



Strategic Research La recherche stratégique

Aboriginal data as a result of changes to the 2011 Census of population

Key Findings:

- The Census of population has undergone many changes throughout its history. The latest is the introduction of a voluntary survey called the National Household Survey (NHS) in place of a mandatory long-form questionnaire.
- The content of the voluntary 2011 NHS is virtually the same as the one for the mandatory 2006 Census long form.
- In 2011, all households in First Nations and Inuit communities received the NHS questionnaire.
- NHS participation in First Nations and Inuit communities was higher than in other communities in Canada.

Introduction

The mandatory long form questionnaire of Statistics Canada's Census of Population has been Aboriginal Affairs and Northern Development's most reliable and comprehensive source of demographic and socioeconomic information on First Nations, Inuit and Métis people and communities. Many data users have expressed concern about the impact of the National Household Survey and asked whether it will affect the quality of the data on Aboriginal people and communities or impact their usefulness.

Before reviewing the details of this question, it is important

to note that the Census has undergone changes over time. Over the years, changes were made to the methodology, questionnaire content, including definitions of the Aboriginal population, and enumeration procedures. For example in 1971, two major changes were introduced: self-enumeration replaced interviewer enumeration and part of the questions were asked only to a sample of the population (then 1/3) rather than to the entire population. The changes made in 2011, while significant, are not unique. They are the latest in a number of changes that have taken place over time.

The National Household Survey (NHS)

The content of the NHS questionnaire is virtually identical to the 2006 long-form Census, which means that the changes did not lead to any loss of previous content.

Collection Methodology

Enumeration in First Nations, Inuit and most of Canada's northern communities has long been carried out in a very different manner to the general collection methods, up to and including the 2011 NHS, in order to meet the needs of these small and often remote communities. The two different collection methods are described below.

General collection

In 2006, private households in Canada were asked to complete either a short or a long census questionnaire, either on paper or on-line: 80% were asked to complete the short form that contained basic demographic information, and 20% the long form that contained additional questions on a variety of social and economic conditions.

In 2011, every household in Canada was asked to complete a short form Census questionnaire¹. In addition, one in three households (33%) was selected to participate in the National Household Survey. Those households that completed the

Changes to the Census: An example

In 1981 Canada's Aboriginal populations were enumerated through a single question, based on ancestry. Introduced over time, four distinct concepts and questions are now used to identify Aboriginal populations:

- Ancestry (first introduced in 1871) - What were the ethnic or cultural origins of this person's ancestors?
- Indian Status (since 1991) - Is this person a Status Indian (Registered or Treaty Indian as defined by the Indian Act of Canada)?
- Self-identification (since 1996) - Is this person an Aboriginal person, that is, First Nations (North American Indian), Métis or Inuk (Inuit)?
- First Nation Membership (since 1996) - Is this person a member of a First Nation/ Indian band?

Such changes resulted in improvements in the quality of information, since it allowed individuals to self-identify as First Nations, Inuit or Métis, distinguished those with legal status, and recognized the diversity with respect to Aboriginal peoples, rather than exclusively relying on ethnocultural background. Nevertheless, the adoption and use of these concepts marked a sharp break from past data, presenting challenges in terms of the data comparability between Censuses.

Census online and were selected to participate in the NHS could complete it online at the same time. The other households that were selected for the NHS received an invitation to participate three to four weeks after Census Day.

First Nations, Inuit and northern communities

The Census has long used a different collection strategy in Aboriginal and most northern communities². Prior to 2011, all First Nations, Inuit and northern community households were enumerated using the long form Census questionnaire, administered in-person by a canvasser³ rather than being left for self-completion. This approach did not change in 2011, since all such households were administered both the Census and the NHS. In these areas, the canvassers administered the mandatory Census questionnaire in-person and immediately asked the household respondent if they would participate in the NHS, completing it at the same time, if the respondent agreed.

In contrast, Aboriginal people living off-reserve or outside northern/Inuit communities were enumerated using the same sampling structure used for the rest of the general population - that is, they received the long form questionnaire only if they were selected in the 20% (2006) or 33% (2011) random sample.

