserve           | 0.709*         | 0.599^ | 2.178*           | 1.632^ | 0.911            | 0.515^ | 2.069*             | 1.274  |
| Income            | 1.001          | 1.001  | 0.998            | 0.996^ | 0.989*           | 0.988* | 0.995^             | 0.992^ |
| Income2           | 1.000^         | 1.000^ | 1.000            | 1.000  | 1.000^           | 1.000* | 1.000              | 1.000  |
| family size       | 0.972^         | 0.971^ | 0.991            | 0.984  | 0.999            | 0.992  | 0.975              | 0.972  |
| Education         |                |        |                  |        |                  |        |                    |        |
| less highschool   | 0.840^         | 0.794^ | 1.253^           | 1.292^ | 1.101            | 1.072  | 0.794^             | 0.712^ |
| some post high    | 1.083          | 0.954  | 1.858*           | 2.060* | 1.328^           | 1.182  | 1.478*             | 1.427^ |
| post secondary    | 1.212^         | 1.168  | 1.610*           | 1.815* | 1.405^           | 1.361^ | 1.901*             | 2.129* |
| university        |                |        |                  |        |                  |        |                    |        |
| Labour Force (LF) | 1.518^         | 1.536^ | 2.028*           | 2.421* | 2.258*           | 2.380* | 3.426*             | 3.787* |
| unemployed        | 0.973          | 1.029  | 1.046            | 1.009  | 1.840*           | 1.863* | 1.083              | 1.123  |
| not in LF         | 1.211*         | 1.319* | 1.160^           | 1.378* | 1.854*           | 2.156* | 0.815^             | 0.807^ |
| Sex and           |                |        |                  |        |                  |        |                    |        |
| Marriage          |                |        |                  |        |                  |        |                    |        |
| female            | 1.911*         | 1.870* | 1.516*           | 1.377* | 1.473*           | 1.435* | 1.068              | 1.062  |
| married           | 1.023          | 1.025  | 1.073            | 1.089  | 0.657*           | 0.661* | 0.921              | 0.948  |
| married before    | 1.201^         | 1.203^ | 1.106            | 1.145^ | 1.064            | 1.071  | 1.526*             | 1.546* |
| Behaviours        |                |        |                  |        |                  |        |                    |        |
| daily smoker      | 1.053          | 1.048  | 1.153^           | 1.170^ | 1.698*           | 1.677* | 1.710*             | 1.734* |
| occasional smoker | 0.988          | 0.981  | 1.180^           | 1.184^ | 1.641*           | 1.607* | 1.559*             | 1.573* |
| former smoker     | 1.397*         | 1.396* | 1.415*           | 1.439* | 1.518*           | 1.506* | 1.401*             | 1.417* |
| drinker           | 1.117^         | 1.134^ | 0.892^           | 0.927  | 1.036            | 1.063  | 0.580*             | 0.587* |
| Age               |                |        |                  |        |                  |        |                    |        |
| 15 to 19 years    | 0.783^         | 0.787^ | 1.043            | 1.113  | 0.684*           | 0.595* | 0.951              | 1.097  |
| 20 to 24          | 0.779^         | 0.741* | 1.213^           | 1.192^ | 0.639*           | 0.565* | 0.656*             | 0.567* |
| 25 to 29 years    | 0.906          | 0.921  | 1.214^           | 1.207^ | 0.838^           | 0.772^ | 0.743^             | 0.648^ |
| 40 to 49 years    | 1.173^         | 1.135  | 0.768*           | 0.657* | 0.736*           | 0.678* | 0.961              | 0.884  |
| 50 to 64 years    | 1.911*         | 1.854* | 0.854^           | 0.673* | 0.555*           | 0.470* | 0.915              | 0.787^ |
| 65 years and over | 2.659*         | 2.319* | 1.204^           | 0.757^ | 0.096*           | 0.054* | 0.680^             | 0.324* |
| Residence         |                |        |                  |        |                  |        |                    |        |
| rural             | 0.836^         | 0.837^ | 1.217*           | 1.271* | 0.760*           | 0.775* | 0.819^             | 0.830^ |
| Newfoundland      | 0.794          | 0.781  | 0.985            | 0.899  | 0.300^           | 0.291^ | 0.043^             | 0.040^ |
| PEI               | 2.302          | 2.282  | 1.437            | 1.360  | 1.429            | 1.429  | 0.640              | 0.593  |
| Nova Scotia       | 1.819*         | 1.821* | 0.663^           | 0.683^ | 0.754            | 0.768  | 0.561^             | 0.582^ |
| New Brunswick     | 0.948          | 0.941  | 0.725^           | 0.708^ | 0.731            | 0.739  | 0.489^             | 0.476^ |
| Quebec            | 0.722*         | 0.704* | 1.629*           | 1.543* | 1.027            | 0.973  | 0.271*             | 0.256* |
| Manitoba          | 0.906          | 0.906  | 0.881^           | 0.863^ | 0.857            | 0.853  | 1.083              | 1.066  |
| Saskatchewan      | 0.973          | 0.970  | 0.814^           | 0.785^ | 1.234^           | 1.232^ | 1.346^             | 1.311^ |
| Alberta           | 1.203^         | 1.201^ | 0.833^           | 0.825^ | 1.210^           | 1.219^ | 1.449*             | 1.437* |
| BC                | 1.058          | 1.046  | 0.690*           | 0.664* | 1.898*           | 1.886* | 0.757^             | 0.732^ |
| Reserve*          |                |        |                  |        |                  |        |                    |        |
| Income            |                | 0.997  |                  | 1.011^ |                  | 1.009  |                    | 1.005  |
| Income2           |                | 1.000  |                  | 1.000  |                  | 1.000  |                    | 1.000  |
| less highschool   |                | 1.231  |                  | 0.834  |                  | 1.168  |                    | 1.230  |
| some post high    |                | 1.563^ |                  | 0.603^ |                  | 1.591^ |                    | 1.086  |
| post secondary    |                | 1.150  |                  | 0.628^ |                  | 1.136  |                    | 0.693  |
| university        |                | 0.883  |                  | 0.455^ |                  | 0.593  |                    | 0.644  |
| unemployed        |                | 0.833  |                  | 1.113  |                  | 0.902  |                    | 0.908  |
| not in LF         |                | 0.784^ |                  | 0.657* |                  | 0.543* |                    | 1.051  |
| female            |                | 1.069  |                  | 1.347^ |                  | 1.101  |                    | 1.011  |
| 15 to 19 years    |                | 1.010  |                  | 0.912  |                  | 1.862^ |                    | 0.784  |
| 20 to 24          |                | 1.180  |                  | 1.045  |                  | 1.698^ |                    | 1.491  |
| 25 to 29 years    |                | 0.946  |                  | 1.014  |                  | 1.380  |                    | 1.452  |
| 40 to 49 years    |                | 1.109  |                  | 1.647* |                  | 1.389^ |                    | 1.337  |
| 50 to 64 years    |                | 1.075  |                  | 2.009* |                  | 1.892^ |                    | 1.576^ |
| 65 years and over |                | 1.411  |                  | 3.370* |                  | 6.057* |                    | 4.248* |

\* statistically different at the 1% level

^ statistically different at the 5% level

## Appendix One

### Description of Variables

Self-reported Health Status - respondents were asked how they generally rated their health (excellent, very good, good, fair or poor) due to low number of observations fair or poor responses were amalgamated into fair/poor.

Diagnosed Disease - respondents were asked if they had been diagnosed by a medical professional with the following conditions: diabetes, hypertension (high blood pressure) CVD (heart problems), Respiratory problems (amalgamation of asthma, bronchitis or breathing problems) (Yes=1, No=0)

Health Care Utilization - respondents were asked if they had been to the stated medical professional in the last 12 months: Doctor, RN (registered nurse), Community Health worker, Traditional healer, Counsellor (Yes=1, No=0)

Independent variables are dummy variables equalling one if the statement is true, zero otherwise  
less than 10K = income less than \$10,000 in previous year in 1991 APS (income is continuous in 2001 APS)

10K-19K = income \$10,000 to \$19,999 in previous year

Income \$20,000 to 28,999 is comparator

29K-39K = income \$29,000 to \$39,999 in previous year

40K or over = income \$40,000 and over in previous year

Education

less highschool = highest level of education is less than highschool diploma

highest level of education is highschool diploma is comparator

post secondary=highest level of education is some post-secondary schooling (includes university without a degree or college or trade school etc.)

university = highest level of education is a university degree

Labour Force (LF)

employed is the comparator

unemployed = unemployed

not in LF = not in the labour force

Sex

female = female

Age

15 to 19 years

20 to 24 years

25 to 29 years

40 to 49 years

50 to 64 years

65 years and over

### Health Behaviours

drinker = drinks more than 3 times per week

smoker = smokes daily or occasionally

former smoker = smoked previously but no longer

never smoked is the comparator

### Residence

rural= rural residence

urban residence is the comparator

Atlantic = lives in the Atlantic Provinces

Quebec = lives in Quebec

Manitoba = lives in Manitoba

Saskatchewan = lives in Saskatchewan

Alberta = lives in Alberta

British Columbia = lives in British Columbia

**Appendix Two**

Table A2-1  
Probability of Health State On and Off-Reserve if has characteristics of  
Comparator\*\* except:  
Registered First Nations, 1991

| Health Status     | Excellent |                   | Very good |      | Good |                   | Fair/Poor |      |
|-------------------|-----------|-------------------|-----------|------|------|-------------------|-----------|------|
|                   | OFF       | ON                | OFF       | ON   | OFF  | ON                | OFF       | ON   |
| Income            |           |                   |           |      |      |                   |           |      |
| less than 10K     | 0.44      | 0.35              | 0.30      | 0.31 | 0.17 | 0.32 <sup>^</sup> | 0.07      | 0.03 |
| 10K-19K           | 0.46      | 0.35              | 0.31      | 0.33 | 0.18 | 0.30 <sup>^</sup> | 0.06      | 0.03 |
| 29K-39K           | 0.49      | 0.41              | 0.42      | 0.32 | 0.13 | 0.31 <sup>^</sup> | 0.03      | 0.02 |
| 40K or over       | 0.54      | 0.34 <sup>^</sup> | 0.44      | 0.45 | 0.10 | 0.29 <sup>^</sup> | 0.01      | 0.01 |
| Education         |           |                   |           |      |      |                   |           |      |
| less highschool   | 0.45      | 0.38              | 0.31      | 0.33 | 0.19 | 0.27 <sup>^</sup> | 0.07      | 0.05 |
| post secondary    | 0.53      | 0.40 <sup>^</sup> | 0.33      | 0.37 | 0.16 | 0.25 <sup>^</sup> | 0.04      | 0.04 |
| university        | 0.56      | 0.53              | 0.31      | 0.29 | 0.17 | 0.25 <sup>^</sup> | 0.03      | 0.04 |
| Labour Force (LF) |           |                   |           |      |      |                   |           |      |
| unemployed        | 0.49      | 0.39              | 0.41      | 0.37 | 0.13 | 0.27 <sup>^</sup> | 0.04      | 0.03 |
| not in LF         | 0.44      | 0.59              | 0.35      | 0.50 | 0.13 | 0.50 <sup>^</sup> | 0.08      | 0.50 |
| Sex               |           |                   |           |      |      |                   |           |      |
| female            | 0.44      | 0.33              | 0.39      | 0.38 | 0.16 | 0.29 <sup>^</sup> | 0.05      | 0.03 |
| Age               |           |                   |           |      |      |                   |           |      |
| 15 to 19 years    | 0.72      | 0.53 <sup>^</sup> | 0.46      | 0.55 | 0.09 | 0.18 <sup>^</sup> | 0.01      | 0.01 |
| 20 to 24          | 0.61      | 0.50              | 0.37      | 0.43 | 0.13 | 0.24 <sup>^</sup> | 0.02      | 0.01 |
| 25 to 29 years    | 0.53      | 0.42              | 0.41      | 0.48 | 0.15 | 0.24 <sup>^</sup> | 0.02      | 0.01 |
| 40 to 49 years    | 0.45      | 0.30 <sup>^</sup> | 0.31      | 0.37 | 0.18 | 0.30 <sup>^</sup> | 0.06      | 0.03 |
| 50 to 64 years    | 0.36      | 0.22 <sup>^</sup> | 0.24      | 0.30 | 0.21 | 0.27              | 0.08      | 0.06 |
| 65 years and over | 0.27      | 0.13 <sup>^</sup> | 0.30      | 0.21 | 0.17 | 0.26              | 0.08      | 0.09 |

