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1. Introduction

The goal of the National Population Health Survey (NPHS) is to collect information related to the health of the Canadian population. To obtain a comprehensive picture of Canadians' health, a special survey was developed for people living in health care institutions—hospitals, nursing homes, and residential facilities for people with disabilities. Data produced from this survey will be both cross-sectional and longitudinal, gathered from a panel of individuals every two years.

In 1994 and 1995, household residents from every province were interviewed for the main component of the NPHS. Data from the household survey were released in the fall of 1995. A separate survey was also conducted in the Yukon and Northwest Territories and the results will be available at a later date.

Statistics Canada conducted the National Population Health Survey of Residents of Health Institutions between January and March 1995. This manual has been produced to facilitate the use of the microdata file of the survey results.

Any questions about the data set or its use should be directed to:

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2. Background

In the fall of 1991, the National Health Information Council (NHIC), recommended that an on-going national survey of population health be conducted. This recommendation was based on consideration of the economic and fiscal pressures on the health care system and the commensurate requirement for information to improve the health status of the population in Canada. Existing sources of health data were unable to provide a complete picture of the health status of the population and the myriad of factors having an impact on health.

Beginning in April 1992, Statistics Canada received funding for the development of a National Population Health Survey. The survey was designed to be flexible and to produce valid, reliable, and timely data. Also, it was to be responsive to changing requirements, interests, and policies.

A special survey covering residents of health institutions was undertaken because this population was rarely covered by national surveys and likely had health characteristics different from those of the general population.

3. Objectives

The objectives of the NPHS are to:

- aid in the public policy development by providing measures of the level, trend, and distribution of the population's health status;
- provide data for analytic studies that will assist in understanding the determinants of health;
- collect data on the economic, social, demographic, and environmental correlates of health;
- increase the understanding of the relationship between health status and health care utilization;
- provide information on a panel of people followed over time, to reflect the dynamic process of health and illness and determine the factors affecting institutionalization;
- provide the provinces and territories and other clients with a health survey capacity that will allow supplementation of content or sample;
- allow the possibility of linking survey data to administrative data that is collected routinely, such as vital statistics, environmental measures, community variables, and health services utilization.

4. Survey Content

The content of the NPHS Health Institutional component was selected according to the following criteria:

1) The survey should collect information on the health status of the Canadian population residing in health institutions.

2) The data collected should be comparable to that of the household population whenever possible.

3) The survey should increase the understanding of conditions relating to institutionalization.

4) Information provided should permit the study, over time, of the transitions from households to institutions and vice versa.

5) The survey should produce national level data.

Respondents were randomly chosen from selected health care institutions. The questionnaire included components on health status, risk factors, social support, contact with health care providers, and demographic and socio-economic status. For example, health status was measured through questions on self-perception of health, functional ability, chronic conditions, and activity restriction. Behavioral risk factors included smoking and alcohol use. The level of social support was assessed by the frequency of contact with friends and relatives inside and outside the institution. Demographic and socio-economic information included age, sex, education, ethnicity, and personal income. The questionnaire is provided in Appendix A.

5. Sample Design

The target population of the institutional survey included all long-term residents of health institutions from all provinces, excluding the territories. A list frame of facilities with long-term residents was created and stratified by geographic region, type and size of facility. A sample of institutions and a subsequent sample of residents within these institutions were selected.

5.1 Design of the Frame

The sample frame was generated from lists of residential care facilities and hospitals maintained by the Health Statistics Division (HSD) of Statistics Canada. Provincial Ministries of Health verified and updated these lists to ensure their accuracy. The institutions were classified by the dominant type of care provided and only those providing long-term care were retained[1]. From the residential care facilities list, institutions providing long-term care for aged people, emotionally-disturbed children, developmentally- delayed, physically- and psychiatrically-disabled people were retained. Facilities from the hospital list included general hospitals with long-term units, extended/chronic care or rehabilitation facilities, and specialty hospitals with long-term units, such as pediatric and psychiatric hospitals. The number of long-term beds was known for each institution.

The sample population was restricted to those facilities with at least four beds that provided long-term care to residents with health problems. Facilities with fewer than four beds were not included on the HSD lists of residential care facilities and hospitals. Health care institutions on Indian reservations and Canadian Forces Bases or within correctional facilities were removed from the lists for operational reasons.

5.2 Stratification and Allocation

The total sample size was set at 2,600 residents. Assuming a response rate of 85%, this sample size would be sufficient to calculate national estimates with a coefficient of variation (CV) of 10% for variables occurring in a minimum of 10% of the population.

The list of health institutions was initially stratified by geographic region (geographic stratum) and subsequently by the type of institution (characteristic stratum) and number of beds (size stratum).

[1] Institutions that exclusively provided short-term care, such as drug rehabilitation centres were excluded because the household component of the NPHS covers short-term institutional residents.

The geographic strata consisted of 5 regions (the Atlantic provinces, Quebec, Ontario, the Prairie provinces, and British Columbia). Within each geographic stratum three characteristic strata were defined:

- Institutions for the Aged - including residential care facilities for the aged and extended/chronic care hospitals.
- Cognitive Institutions - including residential care facilities for emotionally-disturbed children, psychiatrically-disabled and developmentally-delayed people, and psychiatric hospitals.
- Other Rehabilitative Institutions - including rehabilitation, pediatric and other specialty hospitals, general hospitals with long-term units as well as residential care facilities for people with physical disabilities.

Within each of these geographic/characteristic strata, the institutions were grouped into size strata by grouping facilities with a similar number of beds. The number of size strata created depended on the total number of beds in the geographic/characteristic strata. Once the number of size strata was determined, the boundaries for the different size strata were fixed using the $Cum\sqrt{f(y)}$ rule where f(y) was the number of beds. The total sample of 2,600 residents was proportionally allocated to each of the size strata based on the number of beds in each stratum. The sample was increased to thirty residents when a size stratum had an initial sample size of less than thirty residents.

Table 1

Sample Size by Characteristic Stratum

Aged	Cognitive	Other Rehabilitative	Total
1 931	411	282	2 624

5.3 Sample Selection

The number of institutions selected from a size stratum depended on the amount of sample allocated to the stratum and the size of the institutions within the stratum. In strata comprised of larger institutions, a larger sample of residents was selected from each institution. This reduced the total number of institutions visited. Once the number of institutions to be selected from each size stratum was determined, a systematic sample of institutions was taken from the stratum list with the probability of selection

proportional to size (PPS). Size was determined by the number of long-term beds. It was possible that the listing indicated a head office for several smaller institutions. In this case, a listing of all of the institutions under this head office was obtained and two were selected—the largest (in terms of beds) and another randomly selected using PPS sampling. A list of long-term residents was compiled for each selected institution and a systematic sample of residents was chosen from this list just prior to interviewing.

6. Data Collection

6.1 Questionnaire Design and Data Collection Method

The NPHS Institutional component questions were designed to be conducted by personal interview using paper and pencil. Telephone interviews were acceptable when a proxy respondent could not be contacted in person.

The administrator of the institution or a contact within the institution determined which of the selected residents required a proxy interview because of illness or incapacity. The proxy respondent could be a relative, a staff member, or a volunteer at the institution. Proxy respondents completed 57% of the interviews (40% were relatives of the resident). A staff member from the institution provided information on each selected resident's use of medications and contact with health professionals.

6.2 Test

A test was conducted in the fall of 1994, before the main survey was implemented in the field. The test was carried out by experienced interviewers. The main objective of the test were to observe respondent reaction to the survey, to obtain an estimate of interview time, and to evaluate the ability of achieving a high response rate.

6.3 Interviewing

Collection took place between January 30 and March 31, 1995. The interviews were conducted by Statistics Canada interviewers.

Prior to collection, all institutions were contacted by telephone by senior interviewers to arrange a meeting between an interviewer and the administrator of the institution. During this liaison visit the interviewer administered a short questionnaire on the policies of the institution and made the sample selection. The residents requiring proxy interviews were determined at this time. The name and telephone number of the next-of-kin were obtained in these cases. The next-of-kin was then phoned and given the option to complete the interview primarily themselves or have it completed by a knowledgeable institutional staff member.

Most interviews were conducted in person. The total interview took an average of 40 minutes for non-proxy and 30 minutes for proxy respondents.

6.4 Supervision and Control

All interviewers are under the supervision of a staff of senior interviewers. The seniors are responsible for ensuring that interviewers are familiar with the concepts and procedures of the survey. They periodically monitor their interviewers and review their completed documents. The senior interviewers are, in turn, under the supervision of program managers, located in each of the Statistics Canada regional offices.

6.5 Non-Response to the NPHS

Interviewers were instructed to make all reasonable attempts to obtain interviews with selected residents. Refusals at the institutional level were followed-up by senior interviewers, project managers or by other interviewers to try to convince the institution to participate in the survey.

7. Data Processing

7.1 Data Capture

The programme written for the data capture of the questionnaire prevented out-of-range values from being entered. Editing for correct flow was performed after data capture.

7.2 Editing

After completing an interview, the interviewer reviewed the questionnaire to ensure the skip patterns were correctly followed. Further editing was done at the Regional Offices to check for completeness, legibility and consistency of entries on the questionnaire. This allowed for immediate follow-up.

Head office edits included the verification of the demographic variables and response codes prior to data capture. After data capture, top-down editing was performed on all records to check the skip patterns. With the exception of the Health Utility Index (HUI), no imputation was performed (see Section 8.3).

7.3 Coding

Information from write-in responses was coded to new unique categories. Conditions or health problems causing activity restrictions were coded based on the International Classification of Diseases, Version 9 (ICD-9) or according to the Musculoskeletal Impairment Supplementary Coding Scheme developed for the Canadian Health and Disability Survey. Drugs and medications were coded using the Canadian Anatomical Therapeutic Chemical (ATC) Classification System.

7.4 Creation of Derived Variables

To facilitate data analysis, a number of variables on the file have been derived using responses to the NPHS questionnaire for residents of health institutions. Derived variable names generally start with "DV" and are followed by characters referring to the question number or subject. Details of how these variables were created can be found in Appendix D.

7.5 Weighting

Estimation in a probability sample (such as the NPHS) is based on the principle that each person in the sample "represents," besides himself or herself, several others who are not in the sample. For example, in a simple random 2% sample of the population, each

person in the sample represents 50 people in the population. In the terminology used here, it can be said that each person has a weight of 50.

The weighting phase calculates the associated weight for each person. This weight appears on the microdata file and must be used to derive meaningful estimates from the survey. For example, the number of individuals who smoke daily (see question SMOK-Q62 in section 9.2.1) is estimated by selecting the records referring to those individuals in the sample having that characteristic. The weights entered on those records are then summed.

Details of the method used to calculate these weights are presented in Chapter 10.

7.6 Suppression of Confidential Information

'Public Use' microdata files differ in many important respects from the survey 'master' files held by Statistics Canada. These differences result from action taken to protect the anonymity of individual survey respondents. Users requiring access to information excluded from the microdata files may purchase custom tabulations. Estimates generated will be released to the user, subject to meeting the guidelines for analysis and release outlined in Section 9 of this document.