Participation

Participation in the Census and the NHS can be measured in a number of different ways, including community participation and response rates for different levels of geography.

As expected with a mandatory survey, the response rate for the Census long form was high in 2006, at about 94%. Nationally, an estimated 2,300,000 households returned a long form that year. For the 2011 NHS, Statistics Canada reported a collection response rate of 69% at the national level, higher than the 50% response rate that was targeted. This means that around 3,100,000 households completed NHS questionnaires (see Table 1).

Although the overall number of participating households is high for both years – and actually higher for the NHS – the voluntary nature of the NHS introduces a concern that there may be ‘non-random bias’ in the sample. This means that certain people or households, with particular socio-economic or demographic characteristics, might be less likely than others to complete the NHS. Statistics Canada suggested previously that Aboriginal people may be one segment of the Canadian population less likely to participate in the NHS, based on their past survey experience.

Community-level data are of particular importance to AANDC, since much of the work of the Department involves working with First Nations and Inuit communities. Statistics Canada uses the term Census Sub-Division (CSD) to define municipalities, or areas equivalent to municipalities. Historically, the presence of incompletely enumerated reserves is an issue that poses challenges to the analysis of the on-reserve First Nations

Table 1: Differences in 2006 and 2011 Census/NHS response rates

	2006 CENSUS LONG FORM	2011 NHS
NUMBER OF HOUSEHOLDS	12,500,000	13,300,000
SAMPLE	1 IN 5 (20%)	1 IN 3 (33%)
RESPONSE RATE	94%	69%
RETURNED QUESTIONNAIRES	2,350,000	3,050,000

Source: Statistics Canada, 2006 & 2011. Note: Numbers are rounded.

population. Incompletely enumerated reserves are First Nations communities that either declined to participate in the Census or for which enumeration was interrupted. Statistics Canada maintains an open dialogue with First Nations communities and has developed positive relationships with most. The number of incompletely enumerated reserves dropped significantly from 136 in 1986, to 22 in 2006, and 36 in 2011⁴. As a result, the overall quality of the data has improved but such improvements result in new challenges to comparing data over time.

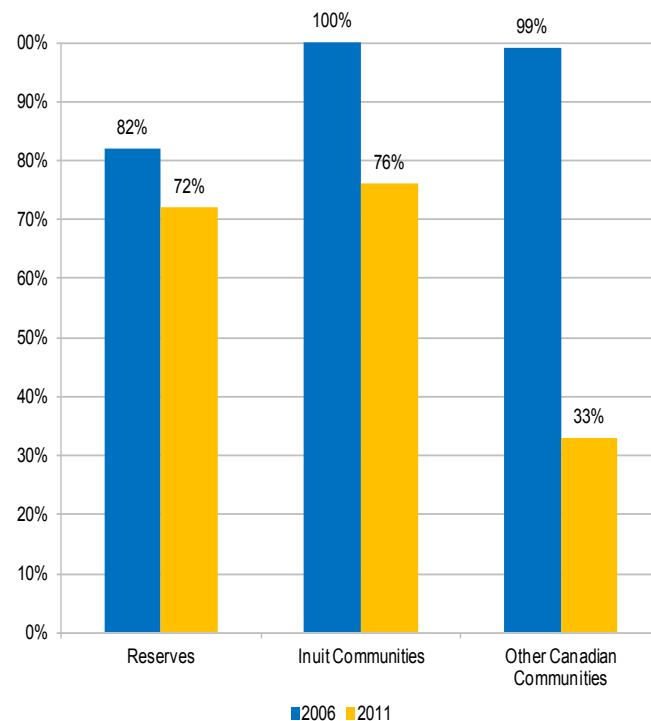
Statistics Canada also measures Global Non-Response. The Global Non-Response rate is a combined measurement of the percentage of households that did not complete a survey (total non response) and the average number of missing information on questionnaires that are returned to Statistics Canada (partial non-response). In the 2006 Census, data from communities with a Global Non-Response rate of 25% or higher were not released for quality reasons. Communities with a population under 40 were suppressed for confidentiality reasons. As a result of this and the incompletely enumerated reserves, 575 of 702 reserves had full and detailed census data available in 2006, as did all 50 Inuit communities with populations of 40 persons or more.