\*\* comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level



Table A2-2

Probability of Health State On and Off-Reserve if has characteristics of  
 Comparator\*\* except:  
 Registered First Nations, 1991

| Chronic Diseases  | Diabetes |      | Hypertension |                   | CVD  |      | Respiratory |                   |
|-------------------|----------|------|--------------|-------------------|------|------|-------------|-------------------|
|                   | OFF      | ON   | OFF          | ON                | OFF  | ON   | OFF         | ON                |
| Income            |          |      |              |                   |      |      |             |                   |
| less than 10K     | 0.03     | 0.05 | 0.15         | 0.06 <sup>^</sup> | 0.09 | 0.06 | 0.06        | 0.12 <sup>^</sup> |
| 10K-19K           | 0.05     | 0.03 | 0.13         | 0.08              | 0.07 | 0.06 | 0.09        | 0.13              |
| 29K-39K           | 0.04     | 0.05 | 0.10         | 0.10              | 0.03 | 0.03 | 0.06        | 0.11              |
| 40K or over       | 0.03     | 0.09 | 0.14         | 0.12              | 0.03 | 0.05 | 0.07        | 0.10              |
| Education         |          |      |              |                   |      |      |             |                   |
| less highschool   | 0.03     | 0.06 | 0.12         | 0.08              | 0.04 | 0.04 | 0.12        | 0.09              |
| post secondary    | 0.03     | 0.05 | 0.09         | 0.07              | 0.04 | 0.04 | 0.14        | 0.11              |
| university        | 0.00     | 0.01 | 0.08         | 0.09              | 0.03 | 0.03 | 0.08        | 0.11              |
| Labour Force (LF) |          |      |              |                   |      |      |             |                   |
| unemployed        | 0.05     | 0.03 | 0.18         | 0.06 <sup>^</sup> | 0.04 | 0.04 | 0.14        | 0.11              |
| not in LF         | 0.05     | 0.50 | 0.17         | 0.50 <sup>^</sup> | 0.08 | 0.50 | 0.13        | 0.50              |
| Sex               |          |      |              |                   |      |      |             |                   |
| female            | 0.03     | 0.07 | 0.14         | 0.07              | 0.04 | 0.05 | 0.13        | 0.12              |
| Age               |          |      |              |                   |      |      |             |                   |
| 15 to 19 years    | 0.01     | 0.01 | 0.05         | 0.01 <sup>^</sup> | 0.03 | 0.02 | 0.07        | 0.07              |
| 20 to 24          | 0.01     | 0.01 | 0.06         | 0.02 <sup>^</sup> | 0.03 | 0.01 | 0.05        | 0.05              |
| 25 to 29 years    | 0.02     | 0.02 | 0.10         | 0.03 <sup>^</sup> | 0.03 | 0.02 | 0.09        | 0.05              |
| 40 to 49 years    | 0.06     | 0.10 | 0.26         | 0.08 <sup>^</sup> | 0.09 | 0.10 | 0.10        | 0.12              |
| 50 to 64 years    | 0.11     | 0.17 | 0.41         | 0.14 <sup>^</sup> | 0.16 | 0.17 | 0.14        | 0.19              |
| 65 years and over | 0.10     | 0.16 | 0.46         | 0.20 <sup>^</sup> | 0.27 | 0.34 | 0.20        | 0.28              |

\*\* comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table A2-3

Probability of Utilization On and Off-Reserve if has characteristics of  
 Comparator\*\* except:  
 Registered First Nations, 1991

| Utilization       | Medical<br>Doctor |                   | Registered<br>Nurse |                   | Community<br>Worker |                   | Traditional<br>Healer |                   |
|-------------------|-------------------|-------------------|---------------------|-------------------|---------------------|-------------------|-----------------------|-------------------|
|                   | OFF               | ON                | OFF                 | ON                | OFF                 | ON                | OFF                   | ON                |
| Income            |                   |                   |                     |                   |                     |                   |                       |                   |
| less than 10K     | 0.70              | 0.65              | 0.13                | 0.13              | 0.01                | 0.06 <sup>^</sup> | 0.02                  | 0.04              |
| 10K-19K           | 0.69              | 0.67              | 0.13                | 0.14              | 0.01                | 0.06*             | 0.02                  | 0.05              |
| 29K-39K           | 0.75              | 0.64              | 0.11                | 0.16              | 0.01                | 0.05 <sup>^</sup> | 0.03                  | 0.03              |
| 40K or over       | 0.75              | 0.66              | 0.11                | 0.13              | 0.01                | 0.04 <sup>^</sup> | 0.01                  | 0.04              |
| Education         |                   |                   |                     |                   |                     |                   |                       |                   |
| less highschool   | 0.62              | 0.59              | 0.13                | 0.21 <sup>^</sup> | 0.02                | 0.04              | 0.02                  | 0.03              |
| post secondary    | 0.72              | 0.71              | 0.14                | 0.19              | 0.02                | 0.05 <sup>^</sup> | 0.05                  | 0.04              |
| university        | 0.83              | 0.81              | 0.13                | 0.26 <sup>^</sup> | 0.04                | 0.06              | 0.13                  | 0.08              |
| Labour Force (LF) |                   |                   |                     |                   |                     |                   |                       |                   |
| unemployed        | 0.75              | 0.67              | 0.12                | 0.17              | 0.01                | 0.06 <sup>^</sup> | 0.02                  | 0.03              |
| not in LF         | 0.78              | 0.50              | 0.14                | 0.50              | 0.01                | 0.50 <sup>^</sup> | 0.02                  | 0.50              |
| Sex               |                   |                   |                     |                   |                     |                   |                       |                   |
| female            | 0.90              | 0.82 <sup>^</sup> | 0.20                | 0.23              | 0.01                | 0.08 <sup>^</sup> | 0.02                  | 0.04              |
| Age               |                   |                   |                     |                   |                     |                   |                       |                   |
| 15 to 19 years    | 0.73              | 0.66              | 0.18                | 0.16              | 0.01                | 0.04 <sup>^</sup> | 0.02                  | 0.02              |
| 20 to 24          | 0.77              | 0.65 <sup>^</sup> | 0.17                | 0.17              | 0.01                | 0.04 <sup>^</sup> | 0.01                  | 0.02              |
| 25 to 29 years    | 0.74              | 0.65              | 0.20                | 0.19              | 0.02                | 0.06 <sup>^</sup> | 0.01                  | 0.02              |
| 40 to 49 years    | 0.80              | 0.74              | 0.19                | 0.17              | 0.02                | 0.08 <sup>^</sup> | 0.03                  | 0.03              |
| 50 to 64 years    | 0.86              | 0.82              | 0.19                | 0.24              | 0.01                | 0.11*             | 0.02                  | 0.06 <sup>^</sup> |
| 65 years and over | 0.91              | 0.89              | 0.24                | 0.39 <sup>^</sup> | 0.02                | 0.17*             | 0.04                  | 0.05              |

<sup>^</sup> comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

### Appendix Three

Table A3-1 - Logit Regressions Self-Reported Health Status  
All Native American and Inuit, 1991