8. Data Quality

8.1 Response Rates

Two separate response rates can be calculated for the Institutional component of the NPHS. The institutional response rate identifies the percentage of in-scope institutions that agreed to allow the survey to be conducted in their facility. The residents could not be interviewed without agreement from the institution. The institutional response rate is calculated by:

$$\frac{\textit{Number of selected institutions which agreed to participate}}{\textit{Total number of in-scope selected institutions}} \times 100$$

$$= \frac{214}{224} \times 100$$

$$= 95.5\%$$

The individual response rate identifies the percentage of selected residents from the responding institutions with whom an interview was conducted. It is calculated by:

$$\frac{\textit{Number of residents with fully or partially completed interviews}}{\textit{Total number of selected residents within the responding institutions}} \times 100$$

$$= \frac{2287}{2444} \times 100$$

$$= 93.6\%$$

Note: Multiplying the two rates together does not give a meaningful result because different numbers of residents were selected within each institution.

8.2 Survey Errors

The survey produces estimates based on information collected from and about a sample of individuals. Somewhat different estimates might have been obtained if a complete census had been taken using the same questionnaire, interviewers, supervisors, processing methods, etc. as those actually used in the survey. The difference between the estimates obtained from the sample and those resulting from a complete count taken under similar conditions is called the sampling error of the estimate.

Errors not related to sampling may occur at almost every phase of a survey operation. Interviewers may misunderstand instructions, respondents may make errors in answering

questions, the answers may be incorrectly entered on the questionnaire and errors may be introduced in the processing and tabulation of the data. These are all examples of non-sampling errors.

Over numerous observations, randomly occurring errors will have little effect on estimates derived from the survey. However, errors occurring systematically will contribute to biases in the survey estimates. Considerable time and effort were spent to reduce non-sampling errors in the survey. Quality assurance measures were carried out at each step of the data collection and processing cycle to monitor the quality of the data. These measures included the use of highly skilled interviewers, extensive training of interviewers with respect to the survey procedures and the questionnaire, and observation of interviewers to detect the misunderstanding of instructions.

Non-response to the survey is a major source of non-sampling error. The extent of non-response varies from partial non-response (failure to answer just one or some questions) to total non-response. Total and partial non-response to the institutional component of the NPHS was small. Partial non-response occurred when the respondent refused to answer a question or could not recall the requested information. Total non-response occurred because the interviewer was unable to contact the proxy-respondent orbecause of refusal to participate in the survey either at the institutional or individual level. Total non-response was handled by adjusting the weight of the residents who responded to the survey to compensate for those who did not respond.

It is unavoidable that estimates from a sample survey are subject to sampling error. Sound statistical practice calls for researchers to provide users with some indication of the magnitude of this sampling error. This section of the documentation outlines the measures of sampling error that Statistics Canada commonly uses. Users producing estimates from this microdata file are also urged to use these measures.

The basis for measuring the potential size of sampling errors is the standard error of the estimates derived from survey results. Because of the large variety of estimates that can be produced from a survey, the standard error of an estimate is usually expressed relative to the estimate to which it pertains. This resulting measure, known as the coefficient of variation (CV) of an estimate, is obtained by dividing the standard error of the estimate (which is equal to the square root of the variance of the estimate) by the estimate itself. It is expressed as a percentage of the estimate.

For example, suppose that, based on the survey results, one estimates that 12% of residents of health institutions are daily cigarette smokers. This estimate yields a standard error of .0096. The coefficient of variation of the estimate is then calculated as:

$$\left(\frac{.0096}{.12}\right) \times 100\% = 8.28\%$$

For more information on the calculation of CVs for this survey, see Section 11.

8.3 Imputation

Imputation was used to derive scores for one variable in the Institutional component of the NPHS. The variable IMPHST denotes the resident's Health Status Index (HST) score. This measure of overall health assesses vision, hearing, speech, mobility, dexterity, emotions, memory, cognition and pain. Overall HST scores ranging from zero to one are calculated based on responses to a series of health status questions[2]. A complete HST score could not be calculated if one or more of the components were not answered. At least one component of the HST was missing for 20.5% of respondents. A form of hot deck imputation was used to impute values for the missing components so that an overall HST could be computed for these cases.

Records where the respondent had answered all components of the HST were used as donors. Twelve donor groups were created. Within each of the three characteristic strata (aged, cognitive, other rehabilitative), the donors were classified into one of four age/sex categories (male/female, aged 0-64/65+). The recipients were classified in the same manner. For each recipient, a partial HST (PHST) value was generated using the components answered. Within the associated donor group, a PHST value was generated for each donor using the same components. The individual from the donor group that had the closest PHST value to the recipient's PHST became the imputation donor for that individual. The missing components in the recipient's record were imputed from the donor's record and an imputed HST value was computed for the recipient. If several potential donors had the same PHST value, then one was selected at random to be the donor. Records having at least one imputed component are identified by IMPFLAG=1.

[2] For more information on the calculation of the HST see Appendix D: Derived Variables.

9. Guidelines for Tabulation, Analysis and Release

The following guidelines should be followed when tabulating, analyzing, publishing or otherwise releasing any data derived from the survey microdata files. Figures produced using these guidelines should be consistent with estimates produced by Statistics Canada.

9.1 Rounding Guidelines

The following guidelines should be followed when rounding estimates derived from the microdata files:

a) Estimates in the main body of a statistical table are to be rounded to the nearest hundred units using the normal rounding technique. In normal rounding, if the first or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is raised by one. For example, in normal rounding to the nearest 100, if the last two digits are between 00 and 49, they are changed to 00 and the preceding digit (the hundreds digit) is left unchanged. If the last digits are between 50 and 99 they are changed to 00 and the preceding digit is incremented by 1.

b) Marginal subtotals and totals in statistical tables are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.

c) Averages, proportions, rates and percentages should be computed from unrounded components (i.e. numerators and/or denominators) and then rounded themselves to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is increased by 1.

d) Sums and differences of aggregates (or ratios) are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units (or the nearest one decimal) using normal rounding.

e) In instances where, due to technical or other limitations, a rounding technique other than normal rounding is used resulting in estimates to be published or otherwise released which differ from corresponding estimates published by Statistics Canada, users are urged to note the reason for such differences in the publication or release document(s).

f) Under no circumstances are unrounded estimates to be published or otherwise released by users. Unrounded estimates imply greater precision than actually exists.

9.2 Sample Weighting Guidelines for Tabulation

The sample design used for the NPHS Institutional component was not self-weighting. The sampling weights are not identical for all individuals in the sample. When producing simple estimates, including the production of ordinary statistical tables, users must apply the sampling weight.

If proper weights are not used, the estimates derived from the microdata files cannot be considered representative of the survey population, and will not correspond to those produced by Statistics Canada.

Users should also note that some software packages may not allow the generation of estimates that exactly match those available from Statistics Canada, because of their treatment of the weight field.

9.2.1 Definitions of types of estimates: Categorical vs. Quantitative

Two main types of point estimates of population characteristics can be generated from the microdata file for the NPHS Institutional component.

Categorical Estimates:

Categorical estimates (also referred to as estimates of an aggregate) are estimates of the number or percentage of the surveyed population possessing certain characteristics or falling into a defined category. The number of individuals who smoke daily is an example of such an estimate.

Example of Categorical Question:

SMOK-Q62 At the present time do you (does . . .) smoke cigarettes daily, occasionally or not at all?

__ Daily
__ Occasionally
__ Not at all

Quantitative Estimates:

Quantitative estimates are estimates of totals or of means, medians, and other measures of central tendency of quantities based upon some or all of the members of the surveyed population. They also specifically involve estimates of the form $\hat{Y} / \hat{X}$ where $\hat{Y}$ is an estimate of surveyed population quantity total and $\hat{X}$ is an estimate of the number of persons in the surveyed population contributing to that total quantity.

An example of a quantitative estimate is the average number of cigarettes smoked per day by individuals who smoke daily. The numerator is an estimate of the total number of cigarettes smoked per day by individuals who smoke daily. Its denominator is an estimate of the number of individuals who smoke daily.

Example of Quantitative Question:

SMOK-Q64: How many cigarettes do you (does ...) smoke each day now?

|_|_| Number of Cigarettes

9.2.2 Tabulation of Categorical Estimates

Estimates of the number of people with a certain characteristic can be obtained from the microdata file by summing the weights of all records possessing the characteristic(s) of interest. Proportions and ratios of the form $\hat{Y} / \hat{X}$ are obtained by:

a) summing the weights of records having the characteristic of interest for the numerator ($\hat{Y}$),
b) summing the weights of records having the characteristic of interest for the denominator ($\hat{X}$), then
c) dividing the numerator estimate by the denominator estimate.

9.2.3 Tabulation of Quantitative Estimates

Estimates of quantities can be obtained from the microdata file by multiplying the value of the variable of interest by the weight. This quantity is then summed over all records of interest. For example, to obtain an estimate of the total number of cigarettes smoked each day by individuals who smoke daily, multiply the value reported in question SMOK-Q64 by the weight for the record, then sum this value over all records with a response of 'daily' to SMOK-Q62.

To obtain a weighted average of the form $\hat{Y} / \hat{X}$, the numerator ($\hat{Y}$) is calculated as for a quantitative estimate and the denominator ($\hat{X}$) is calculated as for a categorical estimate. For example, to estimate the average number of cigarettes smoked per day by individuals who smoke daily:

a) estimate the total number of cigarettes smoked per day by individuals who smoke daily as described above,
b) estimate the number of daily smokers by summing the weights of all records with a response of 'daily' to SMOK-Q62, then
c) divide estimate (a) by estimate (b).

9.3 Guidelines for Statistical Analysis

The NPHS Institutional component has a complex design with stratification, multiple stages of selection, and unequal probabilities of respondent selection. Using data from such complex surveys presents problems to analysts because the survey design and the selection probabilities affect the estimation and variance calculation procedures that should be used.

Many analysis procedures found in statistical packages allow weights to be used. However, the meaning or definition of the weight in these procedures is not appropriate in a sample survey framework. Typically the estimates produced by the packages are correct, but the calculated variances are almost meaningless.

For many analysis techniques (for example, linear regression, logistic regression, analysis of variance), a method exists which can make the application of standard packages more meaningful. If the weights on the records are rescaled so that the average weight is one (1), the results produced by the standard packages will be more reasonable. They still will not allow for the stratification and clustering of the sample's design, but they will take into account the unequal probabilities of selection. The rescaling can be accomplished by using in the analysis a weight equal to the original weight divided by the average of the original weights for the sampled units (people) contributing to the estimator in question.

9.4 Release Guidelines

The number of sampled residents contributing to the calculation of the estimate should be determined before releasing and/or publishing any estimate from the microdata file. If this number is less than 30, the weighted estimate should not be released regardless of this estimate's CV. For weighted estimates based on sample sizes of 30 or more, users should determine the coefficient of variation of the rounded estimate and follow the guidelines below.

Sampling Variability Guidelines

Type of Estimate	CV (in %)	Guidelines
1. Unqualified	0.0 - 16.5	Estimates can be considered for general unrestricted release. Requires no special notation.
2. Qualified	16.6 - 33.3	Estimates can be considered for general unrestricted release but should be accompanied by a warning cautioning subsequent users of the high sampling variability associated with the estimates. Such estimates should be identified by the letter Q (or in some other similar fashion).
3. Not for Release	33.4 or greater	Estimates cannot be released in any form under any circumstances. In statistical tables, such estimates should be deleted and replaced by dashes(--).

The CV is defined as the standard error (equal to the square root of the variance of the estimate), multiplied by 100 and divided by the estimate. See section 11 for more details on calculating the variance.

