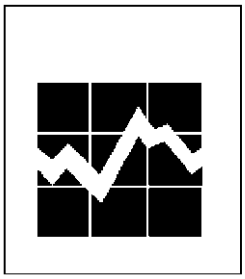

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Microdata User's Guide

Canada's Alcohol and Other Drugs Survey

September 1994

Statistics Canada Statistique Canada

Canada

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1. INTRODUCTION

Canada's Alcohol and Other Drugs Survey (CADS) was conducted by the Special Surveys Division of Statistics Canada on behalf of Health Canada.

The survey was conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19. Collection plans for the survey are registered under collection registration number STC/HLD-040-75012 and personal information bank number STC/P-PU-016.

This documentation should provide sufficient information to access and manipulate data from the survey. Anyone interested in obtaining further information about the survey may contact one of the following persons:

Statistics Canada

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Statistics Canada
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K1A 0T6
1-613-951-4577 (Phone)
1-613-951-0562 (Facsimile)

Health Canada

Patricia MacNeil
Health Promotion and Programs Branch
Population Health and Issues Directorate[1]
Health Canada
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1-613-990-7097 (Facsimile)

[1]Formerly the Health Promotion Directorate

2. BACKGROUND

The first National Alcohol and Other Drugs Survey (NADS) was conducted in 1989. It was the first Canadian survey with a central focus on alcohol and other drug issues. Previous surveys had contained items on alcohol and other drugs that were useful to researchers and practitioners, but an information database that would facilitate indepth explorations of alcohol and other drug topics was required . The development of this database has been made possible by the implementation of Canada's Drug Strategy (CDS). The first phase of CDS was launched on May 25, 1987 by the Minister of Health and Welfare Canada, with the objective of reducing the harm caused by drug abuse to individuals, families and communities. The strategy was renewed on March 31, 1992.

Approval to proceed with the update to NADS 1989 was granted in May, 1993. Canada's Alcohol and Other Drugs Survey (CADS) was similar to the earlier survey, but incorporated an emphasis on "at risk" populations, as defined by Canada's Drug Strategy, Phase II. The Special Surveys Division at Statistics Canada was contracted to conduct a feasibility study of the methods and options to be used in the survey and conducted the main survey in September 1994.

3. OBJECTIVES

The survey questions addressed the following data objectives:

1. To measure the prevalence and patterns of alcohol and other drug use in Canada.

2. To assess harm and other consequences associated with use.

3. To evaluate trends relevant to prevalence and harm.

4. To measure demographic, contextual or proximal risk factors of use (i.e. circumstances and situational factors that may lead to substance use/abuse.)

5. To measure the range of formal and informal responses to drug problems, including attitudes towards users and problem behaviours.

6. To ensure that questions/measures are sensitive to gender and ethnocultural groups (i.e. given the designated "at risk" groups defined by Canada's Drug Strategy, Phase II.)

7. To identify factors associated with positive change toward the reduced use of alcohol and other drugs (including reasons why non-users choose not to use.)

8. To attempt to fill gaps identified in the NADS instrument. The CADS questionnaire provides increased detail in the following content areas:

    - the use of solvents
    - emergent policy issues
    - temporal patterns of alcohol use
    - dosage and patterns of illicit drug use
    - problems associated with alcohol and other drug use and situations of use (i.e. how and when do people get pressured to drink)
    - interactional processes by which people seek help (i.e. what pressures lead to getting help)

4. SURVEY METHODOLOGY

The survey was carried out during the period September 7 to November 5, 1994 using a Random Digit Dialling (RDD) telephone sampling method.

4.1 POPULATION COVERAGE

The target population for the CADS was all persons 15 years of age and older in Canada, excluding:

1. residents of the Yukon and Northwest Territories;
2. full-time residents of institutions.

With RDD, households without telephones were also excluded. However, persons living in such households represent less than 2% of the target population. Survey estimates have been adjusted (weighted) to represent persons without telephones.

4.2 SURVEY DESIGN

Stratification procedures used in the survey design are outlined in Section 4.2.1. The sample for CADS was selected using the Elimination of Non-Working Banks technique of RDD. A description of this method is provided in Section 4.2.2. Section 4.2.3 discusses sample sizes.

4.2.1 STRATIFICATION

In order to carry out sampling, each of the ten provinces was divided into strata or geographic areas. Generally, for each province one stratum represented the Census Metropolitan Areas (CMAs) of the province and another represented the non-CMA areas. There were two exceptions to this general rule:

- Prince Edward Island has no CMA and so did not have a CMA stratum
- Montreal and Toronto were each separate strata

4.2.2 ELIMINATION OF NON-WORKING BANKS RDD DESIGN

The Elimination of Non-Working Banks (ENWB) sampling technique is a method of RDD in which an attempt is made to identify all working banks[2] for an area (i.e., to identify all banks with at least one household). Thus, all telephone numbers within non-working banks are eliminated from the sampling frame.

For each province, lists of telephone numbers in use were purchased from the telephone companies and lists of working banks were extracted. Each bank was assigned to a stratum within its province.

A special situation existed in Ontario and Quebec because some small areas are serviced by independent telephone companies rather than by Bell Canada. The area code prefixes for these areas were identified by matching the Bell file with a file of all area codes and prefixes. Area code prefixes from Ontario and Quebec not on the Bell file were identified. All banks within these area code prefixes were generated and added to the sampling frame. Use of the Waksberg method[3] was not possible for these areas since it requires that an accurate population estimate be available for the survey area. Such an estimate was not available for the parts of Ontario and Quebec not covered by Bell.

A random sample of telephone numbers was generated in each stratum (from the working banks). An attempt was made to generate the entire sample of telephone numbers on the first day of interviewing. Therefore, a prediction of the percentage of numbers dialled that would reach a household had to be made (this is known as the "hit rate"). The hit rate was estimated using information from previous RDD surveys, specifically the General Social Survey Cycle 8.

For CADS, 46.1% of the numbers dialled reached households.

An attempt was made to conduct a CADS interview with one randomly selected person from each household.

A bank of telephone numbers is a set of 100 numbers with the same first eight digits (i.e. the same Area Code-Prefix-Bank ID).

Thus 613-951-9180 and 613-951-9192 are in the same bank, but 613-951-9280 is in a different bank.

Waksberg, J. "Sampling methods for Random Digit Dialling," *Journal of the American Statistical Association*, 73, (1978): 40-46.

4.2.3 SAMPLE SIZES

The sample consisted of 16,082 households. Upon contacting a household all household members were listed and the following basic demographic information was collected: age, sex and marital status. A person 15 years of age or older was then randomly selected in each household and the relationship of all other household members to the selected person was collected. A CADS interview was also completed for each selected person.

CADS collected the following types of information: policy with respect to how respondents feel about laws concerning alcohol and other drugs (**P**olicy Questions); general state of health, stress and ability to handle personal problems (**G**eneral Questions); respondents' employment activities (**E**mployment Questions); tobacco consumption (**T**obacco Questions); respondents' and other persons' drinking behaviour and its consequences (**A**lcohol Questions); use of medications and illegal drugs (Questions on **M**edicines and Other Drugs); and height, weight and background socio-demographic questions for classification purposes (**B**ackground Questions). A response was obtained from 12,155 of the selected households, yielding a 75.6% response rate.

5. DATA COLLECTION

CADS collected data using Computer Assisted Telephone Interviewing (CATI). With CATI, the survey questions appear on a computer monitor. The interviewer asks the respondent the questions, then enters the responses into the computer as the interview progresses. Built-in edits and fewer processing steps result in more timely and better quality data. CATI methodology also eliminates the need for paper questionnaires. The paper document is produced only as a reference document and for the training of interviewers.

A CADS Control Component (CAD-1) was completed for each telephone number generated in the sample. When a private household was contacted, all members of the household were enumerated and basic demographic information such as age, sex, marital status and relationship to the selected respondent was collected for each household member. The respondent was randomly selected by a CATI algorithm and a CADS questionnaire (CAD-2) was completed for this person.

A field test of the questionnaire was completed in June 1994 in the Statistics Canada Halifax and Montréal regional offices. Data collection for the main survey began the second week of September 1994 and continued through the first week of November 1994. All interviewing took place using CATI telephone facilities in five regional offices: Halifax, Montréal, Toronto, Edmonton and Vancouver. Interviewers were trained by Statistics Canada staff in telephone interviewing techniques, survey concepts and procedures in a one day classroom training session. The majority of interviewers had previous telephone interviewing experience.

A CATI Interviewer's Manual and an Interviewer's Content Manual were provided as support documentation for interviewers during the data collection period for CADS.

Respondents were interviewed in the official language of their choice. Participation in the survey was voluntary. If a respondent refused to provide some or all information requested, interviewers' supervisors were instructed to make a second call in an attempt to obtain the information. If the respondent was temporarily away or there was some language or other difficulty preventing an interview, interviewers were instructed to call back at another time. Proxy responses on behalf of the respondents were not allowed.

Interviewing took place between the 9:00 to 21:30 time period in each regional office from Monday to Saturday throughout the survey period. Because of lower than anticipated hit rates in some strata, additional telephone numbers were generated during data collection to meet the sample size requirements of the survey. Information on the total numbers generated, hit rates and response rates for CADS is provided in Section 7.1.

6. DATA PROCESSING

The main output of CADS is a public microdata file. This section presents a brief summary of the processing steps involved in producing this file.

6.1 DATA CAPTURE

Responses to the survey questions were entered directly into the CATI mini-computers in Statistics Canada's regional offices and transmitted to Ottawa. The data capture program allowed for a valid range of codes for each question and automatically followed the flow of the questionnaire for CADS.

6.2 EDIT AND IMPUTATION

The first stage of survey processing involved initial file verification to ensure that all CADS records were received in head office. Duplicate records were eliminated.

Since the CATI questionnaire for CADS was designed to assist the interviewers in entering responses to questions easily as well as maintaining existing conventions in the CATI process, a number of data transformations had to be done after interviews were completed. For example, the CATI process allowed for questions to be either "refused" (coded with an "R") or answered with a "don't know" response (coded with an "X"). These code values had to be converted to numeric codes in an early stage of head office processing.

Several data fields underwent further reformatting (e.g. all multiple response questions) into fixed positional arrays. Records were then split into a response file and a non-response file.

Text fields were removed from the response records and replaced by appropriate codes. Based on text categories (e.g. industry, occupation, or other "specify" entries), files were constructed for further processing during the coding stages.

Due to the nature of the survey, imputation was not appropriate for most items and thus 'not stated' codes were usually assigned for missing data. In some cases, the answer was not known but could be obtained deterministically by the questions which followed or from information from other areas of the survey.

Non-response was not permitted for those items required for weighting. Values were imputed in the rare cases where any of the following items were missing: age, sex, number of eligible persons 15 years of age and over and number of residential telephone lines. The imputation was based on examination of the record and the consideration of any useful data such as age and sex of other household members, interviewer's comments, etc.