| Health Status     | Excellent |        | Very good |        | Good   |        | Fair/Poor |        |
|-------------------|-----------|--------|-----------|--------|--------|--------|-----------|--------|
|                   | 1         | 2      | 1         | 2      | 1      | 2      | 1         | 2      |
| Reserve           | 0.630*    | 0.530^ | 1.124     | 1.200  | 1.314* | 2.339^ | 1.020     | 0.583  |
| Income            |           |        |           |        |        |        |           |        |
| less than 10K     | 0.755*    | 0.721* | 0.768*    | 0.802^ | 1.318^ | 1.371^ | 1.575*    | 1.608^ |
| 10K-19K           | 0.761^    | 0.736^ | 0.824^    | 0.819^ | 1.287^ | 1.370^ | 1.514^    | 1.560^ |
| 29K-39K           | 1.021     | 1.009  | 1.014     | 1.078  | 1.099  | 1.092  | 0.642^    | 0.535^ |
| 40K or over       | 1.012     | 1.006  | 1.252^    | 1.282^ | 0.965  | 0.962  | 0.366*    | 0.347* |
| Education         |           |        |           |        |        |        |           |        |
| less highschool   | 0.790^    | 0.740^ | 0.813^    | 0.832^ | 1.382* | 1.504* | 1.593^    | 1.517^ |
| post secondary    | 1.018     | 1.018  | 0.868     | 0.838^ | 1.162  | 1.245^ | 1.294     | 1.195  |
| university        | 1.363^    | 1.307  | 0.787     | 0.804  | 1.107  | 1.156  | 0.576     | 0.452^ |
| Labour Force (LF) |           |        |           |        |        |        |           |        |
| unemployed        | 0.921     | 0.876  | 1.119     | 1.208^ | 0.945  | 0.906  | 1.182     | 1.213  |
| not in LF         | 0.777*    | 0.773* | 0.877^    | 0.861^ | 1.018  | 1.037  | 2.030*    | 2.135* |
| female            | 0.792*    | 0.808* | 1.042     | 1.069  | 1.116^ | 1.115  | 1.160^    | 1.118  |
| Age               |           |        |           |        |        |        |           |        |
| 15 to 19 years    | 2.129*    | 2.336* | 1.542*    | 1.374^ | 0.568* | 0.543* | 0.233*    | 0.216* |
| 20 to 24          | 1.500*    | 1.445* | 1.210^    | 1.239^ | 0.776^ | 0.719^ | 0.484*    | 0.525* |
| 25 to 29 years    | 1.011     | 0.972  | 1.312*    | 1.272^ | 0.979  | 1.042  | 0.456*    | 0.447* |
| 40 to 49 years    | 0.767^    | 0.802^ | 0.890     | 0.875  | 1.212^ | 1.223^ | 1.387^    | 1.382^ |
| 50 to 64 years    | 0.602*    | 0.692  | 0.615*    | 0.566* | 1.219^ | 1.388* | 2.428*    | 2.203^ |
| 65 years and over | 0.331*    | 0.407  | 0.565*    | 0.719^ | 1.094  | 1.228  | 3.009*    | 2.198^ |
| Health Behaviours |           |        |           |        |        |        |           |        |
| drinker           | 0.911     | 0.899  | 1.173^    | 1.183^ | 0.907  | 0.905  | 1.001     | 1.027  |
| smoker            | 0.661*    | 0.661* | 1.044     | 1.034  | 1.405* | 1.389* | 1.173^    | 1.177^ |
| former smoker     | 0.841^    | 0.839^ | 1.106     | 1.096  | 1.172^ | 1.149^ | 0.995     | 1.007  |
| Residence         |           |        |           |        |        |        |           |        |
| rural             | 0.794     | 0.791  | 1.087     | 1.074  | 1.187  | 1.169  | 0.934     | 0.948  |
| Atlantic          | 1.168^    | 1.157^ | 0.883^    | 0.880^ | 0.943  | 0.930  | 1.113     | 1.134  |
| Quebec            | 1.115     | 1.100  | 1.092     | 1.097  | 1.037  | 1.033  | 0.613*    | 0.622* |
| Manitoba          | 0.835^    | 0.827^ | 1.000     | 1.003  | 1.249^ | 1.243^ | 0.948     | 0.960  |
| Saskatchewan      | 0.666*    | 0.665* | 1.100     | 1.102  | 1.198^ | 1.200^ | 1.163     | 1.167  |
| Alberta           | 0.726*    | 0.727* | 1.350*    | 1.351* | 0.978  | 0.977  | 0.974     | 0.972  |
| British Columbia  | 0.705*    | 0.709* | 0.993     | 0.996  | 1.362* | 1.359* | 1.078     | 1.071  |
| Reserve*          |           |        |           |        |        |        |           |        |
| less than 10K     |           | 1.157  |           | 0.895  |        | 0.902  |           | 0.908  |
| 10K-19K           |           | 1.131  |           | 1.005  |        | 0.832  |           | 0.904  |
| 29K-39K           |           | 1.030  |           | 0.748  |        | 1.068  |           | 1.946  |
| 40K or over       |           | 0.790  |           | 1.010  |        | 1.172  |           | 1.386  |
| less highschool   |           | 1.322  |           | 0.950  |        | 0.665^ |           | 1.556  |
| post secondary    |           | 1.051  |           | 1.158  |        | 0.689  |           | 1.659  |
| university        |           | 1.337  |           | 0.859  |        | 0.763  |           | 3.503  |
| unemployed        |           | 1.160  |           | 0.769  |        | 1.097  |           | 0.945  |
| not in LF         |           | 1.001  |           | 1.028  |        | 0.930  |           | 0.911  |
| female            |           | 0.935  |           | 0.922  |        | 0.994  |           | 1.091  |
| 15 to 19 years    |           | 0.751  |           | 1.405^ |        | 1.094  |           | 1.214  |
| 20 to 24          |           | 1.099  |           | 0.958  |        | 1.202  |           | 0.820  |
| 25 to 29 years    |           | 1.148  |           | 1.135  |        | 0.824  |           | 1.069  |
| 40 to 49 years    |           | 0.842  |           | 1.070  |        | 0.963  |           | 0.987  |
| 50 to 64 years    |           | 0.620^ |           | 1.255  |        | 0.731^ |           | 1.277  |
| 65 years and over |           | 0.556  |           | 0.602^ |        | 0.797  |           | 1.932^ |
| Number obs        | 10805     | 10805  | 10805     | 10805  | 10805  | 10805  | 10805     | 10805  |
| Pseudo R2         | 0.063     | 0.065  | 0.024     | 0.026  | 0.024  | 0.026  | 0.148     | 0.151  |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table A3-2 - Logit Regressions Diagnosed Disease  
All Native American and Inuit, 1991

| Chronic Diseases  | Diabetes           |                    | Hypertension       |                    | CVD                |                    | Respiratory        |                    |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                   | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  |
| Reserve           | 1.345 <sup>^</sup> | 2.137              | 1.098              | 0.455              | 0.864              | 1.005              | 0.992              | 0.870              |
| Income            |                    |                    |                    |                    |                    |                    |                    |                    |
| less than 10K     | 1.199              | 1.330              | 1.160              | 1.211              | 1.679 <sup>^</sup> | 1.868 <sup>^</sup> | 0.885              | 0.779 <sup>^</sup> |
| 10K-19K           | 1.515 <sup>^</sup> | 1.818 <sup>^</sup> | 1.066              | 0.945              | 1.266              | 1.260              | 1.147              | 1.085              |
| 29K-39K           | 0.901              | 0.934              | 1.030              | 0.805              | 0.602 <sup>^</sup> | 0.583              | 0.748 <sup>^</sup> | 0.669 <sup>^</sup> |
| 40K or over       | 1.225              | 1.159              | 1.271              | 1.070              | 0.559 <sup>^</sup> | 0.507 <sup>^</sup> | 0.653 <sup>^</sup> | 0.619 <sup>^</sup> |
| Education         |                    |                    |                    |                    |                    |                    |                    |                    |
| less highschool   | 1.375              | 1.338              | 1.012              | 0.937              | 0.802              | 0.768              | 1.161              | 1.217              |
| post secondary    | 1.238              | 1.287              | 0.899              | 0.831              | 1.011              | 1.029              | 1.327 <sup>^</sup> | 1.361 <sup>^</sup> |
| university        | 0.413 <sup>^</sup> | 0.544              | 0.735              | 0.619 <sup>^</sup> | 0.347 <sup>^</sup> | 0.296 <sup>^</sup> | 1.145              | 1.108              |
| Labour Force (LF) |                    |                    |                    |                    |                    |                    |                    |                    |
| unemployed        | 1.166              | 1.543 <sup>^</sup> | 1.256 <sup>^</sup> | 1.344 <sup>^</sup> | 1.034              | 1.045              | 1.351 <sup>^</sup> | 1.425 <sup>^</sup> |
| not in LF         | 1.528 <sup>*</sup> | 1.864 <sup>*</sup> | 1.358 <sup>*</sup> | 1.344 <sup>^</sup> | 1.378 <sup>^</sup> | 1.505 <sup>^</sup> | 1.306 <sup>*</sup> | 1.376 <sup>*</sup> |
| Sex               |                    |                    |                    |                    |                    |                    |                    |                    |
| female            | 1.244 <sup>^</sup> | 1.033              | 1.108              | 0.921              | 0.833 <sup>^</sup> | 0.757 <sup>^</sup> | 1.386 <sup>*</sup> | 1.444 <sup>*</sup> |
| Age               |                    |                    |                    |                    |                    |                    |                    |                    |
| 15 to 19 years    | 0.166 <sup>*</sup> | 0.193 <sup>*</sup> | 0.201 <sup>*</sup> | 0.213 <sup>*</sup> | 0.517 <sup>^</sup> | 0.517 <sup>^</sup> | 0.692 <sup>*</sup> | 0.705 <sup>^</sup> |
| 20 to 24          | 0.287 <sup>*</sup> | 0.308 <sup>*</sup> | 0.339 <sup>*</sup> | 0.301 <sup>*</sup> | 0.519 <sup>^</sup> | 0.585 <sup>^</sup> | 0.613 <sup>*</sup> | 0.662 <sup>*</sup> |
| 25 to 29 years    | 0.467 <sup>*</sup> | 0.504 <sup>^</sup> | 0.667 <sup>^</sup> | 0.731 <sup>^</sup> | 0.761              | 0.842              | 0.783 <sup>^</sup> | 0.874              |
| 40 to 49 years    | 1.954 <sup>*</sup> | 1.816 <sup>*</sup> | 1.716 <sup>*</sup> | 1.782 <sup>*</sup> | 2.173 <sup>*</sup> | 2.103 <sup>*</sup> | 1.100              | 1.031              |
| 50 to 64 years    | 3.541 <sup>*</sup> | 3.453 <sup>*</sup> | 3.556 <sup>*</sup> | 3.976 <sup>*</sup> | 4.544 <sup>*</sup> | 4.789 <sup>*</sup> | 1.823 <sup>*</sup> | 1.591 <sup>*</sup> |
| 65 years and over | 3.423 <sup>*</sup> | 3.492 <sup>*</sup> | 4.743 <sup>*</sup> | 4.686 <sup>*</sup> | 9.591 <sup>*</sup> | 9.241 <sup>*</sup> | 3.096 <sup>*</sup> | 2.707 <sup>*</sup> |
| Health Behaviours |                    |                    |                    |                    |                    |                    |                    |                    |
| drinker           | 0.748              | 0.770              | 1.375 <sup>^</sup> | 1.374 <sup>^</sup> | 0.760              | 0.770              | 1.110              | 1.125              |
| smoker            | 0.923              | 0.935              | 0.895              | 0.897              | 1.061              | 1.070              | 1.418 <sup>*</sup> | 1.426 <sup>*</sup> |
| former smoker     | 1.069              | 1.063              | 1.200 <sup>^</sup> | 1.189 <sup>^</sup> | 1.386 <sup>^</sup> | 1.384 <sup>^</sup> | 1.265 <sup>*</sup> | 1.274 <sup>^</sup> |
| Residence         |                    |                    |                    |                    |                    |                    |                    |                    |
| rural             | 0.996              | 0.986              | 0.822 <sup>^</sup> | 0.815 <sup>^</sup> | 0.846              | 0.846              | 0.877              | 0.897              |
| Atlantic          | 0.899              | 0.924              | 1.705 <sup>^</sup> | 1.722 <sup>^</sup> | 0.904              | 0.956              | 0.748              | 0.746              |
| Quebec            | 0.746 <sup>^</sup> | 0.741 <sup>^</sup> | 0.738 <sup>^</sup> | 0.732 <sup>^</sup> | 0.737 <sup>^</sup> | 0.736 <sup>^</sup> | 0.648 <sup>*</sup> | 0.656 <sup>*</sup> |
| Manitoba          | 1.115              | 1.109              | 1.214 <sup>^</sup> | 1.231 <sup>^</sup> | 0.931              | 0.940              | 0.855              | 0.856              |
| Saskatchewan      | 0.992              | 0.987              | 0.900              | 0.891              | 0.911              | 0.908              | 0.833              | 0.830 <sup>^</sup> |
| Alberta           | 0.881              | 0.875              | 1.017              | 1.009              | 0.749 <sup>^</sup> | 0.751 <sup>^</sup> | 1.012              | 1.006              |
| British Columbia  | 0.513 <sup>*</sup> | 0.502 <sup>*</sup> | 0.918              | 0.915              | 0.852              | 0.846              | 0.819 <sup>^</sup> | 0.811 <sup>^</sup> |
| Reserve*          |                    |                    |                    |                    |                    |                    |                    |                    |
| less than 10K     |                    | 0.799              |                    | 1.007              |                    | 0.718              |                    | 1.701 <sup>^</sup> |
| 10K-19K           |                    | 0.639              |                    | 1.557              |                    | 0.966              |                    | 1.356              |
| 29K-39K           |                    | 1.031              |                    | 2.605 <sup>^</sup> |                    | 1.190              |                    | 1.816              |
| 40K or over       |                    | 1.788              |                    | 2.224              |                    | 2.091              |                    | 1.712              |
| less highschool   |                    | 0.971              |                    | 1.698              |                    | 1.195              |                    | 0.812              |
| post secondary    |                    | 0.802              |                    | 1.802              |                    | 0.952              |                    | 0.852              |
| university        |                    | 0.183              |                    | 2.748              |                    | 2.314              |                    | 1.193              |
| unemployed        |                    | 0.446 <sup>^</sup> |                    | 0.821              |                    | 0.959              |                    | 0.836              |
| not in LF         |                    | 0.578 <sup>^</sup> |                    | 1.039              |                    | 0.764              |                    | 0.845              |
| female            |                    | 1.516 <sup>^</sup> |                    | 1.601 <sup>*</sup> |                    | 1.295              |                    | 0.889              |
| 15 to 19 years    |                    | 0.651              |                    | 0.728              |                    | 0.922              |                    | 0.959              |
| 20 to 24          |                    | 0.848              |                    | 1.381              |                    | 0.605              |                    | 0.753              |
| 25 to 29 years    |                    | 0.808              |                    | 0.730              |                    | 0.683              |                    | 0.592 <sup>^</sup> |
| 40 to 49 years    |                    | 1.194              |                    | 0.893              |                    | 1.102              |                    | 1.231              |
| 50 to 64 years    |                    | 1.086              |                    | 0.739              |                    | 0.856              |                    | 1.424 <sup>^</sup> |
| 65 years and over |                    | 1.013              |                    | 0.988              |                    | 1.087              |                    | 1.357              |
| Number obs        | 10781              | 10781              | 10763              | 10763              | 10762              | 10762              | 10752              | 10752              |
| Pseudo R2         | 0.154              | 0.159              | 0.139              | 0.144              | 0.156              | 0.159              | 0.056              | 0.059              |