10. Weighting

The weights given to responding members of the institutional survey were based on the probability of selecting the individual as well as any adjustments for non-response within the stratum or institution.

Notation:

M_h - number of beds in stratum h (from list of hospitals and residential care facilities)
$M_{h,i}$ - number of beds in stratum h, institution i (from list of hospitals and residential care facilities)
n_h - number of institutions to be selected from size stratum h
$L_{h,i}$ - actual number of long-term residents in stratum h, institution i (obtained during initial visit)
$r_{h,i}$ - number of residents allocated to be selected from stratum h, institution i

10.1 Probabilities of selection

10.1.1 Probability of selecting an institution

Institutions were selected from the frame with probability proportional to the number of beds. Therefore, the probability of selecting an institution *i* in most cases was:

$$n_h \times \frac{M_{h,i}}{M_h}$$

When a head office was selected (see Section 5.3 for more details) the probability was:

$$n_h \times \frac{M_{h,i}}{M_h} \times P_{h,i,j}$$

where $P_{h,i,j}$ was the probability that an institution *j* under the authority of head office *i* is selected. For the largest institution under *i*, $P_{h,i,j}=1$. For the other *j*'s

$$P_{h,i,j} = \frac{M_{h,i,j}}{\sum_{j \in i'} M_{h,i,j}}$$

where i' consists of all of the institutions under head office *i*, excluding the largest one.

10.1.2 Probability of selecting a resident within an institution

Once an institution had been selected, each resident had an equal probability of selection:

$$\begin{array}{ll} \frac{r_{h,i}}{L_{h,i}} & if\ L_{h,i} \geq r_{h,i} \\ or \quad 1 & if\ L_{h,i} < r_{h,i} \end{array}$$

10.2 Weight Calculations and Adjustments

At this point, initial weights can be calculated at both the institutional and residential level. However, there may be non-response at both levels. Adjustments have to be made at both levels to account for those units that do not respond.

10.2.1 Initial Institutional Weights

Institutional weights correspond to the number of institutions represented by the sampled institution. The **initial institutional weight** is equal to the inverse of the probability of selecting the institution.

10.2.2 Institutional Non-response Weight Adjustment

If interviewing did not take place at a selected in-scope institution, then an adjustment is made to the other institutions within the same size stratum to account for the non-responding institution. This adjustment is equivalent to:

$$\frac{number\ of\ responding\ and\ non\text{-}responding\ institutions}{number\ of\ responding\ institutions}$$

Multiplying this weight adjustment by the initial institutional weight gives the **final institutional weight**.

10.2.3 Initial Personal Weights

An **initial personal weight** can be calculated as the final institutional weight multiplied by the inverse of the probability of selecting a resident within the institution.

10.2.4 Personal Non-response Weight Adjustment

In some cases certain selected residents did not respond to the questionnaire. An additional adjustment has to be made to the weights to compensate for the non-respondents. This adjustment is similar to the institutional non-response adjustment.

$$\frac{\textit{number of responding and non-responding selected residents}}{\textit{number of responding selected residents}}$$

This adjustment is made at the institutional level.

Multiplying the initial personal weight by the personal non-response weight adjustment gives the **final personal weight** that appears on the file. Since this survey focussed on individuals and not institutions themselves, the final institutional weight does not appear on the file.

11. Variance Calculations

The institutional component of the NPHS uses a well-known, simple variance formula to compute the variances and the CVs of estimates. It assumes that institutions are selected with unequal probabilities and with replacement. In reality, the institutions were selected without replacement, that is, once selected, an institution could not be chosen a second time. This was done for operational reasons rather than for variance improvement so the impact of assuming sampling with replacement should be negligible.

A variance computation program written in SAS is provided as part of this microdata package. This program can be used to calculate variances for means and totals. The formulas used for calculating the variances for a total Y or a ratio R=Y/X are:

$$V(\hat{Y}_{total}) = \sum_{h=1}^{N} \frac{\sum_{i=1}^{n_h} (\hat{Y}_{h,i} - \hat{Y}_h)^2}{n_h(n_h - 1)} \qquad V(\hat{R}) = \frac{1}{\hat{X}^2} \sum_{h=1}^{N} \frac{\sum_{i=1}^{n_h} (\hat{Y}_{h,i} - \hat{R}_h \hat{X}_{h,i})^2}{n_h(n_h - 1)}$$

where $\hat{Y}_h$ is the stratum h estimate for a response variable Y based on all of the respondents in stratum h

$\hat{Y}_{h,i}$ is the stratum h estimate for a response variable Y based on all of the respondents in stratum h, institution i

N is the number of strata

n_h is the number of sampled institutions in stratum h

$\hat{X}_h$ is the stratum h estimate for the ratio denominator variable X based on all of the respondents in stratum h

$\hat{X}_{h,i}$ is the stratum h estimate of the ratio denominator variable X based on all of the respondents in stratum h, institution i

$\hat{X}$ is the overall estimate of the ratio denominator variable X

$\hat{R}_h$ is the ratio of $\hat{Y}_h / \hat{X}_h$

11.1 Running the variance program:

The SAS program included with the microdata file allows the user to calculate means and totals with minimal work. The following outlines the steps of the program:

STEP 1: In the data step under 'STEP 1' the user identifies the variables for which he/she wants totals and/or ratios. For totals, a 0/1 variable is assigned to each characteristic of interest. Likewise, for ratios, a 0/1 variable is defined for both the numerator and denominator of the ratio. In the example, three totals are being computed and the 0/1 variables are defined as tot1-tot3. In the ratio example, the variables are num1-num4 and denom1-denom4 where num1/denom1 identifies a ratio requiring variance estimates. Maintain the naming convention tot1-tot*n*, num1-num*m* and denom1-denom*m* as the program automatically uses these names. In the keep statement at the end of this step, change the tot*n*, num*m* and denom*m* variables to indicate the number of totals or ratios computed.

Quantitative estimates are calculated in a similar manner. The only difference is that the 0/1 variable is replaced by a quantity variable, where the quantity represents the value of the characteristic for the respondent.

STEP 2: In the proc format statement, the user can assign descriptive names to replace the totals and ratio names generated by the program. "Totfrmt" defines the names for totals and "ratfrmt," the names for ratios. For example, in totfrmt, 2='Popn 65+' since tot2 is calculating the estimate and variance of the total population aged 65 and over.

STEP 3: In this step, the user simply has to change the array references so that the correct number of totals, numerators and denominators are shown. For example, if the user has defined two totals and three ratios in STEP 1 then the array statements would then read:

```
array totarray{*}tot1-tot2;
array numarray{*}num1-num3;
array denarray{*}denom1-denom3;
```

The program can then be run like any other SAS program.

Note: The program calls a different subroutine when calculating totals or ratios. If only totals or only ratios are calculated it is not necessary to run both subroutines. At the end of the program there are two lines:

```
%totals;
%rates;
```

To save time the unnecessary subroutine can be "commented out" by surrounding the appropriate statement with /* and */. For example, if only totals are being calculated then:

```
%totals;
 /*  %rates;  */
```

Only the subroutine associated with variances for totals will be called.

In this example, it is not necessary to define the num1-num*m* and denom1-denom*m* variables in STEP 1 since no rates are calculated. Likewise, if the %totals line is "commented out," the tot1-tot*n* variables are not required. Simply remove the reference to these variables from the keep statement in STEP 1.

Running the program using the variables in the example produces output similar to this:

Estimates, Variances and CVs of Totals 1

OBS	DESCRIPTION	TOTAL	VARIANCE	CV
1	Total Popn	227841.79	22325494.69	2.07
2	Popn 65+	186496.38	22765493.02	2.56
3	Women 80+	99343.07	15047102.4	3.9

Estimates, Variances and CVs of Rates 2

OBS	DESCRIPTION	RATE	VARIANCE	CV
1	Close Staff Members 65+	0.39964	0.00039088	4.95
2	English 65+	0.56058	0.00031905	3.19
3	French 65+	0.15752	0.00012785	7.18
4	English/French 65+	0.10677	0.00009991	9.36

For further details on other types of variance calculations (for example regression coefficients) contact Chris Mohl at (613) 951-6966. For information in French please call Sylvain Nadon at (613) 951-0658.

APPENDIX A

QUESTIONNAIRE

NPHS: Health Institutions
Form 2

Institution Policy Questions

INST_Q1 Which of the following best describes this facility's smoking policy for residents?
(*Read list. Mark one only.)*

1 Total prohibition - no smoking is permitted inside this facility
2 Smoking is restricted to a few designated areas inside this facility
3 Smoking is permitted throughout this facility
4 No policy on this topic

INST_Q2 Some facilities have a policy that no alcohol may be consumed in the facility by the residents, while other facilities have a policy that residents may consume alcohol in the facility. Which of the following best describes this facility's policy on residents consuming alcohol in the facility?
(*Read list. Mark one only.)*

1 Total prohibition - no alcohol may be consumed inside this facility
2 Alcohol may be consumed inside this facility
3 No policy on this topic

INST_Q3 What is this facility's policy on husband and wives sharing a room?
(*Read list. Mark one only.)*

1 High priority - spouses share a room if possible
2 Some effort is made to place spouses in the same room, but other factors, such as type or level of care required, take a higher priority
3 No priority is given to assigning spouses to the same room
4 Not applicable, this does not admit both spouses
5 No policy on this topic

INST_Q4 Are regular organized physical activities provided for residents?

1 Yes
2 No

INST_Q5 Do pets visit the residents of this facility?

1 Yes
2 No

INST_Q6 As of today, how many long-term residents/patients are admitted to this facility?

In Hospitals
By long-term patient, we mean those patients who are now admitted to long-term beds in this facility.

In Residential Care Facilities
By long-term resident, we mean those residents who have been here for six months or more, including any resident who is temporarily absent from the facility today, for example, visiting relatives or residents transferred to other institutions, such as hospitals, who have not been formally discharged. We would also like you to include those residents who have been here for less than six months, but who are not expected to be discharged to the community in the next six months.

_ _ _ _ Long-term residents/patients

INST_Q7 Institution Response Code

1 Agrees to Participate
2 Refuses
3 No Contact
4 Other (*Specify in notes*)

NPHS: Residents of Health Institutions
Form 3

A. Selected Resident Information

The first set of questions will provide important basic information on the people we areinterviewing.

DEMO_Q1 Name of selected resident

(First and last names)

DEMO_Q2 Enter or ask (. . .'s) sex

1 Male
2 Female

DEMO_Q3 Information Source
(Indicate only one.)

1 Selected Resident - Non-Proxy
2 Proxy - Family member
3 Proxy - Institutional Staff, Volunteers

DEMO_Q4 What is your (. . .'s) date of birth?

1 __ __ _____ Go to DEMO_Q6
DD MM YYYY
9 Don't know

DEMO_Q5 What is your (. . .'s) age? (In years)
(If age unknown, ask for estimated age.)

___ years
9 Don't know

DEMO_Q6 What is your (. . .'s) current marital status?
(Do not read list. Mark one only.)

1	Now married	
2	Common-law	
3	Single (never married)	Go to DEMO_Q8
4	Widowed	Go to DEMO_Q8
5	Separated (legally separated)	Go to DEMO_Q8
6	Divorced	Go to DEMO_Q8
9	Don't know	Go to DEMO_Q8

DEMO_Q7 Is your (. . .'s) husband/wife also living in this facility?