DVTEL (number of residential telephone lines) was derived from questions B16 to B20. When the questionnaire did not contain adequate information to derive DVTEL, it was assigned a value of one (1).

6.3 CODING OF OPEN-ENDED QUESTIONS

Several questions allowing write-in responses had the write-in information coded into either new unique categories, or to a listed category if the write-in information duplicated a listed category. Respondent's industry and occupation information was coded to Statistics Canada's 1980 Standard Industrial Classification (SIC) and Standard Occupational Classification (SOC). SIC codes were assigned to the 3-digit level, and SOC codes to the 4-digit level.

6.4 CREATION OF DERIVED VARIABLES

A number of variables on the file have been derived by using items found on the CADS questionnaire. Derived variable names generally start with DV and are followed by characters referring to the subject. In some cases, the derived variables are straightforward and involve collapsing of categories. In other cases, several variables have been combined to create a new variable. Section 12 provides further information on these variables.

6.5 WEIGHTING

When a probability sample is used, as in CADS, the principle behind estimation is that each person selected in the sample 'represents' (in addition to the respondent) several other persons not in the sample. For example, in a simple random sample of 2% of the population, each person in the sample represents 50 persons in the population.

An overall weighting factor (FINWGHT) was placed on each record to indicate the number of sampled persons that the record represents. This weighting factor refers to the number of times a particular record should contribute to a population estimate. For example, to estimate the number of persons who have taken diet pills or stimulants during the past 12 months, the value of FINWGHT is summed over all records with this characteristic.

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

6.6 SUPPRESSION OF CONFIDENTIAL INFORMATION

It should be noted that the 'Public Use' microdata files described above differ in a number of important respects from the survey 'master' files held by Statistics Canada. These differences are the result of actions taken to protect the anonymity of individual survey respondents. For example, variables with extreme values have been capped and information for some variables have been aggregated into broader categories (e.g., occupation, religion). 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 8 of this document.

7. DATA QUALITY

7.1 RESPONSE RATES

The following table summarizes the hit rates, response rates and the final sample size for CADS.

Prov	Strata	Telephone Numbers Generated	Supplement Numbers Generated	Total Telephone Numbers Generated	Hit rate	Response Rate	Sample Size
Nfld	**CMA**	540	0	540	44.2%	86.6%	206
	non-CMA	1,246	0	1,246	42.0%	87.9%	459
P.E.I		855	0	855	44.0%	83.2%	313
N.S.	**CMA**	948	0	948	48.6%	74.8%	344
	Non-CMA	1,243	0	1,243	50.0%	85.8%	533
N.B.	**CMA**	393	0	393	34.1%	88.8%	119
	Non-CMA	1,530	170	1,700	44.4%	81.9%	617
Que.	**Montreal**	2,307	193	2,500	55.2%	72.8%	1,000
	Other CMA	784	60	844	55.0%	75.6%	351
	Non-CMA	4,686	0	4,686	22.8%	81.8%	874
Ont.	**Toronto**	2,588	830	3,418	48.4%	60.4%	997
	Other CMA	1,872	170	2,042	57.5%	72.5%	851
	Non-CMA	2,788	302	3,090	41.7%	70.3%	905
Man.	**CMA**	1,262	200	1,462	49.8%	72.4%	527
	Non-CMA	968	0	968	47.0%	75.4%	343
Sask.	**CMA**	683	65	748	51.3%	81.3%	312
	Non-CMA	1,492	0	1,492	44.4%	79.9%	529
Alb.	**CMA**	1,784	0	1,784	57.5%	76.7%	786
	Non-CMA	1,433	0	1,433	49.6%	80.2%	570
B.C.	**CMA**	1,976	190	2,166	55.9%	72.8%	881
	Non-CMA	1,356	0	1,356	58.0%	81.3%	638
Total		32,734	2,180	34,914	46.1%	75.6%	12,155

7.2 SURVEY ERRORS

The estimates derived from this survey are based on a sample of households. Somewhat different figures might have been obtained if a complete census had been taken using the same questionnaire, interviewers, supervisors, processing methods, etc. as those actually used. The difference between the estimates obtained from the sample and the results from a complete count taken under similar conditions is called the sampling error of the estimate.

Errors which are 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 a large number of 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 was made to reduce non-sampling errors in the survey. Quality assurance measures were implemented 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 questionnaire, observation of interviewers to detect problems of questionnaire design or misunderstanding of instructions, procedures to ensure that data capture errors were minimized and coding and edit quality checks to verify the processing logic.

A major source of non-sampling errors in surveys is the effect of non-response on the survey results. The extent of non-response varies from partial non-response (failure to answer just one or some questions) to total non-response. Total non-response occured because the interviewer was either unable to contact the respondent, no member of the household was able to provide the information, or the respondent refused to participate in the survey. Total non-response was handled by adjusting the weight of households who responded to the survey to compensate for those who did not respond.

In most cases, partial non-response to the survey occured when the respondent did not understand or misinterpreted a question, refused to answer a question, or could not recall the requested information.

Since it is an unavoidable fact 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.

Although the exact sampling error of the estimate, as defined earlier, cannot be measured from sample results alone, it is possible to estimate a statistical measure of sampling error, the standard error, from the sample data. Using the standard error, confidence intervals for estimates (ignoring the effects of non-sampling error) may be obtained under the assumption that the estimates are normally distributed about the true population value. The chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and virtually with certainty that the differences would be less than three standard errors.

Because of the large variety of estimates that can be produced from a survey, the standard deviation is usually expressed relative to the estimate to which it pertains. The resulting measure, known as the coefficient of variation (C.V.) of an estimate is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

For example, suppose that, based upon the results of the survey, one estimates that 28.9% of males are current cigarette smokers, with a standard error of .007. Then the coefficient of variation of the estimate is calculated as:

$$\frac{.007}{.289} \times 100\% \doteq 2.4\%$$

8. GUIDELINES FOR TABULATION ANALYSIS AND RELEASE

It is important for users to become familiar with the contents of this section before publishing or otherwise releasing any estimates derived from Canada's Alcohol and Other Drugs Survey file.

This section of the documentation outlines the guidelines to be adhered to by users tabulating, analyzing, publishing or otherwise releasing any data derived from the survey microdata file. With the aid of these guidelines, users of microdata should be able to produce the same figures as those produced by Statistics Canada and, at the same time, will be able to develop currently unpublished figures in a manner consistent with these established guidelines. The guidelines can be broken into four broad sections: Rounding Guidelines; Sample Weighting Guidelines; Guidelines for Statistical Analysis; and C.V. Release Guidelines.

8.1 ROUNDING GUIDELINES

In order that estimates produced from Canada's Alcohol and Other Drugs Survey microdata file correspond to those produced by Statistics Canada, users are urged to adhere to the following guidelines regarding the rounding of such estimates. It may be misleading to release unrounded estimates, as they imply greater precision than actually exists.

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 sub-totals 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 are to be computed from unrounded components (i.e. numerators and/or denominators) and then are to be 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.

8.2 SAMPLE WEIGHTING GUIDELINES FOR TABULATION

The sample design used for CADS was not self-weighting. When producing simple estimates, including the production of ordinary statistical tables, users must apply the proper sampling weight.

If proper weights are not used, the estimates derived from the microdata tapes cannot be considered to be 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.

8.2.1 DEFINITIONS OF TYPES OF ESTIMATES: CATEGORICAL VS. QUANTITATIVE

Before discussing how the survey data can be tabulated and analyzed, it is useful to describe the two main types of point estimates of population characteristics which can be generated from the microdata file for the survey. These are qualitative estimates (estimates of counts or proportions of people possessing certain characteristics) and quantitative estimates involving quantities or averages. More complex estimation and analyses are covered in Section 8.3.

(1) Categorical Estimates

It should be kept in mind that the target population for CADS was non-institutionalized persons 15 years of age or over, living in the ten provinces. Categorical estimates are estimates of the number or proportion of this target population possessing certain characteristics. The number of people (14,088,748) who describe their state of health as excellent or very good (Question G1= 1 or 2) is an example of this kind of estimate. These estimates are readily obtained by summing the final weights (FINWGHT) of the records possessing the characteristic in question.

Example of a Categorical Question:

G 1 In general compared to other persons your age would you say your health is...

1 Excellent?
2 Very Good?
3 Good?
4 Fair?
5 Poor?
R Refusal
X *Don't know*

(2) Quantitative Estimates

Quantitative estimates are estimates of totals or of means (averages), medians and other measures of central tendency of quantities based upon some or all of the members of the surveyed population.

Some variables on the CADS microdata file are quantitative in nature (e.g., TCIGCUR-Number of cigarettes smoked over the last 7 days). From these variables, it is possible to obtain such estimates as the average number of cigarettes smoked over the last 7 days by sex.

These estimates are of the following ratio form:

Estimate (average) = X / Y

The numerator (X) is a quantitative estimate of the total of the variable of interest (say, number of cigarettes smoked over the last 7 days) for a given sub-population (say, males who smoked over last 7 days). X would be calculated by multiplying the final weight (FINWGHT) by the variable of interest (TCIGCUR) and summing this product over all records for men who smoked over last 7 days (SEX1=1 and T3=1).
The denominator (Y) is the qualitative estimate of the number of participants within that subpopulation (those men who smoked over last 7 days). Y would be calculated by summing the final weight (FINWGHT) over all records for males who reported smoking over last 7 days (SEX1=1 and T3=1). The two estimates X and Y are derived independently and then divided to provide the quantitative estimate.

The estimated average number of cigarettes smoked for men over the last 7 days was :

$$\frac{\text{----------}}{3{,}141{,}177} = 124$$

Example of a Quantitative type Question:

T6C	**What about yesterday? How many cigarettes did you smoke?**
0	*No cigarettes*
01-94	*Number of cigarettes, if more than 94, make 94*
A	*Half a pack*
B	*One pack*
C	*One and a half packs*
D	*Two packs*
E	*Two and a half packs*
F	*Three packs or more*
R	*Refusal*
X	*Don't Know*

8.2.2 TABULATION OF CATEGORICAL ESTIMATES

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

(a) summing the final weights of records having the characteristic of interest for the numerator (X),

(b) summing the final weights of records having the characteristic of interest for the denominator (Y), then

(c) dividing the numerator estimate by the denominator estimate.

8.2.3 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 final weight for each record, then summing this quantity over all records of interest.

To obtain a weighted average of the form X/Y, the numerator (X) is calculated as for a quantitative estimate and the denominator (Y) is calculated as for a categorical estimate.

Details of the method used to calculate the quantitative estimates are presented in Chapter 9.

8.3 GUIDELINES FOR STATISTICAL ANALYSIS

As is detailed in Section 4 of this document, the respondents from CADS do not form a simple random sample of the target population. Instead, the survey had a complex design, with stratification and multiple stages of selection, and unequal probabilities of selection of respondents. 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.