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table A3-3 - Logit Regressions Self-reported Utilization of Health Care  
All Native American and Inuit, 1991

| Utilization       | Medical Doctor |        | Registered Nurse |        | Community Worker |        | Traditional Healer |        |
|-------------------|----------------|--------|------------------|--------|------------------|--------|--------------------|--------|
|                   | 1              | 2      | 1                | 2      | 1                | 2      | 1                  | 2      |
| Reserve           | 0.861^         | 0.688  | 1.723*           | 1.447  | 2.921*           | 4.925* | 1.951*             | 2.739  |
| Income            |                |        |                  |        |                  |        |                    |        |
| less than 10K     | 0.911          | 0.893  | 0.945            | 1.025  | 1.072            | 1.021  | 1.278              | 1.359  |
| 10K-19K           | 0.942          | 0.894  | 0.966            | 1.002  | 0.977            | 0.866  | 1.251              | 1.151  |
| 29K-39K           | 0.962          | 0.997  | 0.934            | 0.895  | 0.794            | 0.691  | 1.303              | 1.395  |
| 40K or over       | 0.879          | 0.878  | 0.887            | 0.909  | 0.537^           | 0.499^ | 0.780              | 0.670  |
| Education         |                |        |                  |        |                  |        |                    |        |
| less highschool   | 0.575*         | 0.546* | 1.102            | 1.016  | 1.218            | 1.730^ | 1.038              | 1.060  |
| post secondary    | 1.018          | 0.985  | 1.196^           | 1.211  | 1.271            | 1.536  | 2.232*             | 2.795* |
| university        | 1.404          | 1.315  | 1.054            | 0.939  | 1.761^           | 2.393^ | 5.997*             | 7.904* |
| Labour Force (LF) | 0.955          | 0.919  | 1.038            | 1.016  | 1.226            | 1.575^ | 1.013              | 1.143  |
| unemployed        |                |        |                  |        |                  |        |                    |        |
| not in LF         | 1.106          | 1.204^ | 1.208^           | 1.210^ | 1.267^           | 1.433^ | 0.948              | 0.927  |
| Sex               |                |        |                  |        |                  |        |                    |        |
| female            | 2.297*         | 2.394* | 1.609*           | 1.546* | 1.479*           | 1.365^ | 1.152              | 1.002  |
| Age               |                |        |                  |        |                  |        |                    |        |
| 15 to 19 years    | 0.911          | 0.888  | 1.202^           | 1.276^ | 0.884            | 1.051  | 0.765              | 0.870  |
| 20 to 24          | 0.976          | 1.047  | 1.240^           | 1.289^ | 0.770            | 0.891  | 0.667^             | 0.697  |
| 25 to 29 years    | 0.862^         | 0.851  | 1.340*           | 1.384^ | 1.146            | 1.299  | 0.595^             | 0.676  |
| 40 to 49 years    | 1.400*         | 1.395^ | 1.186^           | 1.215^ | 1.336^           | 1.236  | 1.182              | 1.324  |
| 50 to 64 years    | 1.979*         | 1.740* | 1.561*           | 1.437* | 1.685*           | 1.214  | 1.300              | 0.902  |
| 65 years and over | 3.207*         | 2.452* | 2.778*           | 2.251* | 2.900*           | 2.165^ | 1.682^             | 1.630  |
| Health Behaviours |                |        |                  |        |                  |        |                    |        |
| drinker           | 0.884          | 0.894  | 0.972            | 0.985  | 1.103            | 1.130  | 0.523^             | 0.527^ |
| smoker            | 1.091          | 1.095  | 1.074            | 1.090  | 1.050            | 1.071  | 1.671*             | 1.746* |
| former smoker     | 1.375*         | 1.389* | 1.114            | 1.131  | 1.216            | 1.239^ | 1.421^             | 1.467^ |
| Residence         |                |        |                  |        |                  |        |                    |        |
| rural             | 0.621*         | 0.627* | 1.128            | 1.144^ | 1.208            | 1.237  | 0.901              | 0.937  |
| Atlantic          | 1.496^         | 1.525^ | 0.838            | 0.860  | 1.429            | 1.429  | 0.789              | 0.846  |
| Quebec            | 0.686*         | 0.690* | 1.033            | 1.032  | 0.676^           | 0.681^ | 0.603^             | 0.598^ |
| Manitoba          | 0.714*         | 0.719* | 1.207^           | 1.214^ | 1.227            | 1.233  | 1.523^             | 1.515^ |
| Saskatchewan      | 0.789^         | 0.790^ | 0.984            | 0.979  | 1.644*           | 1.621* | 2.357*             | 2.328* |
| Alberta           | 0.987          | 0.991  | 1.202^           | 1.208^ | 1.365^           | 1.355^ | 2.516*             | 2.543* |
| British Columbia  | 0.872^         | 0.875  | 0.734*           | 0.731* | 1.367*           | 1.340^ | 1.303              | 1.293  |
| Reserve*          |                |        |                  |        |                  |        |                    |        |
| less than 10K     |                | 1.049  |                  | 0.761  |                  | 1.113  |                    | 0.863  |
| 10K-19K           |                | 1.130  |                  | 0.871  |                  | 1.261  |                    | 1.189  |
| 29K-39K           |                | 0.865  |                  | 1.179  |                  | 1.416  |                    | 0.774  |
| 40K or over       |                | 1.135  |                  | 0.895  |                  | 1.389  |                    | 2.012  |
| less highschool   |                | 1.293  |                  | 1.394  |                  | 0.448^ |                    | 0.766  |
| post secondary    |                | 1.193  |                  | 1.031  |                  | 0.605  |                    | 0.475  |
| university        |                | 1.470  |                  | 1.969  |                  | 0.470  |                    | 0.319  |
| unemployed        |                | 1.100  |                  | 1.090  |                  | 0.629  |                    | 0.746  |
| not in LF         |                | 0.825  |                  | 1.032  |                  | 0.837  |                    | 0.994  |
| female            |                | 0.912  |                  | 1.109  |                  | 1.156  |                    | 1.363  |
| 15 to 19 years    |                | 1.081  |                  | 0.860  |                  | 0.703  |                    | 0.771  |
| 20 to 24          |                | 0.859  |                  | 0.903  |                  | 0.786  |                    | 0.881  |
| 25 to 29 years    |                | 1.045  |                  | 0.930  |                  | 0.784  |                    | 0.679  |
| 40 to 49 years    |                | 1.006  |                  | 0.926  |                  | 1.156  |                    | 0.728  |
| 50 to 64 years    |                | 1.308  |                  | 1.203  |                  | 1.670^ |                    | 1.895^ |
| 65 years and over |                | 1.646^ |                  | 1.535^ |                  | 1.565  |                    | 1.036  |
| Number obs        | 10797          | 10797  | 10731            | 10731  | 10708            | 10708  | 10651              | 10651  |
| Pseudo R2         | 0.087          | 0.088  | 0.049            | 0.051  | 0.099            | 0.104  | 0.073              | 0.080  |

\* statistically different at the 1% level

^ statistically different at the 5% level

Table A3-4

Probability of Health State On and Off-Reserve if has characteristics of  
 Comparator\*\* except:

All Native American and Inuit, 1991

| Health Status     | Excellent |                   | Very good |      | Good |                   | Fair/Poor |      |
|-------------------|-----------|-------------------|-----------|------|------|-------------------|-----------|------|
|                   | OFF       | ON                | OFF       | ON   | OFF  | ON                | OFF       | ON   |
| Income            |           |                   |           |      |      |                   |           |      |
| less than 10K     | 0.43      | 0.32              | 0.32      | 0.33 | 0.17 | 0.30 <sup>^</sup> | 0.07      | 0.04 |
| 10K-19K           | 0.43      | 0.31 <sup>^</sup> | 0.32      | 0.36 | 0.17 | 0.28 <sup>^</sup> | 0.08      | 0.04 |
| 29K-39K           | 0.51      | 0.36              | 0.38      | 0.36 | 0.14 | 0.28 <sup>^</sup> | 0.02      | 0.03 |
| 40K or over       | 0.51      | 0.31 <sup>^</sup> | 0.44      | 0.47 | 0.12 | 0.28 <sup>^</sup> | 0.02      | 0.01 |
| Education         |           |                   |           |      |      |                   |           |      |
| less highschool   | 0.44      | 0.35              | 0.33      | 0.35 | 0.18 | 0.25 <sup>^</sup> | 0.07      | 0.06 |
| post secondary    | 0.51      | 0.37 <sup>^</sup> | 0.33      | 0.40 | 0.15 | 0.23 <sup>^</sup> | 0.05      | 0.05 |
| university        | 0.58      | 0.49              | 0.32      | 0.32 | 0.14 | 0.23              | 0.02      | 0.04 |
| Labour Force (LF) |           |                   |           |      |      |                   |           |      |
| unemployed        | 0.48      | 0.36              | 0.41      | 0.39 | 0.12 | 0.25 <sup>^</sup> | 0.05      | 0.03 |
| not in LF         | 0.45      | 0.50 <sup>^</sup> | 0.33      | 0.50 | 0.13 | 0.50 <sup>^</sup> | 0.09      | 0.50 |
| Sex               |           |                   |           |      |      |                   |           |      |
| female            | 0.46      | 0.29 <sup>^</sup> | 0.38      | 0.41 | 0.14 | 0.27 <sup>^</sup> | 0.05      | 0.03 |
| Age               |           |                   |           |      |      |                   |           |      |
| 15 to 19 years    | 0.71      | 0.49 <sup>^</sup> | 0.44      | 0.57 | 0.07 | 0.17 <sup>^</sup> | 0.01      | 0.01 |
| 20 to 24          | 0.60      | 0.47              | 0.42      | 0.45 | 0.09 | 0.23 <sup>^</sup> | 0.02      | 0.01 |
| 25 to 29 years    | 0.50      | 0.38              | 0.42      | 0.50 | 0.13 | 0.23 <sup>^</sup> | 0.02      | 0.01 |
| 40 to 49 years    | 0.46      | 0.27 <sup>^</sup> | 0.34      | 0.39 | 0.15 | 0.29 <sup>^</sup> | 0.06      | 0.04 |
| 50 to 64 years    | 0.42      | 0.19 <sup>^</sup> | 0.25      | 0.33 | 0.17 | 0.26              | 0.09      | 0.07 |
| 65 years and over | 0.30      | 0.11 <sup>^</sup> | 0.29      | 0.23 | 0.15 | 0.25 <sup>^</sup> | 0.09      | 0.10 |

\*\* comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table A3-5

Probability of Health State On and Off-Reserve if has characteristics of  
Comparator\*\* except:

All Native American and Inuit, 1991

| Chronic Diseases  | Diabetes |                   | Hypertension |                   | CVD  |      | Respiratory |      |
|-------------------|----------|-------------------|--------------|-------------------|------|------|-------------|------|
|                   | OFF      | ON                | OFF          | ON                | OFF  | ON   | OFF         | ON   |
| Income            |          |                   |              |                   |      |      |             |      |
| less than 10K     | 0.03     | 0.05              | 0.12         | 0.06              | 0.07 | 0.05 | 0.08        | 0.12 |
| 10K-19K           | 0.04     | 0.06              | 0.10         | 0.07              | 0.05 | 0.05 | 0.12        | 0.13 |
| 29K-39K           | 0.02     | 0.05              | 0.08         | 0.10              | 0.02 | 0.03 | 0.07        | 0.11 |
| 40K or over       | 0.02     | 0.10 <sup>^</sup> | 0.11         | 0.11              | 0.02 | 0.04 | 0.06        | 0.10 |
| Education         |          |                   |              |                   |      |      |             |      |
| less highschool   | 0.03     | 0.07 <sup>^</sup> | 0.10         | 0.08              | 0.03 | 0.04 | 0.13        | 0.09 |
| post secondary    | 0.03     | 0.05              | 0.09         | 0.07              | 0.04 | 0.04 | 0.14        | 0.11 |
| university        | 0.01     | 0.01              | 0.07         | 0.08              | 0.01 | 0.03 | 0.12        | 0.12 |
| Labour Force (LF) |          |                   |              |                   |      |      |             |      |
| unemployed        | 0.04     | 0.04              | 0.13         | 0.05 <sup>^</sup> | 0.04 | 0.04 | 0.15        | 0.11 |
| not in LF         | 0.04     | 0.50              | 0.13         | 0.50              | 0.06 | 0.50 | 0.14        | 0.50 |
| Sex               |          |                   |              |                   |      |      |             |      |
| female            | 0.02     | 0.08 <sup>^</sup> | 0.09         | 0.07              | 0.03 | 0.04 | 0.14        | 0.12 |
| Age               |          |                   |              |                   |      |      |             |      |
| 15 to 19 years    | 0.00     | 0.01              | 0.02         | 0.01              | 0.02 | 0.02 | 0.08        | 0.07 |
| 20 to 24          | 0.01     | 0.01              | 0.03         | 0.02              | 0.02 | 0.01 | 0.07        | 0.05 |
| 25 to 29 years    | 0.01     | 0.02              | 0.08         | 0.03 <sup>^</sup> | 0.03 | 0.02 | 0.10        | 0.05 |
| 40 to 49 years    | 0.04     | 0.10              | 0.17         | 0.08 <sup>^</sup> | 0.08 | 0.09 | 0.11        | 0.12 |
| 50 to 64 years    | 0.08     | 0.17              | 0.31         | 0.13 <sup>^</sup> | 0.16 | 0.14 | 0.16        | 0.19 |
| 65 years and over | 0.08     | 0.16              | 0.35         | 0.19              | 0.27 | 0.29 | 0.25        | 0.28 |

<sup>^</sup> comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

<sup>^</sup> statistically different at the 5% level

Table A3-6  
Probability of Utilization On and Off-Reserve if has characteristics of  
Comparator\*\* except:  
All Native American and Inuit, 1991

| Utilization       | Medical Doctor |      | Registered Nurse |       | Community Worker |       | Traditional Healer |       |
|-------------------|----------------|------|------------------|-------|------------------|-------|--------------------|-------|
|                   | OFF            | ON   | OFF              | ON    | OFF              | ON    | OFF                | ON    |
| Income            |                |      |                  |       |                  |       |                    |       |
| less than 10K     | 0.74           | 0.67 | 0.13             | 0.14  | 0.02             | 0.08* | 0.01               | 0.03  |
| 10K-19K           | 0.74           | 0.69 | 0.13             | 0.15  | 0.01             | 0.08* | 0.01               | 0.04^ |
| 29K-39K           | 0.76           | 0.65 | 0.12             | 0.18  | 0.01             | 0.07^ | 0.02               | 0.03  |
| 40K or over       | 0.74           | 0.68 | 0.12             | 0.15  | 0.01             | 0.05^ | 0.01               | 0.04^ |
| Education         |                |      |                  |       |                  |       |                    |       |
| less highschool   | 0.63           | 0.61 | 0.13             | 0.23^ | 0.03             | 0.05^ | 0.01               | 0.02  |
| post secondary    | 0.76           | 0.72 | 0.15             | 0.21^ | 0.02             | 0.06^ | 0.03               | 0.04  |
| university        | 0.81           | 0.81 | 0.12             | 0.28^ | 0.03             | 0.08  | 0.08               | 0.07  |
| Labour Force (LF) |                |      |                  |       |                  |       |                    |       |
| unemployed        | 0.74           | 0.69 | 0.13             | 0.19  | 0.02             | 0.07^ | 0.01               | 0.03  |
| not in LF         | 0.79           | 0.50 | 0.15             | 0.50  | 0.02             | 0.50^ | 0.01               | 0.50  |
| Sex               |                |      |                  |       |                  |       |                    |       |
| female            | 0.88           | 0.83 | 0.18             | 0.26  | 0.02             | 0.11* | 0.01               | 0.04^ |
| Age               |                |      |                  |       |                  |       |                    |       |
| 15 to 19 years    | 0.74           | 0.68 | 0.16             | 0.19  | 0.02             | 0.05^ | 0.01               | 0.02  |
| 20 to 24          | 0.77           | 0.66 | 0.16             | 0.20  | 0.01             | 0.05^ | 0.01               | 0.02  |
| 25 to 29 years    | 0.73           | 0.66 | 0.17             | 0.21  | 0.02             | 0.07^ | 0.01               | 0.01  |
| 40 to 49 years    | 0.82           | 0.75 | 0.15             | 0.19  | 0.02             | 0.10^ | 0.01               | 0.03  |
| 50 to 64 years    | 0.85           | 0.83 | 0.17             | 0.27  | 0.02             | 0.13* | 0.01               | 0.05  |
| 65 years and over | 0.89           | 0.90 | 0.25             | 0.42^ | 0.03             | 0.20* | 0.02               | 0.05  |

^ comparator individual is income 20 to 29K, highschool diploma, employed, male, 30 to 39 years of age, lives in an urban area in Ontario, not a drinker and never smoked.

\* statistically different at the 1% level

^ statistically different at the 5% level



Table A3-7 - Logit Regressions Self-Reported Health Status  
North American Indians and Inuit, 2001