1	Yes
2	No

DEMO_Q8 Do you (Does . . .) live in a room by yourself (by him/herself)?

1	Yes
2	No

DEMO_Q9 What was the date of your (. . .'s) admission to this facility?
(The most recent admission if admitted more than once.)

1	_ _ _ _ YY MM
9	Don't know

DEMO_Q10 Where were you (was . . .) living before being admitted to this facility? Were you (Was . . .) living in:
(Read list. Mark one only.)

1	Your (. . .'s) own household?
2	A relative's household?
3	An unrelated persons' household?
4	A residence for Senior Citizens?
5	A nursing home?
6	A hospital?
7	A convalescent home?
8	A group home?
9	A hotel, rooming or lodging house?
10	Other (Specify)
99	Don't know

B. General Health

This part of the survey deals with various aspects of your (. . .'s) health. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being.

GH_Q11 In general, would you say your (. . .'s) health is:
(Read list. Mark one only.)

1	Excellent?	
2	Very Good?	
3	Good?	
4	Fair?	
5	Poor?	
9	Don't know	

C. Health Status

The next set of questions asks about your (. . .'s) day to day health. The questions are not about illnesses like colds that affect people for short periods of time. They are concerned with a person's usual abilities. You may feel that some of these questions do not apply to you (. . .), but it is important that we ask the same questions of everyone.

Vision

HS_Q12 without Are you (Is . . .) usually able to see well enough to read ordinary newsprint glasses or contact lenses?

1	Yes	Go to HS_Q15
2	No	
9	Don't know	

HS_Q13 glasses Are you (Is . . .) usually able to see well enough to read ordinary newsprint with or contact lenses?

1	Yes	Go to HS_Q15
2	No	
9	Don't know	

HS_Q14 Are you (Is . . .) able to see at all?

1	Yes	
2	No	Go to HS_Q17
9	Don't know	Go to HS_Q17

HS_Q15 Are you (Is . . .) able to see well enough without glasses or contact lenses to recognize a friend on the other side of the street?

1	Yes	Go to HS_Q17
2	No	
9	Don't know	

HS_Q16 Are you (Is . . .) usually able to see well enough with glasses or contact lenses to recognize a friend on the other side of the street?

1	Yes	
2	No	
9	Don't know	

Hearing

HS_Q17 Are you (Is . . .) usually able to hear what is said in a group conversation with at least three other people without the use of a hearing aid?

1	Yes	Go to HS_Q22
2	No	
9	Don't know	

HS_Q18 Are you (Is . . .) usually able to hear what is said in a group conversation with at least three other people with the use of a hearing aid?

1	Yes	Go to HS_Q20
2	No	
9	Don't know	

HS_Q19 Are you (Is . . .) able to hear at all?

1	Yes	
2	No	Go to HS_Q22
9	Don't know	Go to HS_Q22

HS_Q20 Are you (Is . . .) usually able to hear what is said in a conversation with one other person in a quiet room without the use of a hearing aid?

1	Yes	Go to HS_Q22
2	No	
9	Don't know	

HS_Q21 person — Are you (Is . . .) usually able to hear what is said in a conversation with one other in a quiet room with the use of hearing aid?

1 Yes
2 No
9 Don't know

Speech

HS_Q22 strangers in — Are you (Is . . .) usually able to be understood completely when speaking with your (. . .'s) own language?

1 Yes — Go to HS_Q26
2 No
9 Don't know

HS_Q23 — Are you (Is . . .) able to be understood partially when speaking with strangers?

1 Yes
2 No
9 Don't know

HS_Q24 know you — Are you (Is . . .) able to be understood completely when speaking with those who (him/her) well?

1 Yes — Go to HS_Q26
2 No
9 Don't know

HS_Q25 know you — Are you (Is . . .) able to be understood partially when speaking with those who (him/her) well?

1 Yes
2 No
9 Don't know

Getting Around

HS_Q26 mechanical — Are you (Is . . .) usually able to walk around without difficulty and without support such as braces, a cane or crutches?

1 Yes — Go to HS_Q33
2 No
9 Don't know

HS_Q27 Are you (Is . . .) able to walk at all?

1	Yes	
2	No	Go to HS_Q30
9	Don't know	Go to HS_Q30

HS_Q28 Do you (Does . . .) require mechanical support such as braces, a cane or crutches to be able to walk around?

1	Yes
2	No
9	Don't know

HS_Q29 Do you (Does . . .) require the help of another person to be able to walk?

1	Yes
2	No
9	Don't know

HS_Q30 Do you (Does . . .) require a wheelchair to get around?

1	Yes	
2	No	Go to HS_Q33
9	Don't know	Go to HS_Q33

HS_Q31 How often do you (does . . .) use a wheelchair?
(Read list. Mark one only.)

1	Always
2	Often
3	Sometimes
4	Never
9	Don't know

HS_Q32 Do you (Does . . .) need the help of another person to get around in the wheelchair?

1	Yes
2	No
9	Don't know

Hands and Fingers

HS_Q33 Are you (Is . . .) usually able to grasp and handle small objects such as a pencil and scissors?

1	Yes	Go to HS_Q37
2	No	
9	Don't know	

HS_Q34 Do you (Does . . .) require the help of another person because of limitations in the use of hands or fingers?

1	Yes	
2	No	Go to HS_Q36
9	Don't know	Go to HS_Q36

HS_Q35 Do you (Does . . .) require the help of another person with:
(Read list. Mark one only.)

1	Some tasks?
2	Most tasks?
3	Almost all tasks?
4	All tasks?
9	Don't know

HS_Q36 Do you (Does . . .) require special equipment, for example, devices to assist in dressing because of limitations in the use of hands or fingers?

1	Yes
2	No
9	Don't know

Feelings

HS_Q37 Would you describe yourself (. . .) as being usually:
(Read list. Mark one only.)

1	Happy and interested in life?
2	Somewhat happy?
3	Somewhat unhappy?
4	Unhappy with little interest in life?
5	So unhappy that life is not worthwhile?
9	Don't know

Memory

HS_Q38 How would you describe your (. . .'s) usual ability to remember things? Are you (Is . . .):
(Read list. Mark one only.)

1	Able to remember most things	Go to HS_Q40
2	Somewhat forgetful	
3	Very forgetful	
4	Unable to remember anything at all	Go to HS_Q40
9	Don't know	Go to HS_Q40

HS_Q39 Is this a problem with short-term memory, with long-term memory, or both short and long-term memory? By short-term memory, we mean remembering yesterday and today. By long-term memory, we mean remembering events that happened last year or many years ago.
(Do not read list. Mark one only.)

1	Problem with short-term memory only?
2	Problem with long-term memory only?
3	Problem with both short-term and long-term memory?
9	Don't know

Thinking

HS_Q40 How would you describe your (. . .'s) usual ability to think and solve day to day problems? Are you (Is . . .):
(Read list. Mark one only.)

1	Able to think clearly and solve problems?
2	Having a little difficulty?
3	Having some difficulty?
4	Having a great deal of difficulty?
5	Unable to think or solve problems?
9	Don't know

Pain and Discomfort

HS_Q41 Are you (Is . . .) usually free of pain or discomfort?

1	Yes	Go to section D
2	No	
9	Don't know	

HS_Q42 How would you describe the usual intensity of your (. . .'s) pain or discomfort?

(Read list. Mark one only.)

1 Mild
2 Moderate
3 Severe
9 Don't know

HS_Q43 How many activities does your (. . .'s) pain or discomfort prevent?

(Read list. Mark one only.)

1 None
2 A few
3 Some
4 Most
9 Don't know

D. Chronic Conditions

Now I'd like to ask about any chronic conditions you (. . .) may have. Chronic or "long-term conditions" refer to conditions that have lasted or are expected to last 6 months or more.

CHRQ44 Do you (Does . . .) have any of the following long-term conditions that have been diagnosed by a health professional?

a) Arthritis or rheumatism

1 Yes
2 No
9 Don't know

b) High blood pressure

1 Yes
2 No
9 Don't know

c) Asthma

1 Yes
2 No
9 Don't know

d) Chronic bronchitis, emphysema, or other lung or breathing condition

1 Yes
2 No
9 Don't know

e) Diabetes

1 Yes
2 No
9 Don't know

f) Epilepsy

1 Yes
2 No
9 Don't know

g) Heart disease, angina, effects of a heart attack

1 Yes
2 No
9 Don't know

h) Effects of stroke, such as paralysis or speech problems

1 Yes
2 No
9 Don't know

I) Paralysis, partial or complete, other than the effects of a stroke

1 Yes
2 No
9 Don't know

j) Incontinence, that is, difficulty controlling bladder or bowels

1 Yes
2 No
9 Don't know

k) Alzheimer's disease or other dementia

1 Yes
2 No
9 Don't know

l) Osteoporosis or brittle bones

1 Yes
2 No
9 Don't know

m) Cataracts

1 Yes
2 No
9 Don't know

n) Glaucoma

1 Yes
2 No
9 Don't know

o) Digestive conditions, such as stomach or intestinal ulcers

1 Yes
2 No
9 Don't know

p) Kidney failure or disease

1 Yes
2 No
9 Don't know

q) Cerebral palsy

1 Yes
2 No
9 Don't know

r) Spina bifida

1	Yes	
2	No	
9	Don't know	

s) Cystic fibrosis

1	Yes	
2	No	
9	Don't know	

t) Muscular dystrophy

1	Yes	
2	No	
9	Don't know	

u) Multiple sclerosis

1	Yes	
2	No	
9	Don't know	

v) Deformity, orthopedic impairment or absence of arms, legs, hands or feet

1	Yes	
2	No	
9	Don't know	

w) Any other long-term condition - Specify

1	Yes	
2	No	
9	Don't know	

x) Cancer

1	Yes	Go to CHR_Q45
2	No	Go to Section E
9	Don't know	Go to Section E

CHR_Q45 What type(s) of cancer is this? For example, skin, lung or colon cancer.

1 (_____)(25 char)
2 (_____)(25 char)
9 Don't know

E. Restriction of Activities

The next few questions deal with any health limitations which affect your (. . .'s) daily activities. Again, “long-term conditions” refer to conditions that have lasted or are expected to last 6 months or more.

RES_Q46 Because of a long-term physical or mental condition or a health problem, are you (is . . .) limited in the kind or amount of activity you (he/she) can do?

1 Yes
2 No
9 Don't know

RESQ47 Because of a long-term condition or health problem, do you (does . . .) need the help of another person in:
(Read list.)

a) Personal care such as bathing, dressing or eating?

1 Yes
2 No
9 Don't know

b) Moving about inside the residence/facility?

1 Yes
2 No
9 Don't know

c) Getting in and out of bed?

1 Yes
2 No
9 Don't know

d) Getting in or out of a chair?

1 Yes
2 No
9 Don't know

RES_Q48 Are you (Is . . .) usually confined to a bed or chair for most of the day because of your (his/her) health?

1 Yes
2 No
9 Don't know

RES_Q49 What is the main condition or health problem causing you (. . .) to be limited in your (his/her) activities?
(Specify one condition/health problem)

1 (_____)
9 Don't know Go to FAL_Q57

RES_Q50 Which one of the following is the best description of the cause of this condition? (Read list. Mark main cause only.)