CADS used a stratified design, with significant differences in sampling fractions between strata. Thus, some areas are over-represented in the sample (relative to their populations) while some other areas are relatively under-represented; this means that the unweighted sample is not representative of the target population.

The survey weights must be used when producing estimates or performing analyses in order to account for this over-and under-representation. While many analysis procedures found in statistical packages allow weights to be used, the meaning or definition of the weight in these procedures often differs from that which is appropriate in a sample survey framework, with the result that while in many cases the estimates produced by the packages are correct, the variances that are calculated are almost meaningless.

For many analysis techniques (for example linear regression, logistic regression, estimation of rates and proportions, and analysis of variance), a method exists which can make the variances calculated by the standard packages more meaningful. If the weights on the data, or any subset of the data, are rescaled so that the average weight is one (1), then the variances produced by the standard packages will be more reasonable; they still will not take into account the stratification and clustering of the sample's design, but they will take into account the unequal probabilities of selection. This rescaling can be accomplished by dividing each weight by the overall average weight before the analysis is conducted.

Example:

For an analysis of all respondents who are current cigarette smokers, the following steps are required:

- "Select" all respondents from the file who were classified as current smokers (T3=1);
- Calculate the Average Weight for these records;
- For each of these respondents calculate a "working" weight equal to FINWGHT / Average Weight;
- Perform the analysis for these respondents using the "working" weight.

The calculation of truly meaningful variance estimates requires detailed knowledge of the design of the survey; such detail cannot be given in this microdata file because of confidentiality. Variances that take the sample design into account can be calculated for many statistics by Statistics Canada on a cost recovery basis.

In order to provide a means of assessing the quality of tabulated estimates, Statistics Canada has produced a set of Approximate Sampling Variability Tables (commonly referred to as "C.V. Tables") for the survey. These tables can be used to obtain approximate coefficients of variation for categorical-type estimates and proportions, and are given in Section 9.

8.4 C.V. RELEASE GUIDELINES

Users should determine the number of records on the microdata file which contribute to the calculation of a given estimate. This number should be 15 or more. When the number of contributors to the weighted estimate is less than this, the weighted estimate should not be released regardless of the value of the Approximate Coefficient of Variation. For weighted estimates based on sample sizes of 15 or more, users should determine the coefficient of variation of the estimate and follow the guidelines below.

Type of Estimate	**C.V. (in %)**	**Guidelines**
1. Unqualified	0.0 - 16.5	Estimates can be considered for general unrestricted release. Requires no special notation.
2. Qualified	16.6 - 25.0	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. Confidential	25.1 - 33.3	Estimates can be considered for general unrestricted release only when sampling variabilities are obtained using an exact variance calculation procedure. Unless exact variances are obtained, such estimates should be deleted and replaced by dashes (---) in statistical tables.
4. Not for Release	33.4 or greater	Estimates cannot be released in any form under any release OR circumstances. In statistical tables, such estimates should be deleted and replaced by dashes (---)

Note: These sampling variability guidelines should be applied to weighted rounded estimates.

8.5 METHODS OF ESTIMATION AND INTERPRETATION OF ESTIMATES

The basic sampling weight assigned to each sampled individual has been adjusted to reflect the age and sex composition of the various provincial populations as projected by the Labour Force Survey, for September 1994.

$$\sum_{i=1}^{12,155^{4}} \text{FINWGHT} = 23,029,739$$

= an estimate of the number of persons 15 years of age and older in the population.

When estimates of the number of persons are desired, FINWGHT is to be used.

Examples & Interpretation:

(i) Nearly 26% of Canadians 15 years of age and older (6 million) describe their state of health as excellent (G1 = 1).

(ii) 27% of the Canadian population 15 years of age and older were classified as current cigarette smokers (T3 = 1). The 25-44 age group (04 <= DVAGEGP1 <=07) comprised 47.5% of current cigarette smokers.

(iii) 78% of the male population (SEX1=1) can be classified as current drinkers (A2=1).

[4] There were 12,155 responding households (with one randomly chosen respondent per household).

8.6 ESTIMATES OF VARIANCE

Variance estimation is described separately for qualitative and quantitative estimates.

8.6.1 SAMPLING VARIABILITY FOR QUALITATIVE ESTIMATES

Derivation of sampling variabilities for each of the qualitative estimates which could be generated from the survey would be an extremely costly procedure, and for most users, an unnecessary one. Consequently, approximate measures of sampling variability, in the form of tables, have been developed for use and are included in Section 9.5 ("Approximate Variance Tables"). These tables were produced using the coefficient of variation formula based on a simple random sample. Since estimates for CADS are based on a complex sample design, a factor called the Design Effect has been introduced into the variance formula.

The Design Effect for an estimate is the actual variance for the estimate (taking into account the design that was used) divided by the variance that would result if the estimate had been derived from a simple random sample. The Design Effect used to produce the Approximate Variance Tables has been determined by first calculating Design Effects for a wide range of characteristics and then choosing among these a conservative value which will not give a false impression of high precision.

Design Effects

The table below shows the design effects, sample sizes and population counts by province which were used to produce the Approximate Sampling Variability Tables.

PROVINCE	DESIGN EFFECT	SAMPLE SIZE	POPULATION
Newfoundland	1.15	665	457,961
Prince Edward Island	1.02	313	103,920
Nova Scotia	1.10	877	742,975
New Brunswick	1.12	736	602,504
Quebec	1.12	2,225	5,795,927
Ontario	1.20	2,753	8,672,981
Manitoba	1.11	870	874,366
Saskatchewan	1.15	841	767,332
Alberta	1.15	1,356	2,073,112
British Columbia	1.14	1,519	2,938,661
Atlantic Provinces	1.17	2,591	1,907,360
Prairies	1.2	3,067	3,714,810
Canada	1.43	12,155	23,029,739

All coefficients of variation in the Approximate Sampling Variability Tables are approximate and, therefore, unofficial. Estimates of actual variance for specific variables may be obtained from Statistics Canada on a cost-recovery basis. The use of actual variance estimates would allow users to release otherwise unreleaseable estimates, i.e. estimates with coefficients of variation in the 'confidential' range.

Remember: if the number of observations on which an estimate is based is less than 15, the weighted estimate should not be released regardless of the value of the coefficient of variation for this estimate. This is because the formulas used for estimating the variance do not hold true for small sample sizes.

8.6.2 SAMPLING VARIABILITY FOR QUANTITATIVE ESTIMATES

Approximate variances for quantitative variables cannot be as conveniently summarized. As a general rule, however, the coefficient of variation of a quantitative total will be larger than the coefficient of variation of the corresponding qualitative estimate (e.g., the number of persons contributing to the quantitative estimate). If the corresponding qualitative estimate is not releasable, then the quantitative total will in general not be releasable.

9. APPROXIMATE VARIANCE TABLES

By using the Approximate Variance Tables and the following rules, users should be able to determine approximate coefficients of variation for aggregates (totals), percentages, ratios, differences between totals, and differences between ratios.

Rules for Obtaining Approximate Variances

The following rules should enable the user to determine the approximate coefficients of variation from the Approximate Variance Tables for estimates of the number, proportion or percentage of the surveyed population possessing a certain characteristic and for ratios and differences between estimates.

As noted in Section 8.4, each estimate should be derived from at least 15 respondents in order to be released, regardless of the Approximate Coefficient of Variation.

9.1 HOW TO USE THE C.V. TABLES FOR CATEGORICAL ESTIMATES

Rule 1: Estimates of Numbers Possessing a Characteristic (Aggregates)

The coefficient of variation (CV) depends only on the size of the estimated aggregate itself. On the Approximate Variance Table, locate the estimated aggregate in the left-most column of the table (headed "Numerator of Percentage") and follow the asterisks across to the first figure encountered. This figure is the estimated coefficient of variation.

Example 1 : Estimates of Numbers Possessing a Characteristic (Aggregates)

Suppose that a user estimates that in Canada 247,633 females aged 15 years and over describe their state of health as poor compared to other people their age (question G1). How does the user determine the coefficient of variation of this estimate?

(1) Refer to the cv table for CANADA.

(2) The estimated aggregate (247,633) does not appear in the left-hand column (the 'Numerator of Percentage' column), so it is necessary to use the figure closest to it, namely 250,000.

(3) The coefficient of variation for an estimated aggregate is found by referring to the first non-asterisk entry on that row, namely, 10.3%.

(4) So the approximate coefficient of variation of the estimate is 10.3%.
The finding that there were 247,633 females aged 15 years and over who describe their state of health as poor compared to other people their age is publishable with no qualifications.

Rule 2: Estimates of Percentages or Proportions Possessing a Characteristic

The coefficient of variation of an estimated percentage or proportion depends on both the size of the percentage or proportion and the size of the total upon which the percentage is based. Estimated percentages or proportions are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. (Note that in the tables the cv's decline in value reading from left to right).

When the percentage or proportion is based upon the total population of the geographic area covered by the table, the cv of the percentage or proportion is the same as the cv of the numerator of the percentage. In this case, Rule 1 can be used.

When the percentage or proportion is based upon a subset of the total population (e.g., those in a particular age-sex group), reference should be made to the percentage (across the top of the table) and to the numerator of the percentage or proportion (down the left side of the table). The intersection of the appropriate row and column gives the coefficient of variation.

Example 2 : Estimates of Proportions or Percentages Possessing a Characteristic

Suppose that the user estimates that in Canada 2.12% of females aged 15 years and over describe their state of health as poor compared to others their age (question G1). How does the user determine the coefficient of variation of this estimate?

(1) Refer to the table for CANADA.

(2) Because the estimate is a percentage which is based on a subset of the total population (i.e., females 15 years of age or older), it is necessary to use both the percentage (2.12%) and the numerator portion of the percentage (247,633) in determining the coefficient of variation.

(3) The numerator (247,633) does not appear in the left-hand column (the 'Numerator of Percentage' column) so it is necessary to use the figure closet to it, namely 250,000. Similarly, the percentage estimate does not appear as any of the column headings, so it is necessary to use the figure closest to it, 2.0%.

(4) The figure at the intersection of the row and column used, namely 10.3% is the coefficient of variation .

(5) So the approximate coefficient of variation of the estimate is 10.3%. The finding that 2.12% of females aged 15 years and over describe their state of health as poor compared to others their age can be published with no qualifications.

Rule 3: Estimates of Differences Between Aggregates or Percentages

The standard error of a difference between two estimates is approximately equal to the square root of the sum of squares of each standard error considered separately. That is, the standard error of a difference $\hat{d} = \hat{X}_1 - \hat{X}_2$ is:

$$\sigma_{\hat{d}} = \sqrt{(\hat{X}_1 \alpha_1)^2 + (\hat{X}_2 \alpha_2)^2}$$

where $\hat{X}_1$ is estimate 1, $\hat{X}_2$ is estimate 2, and α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively. The coefficient of variation of $\hat{d}$ is given by $\frac{\sigma_{\hat{d}}}{\hat{d}}$.

This formula is accurate for the difference between separate and uncorrelated characteristics, but is only approximate otherwise.