| Health Status     | Excellent          |                    | Very good          |                    | Good               |                    | Fair/Poor          |                    |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                   | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  |
| Reserve           | 0.983              | 0.976              | 0.890 <sup>^</sup> | 1.022              | 1.371*             | 1.293              | 0.793*             | 0.789              |
| Income            | 1.008*             | 1.008*             | 1.001 <sup>^</sup> | 1.001 <sup>^</sup> | 0.997*             | 0.997*             | 0.992*             | 0.991*             |
| Income2           | 1.000*             | 1.000*             | 1.000              | 1.000              | 1.000 <sup>^</sup> | 1.000 <sup>^</sup> | 1.000*             | 1.000*             |
| family size       | 0.977 <sup>^</sup> | 0.979 <sup>^</sup> | 0.985 <sup>^</sup> | 0.983 <sup>^</sup> | 1.062*             | 1.062*             | 0.992              | 0.989              |
| Education         |                    |                    |                    |                    |                    |                    |                    |                    |
| less highschool   | 0.764*             | 0.761*             | 0.915 <sup>^</sup> | 0.930 <sup>^</sup> | 0.995              | 0.976              | 1.634*             | 1.647*             |
| some post high    | 0.955              | 0.958              | 0.968              | 0.973              | 1.038              | 1.047              | 1.154 <sup>^</sup> | 1.134 <sup>^</sup> |
| post secondary    | 0.878 <sup>^</sup> | 0.862 <sup>^</sup> | 1.059              | 1.067              | 1.020              | 1.031              | 1.178 <sup>^</sup> | 1.174 <sup>^</sup> |
| university        | 1.081              | 1.060              | 1.526*             | 1.541*             | 0.678*             | 0.670*             | 0.612*             | 0.608*             |
| Labour Force (LF) |                    |                    |                    |                    |                    |                    |                    |                    |
| unemployed        | 0.996              | 1.019              | 0.815*             | 0.814*             | 0.999              | 0.993              | 1.612*             | 1.629*             |
| not in LF         | 0.773*             | 0.751*             | 0.702*             | 0.697*             | 0.869*             | 0.844*             | 2.939*             | 3.127*             |
| Sex and Marriage  |                    |                    |                    |                    |                    |                    |                    |                    |
| female            | 0.832*             | 0.836*             | 0.988              | 0.994              | 1.138*             | 1.146*             | 1.114 <sup>^</sup> | 1.102 <sup>^</sup> |
| married           | 1.153*             | 1.145*             | 1.092 <sup>^</sup> | 1.094 <sup>^</sup> | 0.937 <sup>^</sup> | 0.937              | 0.829*             | 0.833*             |
| married before    | 1.436*             | 1.427*             | 0.751*             | 0.750*             | 0.899 <sup>^</sup> | 0.900              | 1.027              | 1.026              |
| Behaviours        |                    |                    |                    |                    |                    |                    |                    |                    |
| daily smoker      | 0.550*             | 0.548*             | 1.004              | 1.002              | 1.444*             | 1.451*             | 1.587*             | 1.574*             |
| occasional smoker | 0.692*             | 0.690*             | 1.139 <sup>^</sup> | 1.137 <sup>^</sup> | 1.184 <sup>^</sup> | 1.188*             | 1.358*             | 1.354*             |
| former smoker     | 0.788*             | 0.786*             | 1.108 <sup>^</sup> | 1.106 <sup>^</sup> | 1.171*             | 1.175*             | 1.269*             | 1.262*             |
| drinker           | 1.174*             | 1.160*             | 1.282*             | 1.282*             | 1.104 <sup>^</sup> | 1.098 <sup>^</sup> | 0.588*             | 0.597*             |
| Age               |                    |                    |                    |                    |                    |                    |                    |                    |
| 15 to 19 years    | 1.867*             | 1.777*             | 1.414*             | 1.432*             | 0.800*             | 0.813*             | 0.251*             | 0.246*             |
| 20 to 24          | 1.292*             | 1.235*             | 1.121 <sup>^</sup> | 1.139 <sup>^</sup> | 1.058              | 1.092              | 0.431*             | 0.415*             |
| 25 to 29 years    | 1.322*             | 1.326*             | 1.100 <sup>^</sup> | 1.111 <sup>^</sup> | 0.751*             | 0.720*             | 0.815 <sup>^</sup> | 0.823 <sup>^</sup> |
| 40 to 49 years    | 0.701*             | 0.700*             | 0.799*             | 0.806*             | 1.091 <sup>^</sup> | 1.081 <sup>^</sup> | 2.298*             | 2.363*             |
| 50 to 64 years    | 0.592*             | 0.609*             | 0.627*             | 0.643*             | 1.230*             | 1.234*             | 2.726*             | 2.650*             |
| 65 years and over | 0.309*             | 0.327*             | 0.630*             | 0.672*             | 1.583*             | 1.670*             | 2.141*             | 1.943*             |
| Residence         |                    |                    |                    |                    |                    |                    |                    |                    |
| rural             | 0.923 <sup>^</sup> | 0.918 <sup>^</sup> | 1.073 <sup>^</sup> | 1.072 <sup>^</sup> | 0.979              | 0.979              | 1.022              | 1.028              |
| Newfoundland      | 0.993              | 1.008              | 1.481*             | 1.476*             | 0.903              | 0.902              | 0.495*             | 0.486*             |
| PEI               | 1.048              | 1.059              | 0.908              | 0.908              | 1.378              | 1.365              | 0.695              | 0.699              |
| Nova Scotia       | 0.497*             | 0.497*             | 1.390*             | 1.389*             | 1.129              | 1.125              | 0.959              | 0.962              |
| New Brunswick     | 1.057              | 1.061              | 0.965              | 0.964              | 1.046              | 1.042              | 0.902              | 0.900              |
| Quebec            | 1.278*             | 1.291*             | 1.012              | 1.008              | 1.056              | 1.054              | 0.589*             | 0.581*             |
| Manitoba          | 1.180 <sup>^</sup> | 1.178 <sup>^</sup> | 0.964              | 0.963              | 1.237*             | 1.229*             | 0.593*             | 0.596*             |
| Saskatchewan      | 1.067              | 1.065              | 1.006              | 1.008              | 1.208*             | 1.199*             | 0.702*             | 0.709*             |
| Alberta           | 1.056              | 1.055              | 1.036              | 1.036              | 1.106 <sup>^</sup> | 1.102 <sup>^</sup> | 0.748*             | 0.755*             |
| BC                | 0.990              | 0.996              | 1.005              | 1.004              | 1.155*             | 1.153*             | 0.787*             | 0.783*             |
| Reserve*          |                    |                    |                    |                    |                    |                    |                    |                    |
| Income            |                    | 0.996              |                    | 1.003              |                    | 0.999              |                    | 1.004              |
| Income2           |                    | 1.000              |                    | 1.000              |                    | 1.000              |                    | 1.000              |
| less highschool   |                    | 1.109              |                    | 0.862              |                    | 1.121              |                    | 0.957              |
| some post high    |                    | 1.068              |                    | 0.916              |                    | 0.934              |                    | 1.141              |
| post secondary    |                    | 1.316              |                    | 0.895              |                    | 0.902              |                    | 1.019              |
| university        |                    | 1.123              |                    | 0.843              |                    | 1.336              |                    | 1.264              |
| unemployed        |                    | 0.842              |                    | 1.005              |                    | 1.081              |                    | 0.867              |
| not in LF         |                    | 1.097              |                    | 1.054              |                    | 1.208 <sup>^</sup> |                    | 0.626*             |
| female            |                    | 0.966              |                    | 0.948              |                    | 0.960              |                    | 1.061              |
| 15 to 19 years    |                    | 1.442 <sup>^</sup> |                    | 0.874              |                    | 0.884              |                    | 1.204              |
| 20 to 24          |                    | 1.542 <sup>^</sup> |                    | 0.854              |                    | 0.788              |                    | 1.267              |
| 25 to 29 years    |                    | 1.007              |                    | 0.890              |                    | 1.307 <sup>^</sup> |                    | 0.935              |
| 40 to 49 years    |                    | 0.985              |                    | 0.942              |                    | 1.089              |                    | 0.758 <sup>^</sup> |
| 50 to 64 years    |                    | 0.696 <sup>^</sup> |                    | 0.755 <sup>^</sup> |                    | 1.003              |                    | 1.168              |
| 65 years and over |                    | 0.714              |                    | 0.565 <sup>^</sup> |                    | 0.738              |                    | 1.749 <sup>^</sup> |

\* statistically different at the 1% level, ^ statistically different at the 5% level

Table A3-8 - Logit Regressions Diagnosed Disease  
North American Indians and Inuit, 2001

| Chronic Diseases  | Hypertension       |                    | CVD                |                    | Respiratory        |                    |
|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                   | 1                  | 2                  | 1                  | 2                  | 1                  | 2                  |
| Reserve           | 1.025              | 0.786              | 0.823 <sup>^</sup> | 0.422 <sup>^</sup> | 0.764*             | 0.674              |
| Income            | 0.998 <sup>^</sup> | 0.998 <sup>^</sup> | 0.996*             | 0.996*             | 0.998              | 0.998              |
| Income2           | 1.000              | 1.000              | 1.000              | 1.000              | 1.000 <sup>^</sup> | 1.000 <sup>^</sup> |
| family size       | 1.082*             | 1.082*             | 1.069*             | 1.070*             | 0.982              | 0.983              |
| Education         |                    |                    |                    |                    |                    |                    |
| less highschool   | 1.193 <sup>^</sup> | 1.198 <sup>^</sup> | 0.965              | 0.957              | 1.099 <sup>^</sup> | 1.104 <sup>^</sup> |
| some post high    | 0.765*             | 0.714*             | 0.860              | 0.819 <sup>^</sup> | 1.025              | 1.008              |
| post secondary    | 1.082              | 1.071              | 1.308 <sup>^</sup> | 1.309 <sup>^</sup> | 1.026              | 1.023              |
| university        | 0.629*             | 0.598*             | 0.905              | 0.897              | 0.884              | 0.881              |
| Labour Force (LF) |                    |                    |                    |                    |                    |                    |
| unemployed        | 1.220 <sup>^</sup> | 1.254 <sup>^</sup> | 1.107              | 1.097              | 1.222*             | 1.218 <sup>^</sup> |
| not in LF         | 1.453*             | 1.564*             | 1.891*             | 1.982*             | 1.318*             | 1.360*             |
| Sex and           |                    |                    |                    |                    |                    |                    |
| Marriage          |                    |                    |                    |                    |                    |                    |
| female            | 0.994              | 0.960              | 0.903 <sup>^</sup> | 0.897 <sup>^</sup> | 1.478*             | 1.463*             |
| married           | 1.036              | 1.032              | 0.786*             | 0.782*             | 1.064              | 1.066              |
| married before    | 1.221 <sup>^</sup> | 1.221 <sup>^</sup> | 0.960              | 0.964              | 1.370*             | 1.375*             |
| Behaviours        |                    |                    |                    |                    |                    |                    |
| daily smoker      | 0.861 <sup>^</sup> | 0.849 <sup>^</sup> | 1.315*             | 1.319*             | 1.230*             | 1.232*             |
| occasional smoker | 0.857 <sup>^</sup> | 0.850 <sup>^</sup> | 1.031              | 1.033              | 1.102              | 1.106              |
| former smoker     | 1.226*             | 1.213*             | 1.452*             | 1.457*             | 1.219*             | 1.223*             |
| drinker           | 0.917 <sup>^</sup> | 0.931              | 0.747*             | 0.755*             | 0.913 <sup>^</sup> | 0.922 <sup>^</sup> |
| Age               |                    |                    |                    |                    |                    |                    |
| 15 to 19 years    | 0.158*             | 0.156*             | 0.474*             | 0.463*             | 1.246 <sup>^</sup> | 1.274*             |
| 20 to 24          | 0.513*             | 0.518*             | 0.567*             | 0.557*             | 0.960              | 0.966              |
| 25 to 29 years    | 0.815 <sup>^</sup> | 0.796 <sup>^</sup> | 0.847              | 0.851              | 0.934              | 0.935              |
| 40 to 49 years    | 2.216*             | 2.183*             | 1.756*             | 1.675*             | 1.218*             | 1.216*             |
| 50 to 64 years    | 4.955*             | 4.823*             | 3.809*             | 3.508*             | 1.482*             | 1.440*             |
| 65 years and over | 6.968*             | 6.575*             | 6.807*             | 6.167*             | 1.362*             | 1.217 <sup>^</sup> |
| Residence         |                    |                    |                    |                    |                    |                    |
| rural             | 0.912 <sup>^</sup> | 0.910 <sup>^</sup> | 0.895 <sup>^</sup> | 0.900 <sup>^</sup> | 0.798*             | 0.801*             |
| Newfoundland      | 1.080              | 1.072              | 0.321*             | 0.321*             | 0.513*             | 0.511*             |
| PEI               | 1.653              | 1.689              | 0.797              | 0.802              | 0.718              | 0.720              |
| Nova Scotia       | 1.363 <sup>^</sup> | 1.356 <sup>^</sup> | 1.029              | 1.034              | 1.204 <sup>^</sup> | 1.208 <sup>^</sup> |
| New Brunswick     | 1.018              | 1.018              | 0.647 <sup>^</sup> | 0.646 <sup>^</sup> | 0.865              | 0.867              |
| Quebec            | 0.677*             | 0.675*             | 0.597*             | 0.600*             | 0.585*             | 0.585*             |
| Manitoba          | 0.938              | 0.947              | 0.543*             | 0.546*             | 0.600*             | 0.602*             |
| Saskatchewan      | 0.800 <sup>^</sup> | 0.813 <sup>^</sup> | 0.613*             | 0.613*             | 0.563*             | 0.564*             |
| Alberta           | 0.774*             | 0.778*             | 0.687*             | 0.687*             | 0.672*             | 0.673*             |
| BC                | 0.724*             | 0.723*             | 0.669*             | 0.667*             | 0.609*             | 0.606*             |
| Reserve*          |                    |                    |                    |                    |                    |                    |
| Income            |                    | 1.001              |                    | 1.004              |                    | 0.999              |
| Income2           |                    | 1.000              |                    | 1.000              |                    | 1.000              |
| less highschool   |                    | 1.169              |                    | 1.154              |                    | 0.974              |
| some post high    |                    | 1.974 <sup>^</sup> |                    | 1.721              |                    | 1.226              |
| post secondary    |                    | 1.182              |                    | 0.933              |                    | 1.084              |
| university        |                    | 2.237 <sup>^</sup> |                    | 1.107              |                    | 1.283              |
| unemployed        |                    | 0.784              |                    | 1.059              |                    | 1.013              |
| not in LF         |                    | 0.565*             |                    | 0.698 <sup>^</sup> |                    | 0.807              |
| female            |                    | 1.323 <sup>^</sup> |                    | 1.068              |                    | 1.104              |
| 15 to 19 years    |                    | 1.159              |                    | 1.561              |                    | 0.842              |
| 20 to 24          |                    | 0.992              |                    | 1.435              |                    | 0.949              |
| 25 to 29 years    |                    | 1.216              |                    | 1.058              |                    | 1.014              |
| 40 to 49 years    |                    | 1.112              |                    | 1.791 <sup>^</sup> |                    | 0.991              |
| 50 to 64 years    |                    | 1.192              |                    | 2.511 <sup>^</sup> |                    | 1.348              |
| 65 years and over |                    | 1.478 <sup>^</sup> |                    | 2.595 <sup>^</sup> |                    | 2.346*             |