1 Injury - at home or in a facility where you were (. . .was) living
2 Injury - sports or recreation
3 Injury - motor vehicle
4 Injury - work-related
5 Existed at birth
6 Work environment
7 Disease or illness
8 Natural aging process
9 Psychological or physical abuse
10 Other - Specify
99 Don't know

RES_Q51 Do you (Does . . .) have another condition or health problem causing you (. . .) to be limited in your (his/her) activities?

1 Yes- Specify one condition/health problem
(_____)
2 No Go to FAL_Q57
9 Don't know Go to FAL_Q57

RES_Q52 Which one of the following is the best description of the cause of this condition? (Read list. Mark main cause only.)

1 Injury - at home or in a facility where you were (. . .was) living
2 Injury - sports or recreation
3 Injury - motor vehicle
4 Injury - work-related
5 Existed at birth
6 Work environment
7 Disease or illness
8 Natural aging process
9 Psychological or physical abuse
10 Other - Specify
99 Don't know

RES_Q53 Do you (Does . . .) have another condition or health problem causing you (. . .) to be limited in your (his/her) activities?

1 Yes - Specify one condition/health problem
(_____)
2 No Go to FAL_Q57
9 Don't know Go to FAL_Q57

RES_Q54 Which one of the following is the best description of the cause of this condition? (Read list. Mark main cause only.)

1 Injury - at home or in a facility where you were (. . .was) living
2 Injury - sports or recreation
3 Injury - motor vehicle
4 Injury - work-related
5 Existed at birth
6 Work environment
7 Disease or illness
8 Natural aging process
9 Psychological or physical abuse
10 Other (Specify)
99 Don't know

RES_Q55 Do you (Does . . .) have another condition or health problem causing you (. . .) to be limited in your (his/her)activities?

1	Yes	
(_____)		
2	No	Go to FAL_Q57
9	Don't know	Go to FAL_Q57

RES_Q56 Which one of the following is the best description of the cause of this condition? (Read list. Mark main cause only.)

1	Injury - at home or in a facility where you were (. . . was) living
2	Injury - sports or recreation
3	Injury - motor vehicle
4	Injury - work-related
5	Existed at birth
6	Work environment
7	Disease or illness
8	Natural aging process
9	Psychological or physical abuse
10	Other- Specify
99	Don't know

Balance

FAL_Q57 During the past 12 months, have you (has . . .) fallen?

1	Yes	
2	No	Go to section F
9	Don't know	Go to section F

FAL_Q58 How many times have you (has . . .) fallen?

__	times
9	Don't know

FAL_Q59 Were you (Was . . .) injured as a result of the fall / of any of these falls?

1	Yes	
2	No	Go to FAL_Q61
9	Don't know	Go to FAL_Q61

FAL_Q60 What was the most serious injury you (. . .) had as a result of falling?
(Do not read list. Mark one only.)

1 Broken or fractured hip
2 Break or fracture of bone or joint other than hip
3 Bruise, scrape or cut
4 Lost consciousness
5 Other injury - Specify
9 Don't know

FAL_Q61 Why did you (. . .) fall?
(Do not read list. Mark all that apply.)

1 Dizziness
2 Illness
3 Weakness/Frailty
4 Problems with balance
5 Fell out of bed
6 Hit or pushed by someone
7 Poor lighting
8 Condition of floor(for example, wet, loose rugs)
9 Weather conditions (for example, icy, wet)
10 Other - Specify
99 Don't know

F. Smoking

The next few questions are about smoking.

SMK_Q62 At the present time do you (does . . .) smoke cigarettes daily, occasionally or not at all?
(Do not read list. Mark one only.)

1	Daily	
2	Occasionally	Go to SMK_Q66
3	Not at all	Go to SMK_Q65
9	Don't know	Go to SMK_Q65

SMK_Q63 At what age did you (. . .) begin smoking cigarettes daily?

__ years old
9 Don't know

SMK_Q64 How many cigarettes do you (does . . .) smoke each day now?

__	cigarettes	Go to section G
9	Don't know	Go to section G

SMK_Q65 Have you (Has . . .) ever smoked cigarettes at all?

1	Yes	
2	No	Go to section G
9	Don't know	Go to section G

SMK_Q66 Have you (Has . . .) ever smoked cigarettes daily?

1	Yes	
2	No	Go to section G
9	Don't know	Go to section G

SMK_Q67 At what age did you (. . .) begin to smoke (cigarettes) daily?

__	years old
9	Don't know

SMK_Q68 At what age did you (. . .) stop smoking (cigarettes) daily?

__	years old
9	Don't know

G. Alcohol

Now, some questions about your (. . .'s) alcohol consumption. When we use the word drink it means:

- one bottle or can of beer or a glass of draft
- one glass of wine or wine cooler
- one straight or mixed drink with one and a half ounces of hard liquor

ALC_Q69 During the past 12 months, have you (has . . .) had a drink of beer, wine, liquor or any other alcoholic beverage?

1	Yes	
2	No	Go to ALC_Q71
9	Don't know	Go to ALC_Q71

ALC_Q70 During the past 12 months, how often did you (. . .) drink alcoholic beverages? (Do not read list. Mark one only.)

1	Every day	
2	4-6 times a week	
3	2-3 times a month	
4	Once a week	
5	2-3 times a month	
6	Once a month	
7	Less than once a month	
9	Don't know	

Go to ALC_Q72

ALC_Q71 Did you (. . .) ever have a drink?

1	Yes	
2	No	Go to section H
9	Don't know	Go to section H

ALC_Q72 Did you (. . .) ever regularly drink more than 12 drinks a week?

1	Yes	
2	No	
9	Don't know	

H. Social Support

Now, some questions about your (. . .'s) contact with different groups and support from family and friends.

SUP_Q73 Do you (Does . . .) belong to any groups or participate in group activities in this facility, such as bridge or social clubs, leisure or hobby groups, or religious services or meetings?

1	Yes	
2	No	Go to SUP_Q75
9	Don't know	Go to SUP_Q75

SUP_Q74 How often did you (. . .) participate in these group meetings or activities in the past 12 months? If you belong (. . . belongs) to many, just think of the ones in which you are (he/she is) most active.
(Read list. Mark one only)

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

SUP_Q75 How many relatives do you (does . . .) have that you feel (he/she feels) close to?

__ close relatives
2 None Go to SUP_Q77
9 Don't know Go to SUP_Q77

SUP_Q76 During the past twelve months how often did you (. . .) see any of these relatives? (Read list. Mark one only.)

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

SUP_Q77 Not counting your (. . .'s) relatives or the staff of this facility, how many close friends do you (does he/she) have living INSIDE this facility? By close friends, I mean people that you feel (. . . feels) at ease with, can talk to about private matters or can call upon for help?

__ close friends living INSIDE this facility
2 None
9 Don't know

SUP_Q78 Not counting your (. . .'s) relatives or the staff of this facility, how many close friends do you (does . . .) have living OUTSIDE this facility?

__ close friends living OUTSIDE this facility
2 None Go to SUP_Q80
9 Don't know Go to SUP_Q80

SUP_Q79 During the past twelve months, how often did you (. . .) see your (his/her) close friends living OUTSIDE this facility? That is, how often did they visit you (. . .) here or you (. . .) visit them outside this facility?
(Read list. Mark one only.)

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

SUP_Q80 How many staff members of this facility do you (does . . .) have a close relationship with, that is, feel at ease with or can talk to about private matters?

__ staff members you feel (. . .feels) close to
2 None
9 Don't know

SUP_Q81 During the past twelve months, how often did you (. . .) leave this facility for social or recreational purposes, such as outings, visits or trips.

Do not include trips to obtain medical care or treatment.
(Read list. Mark one only.)

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

SUP_Q82 Can you (. . .) change your (his/her) daily schedule, for example, choosing when to go to bed, when to get up, when to eat meals?
(Read list. Mark one only.)

1 Daily schedule is very flexible
2 Daily schedule has some flexibility
3 Daily schedule has no flexibility, is very rigid
9 Don't know

I. Socio-demographic Characteristics

Now I'd like to ask some general questions which will allow us to study the relationship between health and factors which may be related to health.

Country of Birth/Year of Immigration

SOC_Q83 In what country were you (was . . .) born?
(Do not read list. Mark one only.)

1	Canada Go toSOC_Q85	10	Italy
2	China	11	Jamaica
3	France	12	Netherlands
4	Germany	13	Jamaica
5	Greece	14	Poland
6	Guyana	15	Portugal
7	Hong Kong	16	United Kingdom
8	Hungary	17	United States
9	India	18	Viet Nam

19 Other - Specify
99 Don't know

SOC_Q84 In what year did you (is . . .) first immigrate to Canada?

____ year (4 digits)
9 Don't know

Ethnicity

SOC_Q85 What was the ethnic or cultural background of your (. . .'s) ancestors? (For example: French, British, Chinese, etc.)
(Do not read list. Mark all the apply.)

1	Canadian	10	Chinese
2	French	11	Jewish
3	English	12	Polish
4	German	13	Portuguese
5	Scottish	14	South Asian
6	Irish	15	Black
7	Italian	16	North American Indian
8	Ukrainian	17	Métis
9	Dutch(Netherlands)	18	Inuit/Eskimo

19 Other ethnic or cultural group(s) - Specify
99 Don't know

Language

SOC_Q86 Which languages can you (. . .) speak or understand now?
(Do not read list. Mark all that apply.)

1 English
2 French
3 Other
4 Not able to speak or to understand spoken language
99 Don't know

SOC_Q87 What is the language that you (. . .) first learned at home in childhood and can still understand? (If you (. . .) can no longer understand the first language learned, choose the second language learned.)
(Do not read list. Mark all that apply.)

1	English	10	Korean
2	French	11	Persian (Farsi)
3	Arabic	12	Polish
4	Chinese	13	Portuguese
5	Cree	14	Punjabi
6	German	15	Spanish
7	Greek	16	Tagalog (Filipino)
8	Hungarian	17	Ukrainian
9	Italian	18	Vietnamese

19 Other - Specify
99 Don't know

Race

SOC_Q88 How would you best describe your (. . .'s) race or colour?
(Do not read list. Mark all that apply.)

1 White (e.g. British, French, European, Latin/South American of European background)
2 Black
3 Korean
4 Filipino
5 Japanese
6 Chinese
7 Native/Aboriginal Peoples of North America (North American Indian, Métis, Inuit/Eskimo)
8 South Asian (e.g. Indian from India or Uganda, Pakistani, Punjabi, Tamil)
9 South East Asian (e.g. Vietnamese, Thai, Laotian)
10 West East Asian or North African (e.g. Armenian, Syrian, Moroccan)
11 Other - Specify
99 Don't know

Education

ED_Q89 What is the highest level of education that you have (. . . has) completed?
(Do not read list. Mark one only)

1 None or no formal schooling
2 Elementary only
3 Some secondary (without certificate)
4 Secondary or high school graduation certificate or equivalent
5 Post-secondary without degree, certificate or diploma
6 Trades certificate or diploma
7 Other non-university certificate or diploma obtained at community college, CEGEP or institute of technology
8 University certificate or degree
9 Don't know

Income

INC_Q90 Thinking about your (. . .'s) own personal income, from which of the following sources did you (. . .) receive any income in the past 12 months?
(Read list. Mark all that apply.)