Example 3 : Estimates of Differences Between Aggregates or Percentages

Suppose that a user estimates that in Canada, among those 15 years and over, 247,633/11,692,329 = 2.12% of females describe their state of health as poor compared to others their age and 164,428/11,337,410 = 1.45% of males describe their state of health as poor compared to other people their age. The user is interested in the difference between these two estimates. How does the user determine the coefficient of variation of the difference between these two estimates?

(1) Using the CANADA cv table for in the same manner as described in example 2 gives the cv of the estimate for females who describe their state of health as poor compared to others their age as 10.3%, and the cv of the estimate for males who describe their state of health as poor as 11.5%.

(2) Using rule 3, the standard error of a difference $\hat{d} = \hat{X}_1 - \hat{X}_2$ is:

$$\sigma_{\hat{d}} = \sqrt{(\hat{X}_1 \alpha_1)^2 + (\hat{X}_2 \alpha_2)^2}$$

where $\hat{X}_1$ is estimate 1, $\hat{X}_2$ is estimate 2, and α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively.

That is, the standard error of the difference $\hat{d}$ = (.0212 - .0145) = .0067 is:

$$\sigma_{\hat{d}} = \sqrt{[(.0212)(.103)]^2 + [(.0145)(.115)]^2}$$

$$= \sqrt{(.0000048) + (.0000028)}$$

$$= .0028$$

(3) The coefficient of variation of $\hat{d}$ is given by $\frac{\sigma_{\hat{d}}}{\hat{d}}$ = .0028/.0067 = 0.4179.

(4) So the approximate coefficient of variation of the difference between the estimates is 41.79%. This estimate can not be released under any circumstances and should be deleted and replaced by dashes.

Rule 4: Estimates of Ratios

In the case where the numerator is a subset of the denominator, the ratio should be converted to a percentage and Rule 2 applied. This would apply, for example, to the case where the denominator is the number of males and the numerator is the number of males who smoke currently.

In the case where the numerator is not a subset of the denominator, as for example, the ratio of females aged 15 and over who describe their state of health as poor compared to other people their age who describe their state of health as excellent. The standard deviation of the ratio of the estimates is approximately equal to the square root of the sum of squares of each coefficient of variation considered separately multiplied by R.

That is, the standard error of a ratio $\hat{R} = \frac{\hat{X}_1}{\hat{X}_2}$ is:

$$\sigma_{\hat{R}} = \hat{R}\sqrt{\alpha_1^2 + \alpha_2^2}$$

where α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively.

The coefficient of variation of $\hat{R}$ is given by $\frac{\sigma_{\hat{R}}}{\hat{R}}$.

The formula will tend to overstate the error, if $\hat{X}_1$ and $\hat{X}_2$ are positively correlated and understate the error if $\hat{X}_1$ and $\hat{X}_2$ are negatively correlated.

Example 4 : Estimates of Ratios

Suppose that a user estimates that in Canada among females aged 15 years and over, 247,633 describe their state of health as poor compared to other people their age (question G1) and 3,094,971 describe their state of health as excellent as compared to others their age. The user is interested in the ratio of females describing their health as excellent versus those describing their health as poor. How does the user determine the coefficient of variation of this estimate?

(1) First of all, this estimate is a ratio estimate, where the numerator of the estimate ($\hat{X}_1$) is the number of females aged 15 years and over, who describe their state of health as poor . The denominator of the estimate (= $\hat{X}_2$) is the number of females aged 15 years and over, who describe their state of health as excellent.

(2) Refer to the table for CANADA.

(3) The numerator of this ratio estimate is 247,633. The figure closest to it is 250,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row, namely, 10.3%.

(4) The denominator of this ratio estimate is 3,094,971. The figure closest to it is 3,000,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row, namely, 2.8%.

(5) So the approximate coefficient of variation of the ratio estimate is given by rule 4, which is,

$$\alpha_{\hat{R}} = \sqrt{\alpha_1^2 + \alpha_2^2}$$

where α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively. That is ,

$$\alpha_{\hat{R}} = \sqrt{(.103)^2 + (.028)^2}$$

$$= 0.1067$$

The obtained ratio of females who describe their health as excellent versus females who describe their health as poor is 3,094,971/247,633 or 12.5 to 1. The coefficient of variation of this estimate is 10.67%, which is releasable with no qualifications.

Rule 5: Difference of Ratios

In this case, Rules 3 and 4 are combined. The cv's of the two ratios are first determined using Rule 4, and the cv of their difference is found using Rule 3.

9.2 HOW TO USE THE C.V. TABLES TO OBTAIN CONFIDENCE LIMITS

Although coefficients of variation are widely used, a more intuitively meaningful measure of sampling error is the confidence interval of an estimate. A confidence interval constitutes a statement on the level of confidence that the true value for the population lies within a specified range of values. For example a 95% confidence interval can be described as follows:

> *If sampling of the population is repeated indefinitely, each sample leading to a new confidence interval for an estimate, then in 95% of the samples the interval will cover the true population value.*

Using the standard error of an estimate, confidence intervals for estimates may be obtained under the assumption that under repeated sampling of the population, the various estimates obtained for a population characteristic are normally distributed about the true population value. Under this assumption, the chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and about 99 out 100 that the differences would be less than three standard errors. These different degrees of confidence are referred to as the confidence levels.

Confidence intervals for an estimate, $\hat{X}$, are generally expressed as two numbers, one below the estimate and one above the estimate, as $(\hat{X} - k,\ \hat{X} + k)$ where k is determined depending upon the level of confidence desired and the sampling error of the estimate.

Confidence intervals for an estimate can be calculated directly from the Approximate Sampling Variability Tables by first determining from the appropriate table the coefficient of variation of the estimate $\hat{X}$, and then using the following formula to convert to a confidence interval CI:

$$CI_X = [\ \hat{X} - t\hat{X}\alpha_{\hat{X}}\ ,\ \hat{X} + t\hat{X}\alpha_{\hat{X}}\ ]$$

where $\alpha_{\hat{X}}$ is the determined coefficient of variation of $\hat{X}$, and

t = 1 if a 68% confidence interval is desired
t = 1.6 if a 90% confidence interval is desired
t = 2 if a 95% confidence interval is desired
t = 3 if a 99% confidence interval is desired.

Example 5(a):
An estimated 412,060 persons described their state of health as poor (question G1) as compared to other people their age. This estimate has an approximate coefficient of variation of 8.1% (obtained from the 400,000 row, left-most column, of the Canada approximate variance table). The 95% confidence interval for this estimate is thus:

{412,060 - (2)(412,060)(0.081), 412,060 + (2)(412,060)(0.081)}
{412,060 - 66,754, 412,060 + 66,754}
{345,306, 478,814}

Example 5(b):
An estimated 2.12% of females aged 15 years and over in Canada described their state of health as poor when compared to other people their age or .0212 expressed as a proportion. From Example 2 this estimate has an approximate coefficient of variation of 10.3%. A 95% confidence interval for this estimate (expressed as a proportion) is

CI = {.0212 - (2 x .0212 x .103), .0212 + (2 x .0212 x .103)}
= {.0168, .0256}

With 95% confidence it can be said that between 1.68% and 2.56% of females aged 15 years and over in Canada, describe their state of health as poor, compared to other people their age.

Note: Release guidelines which apply to the estimate also apply to the confidence interval. For example, if the estimate is not releasable, then the confidence interval is not releasable either.

9.3 HOW TO USE THE C.V. TABLES TO DO A T-TEST

Standard errors may also be used to perform hypothesis testing, a procedure for distinguishing between population parameters using sample estimates. The sample estimates can be numbers, averages, percentages, ratios, etc. Tests may be performed at various levels of significance, where a level of significance is the probability of concluding that the characteristics are different when, in fact, they are identical.

Let X_1 and X_2 be sample estimates for 2 characteristics of interest. Let the standard error of the difference $\hat{X}_1 - \hat{X}_2$ be $\sigma_{\hat{d}}$.

If $t = \dfrac{\hat{X}_1 - \hat{X}_2}{\sigma_{\hat{d}}}$ is between -2 and 2,

then no conclusion about the difference between the characteristics is justified at the 5% level of significance. If however, this ratio is smaller than -2 or larger than +2, the observed difference is significant at the 5% level.

Example 6:

A user wishes to test at the 5% level of significance the hypothesis that at the Canada level there is no difference between percentage estimates of males and females who describe their state of health as poor, as compared to other people their age. From Example 3 the estimate of the standard deviation of the difference between the estimates is 0.0028.

$$\text{Hence } t = \frac{0.0212 - 0.0145}{0.0028}$$

$$= 2.39$$

Since t = 2.39 is greater than 2, the observed difference is significant at the 5% significance level.

9.4 RELEASE CUT-OFF'S FOR THE SURVEY

The minimum size of the estimate at the provincial, regional and Canada levels are specified in the following tables. Estimates smaller than the minimum size specified in these tables may not be released under any circumstances.

RELEASE CUT-OFF VALUES

AREA	C.V.		
	CV=16.5% MINX	CV=25% MINX	CV=33.3% MINX
CANADA	99,000	43,500	24,500
NEWFOUNDLAND	27,500	12,500	7,000
P.E.I.	11,000	5,000	3,000
NOVA SCOTIA	32,500	14,500	8,500
NEW BRUNSWICK	32,000	14,500	8,000
QUEBEC	105,000	46,500	26,000
ONTARIO	136,500	60,000	34,000
MANITOBA	39,000	17,500	10,000
SASKATCHEWAN	36,500	16,500	9,500
ALBERTA	62,500	28,000	15,500
BRITISH COLUMBIA	79,000	35,000	20,000
ATLANTIC	31,000	13,500	7,500
PRAIRIES	52,500	23,000	13,000