\* statistically different at the 1% level, ^ statistically different at the 5% level

Table A3-9 - Logit Regressions Health Care Utilization  
North American Indians and Inuit, 2001

| Utilization       | Medical Doctor |        | Registered Nurse |        | Community Worker |        | Traditional Healer |        |
|-------------------|----------------|--------|------------------|--------|------------------|--------|--------------------|--------|
|                   | 1              | 2      | 1                | 2      | 1                | 2      | 1                  | 2      |
| Reserve           | 0.756*         | 0.991  | 2.275*           | 1.642^ | 0.874^           | 0.698  | 2.369*             | 1.481  |
| Income            | 1.001^         | 1.001^ | 0.998^           | 0.997* | 0.995*           | 0.995* | 0.994*             | 0.993* |
| Income2           | 1.000          | 1.000  | 1.000            | 1.000  | 1.000*           | 1.000* | 1.000*             | 1.000* |
| family size       | 0.989          | 0.991  | 0.996            | 0.993  | 1.008            | 1.008  | 1.018              | 1.016  |
| Education         |                |        |                  |        |                  |        |                    |        |
| less highschool   | 1.040          | 1.047  | 1.190*           | 1.177^ | 1.002            | 0.987  | 0.658*             | 0.595* |
| some post high    | 1.488*         | 1.472* | 1.724*           | 1.772* | 1.286*           | 1.240* | 1.496*             | 1.492* |
| post secondary    | 1.509*         | 1.524* | 1.475*           | 1.514* | 1.115^           | 1.093  | 1.350*             | 1.326^ |
| university        | 1.594*         | 1.618* | 1.951*           | 2.052* | 1.738*           | 1.744* | 2.108*             | 2.088* |
| Labour Force (LF) |                |        |                  |        |                  |        |                    |        |
| unemployed        | 0.848*         | 0.836* | 1.022            | 1.002  | 1.802*           | 1.790* | 1.004              | 1.015  |
| not in LF         | 1.288*         | 1.359* | 1.165*           | 1.266* | 1.845*           | 1.956* | 0.831^             | 0.844^ |
| Sex and Marriage  |                |        |                  |        |                  |        |                    |        |
| female            | 2.113*         | 2.134* | 1.531*           | 1.479* | 1.479*           | 1.475* | 1.171*             | 1.181^ |
| married           | 1.059          | 1.060  | 1.065            | 1.074^ | 0.627*           | 0.627* | 0.943              | 0.960  |
| married before    | 1.287*         | 1.290* | 1.130^           | 1.149^ | 1.078            | 1.082  | 1.482*             | 1.491* |
| Behaviours        |                |        |                  |        |                  |        |                    |        |
| daily smoker      | 1.084^         | 1.085^ | 1.127*           | 1.139* | 1.649*           | 1.646* | 1.438*             | 1.455* |
| occasional smoker | 1.033          | 1.034  | 1.185*           | 1.196* | 1.508*           | 1.508* | 1.531*             | 1.547* |
| former smoker     | 1.295*         | 1.299* | 1.231*           | 1.242* | 1.373*           | 1.373* | 1.428*             | 1.446* |
| drinker           | 1.013          | 1.020  | 0.894*           | 0.914^ | 0.919^           | 0.926^ | 0.645*             | 0.650* |
| Age               |                |        |                  |        |                  |        |                    |        |
| 15 to 19 years    | 0.884^         | 0.903^ | 1.116^           | 1.185^ | 0.969            | 0.976  | 0.848              | 0.897  |
| 20 to 24          | 0.883^         | 0.884^ | 1.192*           | 1.183^ | 0.579*           | 0.546* | 0.605*             | 0.555* |
| 25 to 29 years    | 0.950          | 0.959  | 1.106^           | 1.086  | 0.897^           | 0.886^ | 0.703*             | 0.657* |
| 40 to 49 years    | 1.254*         | 1.250* | 0.743*           | 0.704* | 0.861^           | 0.853^ | 1.145^             | 1.127^ |
| 50 to 64 years    | 1.649*         | 1.593* | 0.854*           | 0.783* | 0.553*           | 0.522* | 0.899              | 0.815^ |
| 65 years and over | 2.312*         | 2.127* | 1.062            | 0.858^ | 0.142*           | 0.125* | 0.655^             | 0.409* |
| Residence         |                |        |                  |        |                  |        |                    |        |
| rural             | 0.857*         | 0.859* | 1.127*           | 1.144* | 0.722*           | 0.724* | 1.002              | 1.016  |
| Newfoundland      | 0.798^         | 0.794^ | 1.030            | 1.010  | 0.528*           | 0.525* | 0.225*             | 0.221* |
| PEI               | 1.211          | 1.210  | 1.111            | 1.097  | 1.202            | 1.214  | 0.919              | 0.896  |
| Nova Scotia       | 1.521*         | 1.527* | 0.902            | 0.916  | 1.036            | 1.040  | 0.665^             | 0.668^ |
| New Brunswick     | 0.902          | 0.903  | 0.886            | 0.885  | 0.584*           | 0.586* | 0.633^             | 0.627^ |
| Quebec            | 0.789*         | 0.789* | 1.310*           | 1.296* | 1.044            | 1.046  | 0.663*             | 0.654* |
| Manitoba          | 0.940          | 0.945  | 0.925            | 0.930  | 0.785*           | 0.791* | 1.556*             | 1.548* |
| Saskatchewan      | 1.031          | 1.033  | 0.988            | 0.990  | 1.081            | 1.092  | 1.855*             | 1.839* |
| Alberta           | 1.107^         | 1.108^ | 1.041            | 1.050  | 0.887^           | 0.890^ | 1.655*             | 1.663* |
| BC                | 1.133^         | 1.131^ | 0.757*           | 0.750* | 1.390*           | 1.389* | 1.206^             | 1.198^ |
| Reserve*          |                |        |                  |        |                  |        |                    |        |
| Income            |                | 0.996  |                  | 1.010^ |                  | 1.001  |                    | 1.000  |
| Income2           |                | 1.000  |                  | 1.000  |                  | 1.000  |                    | 1.000  |
| less highschool   |                | 0.910  |                  | 0.938  |                  | 1.254  |                    | 1.424  |
| some post high    |                | 1.018  |                  | 0.704^ |                  | 1.551^ |                    | 1.057  |
| post secondary    |                | 0.880  |                  | 0.763  |                  | 1.389  |                    | 1.163  |
| university        |                | 0.835  |                  | 0.545^ |                  | 0.759  |                    | 1.173  |
| unemployed        |                | 1.020  |                  | 1.094  |                  | 0.930  |                    | 0.981  |
| not in LF         |                | 0.740^ |                  | 0.691* |                  | 0.594* |                    | 1.011  |
| female            |                | 0.926  |                  | 1.257^ |                  | 1.046  |                    | 0.925  |
| 15 to 19 years    |                | 0.915  |                  | 0.825  |                  | 1.080  |                    | 0.944  |
| 20 to 24          |                | 1.010  |                  | 1.046  |                  | 1.739^ |                    | 1.477^ |
| 25 to 29 years    |                | 0.934  |                  | 1.155  |                  | 1.164  |                    | 1.398  |
| 40 to 49 years    |                | 1.019  |                  | 1.554* |                  | 1.079  |                    | 1.083  |
| 50 to 64 years    |                | 1.271  |                  | 1.765* |                  | 1.674^ |                    | 1.593^ |
| 65 years and over |                | 1.558  |                  | 3.035* |                  | 2.544^ |                    | 3.640* |