1 Benefits from Canada or Quebec Pension Plan
2 Old Age Security
3 Guaranteed Income Supplement
4 Retirement pensions, superannuation and annuities
5 Provincial or municipal social assistance or welfare
6 Worker's compensation
7 Unemployment insurance
8 Dividends and interest on bonds, deposits and savings, stocks, mutual funds, etc.
9 Wages, salaries, or income from self employment
10 Other income (e.g. rental income, scholarships, other government income, alimony, child support, etc.)
11 None
99 Don't know Go to Section J

INC_Q91 What is your best estimate of your (. . .'s) total personal income before taxes and deductions from all sources in the past 12 months? Was your (. . .'s) total income:
(Read list. Mark one only.)

1 Less than $5,000?
2 $5,000 to less than $10,000?
3 $10,000 to less than $15,000?
4 $15,000 to less than $20,000?
5 $20,000 to less than $30,000?
6 $30,000 to less than $40,000?
7 $40,000 to less than $50,000?
8 $50,000 to less than $60,000?
9 $60,000 to less than $80,000?
10 $80,000 and more?
11 No income
99 Don't know

J. Contact Information

This survey is the first interview in a longer-term study to look at the health of Canadians.

We will need to re-contact you (. . .) two years from now to ask a few more questions about your (. . .'s) health.

We would like the names, addresses and phone numbers of two friends or relatives (of . . .) we could call in case there are difficulties in reaching you. This would only be used to help us make contact with you (. . .).

First Contact Person

CI_Q92 Name(First and last names)
(_____)

CI_Q93 Address
(_____)

CI_Q94 City
(_____)

CI_Q95 Postal Code
_ _ _ _ _ _

CI_Q96 Telephone number (including area code)
(_ _ _) _ _ _ - _ _ _ _

Second Contact Person

CI_Q97 Name(First and last names)
(_____)

CI_Q98 Address
(_____)

CI_Q99 City
(_____)

CI_Q100 Postal Code
_ _ _ _ _ _

CI_Q101 Telephone number (including area code)
(_ _ _) _ _ _ - _ _ _ _

K. Agreements

(If interviewing the resident or a proxy who is his/her next of kin, ask the questions in this section.

If interviewing a proxy who is not the next of kin of the resident, refer to the consent form to complete this section.)

We are asking your permission to obtain the following information from the staff of this facility (the facility in which . . . lives.)

Drug Use and Health Care Utilization

LNK_Q102 First we would like to ask the number and names of the medications you take (. . .takes), both prescription and over the counter.

Second, we would like to ask about the frequency of your (. . .'s) contacts with health professionals, such as doctors, dentists and therapists.

Do we have your permission?

1 Yes
2 No (Check “Refused” in DRG_Q107 and UT_Q109)

Health Number

LNK_Q103 We are also seeking your permission to link information collected during this interview with provincial health information.

This would include information on past and continuing use of services such as visits to hospitals, clinics, physician's offices or other services provided by the province.

This information will be used for statistical purposes only.

Do we have your permission?

1 Yes
2 No (Check “Refused” in LNK_Q110)

LNK_Q104 Having your (. . .'s) provincial health number will assist us in linking to this other information.

Do we have your permission?

1 Yes
2 No (Check “Refused” in LNK_Q110) Go to SHR_Q105

Agreement to Share

SHR_Q105 To avoid duplication Statistics Canada intends to share the information from this survey with provincial ministries of health, Health Canada, and Human Resources Development Canada.

These organizations have undertaken to keep this information confidential and use it only for statistical purposes.

Do you agree to share the information you have provided?

1 Yes
2 No

(Thank and end interview)

(If any YES in LNK_ Q102, LNK_Q103 or LNK_Q104, arrange and complete interview with staff member of facility to complete DRG_Q106, DRG_Q107, DRG_Q108, UT_Q109 and LNK_Q110)

L. Drug Use

We have the permission of . . . (. . .'s next of kin) to obtain information from you about his/her use of medications and contact with health professionals.

Having the name of the staff member who provided us with the information will assist us should we need to clarify the information later. Your name will be kept confidential.

DR_Q106 Name of staff member providing this information.

(First and last names)

DR_Q107 Now, I am referring to yesterday and the day before yesterday. During those two days, how many different medications, both prescription and over the counter, did . . . take?

__	Number of different medications	
2	None	Go to section M
8	Refused	Go to section M
9	Don't know	Go to section M

DR_Q108 What is the exact name of the medication that . . . took in the last two days? (Report a maximum of 12.)

a) (_____)(30 char)
b) (_____)(30 char)
c) (_____)(30 char)
d) (_____)(30 char)
e) (_____)(30 char)
f) (_____)(30 char)
g) (_____)(30 char)
h) (_____)(30 char)
i) (_____)(30 char)
j) (_____)(30 char)
k) (_____)(30 char)
l) (_____)(30 char)

8 Refused

M. Health Care Utilization

UT_Q109 I'd like to ask how often in the past 12 months . . . has seen the following types of health care providers about his/her physical, emotional or mental health:

a) Doctors, including psychiatrists

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
6 Don't know

b) Nurses for care or advice

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
6 Don't know

c) Therapists, such as speech, audiology, occupational, respiratory, or physiotherapists

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
6 Don't know

d) Dentists, denture therapists or dental hygienists

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

e) Psychologists, counsellors or social workers

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

f) Other health care providers, such as optometrists, podiatrists, chiropractors, pharmacists

1 Every day
2 At least once a week
3 At least once a month
4 Less than once a month
5 Not at all
9 Don't know

88 Refused

(If no to question LNK_Q103 or LNK_Q104 thank and end interview)

N. Provincial Health Number

We also have the permission of . . .(. . .'s next of kin) to obtain his/her provincial health number.

LNK_Q110 What is . . .'s provincial health number?

1 (_____)
8 Refused

Table of Contents

Description of Derived Variables

Several derived variables were created for the NPHS: Health Institutions Public Use Microdata File. This section describes how these variables were calculated. It also describes some of the coding structures. The descriptions of the derived variables are in order of their appearance on the file. Most derived variable names start with the letter "DV". In general, a derived variable was not calculated if any part of the equation was not answered (e.g. don't know, refusal, and not stated). In these cases, the code assigned to the derived variable was "not stated".

DVADMAGE Age at time of admission to the facility

The age at admission was calculated by subtracting the length of stay at the facility (based on date of admission and year of the survey) from the current age of the resident.

DVGHI Self-reported Health Index

Recode of GH_Q11. Higher scores indicate positive self-reported health status.

DVGHI=	Description	Condition
0	Poor	GH_Q11=5
1	Fair	GH_Q11=4
2	Good	GH_Q11=3
3	Very Good	GH_Q11=2
4	Excellent	GH_Q11=1
9	Not Stated	Not Stated

IMPHST Health Status Index

This is a composite index based on questions HS_Q12 to HS_Q43.

The Health Status Index (HSI) is a generic index that is able to synthesize both quantitative and qualitative aspects of health. It is based on the Comprehensive Health Status Measurement System (CHSMS) developed at McMaster University's Centre for Health Economics and Policy Analysis. A description of an individual's overall functional health, based on eight attributes: vision, hearing, speech, mobility (ability to get around), dexterity (use of hands and fingers), cognition (memory and thinking), emotion (feelings), and pain and discomfort is provided by this measure.

The HSI is a single numerical value for any possible combination of levels of these eight self-reported health attributes. The HSI maps any one of the vectors of eight health attribute levels into a summary health value between 0 and 1. For instance, an individual who is near-sighted, yet fully healthy on the other seven attributes, receives a score of 0.95 or 95% of full health.

The HSI value also embodies the views of society concerning health status. These views are termed societal preferences, since preferences about various health states are elicited from a representative sample of individuals.

The specific HSI calculated here is provisional. The societal preferences were derived from the small-scale Childhood Cancer Study using a precursor of the CHSMS and were adapted for use with the Ontario Health Survey. Some adjustments were also made to the health attributes reported in the Ontario Health Survey. Consequently, the HSI results are preliminary and approximate. This version of the CHSMS, however, was tested for consistency and was deemed to provide a realistic appraisal of individual health status.

Section 8.3 of the microdata file documentation details the use of imputation in the calculation of the IMPHST.

For a detailed explanation of the calculation of the HSI, refer to Berthelot J, Roberge R, Wolfson

MC. The calculation of health-adjusted life expectancy for a Canadian province using a multi-attribute utility function: a first attempt.
Montpellier, France: Colloque *Inserm*/John Libbey Eurotext Ltd, 1993:161-72.

DVLTCOND Number of long-term conditions

Total number of chronic conditions listed in questions CHRQ44_A through CHRQ44_X.

DVACTLIM The number of activities with which residents need help

Total number of activities requiring assistance from questions RESQ47_A to RESQ47_D.

DVRST Recode of main health problem (ICD-9) to 12 codes

Residents who reported a limiting condition.

DVRSTC1 - based on RES_Q49
DVRSTC2 - based on RES_Q51
DVRSTC3 - based on RES_Q53
DVRSTC4 - based on RES_Q55

The following table provides the recode of ICD-9 codes into the 12 categories of:

1) Diseases of nervous system and senses

3170 - 3190 Mental retardation

7580	Down's Syndrome
2900 - 3160	Psychoses, neurotic disorders
3600 - 3799	Disorders of the eye and adnexa
7430 - 7439	Congenital anomalies of eye
8710 - 8719	Open wound of eyeball
9213 - 9219	Contusion of eyeball and unspecified contusion of eye
9400 - 9409	Burn confined to eye and adnexa
9500 - 9509	Injury to optic nerve and pathways
V410 - V411	Problems with sight and other eye problems
V425	Cornea replaced by transplant
V430 - V431	Eye globe and lens replaced by other means
V522	Fitting and adjustment of artificial eye
3800 - 3899	Diseases of the ear and mastoid process
7440 - 7443	Congenital anomalies of ear
8720 - 8729	Open wound of ear - affecting hearing
9515	Injury acoustic nerve
V412 - V413	Problems with hearing and other ear problems
3200 - 3599	Diseases of the nervous system and senses organs (except disorders of the eye, adnexa and diseases of ear)
7400 - 7429	Anencephalus, spina bifida and other congenital anomalies
8000 - 8049	Fracture of skull
8060 - 8069	Fracture of vertebral column with spinal cord lesion
8500 - 8540	Intracranial injury (excluding those with skull fracture)
9510 - 9514	Injury to oculomotor, trochlear, trigeminal, abducent and facial nerve
9516 - 9579	Injury to accessory, hypoglossal and to unspecified cranial nerve
9520	Spinal cord lesion without evidence of spinal bone injury

2) Ischaemic Heart Disease

4100 - 4149	Ischaemic heart disease

3) Other Heart Conditions

4010 - 4059	Hypertensive disease
3900 - 3989	Acute rheumatic fever and chronic heart disease
4150 - 4179	Diseases of pulmonary circulation
4200 - 4299	Other forms of heart disease
7450 - 7459	Bulbus cordis anomalies and anomalies of cardiac septal closure
7460 - 7469	Congenital anomalies of heart
7850 - 7853	Tachycardia, palpitations and other abnormal heart sounds
8610 - 8611	Injury to heart with and without open wound into thorax
V421	Heart replaced by transplant
V422	Transplant heart valve (mechanical)
V433	Heart valve replace (tissue)
V450	Cardiac pacemaker

4) Other Circulatory Disorders

4300 - 4389	Cerebrovascular disease
4400 - 4489	Diseases of arteries, arterioles and capillaries