9.5 C.V. TABLES

CANADA'S ALCOHOL AND OTHER DRUGS SURVEY - SEPTEMBER 1994
APPROXIMATE SAMPLING VARIABILITY TABLES FOR CANADA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	164.5	163.7	162.9	160.4	156.1	151.7	147.2	142.5	137.7	132.7	127.5	116.4	90.1	52.0
2	116.3	115.8	115.2	113.4	110.4	107.3	104.1	100.8	97.4	93.8	90.1	82.3	63.7	36.8
3	95.0	94.5	94.1	92.6	90.1	87.6	85.0	82.3	79.5	76.6	73.6	67.2	52.0	30.0
4	82.2	81.9	81.5	80.2	78.1	75.9	73.6	71.3	68.8	66.3	63.7	58.2	45.1	26.0
5	73.6	73.2	72.9	71.7	69.8	67.8	65.8	63.7	61.6	59.3	57.0	52.0	40.3	23.3
6	67.1	66.8	66.5	65.5	63.7	61.9	60.1	58.2	56.2	54.2	52.0	47.5	36.8	21.2
7	62.2	61.9	61.6	60.6	59.0	57.3	55.6	53.9	52.0	50.1	48.2	44.0	34.1	19.7
8	58.2	57.9	57.6	56.7	55.2	53.6	52.0	50.4	48.7	46.9	45.1	41.1	31.9	18.4
9	54.8	54.6	54.3	53.5	52.0	50.6	49.1	47.5	45.9	44.2	42.5	38.8	30.0	17.3
10	52.0	51.8	51.5	50.7	49.4	48.0	46.5	45.1	43.5	42.0	40.3	36.8	28.5	16.5
11	49.6	49.4	49.1	48.4	47.1	45.7	44.4	43.0	41.5	40.0	38.4	35.1	27.2	15.7
12	47.5	47.3	47.0	46.3	45.1	43.8	42.5	41.1	39.7	38.3	36.8	33.6	26.0	15.0
13	45.6	45.4	45.2	44.5	43.3	42.1	40.8	39.5	38.2	36.8	35.4	32.3	25.0	14.4
14	44.0	43.8	43.5	42.9	41.7	40.5	39.3	38.1	36.8	35.5	34.1	31.1	24.1	13.9
15	42.5	42.3	42.1	41.4	40.3	39.2	38.0	36.8	35.5	34.3	32.9	30.0	23.3	13.4
16	41.1	40.9	40.7	40.1	39.0	37.9	36.8	35.6	34.4	33.2	31.9	29.1	22.5	13.0
17	39.9	39.7	39.5	38.9	37.9	36.8	35.7	34.6	33.4	32.2	30.9	28.2	21.9	12.6
18	38.8	38.6	38.4	37.8	36.8	35.8	34.7	33.6	32.5	31.3	30.0	27.4	21.2	12.3
19	37.7	37.6	37.4	36.8	35.8	34.8	33.8	32.7	31.6	30.4	29.2	26.7	20.7	11.9
20	36.8	36.6	36.4	35.9	34.9	33.9	32.9	31.9	30.8	29.7	28.5	26.0	20.2	11.6
21	35.9	35.7	35.5	35.0	34.1	33.1	32.1	31.1	30.0	29.0	27.8	25.4	19.7	11.4
22	35.1	34.9	34.7	34.2	33.3	32.3	31.4	30.4	29.4	28.3	27.2	24.8	19.2	11.1
23	34.3	34.1	34.0	33.4	32.6	31.6	30.7	29.7	28.7	27.7	26.6	24.3	18.8	10.9
24	********	33.4	33.3	32.7	31.9	31.0	30.0	29.1	28.1	27.1	26.0	23.8	18.4	10.6
25	********	32.7	32.6	32.1	31.2	30.3	29.4	28.5	27.5	26.5	25.5	23.3	18.0	10.4
30	********	29.9	29.7	29.3	28.5	27.7	26.9	26.0	25.1	24.2	23.3	21.2	16.5	9.5
35	********	27.7	27.5	27.1	26.4	25.6	24.9	24.1	23.3	22.4	21.5	19.7	15.2	8.8
40	********	25.9	25.8	25.4	24.7	24.0	23.3	22.5	21.8	21.0	20.2	18.4	14.3	8.2
45	********	24.4	24.3	23.9	23.3	22.6	21.9	21.2	20.5	19.8	19.0	17.3	13.4	7.8
50	********	23.2	23.0	22.7	22.1	21.5	20.8	20.2	19.5	18.8	18.0	16.5	12.7	7.4
55	********	22.1	22.0	21.6	21.1	20.5	19.8	19.2	18.6	17.9	17.2	15.7	12.2	7.0
60	********	21.1	21.0	20.7	20.2	19.6	19.0	18.4	17.8	17.1	16.5	15.0	11.6	6.7
65	********	20.3	20.2	19.9	19.4	18.8	18.3	17.7	17.1	16.5	15.8	14.4	11.2	6.5
70	********	19.6	19.5	19.2	18.7	18.1	17.6	17.0	16.5	15.9	15.2	13.9	10.8	6.2
75	********	18.9	18.8	18.5	18.0	17.5	17.0	16.5	15.9	15.3	14.7	13.4	10.4	6.0
80	********	18.3	18.2	17.9	17.5	17.0	16.5	15.9	15.4	14.8	14.3	13.0	10.1	5.8
85	********	17.8	17.7	17.4	16.9	16.5	16.0	15.5	14.9	14.4	13.8	12.6	9.8	5.6
90	********	17.3	17.2	16.9	16.5	16.0	15.5	15.0	14.5	14.0	13.4	12.3	9.5	5.5
95	********	16.8	16.7	16.5	16.0	15.6	15.1	14.6	14.1	13.6	13.1	11.9	9.2	5.3
100	********	16.4	16.3	16.0	15.6	15.2	14.7	14.3	13.8	13.3	12.7	11.6	9.0	5.2
125	********	14.6	14.6	14.3	14.0	13.6	13.2	12.7	12.3	11.9	11.4	10.4	8.1	4.7
150	********	13.4	13.3	13.1	12.7	12.4	12.0	11.6	11.2	10.8	10.4	9.5	7.4	4.2
200	********	11.6	11.5	11.3	11.0	10.7	10.4	10.1	9.7	9.4	9.0	8.2	6.4	3.7
250	**********	10.3	10.1	9.9	9.6	9.3	9.0	8.7	8.4	8.1	7.4	5.7	3.3	
300	**********	9.4	9.3	9.0	8.8	8.5	8.2	7.9	7.7	7.4	6.7	5.2	3.0	
350	**********	8.7	8.6	8.3	8.1	7.9	7.6	7.4	7.1	6.8	6.2	4.8	2.8	
400	**********	8.1	8.0	7.8	7.6	7.4	7.1	6.9	6.6	6.4	5.8	4.5	2.6	
450	**********	7.7	7.6	7.4	7.2	6.9	6.7	6.5	6.3	6.0	5.5	4.2	2.5	
500	**********	7.2	7.0	6.8	6.6	6.4	6.2	5.9	5.7	5.2	4.0	2.3		
750	**********	5.9	5.7	5.5	5.4	5.2	5.0	4.8	4.7	4.2	3.3	1.9		
1000	**********	5.1	4.9	4.8	4.7	4.5	4.4	4.2	4.0	3.7	2.9	1.6		
1500	**********	4.0	3.9	3.8	3.7	3.6	3.4	3.3	3.0	2.3	1.3			
2000	**********	3.5	3.4	3.3	3.2	3.1	3.0	2.9	2.6	2.0	1.2			
3000	**********	2.8	2.7	2.6	2.5	2.4	2.3	2.1	1.6	1.0				
4000	**********	2.3	2.3	2.2	2.1	2.0	1.8	1.4	0.8					
5000	**********	2.0	1.9	1.9	1.8	1.6	1.3	0.7						
6000	**********	1.8	1.7	1.6	1.5	1.2	0.7							
7000	**********	1.6	1.5	1.4	1.1	0.6								
8000	**********	1.5	1.4	1.3	1.0	0.6								
9000	**********	1.3	1.2	1.0	0.5									
10000	**********	1.2	0.9	0.5										
12500	**********	0.8	0.5											
15000	**********	0.7	0.4											

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR NEWFOUNDLAND

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	88.5	88.0	86.7	84.4	82.0	79.5	77.0	74.4	71.7	68.9	62.9	48.7	28.1
2	********	62.6	62.2	61.3	59.7	58.0	56.2	54.5	52.6	50.7	48.7	44.5	34.4	19.9
3	********	51.1	50.8	50.0	48.7	47.3	45.9	44.5	43.0	41.4	39.8	36.3	28.1	16.2
4	********	44.2	44.0	43.3	42.2	41.0	39.8	38.5	37.2	35.8	34.4	31.4	24.4	14.1
5	**********	39.4	38.8	37.7	36.7	35.6	34.4	33.3	32.1	30.8	28.1	21.8	12.6	
6	**********	35.9	35.4	34.4	33.5	32.5	31.4	30.4	29.3	28.1	25.7	19.9	11.5	
7	**********	33.3	32.8	31.9	31.0	30.1	29.1	28.1	27.1	26.0	23.8	18.4	10.6	
8	**********	31.1	30.6	29.8	29.0	28.1	27.2	26.3	25.3	24.4	22.2	17.2	9.9	
9	**********	29.3	28.9	28.1	27.3	26.5	25.7	24.8	23.9	23.0	21.0	16.2	9.4	
10	**********	27.4	26.7	25.9	25.2	24.4	23.5	22.7	21.8	19.9	15.4	8.9		
11	**********	26.1	25.4	24.7	24.0	23.2	22.4	21.6	20.8	19.0	14.7	8.5		
12	**********	25.0	24.4	23.7	23.0	22.2	21.5	20.7	19.9	18.2	14.1	8.1		
13	**********	24.0	23.4	22.7	22.1	21.4	20.6	19.9	19.1	17.4	13.5	7.8		
14	**********	23.2	22.5	21.9	21.3	20.6	19.9	19.2	18.4	16.8	13.0	7.5		
15	**********	22.4	21.8	21.2	20.5	19.9	19.2	18.5	17.8	16.2	12.6	7.3		
16	**********	21.7	21.1	20.5	19.9	19.3	18.6	17.9	17.2	15.7	12.2	7.0		
17	**********	21.0	20.5	19.9	19.3	18.7	18.0	17.4	16.7	15.3	11.8	6.8		
18	**********	20.4	19.9	19.3	18.7	18.2	17.5	16.9	16.2	14.8	11.5	6.6		
19	**********	19.9	19.4	18.8	18.2	17.7	17.1	16.4	15.8	14.4	11.2	6.5		
20	**********	19.4	18.9	18.3	17.8	17.2	16.6	16.0	15.4	14.1	10.9	6.3		
21	**********	18.9	18.4	17.9	17.4	16.8	16.2	15.6	15.0	13.7	10.6	6.1		
22	**********	18.5	18.0	17.5	17.0	16.4	15.9	15.3	14.7	13.4	10.4	6.0		
23	**********	17.6	17.1	16.6	16.1	15.5	14.9	14.4	13.1	10.2	5.9			
24	**********	17.2	16.7	16.2	15.7	15.2	14.6	14.1	12.8	9.9	5.7			
25	**********	16.9	16.4	15.9	15.4	14.9	14.3	13.8	12.6	9.7	5.6			
30	**********	15.4	15.0	14.5	14.1	13.6	13.1	12.6	11.5	8.9	5.1			
35	**********	14.3	13.9	13.4	13.0	12.6	12.1	11.6	10.6	8.2	4.8			
40	**********	13.3	13.0	12.6	12.2	11.8	11.3	10.9	9.9	7.7	4.4			
45	**********	12.6	12.2	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2			
50	**********	11.6	11.2	10.9	10.5	10.1	9.7	8.9	6.9	4.0				
55	**********	11.1	10.7	10.4	10.0	9.7	9.3	8.5	6.6	3.8				
60	**********	10.6	10.3	9.9	9.6	9.3	8.9	8.1	6.3	3.6				
65	**********	10.2	9.9	9.6	9.2	8.9	8.5	7.8	6.0	3.5				
70	**********	9.5	9.2	8.9	8.6	8.2	7.5	5.8	3.4					
75	**********	9.2	8.9	8.6	8.3	8.0	7.3	5.6	3.2					
80	**********	8.9	8.6	8.3	8.0	7.7	7.0	5.4	3.1					
85	**********	8.6	8.4	8.1	7.8	7.5	6.8	5.3	3.1					
90	**********	8.4	8.1	7.8	7.6	7.3	6.6	5.1	3.0					
95	**********	7.9	7.6	7.4	7.1	6.5	5.0	2.9						
100	**********	7.7	7.4	7.2	6.9	6.3	4.9	2.8						
125	**********	6.7	6.4	6.2	5.6	4.4	2.5							
150	**********	5.9	5.6	5.1	4.0	2.3								
200	**********	4.4	3.4	2.0										
250	**********	3.1	1.8											
300	**********	2.8	1.6											
350	**********	1.5												
400	**********	1.4												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR PRINCE EDWARD ISLAND