For the 2011 NHS, Statistics Canada set the cut-off at 50% for Global Non-Response rate for communities where data would not be released for quality reason. As in 2006, data are suppressed for any community with a population below 40 for confidentiality reasons. As a result of this and the incompletely enumerated reserves, Statistics Canada will publish data for 573 reserve communities and 46 Inuit communities in 2011.

Based on these criteria, the availability of community-level data for the 2006 Census and the 2011 NHS shows distinct differences in the percentage of responses between community types. This is not unexpected, given the different sampling strategies employed in reserves and Inuit and most of Canada's northern communities, in addition to the move to the voluntary NHS. Figure 1 shows the proportion of reserve, Inuit and other Canadian communities in 2006 and 2011 for which Statistics Canada has published CSD-level data. The figures from these two years are not directly comparable in terms of data quality, as they are based on different suppression cut-offs. This figure does, however, show the proportion of communities that met the release criteria for the 2006 Census and 2011 NHS, respectively, and for which community level data are readily available.

For the 2006 Census, data for reserve communities was more often suppressed than was data for Inuit or other communities. In fact, data was available from all 50 Inuit communities (100%) and nearly all other communities (99%) in 2006. Looking at 2011, Statistics Canada published data for a much higher proportion of reserve communities. Not

Figure 1: Community-level data published by Statistics Canada[†], 2006 Census and 2011 NHS



[†] Expressed as a proportion of communities with a population of 40 or more, by Community Type. Note: "Reserves" are based on the definition of Indian Reserves used by Statistics Canada in each Census year. Published data is also based on the suppression criteria set for that particular year (i.e. a 25% or greater Global Non-Response rate in 2006 and a 50% or greater Global Non-Response rate in 2011).

Sources: Statistics Canada, Census of Population, 2006; National Household Survey, 2011.

only did the proportion of communities rise in comparison to the 2006 figure, reserve communities in 2011 had the highest proportion of communities with CSD-level data available. The figure for Inuit was similar, though it lowered slightly to 92% (representing 46 of 50 communities). The data for other communities, in contrast, was down about a quarter from the 2006 figure.

Aboriginal peoples living off-reserve or outside most northern or Inuit communities were sampled as part of the general population. That is, they would have had a 1 in 3 chance that their household was selected to participate in the NHS. Regarding the Aboriginal population living in large urban areas (known as Census Metropolitan Areas) Statistics Canada concentrated their collection efforts in these areas to ensure good participation from Canadian cities. Nevertheless, Aboriginal populations tend to make up relatively small proportions of these areas and data from these areas must be interpreted with caution particularly when considered at the level of individual cities. Analysis of the quality of the urban and off-reserve Aboriginal data from the NHS will be an ongoing process, meaning more time is required to complete the quality assessment.

Conclusion

The Census has never been a static collection tool. Various factors have affected the coverage, quality and comparability of Census data from one year to the next. Despite these changes, the Census has remained the most reliable and comprehensive national source of data for Aboriginal populations and communities in Canada.

The NHS is the largest voluntary survey ever collected by Statistics Canada. Response rates were higher than anticipated but they did vary from one community to another. While the changes brought to the NHS represent a major shift from how the Census was conducted in the past, they are seen as one in a number of periodic changes and modifications that the Census Program has undergone.

Notes:

1. The 2011 short form questionnaire was similar to the 2006 Census short form but with the addition of three questions on language, previously on the long form.
2. Yellowknife and Whitehorse were enumerated using the general collection strategy.
3. The canvasser is a Statistics Canada employee who would interview the household respondent and record their answers in-person.
4. Thirteen of these were incompletely enumerated due to emergencies such as forest fires, rather than a refusal to participate. The number of reserves which declined to participate was 23.

About the author

This research brief was prepared by Christopher Penney from the Strategic Research Directorate with the collaboration of Statistics Canada and the Statistics and Measurement Directorate of AANDC.

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The Strategic Research Directorate is mandated to support the Federal Government's policy making regarding First Nations, Métis, Inuit and northern peoples in Canada. It does this through a program of survey development, policy research and knowledge transfer.

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