Reference Guide

Mobility and Migration Reference Guide

National Household Survey, 2011



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Mobility and Migration Reference Guide

Catalogue no. <u>99-013-X2011006</u>

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Definitions and concepts

Introduction to the population universe

There are two subuniverses for mobility and migration: Mobility status 1 year ago, which is based on the answers to the question on the place of residence 1 year prior to the National Household Survey date (Question 23) and Mobility status 5 years ago, which is based on the answers to the question on the place of residence 5 years prior to the National Household Survey date (Question 24). Included are persons 1 year of age and over living in private households for the Mobility 1 year ago subuniverse and persons 5 years of age and over living in private households for the Mobility 5 years ago subuniverse.

There are 9 variables each in the Mobility status 1 year ago and in the Mobility status 5 years ago subuniverses. Each variable is defined in the *National Household Survey Dictionary*, Catalogue no. 99-000-X.

- <u>Mobility 1 Statistical Area Classification of residence 1 year ago</u>
- Mobility 1 Census division of residence 1 year ago
- Mobility 1 Census metropolitan area or census agglomeration of residence 1 year ago
- Mobility 1 Census subdivision of residence 1 year ago
- Mobility 1 Census subdivision type of residence 1 year ago
- Mobility 1 Components of migration (in and out)
- <u>Mobility 1 Country of residence 1 year ago</u>
- Mobility 1 Mobility status Place of residence 1 year ago
- Mobility 1 Province or territory of residence 1 year ago
- Mobility 5 Statistical Area Classification of residence 5 years ago
- Mobility 5 Census division of residence 5 years ago
- Mobility 5 Census metropolitan area or census agglomeration of residence 5 years ago
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- Mobility 5 Components of migration (in and out)
- <u>Mobility 5 Country of residence 5 years ago</u>
- <u>Mobility 5 Mobility status Place of residence 5 years ago</u>
- Mobility 5 Province or territory of residence 5 years ago

Classifications

Mobility status - Place of residence 1 year ago

Refers to the status of a person with regard to the place of residence on the reference day, May 10, 2011, in relation to the place of residence on the same date one year earlier. Persons who have not moved are referred to as non-movers and persons who have moved from one residence to another are referred to as movers. Movers include non-migrants and migrants. Non-migrants are persons who did move but remained in the same city, town, township, village or Indian reserve. Migrants include internal migrants who moved to a different city, town, township, village or Indian reserve within Canada. External migrants include persons who lived outside Canada at the earlier reference date.

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Please refer to <u>Figure 2.3</u> of the *National Household Survey Dictionary*, Catalogue no. 99-000-X for the relationship between the category of mobility status and the 2011 National Household Survey (NHS) question on place of residence 1 year ago.

The place of residence within Canada is coded to the <u>Standard Geographical Classification (SGC) 2011</u>, a 7-digit code for each census subdivision.

Mobility status - Place of residence 5 years ago

Refers to the status of a person with regard to the place of residence on the reference day, May 10, 2011, in relation to the place of residence on the same date five years earlier. Persons who have not moved are referred to as non-movers and persons who have moved from one residence to another are referred to as movers. Movers include non-migrants and migrants. Non-migrants are persons who did move but remained in the same city, town, township, village or Indian reserve. Migrants include internal migrants who moved to a different city, town, township, village or Indian reserve within Canada. External migrants include persons who lived outside Canada at the earlier reference date.

Please refer to Figure 2.4 of the National Household Survey Dictionary, Catalogue no. 99-000-X for the relationship between the category of mobility status and the 2011 National Household Survey (NHS) question on place of residence 5 years ago.

The place of residence within Canada is coded to the <u>Standard Geographical Classification (SGC) 2011</u>, a 7-digit code for each census subdivision.

Questions

Most 2011 National Household Survey (NHS) respondents received the <u>2011 National Household Survey (NHS)</u> <u>Form N1 questionnaire</u> while respondents living on Indian reserves, on Indian settlements and in other remote areas received the <u>2011 National Household Survey (NHS) Form N2 questionnaire</u>. Mobility and migration data were collected from Question 23, Place of residence 1 year ago and Question 24, Place of residence 5 years ago.

For more information on all the questions included in the 2011 NHS questionnaire, please refer to <u>Reasons why the</u> <u>NHS questions are asked</u> on the NHS website.

Data and other products

Data for the 2011 National Household Survey mobility and migration variables were released on June 26, 2013, as part of an integrated release with other variables.

The products published using 2011 NHS mobility and migration data include:

- Data products
 - NHS Profile
 - NHS Data Tables
- <u>Reference products</u>

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For more information on and access to 2011 NHS data, please refer to the <u>2011 National Household Survey (NHS)</u> website.