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	57.8	57.5	56.6	55.1	53.6	52.0	50.3	48.6	46.8	45.0	41.1	31.8	18.4
2	**********	40.7	40.0	39.0	37.9	36.7	35.6	34.4	33.1	31.8	29.1	22.5	13.0	
3	**********	32.7	31.8	30.9	30.0	29.1	28.1	27.0	26.0	23.7	18.4	10.6		
4	**********	28.3	27.6	26.8	26.0	25.2	24.3	23.4	22.5	20.5	15.9	9.2		
5	**********	25.3	24.7	24.0	23.2	22.5	21.7	21.0	20.1	18.4	14.2	8.2		
6	**********	22.5	21.9	21.2	20.5	19.8	19.1	18.4	16.8	13.0	7.5			
7	**********	20.8	20.2	19.6	19.0	18.4	17.7	17.0	15.5	12.0	6.9			
8	**********	19.5	18.9	18.4	17.8	17.2	16.6	15.9	14.5	11.3	6.5			
9	**********	18.4	17.9	17.3	16.8	16.2	15.6	15.0	13.7	10.6	6.1			
10	**********	17.4	16.9	16.4	15.9	15.4	14.8	14.2	13.0	10.1	5.8			
11	**********	16.2	15.7	15.2	14.7	14.1	13.6	12.4	9.6	5.5				
12	**********	15.5	15.0	14.5	14.0	13.5	13.0	11.9	9.2	5.3				
13	**********	14.9	14.4	14.0	13.5	13.0	12.5	11.4	8.8	5.1				
14	**********	14.3	13.9	13.4	13.0	12.5	12.0	11.0	8.5	4.9				
15	**********	13.8	13.4	13.0	12.6	12.1	11.6	10.6	8.2	4.7				
16	**********	13.0	12.6	12.2	11.7	11.3	10.3	8.0	4.6					
17	**********	12.6	12.2	11.8	11.4	10.9	10.0	7.7	4.5					
18	**********	12.2	11.9	11.5	11.0	10.6	9.7	7.5	4.3					
19	**********	11.9	11.5	11.2	10.7	10.3	9.4	7.3	4.2					
20	**********	11.6	11.3	10.9	10.5	10.1	9.2	7.1	4.1					
21	**********	11.0	10.6	10.2	9.8	9.0	6.9	4.0						
22	**********	10.7	10.4	10.0	9.6	8.8	6.8	3.9						
23	**********	10.5	10.1	9.8	9.4	8.6	6.6	3.8						
24	**********	10.3	9.9	9.6	9.2	8.4	6.5	3.8						
25	**********	10.1	9.7	9.4	9.0	8.2	6.4	3.7						
30	**********	8.9	8.6	8.2	7.5	5.8	3.4							
35	**********	7.9	7.6	6.9	5.4	3.1								
40	**********	7.1	6.5	5.0	2.9									
45	**********	6.1	4.7	2.7										
50	**********	5.8	4.5	2.6										
55	**********	4.3	2.5											
60	**********	4.1	2.4											
65	**********	3.9	2.3											
70	**********	3.8	2.2											
75	**********	2.1												
80	**********	2.1												
85	**********	2.0												
90	**********	1.9												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR NOVA SCOTIA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	96.0	95.5	94.0	91.5	88.9	86.3	83.6	80.7	77.8	74.7	68.2	52.8	30.5
2	********	67.9	67.5	66.5	64.7	62.9	61.0	59.1	57.1	55.0	52.8	48.2	37.4	21.6
3	********	55.4	55.1	54.3	52.8	51.4	49.8	48.2	46.6	44.9	43.1	39.4	30.5	17.6
4	********	48.0	47.8	47.0	45.8	44.5	43.1	41.8	40.4	38.9	37.4	34.1	26.4	15.3
5	********	42.9	42.7	42.1	40.9	39.8	38.6	37.4	36.1	34.8	33.4	30.5	23.6	13.6
6	********	39.2	39.0	38.4	37.4	36.3	35.2	34.1	33.0	31.8	30.5	27.9	21.6	12.5
7	********	36.3	36.1	35.5	34.6	33.6	32.6	31.6	30.5	29.4	28.2	25.8	20.0	11.5
8	**********		33.8	33.2	32.4	31.4	30.5	29.5	28.5	27.5	26.4	24.1	18.7	10.8
9	**********		31.8	31.3	30.5	29.6	28.8	27.9	26.9	25.9	24.9	22.7	17.6	10.2
10	**********		30.2	29.7	28.9	28.1	27.3	26.4	25.5	24.6	23.6	21.6	16.7	9.6
11	**********		28.8	28.4	27.6	26.8	26.0	25.2	24.3	23.5	22.5	20.6	15.9	9.2
12	**********		27.6	27.1	26.4	25.7	24.9	24.1	23.3	22.5	21.6	19.7	15.3	8.8
13	**********		26.5	26.1	25.4	24.7	23.9	23.2	22.4	21.6	20.7	18.9	14.7	8.5
14	**********		25.5	25.1	24.5	23.8	23.1	22.3	21.6	20.8	20.0	18.2	14.1	8.2
15	**********			24.3	23.6	23.0	22.3	21.6	20.8	20.1	19.3	17.6	13.6	7.9
16	**********			23.5	22.9	22.2	21.6	20.9	20.2	19.4	18.7	17.1	13.2	7.6
17	**********			22.8	22.2	21.6	20.9	20.3	19.6	18.9	18.1	16.5	12.8	7.4
18	**********			22.2	21.6	21.0	20.3	19.7	19.0	18.3	17.6	16.1	12.5	7.2
19	**********			21.6	21.0	20.4	19.8	19.2	18.5	17.8	17.1	15.7	12.1	7.0
20	**********			21.0	20.5	19.9	19.3	18.7	18.0	17.4	16.7	15.3	11.8	6.8
21	**********			20.5	20.0	19.4	18.8	18.2	17.6	17.0	16.3	14.9	11.5	6.7
22	**********			20.0	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.5	11.3	6.5
23	**********			19.6	19.1	18.5	18.0	17.4	16.8	16.2	15.6	14.2	11.0	6.4
24	**********			19.2	18.7	18.2	17.6	17.1	16.5	15.9	15.3	13.9	10.8	6.2
25	**********			18.8	18.3	17.8	17.3	16.7	16.1	15.6	14.9	13.6	10.6	6.1
30	**********			17.2	16.7	16.2	15.8	15.3	14.7	14.2	13.6	12.5	9.6	5.6
35	**********			15.9	15.5	15.0	14.6	14.1	13.6	13.1	12.6	11.5	8.9	5.2
40	**********				14.5	14.1	13.6	13.2	12.8	12.3	11.8	10.8	8.4	4.8
45	**********				13.6	13.3	12.9	12.5	12.0	11.6	11.1	10.2	7.9	4.5
50	**********				12.9	12.6	12.2	11.8	11.4	11.0	10.6	9.6	7.5	4.3
55	**********				12.3	12.0	11.6	11.3	10.9	10.5	10.1	9.2	7.1	4.1
60	**********				11.8	11.5	11.1	10.8	10.4	10.0	9.6	8.8	6.8	3.9
65	**********				11.4	11.0	10.7	10.4	10.0	9.6	9.3	8.5	6.6	3.8
70	**********				10.9	10.6	10.3	10.0	9.6	9.3	8.9	8.2	6.3	3.6
75	**********					10.3	10.0	9.6	9.3	9.0	8.6	7.9	6.1	3.5
80	**********					9.9	9.6	9.3	9.0	8.7	8.4	7.6	5.9	3.4
85	**********					9.6	9.4	9.1	8.8	8.4	8.1	7.4	5.7	3.3
90	**********					9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2
95	**********					9.1	8.9	8.6	8.3	8.0	7.7	7.0	5.4	3.1
100	**********					8.9	8.6	8.4	8.1	7.8	7.5	6.8	5.3	3.1
125	**********						7.7	7.5	7.2	7.0	6.7	6.1	4.7	2.7
150	**********							6.8	6.6	6.4	6.1	5.6	4.3	2.5
200	**********								5.7	5.5	5.3	4.8	3.7	2.2
250	**********									4.9	4.7	4.3	3.3	1.9
300	**********											3.9	3.1	1.8
350	**********											3.6	2.8	1.6
400	**********												2.6	1.5
450	**********												2.5	1.4
500	**********												2.4	1.4