\* statistically different at the 1% level

^ statistically different at the 5% level

SEDAP RESEARCH PAPERS: Recent Releases

| Number   | Title  | Author(s)  |
|----------|--|--|
| (2005)   |  |  |
| No. 124: | Exploring the Use of a Nonparametrically Generated Instrumental Variable in the Estimation of a Linear Parametric Equation | F.T. Denton  |
| No. 125: | Borrowing Constraints, The Cost of Precautionary Saving, and Unemployment Insurance  | T.F. Crossley<br>H.W. Low  |
| No. 126: | Entry Costs and Stock Market Participation Over the Life Cycle   | S. Alan  |
| No. 127: | Income Inequality and Self-Rated Health Status: Evidence from the European Community Household Panel                       | V. Hildebrand<br>P. Van Kerm   |
| No. 128: | Where Have All The Home Care Workers Gone?   | M. Denton<br>I.U. Zeytinoglu<br>S. Davies<br>D. Hunter                             |
| No. 129: | Survey Results of the New Health Care Worker Study: Implications of Changing Employment Patterns                           | I.U. Zeytinoglu<br>M. Denton<br>S. Davies<br>A. Baumann<br>J. Blythe<br>A. Higgins |
| No. 130: | Does One Size Fit All? The CPI and Canadian Seniors  | M. Brzozowski  |
| No. 131: | Unexploited Connections Between Intra- and Inter-temporal Allocation   | T.F. Crossley<br>H.W. Low  |
| No. 132: | Grandparents Raising Grandchildren in Canada: A Profile of Skipped Generation Families                                     | E. Fuller-Thomson  |
| No. 133: | Measurement Errors in Recall Food Expenditure Data   | N. Ahmed<br>M. Brzozowski<br>T.F. Crossley   |
| No. 134: | The Effect of Health Changes and Long-term Health on the Work Activity of Older Canadians                                  | D.W.H. Au<br>T. F. Crossley<br>M.. Schellhorn                                      |

SEDAP RESEARCH PAPERS: Recent Releases

| Number   | Title   | Author(s)  |
|----------|---|--|
| No. 135: | Population Aging and the Macroeconomy: Explorations in the Use of Immigration as an Instrument of Control   | F. T. Denton<br>B. G. Spencer                            |
| No. 136: | Users and Suppliers of Physician Services: A Tale of Two Populations  | F.T. Denton<br>A. Gafni<br>B.G. Spencer                  |
| No. 137: | MEDS-D USERS' MANUAL  | F.T. Denton<br>C.H. Feaver<br>B.G.. Spencer              |
| No. 138: | MEDS-E USERS' MANUAL  | F.T. Denton<br>C.H. Feaver<br>B.G. Spencer               |
| No. 139: | Socioeconomic Influences on the Health of Older Canadians: Estimates Based on Two Longitudinal Surveys (Revised Version of No. 112)   | N.J. Buckley<br>F.T. Denton<br>A.L. Robb<br>B.G. Spencer |
| No. 140: | Developing New Strategies to Support Future Caregivers of the Aged in Canada: Projections of Need and their Policy Implications   | J. Keefe<br>J. Légaré<br>Y. Carrière                     |
| No. 141: | Les Premiers Baby-Boomers Québécois font-ils une Meilleure Préparation Financière à la Retraite que leurs Parents? Revenu, Patrimoine, Protection en Matière de Pensions et Facteurs Démographiques | L. Mo<br>J. Légaré                                       |
| No. 142: | Welfare Restructuring without Partisan Cooperation: The Role of Party Collusion in Blame Avoidance  | M. Hering  |
| No. 143: | Ethnicity and Health: An Analysis of Physical Health Differences across Twenty-one Ethnocultural Groups in Canada   | S. Prus<br>Z. Lin  |
| No. 144: | The Health Behaviours of Immigrants and Native-Born People in Canada  | J.T. McDonald  |
| No. 145: | Ethnicity, Immigration and Cancer Screening: Evidence for Canadian Women  | J.T. McDonald<br>S. Kennedy                              |
| No. 146: | Population Aging in Canada: Software for Exploring the Implications for the Labour Force and the Productive Capacity of the Economy   | F.T. Denton<br>C.H. Feaver<br>B.G. Spencer               |

SEDAP RESEARCH PAPERS: Recent Releases

| Number              | Title   | Author(s)                                       |
|---------------------|---|---|
| -2006               |   |   |
| No. 147:            | The Portfolio Choices of Hispanic Couples   | D.A. Cobb-Clark<br>V.A. Hildebrand              |
| No. 148:            | Inter-provincial Migration of Income among Canada's Older Population:1996-2001  | K.B. Newbold                                    |
| No. 149:            | Joint Taxation and the Labour Supply of Married Women: Evidence from the Canadian Tax Reform of 1988  | T.F. Crossley<br>S.H. Jeon                      |
| No. 150:            | What Ownership Society? Debating Housing and Social Security Reform in the United States  | D. Béland                                       |
| No. 151:            | Home Cooking, Food Consumption and Food Production among the Unemployed and Retired Households  | M. Brzozowski<br>Y. Lu                          |
| No. 152:            | The Long-Run Cost of Job Loss as Measured by Consumption Changes  | M. Browning<br>T.F. Crossley                    |
| No. 153:            | Do the Rich Save More in Canada?  | S. Alan<br>K. Atalay<br>T.F. Crossley           |
| No. 154:            | Income Inequality over the Later-life Course: A Comparative Analysis of Seven OECD Countries  | R.L. Brown<br>S.G. Prus                         |
| No. 155:            | The Social Cost-of-Living: Welfare Foundations and Estimation   | T.F. Crossley<br>K. Pendakur                    |
| No. 156:            | The Top Shares of Older Earners in Canada   | M.R. Veall                                      |
| No. 157:            | Le soutien aux personnes âgées en perte d'autonomie: jusqu' où les baby-boomers pourront-ils compter sur leur famille pour répondre à leurs besoins ? | J. Légaré<br>C. Alix<br>Y. Carrière<br>J. Keefe |
| No. 158:            | Les générations X et Y du Québec, vraiment différentes des précédentes ?  | J. Légaré<br>P.O. Ménard                        |
| No. 159:<br>French  | La diversification et la privatisation des sources de revenu de retraite au Canada  | L. Mo<br>J. Légaré<br>L. Stone                  |
| No. 159:<br>English | The Diversification and the Privatization of the Sources of Retirement Income in Canada   | L. Mo<br>J. Légaré<br>L. Stone                  |
| No. 160:            | Evaluating Pension Portability Reforms: The Tax Reform Act of 1986 as a Natural Experiment  | V. Andrietti<br>V.A. Hildebrand                 |

SEDAP RESEARCH PAPERS: Recent Releases

| Number   | Title   | Author(s)  |
|----------|---|--|
| No. 161: | Estimating a Collective Household Model with Survey Data on Financial Satisfaction  | R. Alessie<br>T.F. Crossley<br>V.A. Hildebrand   |
| No. 162: | Physician Labour Supply in Canada: A Cohort Analysis  | T.F. Crossley<br>J. Hurley<br>S.H. Jeon  |
| No. 163: | Tax Incentives and Household Portfolios: A Panel Data Analysis  | S. Alan<br>S. Leth-Petersen  |
| No. 164: | The Healthy Immigrant Effect and Immigrant Selection: Evidence from Four Countries  | S. Kennedy<br>J.T. McDonald<br>N. Biddle   |
| No. 165: | Well-Being Throughout the Senior Years: An Issues Paper on Key Events and Transitions in Later Life   | M. Denton<br>K. Kusch  |
| No. 166: | Satisfied Workers, Retained Workers: Effects of Work and Work Environment on Homecare Workers' Job Satisfaction, Stress, Physical Health, and Retention       | I.U. Zeytinoglu<br>M. Denton   |
| No. 167: | Contrasting Inequalities: Comparing Correlates of Health in Canada and the United States  | H. Armstrong<br>W. Clement<br>Z. Lin<br>S. Prus  |
| -2007    |   |  |
| No. 168: | Health human resources planning and the production of health: Development of an extended analytical framework for needs-based health human resources planning | S. Birch<br>G. Kephart<br>G. Tomblin-Murphy<br>L. O'Brien-Pallas<br>R. Alder<br>A. MacKenzie |
| No. 169: | Gender Inequality in the Wealth of Older Canadians  | M. Denton<br>L. Boos   |
| No. 170: | The Evolution of Elderly Poverty in Canada  | K. Milligan  |
| No. 171: | Return and Onwards Migration among Older Canadians: Findings from the 2001 Census   | K.B. Newbold   |
| No. 172: | Le système de retraite américain: entre fragmentation et logique financière   | D. Béland  |

SEDAP RESEARCH PAPERS: Recent Releases

| Number   | Title  | Author(s)  |
|----------|--|--|
| No. 173: | Entrepreneurship, Liquidity Constraints and Start-up Costs   | R. Fonseca<br>P.-C. Michaud<br>T. Sopraseuth                 |
| No. 174: | How did the Elimination of the Earnings Test above the Normal Retirement Age affect Retirement Expectations? | P.-C. Michaud<br>A. van Soest                                |
| No. 175: | The SES Health Gradient on Both Sides of the Atlantic  | J. Banks<br>M. Marmot<br>Z. Oldfield<br>J.P. Smith           |
| No. 176: | Pension Provision and Retirement Saving: Lessons from the United Kingdom                                     | R. Disney<br>C. Emmerson<br>M. Wakefield                     |
| No. 177: | Retirement Saving in Australia   | G. Barrett<br>Y.-P. Tseng                                    |
| No. 178: | The Health Services Use Among Older Canadians in Rural and Urban Areas                                       | H. Conde<br>J.T. McDonald                                    |
| No. 179: | Older Workers and On-the-Job Training in Canada: Evidence from the WES data                                  | I.U. Zeytinoglu<br>G.B. Cooke<br>K. Harry                    |
| No. 180: | Private Pensions and Income Security in Old Age: An Uncertain Future – Conference Report                     | M. Hering<br>M. Kpessa                                       |
| No. 181: | Age, SES, and Health: A Population Level Analysis of Health Inequalities over the Life Course                | S. Prus  |
| No. 182: | Ethnic Inequality in Canada: Economic and Health Dimensions  | E.M. Gee<br>K.M. Kobayashi<br>S.G. Prus                      |
| No. 183: | Home and Mortgage Ownership of the Dutch Elderly: Explaining Cohort, Time and Age Effects                    | A. van der Schors<br>R.J.M. Alessie<br>M. Mastrogiacomo      |
| No. 184: | A Comparative Analysis of the Nativity Wealth Gap  | T.K. Bauer<br>D.A. Cobb-Clark<br>V. Hildebrand<br>M. Sinning |
| No. 185: | Cross-Country Variation in Obesity Patterns among Older Americans and Europeans                              | P.C. Michaud<br>A. van Soest<br>T. Andreyeva                 |



SEDAP RESEARCH PAPERS: Recent Releases

| Number   | Title  | Author(s)                              |
|----------|--|--|
| No. 186: | Which Canadian Seniors Are Below the Low-Income Measure?   | M.R. Veall                             |
| No. 187: | Policy Areas Impinging on Elderly Transportation Mobility: An Explanation with Ontario, Canada as Example              | R. Mercado<br>A. Páez<br>K. B. Newbold |
| No. 188: | The Integration of Occupational Pension Regulations: Lessons for Canada  | M. Hering<br>M. Kpessa                 |
| No. 189: | Psychosocial resources and social health inequalities in France: Exploratory findings from a general population survey | F. Jusot<br>M. Grignon<br>P. Dourgnon  |
| No. 190: | Health-Care Utilization in Canada: 25 Years of Evidence  | L.J. Curtis<br>W.J. MacMinn            |
| No. 191: | Health Status of On and Off-reserve Aboriginal Peoples: Analysis of the Aboriginal Peoples Survey                      | L.J. Curtis                            |