Data quality

National Household Survey (NHS) data underwent a series of evaluations using several quality indicators. There are three key steps in evaluating data quality:

- 1. Verification of data during collection and processing: this involves analysis of imputation rates, coding match rates and the rate of non-response to questions.
- 2. Verification of data after edit and imputation: this involves evaluating the quality of the imputed data.
- 3. Certification of final estimates: after data processing and imputation are completed, the data are weighted to represent the total Canadian population. These weighted data (the final estimates) are certified to ensure that they are coherent and reliable. At this stage, the final estimates are compared to those of different data sources. This is the final stage of data validation when data are recommended for release, by geographical level and area of interest. The main highlights of the analyses conducted in this stage are presented below.

Of all the quality measurements produced and analysed during the evaluation, two measurements are presented to users: the global non-response rate and the imputation rate by question.

- Information on the global non-response rate is available in the <u>National Household Survey User Guide</u>, Catalogue no. 99-001-X. The global non-response rate combines the non-response at the household level and the non-response at the question level. It is calculated and presented for each region. The global non-response rate is also the key release criterion linked to the quality of NHS estimates.
- The imputation rate by question, excluding global non-response, is a quality measurement specific to each question in the NHS. It measures the proportion of respondents who did not answer the question or whose response is deemed invalid and for which a value was imputed. When done carefully, imputation can improve data quality by reducing the gaps caused by non-response. The imputation rates by question are presented in this section.

The evaluation of the mobility variables consisted of the following:

- Examination of imputation rates by question
- Comparison of the distribution of unedited and edited data to determine if any data bias is introduced by imputation
- Comparison with data from the 2006 Census
- Comparison with other sources of data, as applicable.

Coding of mobility

The inside Canada place name write-ins were converted to 7-digit codes based on the 2011 Standard Geographical Classification. Overall, 76.3% of the write-ins were coded by the system while the match rate for the postal code was 75.0%. The remaining responses were sent to interactive coding for manual coding.

The outside Canada write-ins were converted to a 3-digit code coming from the place of birth classification. Overall, 92.5% of the write-ins were coded directly by the system. The remaining responses were also sent to interactive coding for manual coding.

Imputation for non-response and inconsistent responses

During data processing of the mobility variables, inconsistent or missing responses are replaced with valid values. This is done by identifying persons in the same geographical area that have similar characteristics to the failed record and then copying their values to fill in the missing or erroneous data. Analysis of the unedited and edited data did not reveal any significant alteration of the mobility data due to imputation. Table 1 shows weighted imputation rates for the mobility status by question and by province. The overall imputation rates for mobility status are generally similar with those from the 2006 census: 4.8% for mobility one year ago compared with 4.2% in 2006, and 6.9% for mobility five years ago compared with 7.9% in 2006.

Table 1	Imputation	rates f	or the	mobility	status
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Province or territory	Question 23: mobility 1 year ago	Question 24: mobility 5 years ago	
Canada	4.8%	6.9%	
Newfoundland and Labrador	4.5%	5.9%	
Prince Edward Island	4.9%	6.8%	
Nova Scotia	4.7%	7.4%	
New Brunswick	4.5%	6.0%	
Quebec	4.4%	6.6%	
Ontario	5.1%	7.4%	
Manitoba	4.4%	5.7%	
Saskatchewan	4.3%	5.7%	
Alberta	4.8%	6.8%	
British Columbia	4.8%	6.6%	
Yukon	5.7%	6.9%	
Northwest Territories	2.1%	4.6%	
Nunavut	2.6%	5.1%	

Cross-classification of mobility and migration variables

Mobility and migration variables are often crossed with other variables in a table to analyse a subject in more depth. Data users should be aware that when examining small populations, either by selecting small geographical areas or by crossing multiple variables, the NHS estimates will tend to have greater variability due to sampling error.

Further references related to data quality

For general information on the overall content, collection, design, processing and data quality for the NHS as well as factors that may impact the quality of the NHS data, such as response errors and processing errors, please refer to the *National Household Survey User Guide*, Catalogue no. 99-001-X.

Comparability with other data sources

As a standard practice, the quality of the 2011 NHS mobility and migration information released was evaluated internally prior to publication. The data were compared, to the extent possible, with alternative data sources.

In order to evaluate the quality of the mobility 1 year and 5 years ago data, results from the 2011 National Household Survey were compared with the final estimates of migration based on income tax files along with the Canada child tax benefit data.

For the comparison of the external migration data, the landed immigrant data and the student and working visa authorization files obtained from Citizenship and Immigration Canada were used.

Based on comparisons with other data sources, the estimation of internal migrants from the 2011 National Household Survey are, in general, lower than the ones derived from administrative data.

Estimates of internal migration may be less accurate for small geographic areas, areas with a place name that is a duplicate elsewhere, and for some census subdivisions (CSDs) where residents may have provided the name of the census metropolitan area or census agglomeration instead of the specific name of the component CSD from which they migrated.