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR NEW BRUNSWICK

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	95.2	94.7	93.3	90.8	88.2	85.6	82.9	80.1	77.2	74.1	67.7	52.4	30.3
2	********	67.3	67.0	66.0	64.2	62.4	60.5	58.6	56.6	54.6	52.4	47.8	37.1	21.4
3	********	55.0	54.7	53.9	52.4	50.9	49.4	47.8	46.2	44.5	42.8	39.1	30.3	17.5
4	********	47.6	47.4	46.6	45.4	44.1	42.8	41.4	40.0	38.6	37.1	33.8	26.2	15.1
5	********	42.6	42.4	41.7	40.6	39.5	38.3	37.1	35.8	34.5	33.1	30.3	23.4	13.5
6	********	38.9	38.7	38.1	37.1	36.0	34.9	33.8	32.7	31.5	30.3	27.6	21.4	12.4
7	**********		35.8	35.3	34.3	33.3	32.4	31.3	30.3	29.2	28.0	25.6	19.8	11.4
8	**********		33.5	33.0	32.1	31.2	30.3	29.3	28.3	27.3	26.2	23.9	18.5	10.7
9	**********		31.6	31.1	30.3	29.4	28.5	27.6	26.7	25.7	24.7	22.6	17.5	10.1
10	**********		30.0	29.5	28.7	27.9	27.1	26.2	25.3	24.4	23.4	21.4	16.6	9.6
11	**********		28.6	28.1	27.4	26.6	25.8	25.0	24.1	23.3	22.3	20.4	15.8	9.1
12	**********		27.3	26.9	26.2	25.5	24.7	23.9	23.1	22.3	21.4	19.5	15.1	8.7
13	**********			25.9	25.2	24.5	23.7	23.0	22.2	21.4	20.6	18.8	14.5	8.4
14	**********			24.9	24.3	23.6	22.9	22.1	21.4	20.6	19.8	18.1	14.0	8.1
15	**********			24.1	23.4	22.8	22.1	21.4	20.7	19.9	19.1	17.5	13.5	7.8
16	**********			23.3	22.7	22.1	21.4	20.7	20.0	19.3	18.5	16.9	13.1	7.6
17	**********			22.6	22.0	21.4	20.8	20.1	19.4	18.7	18.0	16.4	12.7	7.3
18	**********			22.0	21.4	20.8	20.2	19.5	18.9	18.2	17.5	15.9	12.4	7.1
19	**********			21.4	20.8	20.2	19.6	19.0	18.4	17.7	17.0	15.5	12.0	6.9
20	**********			20.9	20.3	19.7	19.1	18.5	17.9	17.3	16.6	15.1	11.7	6.8
21	**********			20.4	19.8	19.3	18.7	18.1	17.5	16.8	16.2	14.8	11.4	6.6
22	**********			19.9	19.4	18.8	18.2	17.7	17.1	16.4	15.8	14.4	11.2	6.5
23	**********			19.4	18.9	18.4	17.8	17.3	16.7	16.1	15.5	14.1	10.9	6.3
24	**********			19.0	18.5	18.0	17.5	16.9	16.3	15.7	15.1	13.8	10.7	6.2
25	**********			18.7	18.2	17.6	17.1	16.6	16.0	15.4	14.8	13.5	10.5	6.1
30	**********			17.0	16.6	16.1	15.6	15.1	14.6	14.1	13.5	12.4	9.6	5.5
35	**********				15.3	14.9	14.5	14.0	13.5	13.0	12.5	11.4	8.9	5.1
40	**********				14.4	13.9	13.5	13.1	12.7	12.2	11.7	10.7	8.3	4.8
45	**********				13.5	13.2	12.8	12.4	11.9	11.5	11.0	10.1	7.8	4.5
50	**********				12.8	12.5	12.1	11.7	11.3	10.9	10.5	9.6	7.4	4.3
55	**********				12.2	11.9	11.5	11.2	10.8	10.4	10.0	9.1	7.1	4.1
60	**********				11.7	11.4	11.0	10.7	10.3	10.0	9.6	8.7	6.8	3.9
65	**********					10.9	10.6	10.3	9.9	9.6	9.2	8.4	6.5	3.8
70	**********					10.5	10.2	9.9	9.6	9.2	8.9	8.1	6.3	3.6
75	**********					10.2	9.9	9.6	9.2	8.9	8.6	7.8	6.1	3.5
80	**********					9.9	9.6	9.3	9.0	8.6	8.3	7.6	5.9	3.4
85	**********					9.6	9.3	9.0	8.7	8.4	8.0	7.3	5.7	3.3
90	**********					9.3	9.0	8.7	8.4	8.1	7.8	7.1	5.5	3.2
95	**********						8.8	8.5	8.2	7.9	7.6	6.9	5.4	3.1
100	**********						8.6	8.3	8.0	7.7	7.4	6.8	5.2	3.0
125	**********							7.4	7.2	6.9	6.6	6.1	4.7	2.7
150	**********							6.8	6.5	6.3	6.1	5.5	4.3	2.5
200	**********									5.5	5.2	4.8	3.7	2.1
250	**********											4.3	3.3	1.9
300	**********											3.9	3.0	1.7
350	**********												2.8	1.6
400	**********												2.6	1.5
450	**********													1.4
500	**********													1.4

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR QUEBEC

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	170.7	169.9	169.1	166.5	162.0	157.4	152.7	147.9	142.9	137.7	132.3	120.8	93.5	54.0
2	120.7	120.2	119.5	117.7	114.6	111.3	108.0	104.6	101.0	97.4	93.5	85.4	66.1	38.2
3	98.5	98.1	97.6	96.1	93.5	90.9	88.2	85.4	82.5	79.5	76.4	69.7	54.0	31.2
4	85.3	85.0	84.5	83.2	81.0	78.7	76.4	73.9	71.4	68.8	66.1	60.4	46.8	27.0
5	76.3	76.0	75.6	74.4	72.5	70.4	68.3	66.1	63.9	61.6	59.2	54.0	41.8	24.2
6	********	69.4	69.0	68.0	66.1	64.3	62.4	60.4	58.3	56.2	54.0	49.3	38.2	22.0
7	********	64.2	63.9	62.9	61.2	59.5	57.7	55.9	54.0	52.0	50.0	45.6	35.4	20.4
8	********	60.1	59.8	58.8	57.3	55.7	54.0	52.3	50.5	48.7	46.8	42.7	33.1	19.1
9	********	56.6	56.4	55.5	54.0	52.5	50.9	49.3	47.6	45.9	44.1	40.3	31.2	18.0
10	********	53.7	53.5	52.6	51.2	49.8	48.3	46.8	45.2	43.5	41.8	38.2	29.6	17.1
11	********	51.2	51.0	50.2	48.8	47.5	46.1	44.6	43.1	41.5	39.9	36.4	28.2	16.3
12	********	49.1	48.8	48.0	46.8	45.5	44.1	42.7	41.2	39.7	38.2	34.9	27.0	15.6
13	********	47.1	46.9	46.2	44.9	43.7	42.4	41.0	39.6	38.2	36.7	33.5	25.9	15.0
14	********	45.4	45.2	44.5	43.3	42.1	40.8	39.5	38.2	36.8	35.4	32.3	25.0	14.4
15	********	43.9	43.7	43.0	41.8	40.7	39.4	38.2	36.9	35.5	34.2	31.2	24.2	13.9
16	********	42.5	42.3	41.6	40.5	39.4	38.2	37.0	35.7	34.4	33.1	30.2	23.4	13.5
17	********	41.2	41.0	40.4	39.3	38.2	37.0	35.9	34.7	33.4	32.1	29.3	22.7	13.1
18	********	40.1	39.8	39.2	38.2	37.1	36.0	34.9	33.7	32.5	31.2	28.5	22.0	12.7
19	********	39.0	38.8	38.2	37.2	36.1	35.0	33.9	32.8	31.6	30.3	27.7	21.5	12.4
20	********	38.0	37.8	37.2	36.2	35.2	34.2	33.1	31.9	30.8	29.6	27.0	20.9	12.1
21	********	37.1	36.9	36.3	35.4	34.4	33.3	32.3	31.2	30.0	28.9	26.4	20.4	11.8
22	********	36.2	36.0	35.5	34.5	33.6	32.6	31.5	30.5	29.4	28.2	25.7	19.9	11.5
23	********	35.4	35.3	34.7	33.8	32.8	31.8	30.8	29.8	28.7	27.6	25.2	19.5	11.3
24	********	34.7	34.5	34.0	33.1	32.1	31.2	30.2	29.2	28.1	27.0	24.6	19.1	11.0
25	********	34.0	33.8	33.3	32.4	31.5	30.5	29.6	28.6	27.5	26.5	24.2	18.7	10.8
30	********	31.0	30.9	30.4	29.6	28.7	27.9	27.0	26.1	25.1	24.2	22.0	17.1	9.9
35	********	28.7	28.6	28.1	27.4	26.6	25.8	25.0	24.2	23.3	22.4	20.4	15.8	9.1
40	********	26.9	26.7	26.3	25.6	24.9	24.2	23.4	22.6	21.8	20.9	19.1	14.8	8.5
45	********	25.3	25.2	24.8	24.2	23.5	22.8	22.0	21.3	20.5	19.7	18.0	13.9	8.1
50	********	24.0	23.9	23.5	22.9	22.3	21.6	20.9	20.2	19.5	18.7	17.1	13.2	7.6
55	********	22.9	22.8	22.4	21.8	21.2	20.6	19.9	19.3	18.6	17.8	16.3	12.6	7.3
60	**********	21.8	21.5	20.9	20.3	19.7	19.1	18.4	17.8	17.1	15.6	12.1	7.0	
65	**********	21.0	20.6	20.1	19.5	18.9	18.3	17.7	17.1	16.4	15.0	11.6	6.7	
70	**********	20.2	19.9	19.4	18.8	18.3	17.7	17.1	16.5	15.8	14.4	11.2	6.5	
75	**********	19.5	19.2	18.7	18.2	17.6	17.1	16.5	15.9	15.3	13.9	10.8	6.2	
80	**********	18.9	18.6	18.1	17.6	17.1	16.5	16.0	15.4	14.8	13.5	10.5	6.0	
85	**********	18.3	18.1	17.6	17.1	16.6	16.0	15.5	14.9	14.3	13.1	10.1	5.9	
90	**********	17.8	17.5	17.1	16.6	16.1	15.6	15.1	14.5	13.9	12.7	9.9	5.7	
95	**********	17.3	17.1	16.6	16.2	15.7	15.2	14.7	14.1	13.6	12.4	9.6	5.5	
100	**********	16.9	16.6	16.2	15.7	15.3	14.8	14.3	13.8	13.2	12.1	9.4	5.4	
125	**********	14.9	14.5	14.1	13.7	13.2	12.8	12.3	11.8	10.8	8.4	4.8		
150	**********	13.6	13.2	12.9	12.5	12.1	11.7	11.2	10.8	9.9	7.6	4.4		
200	**********	11.8	11.5	11.1	10.8	10.5	10.1	9.7	9.4	8.5	6.6	3.8		
250	**********	10.5	10.2	10.0	9.7	9.4	9.0	8.7	8.4	7.6	5.9	3.4		
300	**********	9.4	9.1	8.8	8.5	8.2	7.9	7.6	7.0	5.4	3.1			
350	**********	8.7	8.4	8.2	7.9	7.6	7.4	7.1	6.5	5.0	2.9			
400	**********	8.1	7.9	7.6	7.4	7.1	6.9	6.6	6.0	4.7	2.7			
450	**********	7.6	7.4	7.2	7.0	6.7	6.5	6.2	5.7	4.4	2.5			
500	**********	7.2	7.0	6.8	6.6	6.4	6.2	5.9	5.4	4.2	2.4			
750	**********	5.7	5.6	5.4	5.2	5.0	4.8	4.4	3.4	2.0				
1000	**********	4.8	4.7	4.5	4.4	4.2	3.8	3.0	1.7					
1500	**********	3.7	3.6	3.4	3.1	2.4	1.4							
2000	**********	3.1	3.0	2.7	2.1	1.2								
3000	**********	1.7	1.0											
4000	**********	1.5	0.9											
5000	**********	0.8												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR ONTARIO