4510 - 4599	Diseases of veins and lymphatics and other diseases of circulatory system
7470 - 7479	Other congenital anomalies of circulatory system
7854 - 7859	Gangrene, shock and enlargement of lymph nodes
9000 - 9049	Injury to blood vessels
V434	Blood vessel replaced by other means

5) Diseases of respiratory and digestive system

4900 - 4920	Bronchitis, chronic bronchitis and emphysema
4930 - 4939	Asthma
4770 - 4779	Allergic Rhinitis
4940 - 5199	Bronchiectasis, Pneumoconiosis etc.
7480 - 7489	Congenital anomalies of respiratory system
7860 - 7869	Symptoms involving respiratory system and other chest systems
8612 - 8613	Injury to lung with or without open wound into thorax
5200 - 5299	Diseases of oral cavity, salivary glands and jaws
5300 - 5799	Diseases of oesophagus, stomach, duodenum, appendicitis, hernia, colitis, intestines and other digestive system
7500 - 7519	Other congenital anomalies of digestive system
7870 - 7879	Symptoms involving digestive system
8630 - 8641	Injury to gastrointestinal tract and liver

6) Arthritis - limbs

VA01 - VA06*	Arthritis/Rheumatism
VA07 - VA12*	Arthritis/Rheumatism

7) Arthritis - back & spine

VA13*	Arthritis/Rheumatism

8) Arthritis - other

7110 - 7169	Arthropathy, rheumatoid arthritis, osteoarthrosis and unspecified arthropathies
7250	Polymalagia rheumatica
7290	Other disorders of soft tissues
VA00*	Arthritis/Rheumatism
VA14 - VA19*	Arthritis/Rheumatism

9) Diseases of the Musculoskeletal - limbs

7170 - 7179	Internal derangement of knee
7265 - 7267	Enthesopathy of hip, knee, ankle, tarsus
7321 - 7322	Osteochondrosis of hip, pelvis, upper femoral epiphysis
7324 - 7325	Osteochondrosis of lower extremity with and without foot
7340 - 7359	Flat foot and acquired deformities of toe
7363 - 7367	Acquired deformities of hip, varum, recurvatum, knee, foot
7395 - 7396	Nonallopathic lesions (pelvic and lower extremities)
7543 - 7547	Congenital deformities (hip, feet)
7553	Reduction deformity of lower limb
7556	Other anomaly
8200 - 8291	Fracture lower limb/hip
8350 - 8381	Dislocation of hip/knee/ankle/foot
8430 - 8451	Sprains and strains of hip/thigh/knee/ankle/foot
8900 - 8977	Open wound of lower limb
9280 - 9289	Crushing injury of lower limb
9596 - 9597	Injury, other and unspecified/hip/thigh/knee/leg/ankle/foot

9912	Frostbite of foot
V521	Fitting and adjustment of artificial leg
VB01 - VB06*	Damaged/Removed Discs
VC01 - VC06*	Weak/Damaged Bones
VD01 - VD06*	Damaged/Torn Cartilages
VE01 - VE06*	Sprained/Damaged Ligaments/Tendons
VF01 - VF06*	Weak/Pulled/Damaged Muscles
VG01 - VG06*	Absence/Missing
VH01 - VH06*	Fractures/Breaks
VJ01 - VJ06*	Fusions
VK01 - VK06*	Deformed/Crooked
VL01 - VL06*	Displaced/Dislocated/Slipped
VM01 - VM06*	Pain/Soreness
VN01 - VN06*	Stiffness
VP01 - VP06*	Paralysis
VR01 - VR06*	Coordination Problems
VS01 - VS06*	Weakness - site unspecified
VT01 - VT06*	Other specified impairments
VU01 - VU06*	Other unspecified impairments
7260 - 7264	Peripheral enthesopathies (shoulder, elbow, wrist)
7323	Osteochondrosis upper extremities
7360 - 7362	Acquired deformities arm/hand/finger
7397	Nonallopathic lesions (upper extremities)
7552	Congenital Deformity (upper limb)
7555	Congenital deformity (upper limb, including shoulder girdle)
V520	Fitting and adjustment of artificial arm
8100 - 8191	Fracture upper limb
8310 - 8341	Dislocation of shoulder/elbow/finger/wrist

8400 - 8421	Sprains of shoulder/elbow/finger/wrist
8800 - 8877	Open wound of upper limb
9270 - 9279	Crushing of upper limb
9592 - 9595	Injury (shoulder, elbow, wrist, hand, finger)
9911	Frostbite of hand
VB07 - VB12*	Damaged/Removed Discs
VC07 - VC12*	Weak/Damaged Bones
VD07 - VD12*	Damaged/Torn Cartilages
VE07 - VE12*	Sprained/Damaged Ligaments/Tendons
VF07 - VF12*	Weak/Pulled/Damaged Muscles
VG07 - VG12*	Absence/Missing
VH07 - VH12*	Fractures/Breaks
VJ07 - VJ12*	Fusions
VK07 - VK12*	Deformed/Crooked
VL07 - VL12*	Displaced/Dislocated/Slipped
VM07 - VM12*	Pain/Soreness
VN07 - VN12*	Stiffness
VP07 - VP12*	Paralysis
VR07 - VR12*	Coordination Problems
VS07 - VS12*	Weakness - site specified
VT07 - VT12*	Other specified impairments
VU07 - VU12*	Other unspecified impairments

10) Diseases of the Musculoskeletal - back

7200 - 7209	Ankylosing spondylitis and other inflammatory spondylopathies
7210 - 7249	Spondylosis, intervertebral disc disorders and other unspecified disorders of back
7268 - 7269	Other peripheral enthesopathies and unspecified enthesopathy

7320	Osteochondrosis of spine
7370 - 7379	Curvature of spine
7384 - 7385	Acquired spondylolisthesis and other deformity of spine
7391 - 7394	Nonallopathic lesions (cervical, thoracic, lombar, sacral)
7542	Certain congenital musculoskeletal deformities of spine
7561	Other congenital musculoskeletal anomalies of spine
8050 - 8059	Fracture of vertebral column without mention of spinal cord lesion
8460 - 8479	Sprains and strains of sacroiliac and unspecified parts of back
9591	Injury of trunk
VB13 - VU13*	Impairment to back/spine/discs

11) Diseases of the Musculoskeletal - other

7100 - 7109	Diffuse diseases of connective tissue
7180 - 7199	Other derangement of joint and unspecified disorder of joint
7270 - 7279	Disorders of synovium, tendon and bursa
7280 - 7289	Disorders of muscle, ligament and fascia
7291 - 7299	Other soft tissues. excl: rheumatism and fibrositis
7300 - 7319	Osteomyelitis, periostitis and osteopathies
7326 - 7339	Osteochondropathies and other disorders of bone/cartilage
7368 - 7369	Other acquired deformities of limbs
7380 - 7383	Acquired deformity of nose, head, neck, chest and rib
7386 - 7389	Acquired deformity of pelvis, unspecified site
7390	Nonallopathic lesions (head region)
7398 - 7399	Lesions rib cage and abdomen
7540 - 7541	Congenital anomalies (skull, face, jaw)
7548	Congenital musculoskeletal deformities
7550 - 7551	Congenital anomalies of limb (polydactyly syndactyly)

7554	Congenital anomalies, unspecified limb
7558 - 7559	Congenital unspecified anomalies of unspecified limb
7560	Anomalies of skull and face bones
7562 - 7569	Other congenital anomalies except spine
8070 - 8091	Fracture rib, sternum, larynx, trachea, trunk
8300 - 8301	Dislocation of jaw
8390 - 8391	Other ill-defined dislocations (cervical and lumbar vertebra)
8480 - 8489	Other and ill-defined sprains and strains
9260 - 9269	Crushing injury of trunk
9598 - 9599	Injury - site unspecified
V436	Joint replaced by other means

12) Other

0010 - 1398	Infectious Diseases (excluding intestinal)
1400 - 2089	Malignant neoplasms
2100 - 2299	Benign neoplasms
2300 - 2399	Carcinoma in situ and neoplasms of unspecified nature
2400 - 2469	Disorders of thyroid gland
2500 - 2509	Diseases of other endocrine glands (diabetes mellitus)
2510 - 2799	Endocrine glands (except diabetes), nutritional and metabolic diseases and immunity disorders
All others	

***Musculoskeletal Impairment Supplementary Coding Scheme**

Example VA01 - Arthritis/Rheumatism of Toes

Impairment	**Site**
VA__ - Arthritis/Rheumatism	__00 - Not Stated
VB__ - Damaged/Removed discs	__01 - Toes
VC__ - Weak/Damaged/Degenerating bones	__02 - Feet
VD__ - Damaged/Torn cartilage	__03 - Ankles
VE__ - Sprained/Damaged/Torn ligaments	__04 - Knees/Kneecaps
VF__ - Weak/Pulled/Damaged muscles	__05 - Legs
VG__ - Absence/Missing	__06 - Hips
VH__ - Fractures/Breaks (only with bones)	__07 - Fingers
VJ__ - Fusions	__08 - Hands
VK__ - Deformed/Crooked	__09 - Wrists
VL__ - Displaced/Dislocated/Slipped	__10 - Elbows
VM__ - Pain/Soreness	__11 - Arms
VN__ - Stiffness	__12 - Shoulders
VP__ - Paralysis	__13 - Back/Spine/Discs
VR__ - Coordination problems	__14 - Trunk/Chest
VS__ - Weakness - site specified	__15 - Neck
VT__ - Other specified impairments	__16 - Head/Face
VU__ - Other unspecified impairments	__17 - One side of the body
	__18 - Below the waist
	__19 - Entire body

DVFALINJ Most serious injury from falling.
Residents who were injured as a result of a fall. Recode of FAL_Q60.

DVFALINJ=	Description	Condition
1	Broken hip	FAL_Q60=1
2	Other broken bone	FAL_Q60=2
3	Bruise/scrape/cut	FAL_Q60=3
4	Other injury	FAL_Q60=4 or 5
6	Not applicable	Not applicable
9	Not stated	Not stated

DVSMKT Type of smoker
Based on SMK_Q62, SMK_Q65, SMK_Q66

DVSMKT =	Description	Condition
1	Daily smoker	SMK_Q62 = 1
2	Occasional smoker but former daily smoker	SMK_Q62=2 and SMK_Q66=1
3	Always an occasional smoker	SMK_Q62=2 and SMK_Q66=2
4	Former daily smoker	SMK_Q62=3 and SMK_Q65=1 and SMK_Q66=1
5	Former occasional smoker	SMK_Q62=3 and SMK_Q65=1 and SMK_Q66=2
6	Never smoked	SMK_Q62=3 and SMK_Q65=2
9	Not stated	Not stated

DVYRSMOK Number of years smoked
For daily smokers or former daily smokers only.

For daily smokers the number of years smoked was calculated by subtracting the value in SMK_Q63 from the current age of the resident.

For former smokers the value in SMK_Q67 is subtracted from the value in SMK_Q68.

DVALCTYP Type of drinker
Based on ALC_Q69, ALC_Q70 and ALC_Q71.

DVALCTYP =	Description	Condition
1	Regular drinker: a drink at least once a month	ALC_Q69=1 and ALC_Q70<7
2	Occasional drinker: less than one drink a month	ALC_Q69=1 and ALC_Q70=7
3	Don't drink now: did not have a drink in the last 12 months	ALC_Q69=2 and ALC_Q71=1
4	Abstinent (never drank)	ALC_Q69=2 and ALC_Q71=2
9	Not stated	Not stated

DVBORNI Residents place of birth

Recode of SOC_Q83.

DVBORNI =	Description	Condition
1	Canada	SOC_Q83=1
2	US/Mexico/Europe/Australia	SOC_Q83=3,4,5,8,10,12, 14,15,16,17*
3	Africa/Asia/South America	SOC_Q83=2,6,7,9,11,13, 18*
9	Not stated	Not stated

***** Countries written in by hand were coded to the appropriate category.

DVAGIMG Age at time of immigration to Canada
Based on SOC_Q84. Residents born outside Canada.

Estimated age at immigration was calculated by subtracting the calculated age from the year of the survey less SOC_Q84 (year of immigration).

DVIMMIGI Length of time in Canada since immigration
Based on SOC_Q84. Residents born outside Canada.

Length of time in Canada since immigration was calculated by subtracting SOC_Q84 (year of immigration) from the year of the survey.

DVLANGI Language in which resident is able to conduct a conversation
SOCQ86_A through SOCQ86_C.

DVLANGI =	Description	Condition
1	English only	SOCQ86_A=1 and SOCQ86_B>1 and SOCQ86_C>1
2	French only	SOCQ86_A>1 and SOCQ86_B=1 and SOCQ86_C>1
3	English & French	SOCQ86_A=1 and SOCQ86_B=1 and SOCQ86_C>1
4	English/French/Other	SOCQ86_A=1 and SOCQ86_B=1 and SOCQ86_C=1
5	English & Other	SOCQ86_A=1 and SOCQ86_B>1 and SOCQ86_C=1
6	French & Other	SOCQ86_A>1 and SOCQ86_B=1 and SOCQ86_C=1
7	Other only	SOCQ86_A>1 and SOCQ86_B>1 and SOCQ86_C=1
8	Not able to speak	SOCQ86_A=3 or SOCQ86_B=3 or SOCQ86_C=3
9	Not stated	Not stated

DVFIRST First language learned and still understood
Recode of SOCQ87_A through SOCQ86_S.

DVFIRST =	Description	Condition
1	English	SOCQ87_A=1 and SOCQ87_B -- SOCQ87_S >1
2	French	SOCQ87_A>1 and SOCQ87_B=1 and SOCQ87_C--SOCQ87_S>1
3	English & French	SOCQ87_A=1 and SOCQ87_B=1 and SOCQ87_C--SOCQ87_S>1
4	Other	SOCQ87_A>1 and SOCQ87_B>1 and any of SOCQ87_C--SOCQ87_S=1
9	Not stated	Not stated

DVPINC Total personal income
Recode of INC_Q91.

DVPINC=	Description	Condition
0	No income	INC_Q91=11
1	Less than $5 000	INC_Q91=1
2	$5 000 - $9 999	INC_Q91=2
3	$10 000 - $14 999	INC_Q91=3
4	$15 000 - $19 999	INC_Q91=4
5	$20 000 - $29 999	INC_Q91=5
6	$30 000 - $39 999	INC_Q91=6
7	$40 000 or more	INC_Q91=7,8,9,10
9	Not stated	Not stated

DVMEDS Number of different medications.

Regrouping of the number of medications taken in the past two days (DR_Q107). Residents who answered LNK_Q102=1.

DVDRG Drug groupings

Residents who answered LNK_Q102=1. DVDRGA1 through DVDRGV3 are based on responses to DRG_Q108.

The drug groupings are based on the Canadian Anatomical Therapeutic Chemical (ATC) Classification System. The categories on the microdata file are based on the first letter and the following 4 numbers of the ATC code. The full set of codes are identified on the master file maintained at Statistics Canada. These are available on request.

A1 Mineral Supplements

Mineral supplements
Other mineral supplements

A2 Antipropulsives/Antiflatulents

Antipropulsives
Antiflatulents

A3 Antiemetics/Antinauseants

Antiemetics and Antinauseants

A4 Drugs for Peptic Ulcer

Anti-peptic ulcer (H2-receptor antagonists)
Anti-peptic ulcer (others)

A5 Antacids

Antacids

A6 Laxatives

Cathartics/Laxatives
Laxatives (bulk forming)
Laxatives (contact)
Laxatives (softeners, emollients)
Laxatives (osmotically acting)

A7 **Drugs for Diabetes**

Drugs used in diabetes
Drugs used in diabetes (insulins)
Drugs used in diabetes (oral hypoglycemics)
Antihypoglycemics

A8 **Miscellaneous Alimentary Tract**

Miscellaneous GI
Nutritional supplements
Antiobesity preparations
Enzyme preparations
Propulsives
Digestives, including enzymes
Cholelitholytic and Choleretic
Anti-obesity preparations, excluding diet products

B1 **Anticoagulants**

Anticoagulants

B2 **Iron Preparations**

Iron preparations

B3 **Other Blood Agents**

Blood formation and coagulation
Irrigating solutions

C1 **Cardic Drugs**

Cardiac drugs
Cardiac (glycosides and others)
Cardiac (antiarrhythmics)
Cardiac (calcium channel blockers)

C2 **Other Cardiovascular Drugs**

Cardiovascular system
Haemorrheologic
Antihyperlipedemic

C3 **Antihypertensives**

Antihypertensive
Antihypertensive (Beta blocking)
Antihypertensive (converting enzyme inhibitors - ACE)
Antihypertensive (adrenergic neuron blockers)
Antihypertensive (A-blockers)
Antihypertensive (others)

C4 **Vasodilators**

Vasodilators (nitrates/nitrites)
Vasodilators (others)
Peripheral vasodilators

C5 **Diuretics**

Diuretics
Diuretics (thiazides and related)
Diuretics (loop)
Diuretics (potassium-sparing)

D1 **Corticosteroids/Dermatological preparations**

Anti-inflammatory (corticosteroids)

D2 **Dermatological Anti-infectives**

Antibiotics
Antivirals
Antifungals
Other Anti-infectives
Antiplatelet

D3 **Other Dermatological Preparations**

Skin/mucous membrane preparation
Anesthetics for topical use/Antipruritics
Anti-acne preparation
Antipsoriatics and protectants
Keratolytics
Keratoplastics
Astringents
Depigmenting/Pigmenting
Topical products for joint and muscular pain
Sunscreens
Miscellaneous dermatological preparations

G1 **Hormonal Contraceptives**

Hormonal contraceptives

G2 **Progestogens & Estrogens (non-contraceptive)**

Progestogens
Estrogens

G3 **Other Genitourinary Drugs**

Urinary anti-infectives
Genitourinary antispasmodics

H1 **Systemic Corticosteroids**

Corticosteroids

H2 **Thyroid Hormones**

Thyroid/Antithyroid
Thyroid hormones
Antithyroid preparations

H3 **Other Systemic Hormones**

Hormones
Pituitary and hypothalamic hormones
Calimar
Androgens
Gonadotrophins

J1 **Systemic Anti-infectives**

Antimycotics for systemic use
Antimycobacterials
Antivirals for systemic use
Aminoglycoside antibacterials
Cephalosporins and related substances
Macrolides
Quinolone antibacterials
Sulfonamides
Tetracyclines
Penicillins
Penicillins (natural)
Penicillins (penicillinase-resistant)
Penicillins (broad spectrum)
Miscellaneous antibacterials

L1 **Antineoplastic Agents**

Antineoplastic
Alkylating
Anti-metabolites
Miscellaneous antineoplastics
Immunosuppressive agents

M1 **NSAID (Non-steroidal anti-inflammatory drugs)**

Analgesics/Antipyretics
Anti-inflammatory and Antirheumatic (NSAID)

M2 **Muscle Relaxants**

Skeletal muscle relaxants
Skeletal muscle relaxants (centrally acting)
Skeletal muscle relaxants (combination)

N1 **Anticholinergic/Antimuscarinics**

Anticholinergic
Antimuscarinics/Antispasmodics
Anti-parkinson drugs
Anti-parkinson drugs (combinations)

N2 **Anti-epileptics**

Anti-epileptics

N4 **Salicylic Acid**

Analgesics/Antipyretics (salicylic acid/derivatives)

N5 **Opioids**

Analgesics/Antipyretics (opioids)
Analgesics/Antipyretics (opioids-combinations)
Analgesics/Antipyretics (opioids-codeine)

N6 **Acetaminophen**

Analgesics/Antipyretics (acetaminophen)

N7 **Antidepressants**

Antidepressants
Antidepressants (mao inhibitors)
Antidepressants (tricyclics)
Antidepressants (serotonin inhibitors)
Antidepressants (others)

N8 **Anxiolytics**

Anxiolytics, Sedatives, Hypnotics
Anxiolytics (BZD-short half-life)
Anxiolytics (BZD-medium half-life)
Anxiolytics (BZD-long half-life)
Anxiolytics (others)

N9 **Hypnotics**

Hypnotics and sedatives (barbiturates)
Hypnotics and sedatives (other)

N10 **Antipsychiotics**

Antipsychotics (phenothiazines)
Antipsychotics (others)
Antipsychotic (lithium)

N11 **Other Nervous System Drugs**

Parasypathomimetic
Ergot alkaloids
Antimigraine
Alcohol
Analgesics/Antipyretics (miscellaneous)
Psychostimulants

P1 **Antiprotozoals**

Antiprotozoals (antimalarials)

Q1 **Cold medications**

Cold medications

R1 **Antihistamines**

Antihistamines (general)
Antihistamines (for systemic use)
Antihistamines (for systemic use) - other

R2 **Anti-asthmatics**

Anti-asthmatics (theophyllines)
Anti-asthmatics (B-agonists)
Anti-asthmatics (others)

R3 **Inhaled Anti-Asthmatics**

Anti-allergic and other anti-asthmatics (inhaled)

S1 **EENT Anti-infectives (Eye/Ear/Nose/Throat)**

Anti-infectives
Anti-inflammatory
Anti-infective (antivirals)
Anti-infective (sulfonamides)
Anti-infective (miscellaneous)

S2 **Other EENT Agents (Eye/Ear/Nose/Throat)**

Tear drops
Carbonic anhydrase inhibitors
Antiglaucoma preparations and miotics
Mydriatics
Mouth washes and gargles
Nasal and systemic decongestants (nasal)
Opthalmological and otological preparations

V1 **Vitamins**

Vitamin A derivatives
Vitamin B complex
Vitamin C
Vitamin D
Vitamin E
Vitamin K
Miscellaneous vitamin preparations
Multivitamins

V2 **Other/Unclassified**

Anti-smoking agents
Heavy metal antagonists
Local anesthetics (parenteral)
Vaccines
Placebo
Unclassified therapeutics
Preparations increasing uric acid
Gold preparations
Respiratory stimulants
Missing drugs

V3 **Natural medicines**

Natural medicines
Medicinal herbs
Natural weight reduction
Tisanes
Chinese medicine
Natural immune/Anti-allergy
Micro-algae
Proteins
Amino-acids
Nucleoside
Amino sugar
Fatty acids
Natural oils, spices
Natural enzymes
Natural vitamins
Natural antioxidants
Natural minerals
Nutritional products
Alternative therapies
Aroma therapy
Homeopathic
Natural medicines (miscellaneous)
Missing products