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	194.3	193.4	192.4	189.5	184.4	179.2	173.9	168.4	162.6	156.7	150.6	137.5	106.5	61.5
2	137.4	136.8	136.1	134.0	130.4	126.7	123.0	119.0	115.0	110.8	106.5	97.2	75.3	43.5
3	112.2	111.7	111.1	109.4	106.5	103.5	100.4	97.2	93.9	90.5	86.9	79.4	61.5	35.5
4	97.2	96.7	96.2	94.7	92.2	89.6	86.9	84.2	81.3	78.4	75.3	68.7	53.2	30.7
5	86.9	86.5	86.1	84.7	82.5	80.2	77.8	75.3	72.7	70.1	67.3	61.5	47.6	27.5
6	79.3	79.0	78.6	77.4	75.3	73.2	71.0	68.7	66.4	64.0	61.5	56.1	43.5	25.1
7	73.4	73.1	72.7	71.6	69.7	67.7	65.7	63.6	61.5	59.2	56.9	52.0	40.2	23.2
8	68.7	68.4	68.0	67.0	65.2	63.4	61.5	59.5	57.5	55.4	53.2	48.6	37.6	21.7
9	********	64.5	64.1	63.2	61.5	59.7	58.0	56.1	54.2	52.2	50.2	45.8	35.5	20.5
10	********	61.2	60.9	59.9	58.3	56.7	55.0	53.2	51.4	49.6	47.6	43.5	33.7	19.4
11	********	58.3	58.0	57.1	55.6	54.0	52.4	50.8	49.0	47.3	45.4	41.4	32.1	18.5
12	********	55.8	55.6	54.7	53.2	51.7	50.2	48.6	47.0	45.2	43.5	39.7	30.7	17.7
13	********	53.6	53.4	52.6	51.2	49.7	48.2	46.7	45.1	43.5	41.8	38.1	29.5	17.1
14	********	51.7	51.4	50.6	49.3	47.9	46.5	45.0	43.5	41.9	40.2	36.7	28.5	16.4
15	********	49.9	49.7	48.9	47.6	46.3	44.9	43.5	42.0	40.5	38.9	35.5	27.5	15.9
16	********	48.4	48.1	47.4	46.1	44.8	43.5	42.1	40.7	39.2	37.6	34.4	26.6	15.4
17	********	46.9	46.7	46.0	44.7	43.5	42.2	40.8	39.4	38.0	36.5	33.3	25.8	14.9
18	********	45.6	45.4	44.7	43.5	42.2	41.0	39.7	38.3	36.9	35.5	32.4	25.1	14.5
19	********	44.4	44.2	43.5	42.3	41.1	39.9	38.6	37.3	36.0	34.5	31.5	24.4	14.1
20	********	43.3	43.0	42.4	41.2	40.1	38.9	37.6	36.4	35.0	33.7	30.7	23.8	13.7
21	********	42.2	42.0	41.3	40.2	39.1	37.9	36.7	35.5	34.2	32.9	30.0	23.2	13.4
22	********	41.2	41.0	40.4	39.3	38.2	37.1	35.9	34.7	33.4	32.1	29.3	22.7	13.1
23	********	40.3	40.1	39.5	38.5	37.4	36.3	35.1	33.9	32.7	31.4	28.7	22.2	12.8
24	********	39.5	39.3	38.7	37.6	36.6	35.5	34.4	33.2	32.0	30.7	28.1	21.7	12.5
25	********	38.7	38.5	37.9	36.9	35.8	34.8	33.7	32.5	31.3	30.1	27.5	21.3	12.3
30	********	35.3	35.1	34.6	33.7	32.7	31.7	30.7	29.7	28.6	27.5	25.1	19.4	11.2
35	********	32.7	32.5	32.0	31.2	30.3	29.4	28.5	27.5	26.5	25.5	23.2	18.0	10.4
40	********	30.6	30.4	30.0	29.2	28.3	27.5	26.6	25.7	24.8	23.8	21.7	16.8	9.7
45	********	28.8	28.7	28.2	27.5	26.7	25.9	25.1	24.2	23.4	22.4	20.5	15.9	9.2
50	********	27.4	27.2	26.8	26.1	25.3	24.6	23.8	23.0	22.2	21.3	19.4	15.1	8.7
55	********	26.1	25.9	25.5	24.9	24.2	23.4	22.7	21.9	21.1	20.3	18.5	14.4	8.3
60	********	25.0	24.8	24.5	23.8	23.1	22.4	21.7	21.0	20.2	19.4	17.7	13.7	7.9
65	********	24.0	23.9	23.5	22.9	22.2	21.6	20.9	20.2	19.4	18.7	17.1	13.2	7.6
70	********	23.1	23.0	22.6	22.0	21.4	20.8	20.1	19.4	18.7	18.0	16.4	12.7	7.3
75	********	22.3	22.2	21.9	21.3	20.7	20.1	19.4	18.8	18.1	17.4	15.9	12.3	7.1
80	********	21.6	21.5	21.2	20.6	20.0	19.4	18.8	18.2	17.5	16.8	15.4	11.9	6.9
85	********	21.0	20.9	20.6	20.0	19.4	18.9	18.3	17.6	17.0	16.3	14.9	11.5	6.7
90	**********	20.3	20.0	19.4	18.9	18.3	17.7	17.1	16.5	15.9	14.5	11.2	6.5	
95	**********	19.7	19.4	18.9	18.4	17.8	17.3	16.7	16.1	15.4	14.1	10.9	6.3	
100	**********	19.2	18.9	18.4	17.9	17.4	16.8	16.3	15.7	15.1	13.7	10.6	6.1	
125	**********	17.2	16.9	16.5	16.0	15.6	15.1	14.5	14.0	13.5	12.3	9.5	5.5	
150	**********	15.7	15.5	15.1	14.6	14.2	13.7	13.3	12.8	12.3	11.2	8.7	5.0	
200	**********	13.4	13.0	12.7	12.3	11.9	11.5	11.1	10.6	9.7	7.5	4.3		
250	**********	12.0	11.7	11.3	11.0	10.6	10.3	9.9	9.5	8.7	6.7	3.9		
300	**********	10.9	10.6	10.3	10.0	9.7	9.4	9.0	8.7	7.9	6.1	3.5		
350	**********	10.1	9.9	9.6	9.3	9.0	8.7	8.4	8.0	7.3	5.7	3.3		
400	**********	9.5	9.2	9.0	8.7	8.4	8.1	7.8	7.5	6.9	5.3	3.1		
450	**********	8.7	8.4	8.2	7.9	7.7	7.4	7.1	6.5	5.0	2.9			
500	**********	8.2	8.0	7.8	7.5	7.3	7.0	6.7	6.1	4.8	2.7			
750	**********	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.0	3.9	2.2			
1000	**********	5.7	5.5	5.3	5.1	5.0	4.8	4.3	3.4	1.9				
1500	**********	4.5	4.3	4.2	4.0	3.9	3.5	2.7	1.6					
2000	**********	3.8	3.6	3.5	3.4	3.1	2.4	1.4						
3000	**********	2.9	2.7	2.5	1.9	1.1								
4000	**********	2.2	1.7	1.0										
5000	**********	1.5	0.9											
6000	**********	1.4	0.8											
7000	**********	0.7												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR MANITOBA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	105.0	104.5	102.9	100.2	97.3	94.4	91.4	88.3	85.1	81.8	74.6	57.8	33.4
2	********	74.3	73.9	72.8	70.8	68.8	66.8	64.6	62.5	60.2	57.8	52.8	40.9	23.6
3	********	60.6	60.3	59.4	57.8	56.2	54.5	52.8	51.0	49.1	47.2	43.1	33.4	19.3
4	********	52.5	52.3	51.4	50.1	48.7	47.2	45.7	44.2	42.6	40.9	37.3	28.9	16.7
5	********	47.0	46.7	46.0	44.8	43.5	42.2	40.9	39.5	38.1	36.6	33.4	25.9	14.9
6	********	42.9	42.7	42.0	40.9	39.7	38.5	37.3	36.1	34.7	33.4	30.5	23.6	13.6
7	********	39.7	39.5	38.9	37.9	36.8	35.7	34.6	33.4	32.2	30.9	28.2	21.9	12.6
8	********	37.1	36.9	36.4	35.4	34.4	33.4	32.3	31.2	30.1	28.9	26.4	20.4	11.8
9	**********	34.8	34.3	33.4	32.4	31.5	30.5	29.4	28.4	27.3	24.9	19.3	11.1	
10	**********	33.0	32.5	31.7	30.8	29.9	28.9	27.9	26.9	25.9	23.6	18.3	10.6	
11	**********	31.5	31.0	30.2	29.3	28.5	27.6	26.6	25.7	24.7	22.5	17.4	10.1	
12	**********	30.2	29.7	28.9	28.1	27.3	26.4	25.5	24.6	23.6	21.5	16.7	9.6	
13	**********	29.0	28.5	27.8	27.0	26.2	25.4	24.5	23.6	22.7	20.7	16.0	9.3	
14	**********	27.9	27.5	26.8	26.0	25.2	24.4	23.6	22.7	21.9	20.0	15.5	8.9	
15	**********	27.0	26.6	25.9	25.1	24.4	23.6	22.8	22.0	21.1	19.3	14.9	8.6	
16	**********	26.1	25.7	25.0	24.3	23.6	22.9	22.1	21.3	20.4	18.7	14.5	8.3	
17	**********	25.3	25.0	24.3	23.6	22.9	22.2	21.4	20.6	19.8	18.1	14.0	8.1	
18	**********	24.3	23.6	22.9	22.3	21.5	20.8	20.1	19.3	17.6	13.6	7.9		
19	**********	23.6	23.0	22.3	21.7	21.0	20.3	19.5	18.8	17.1	13.3	7.7		
20	**********	23.0	22.4	21.8	21.1	20.4	19.7	19.0	18.3	16.7	12.9	7.5		
21	**********	22.5	21.9	21.2	20.6	20.0	19.3	18.6	17.8	16.3	12.6	7.3		
22	**********	21.9	21.4	20.8	20.1	19.5	18.8	18.1	17.4	15.9	12.3	7.1		
23	**********	21.5	20.9	20.3	19.7	19.1	18.4	17.7	17.1	15.6	12.1	7.0		
24	**********	21.0	20.4	19.9	19.3	18.7	18.0	17.4	16.7	15.2	11.8	6.8		
25	**********	20.6	20.0	19.5	18.9	18.3	17.7	17.0	16.4	14.9	11.6	6.7		
30	**********	18.8	18.3	17.8	17.2	16.7	16.1	15.5	14.9	13.6	10.6	6.1		
35	**********	17.4	16.9	16.5	16.0	15.5	14.9	14.4	13.8	12.6	9.8	5.6		
40	**********	16.3	15.8	15.4	14.9	14.5	14.0	13.5	12.9	11.8	9.1	5.3		
45	**********	14.9	14.5	14.1	13.6	13.2	12.7	12.2	11.1	8.6	5.0			
50	**********	14.2	13.8	13.4	12.9	12.5	12.0	11.6	10.6	8.2	4.7			
55	**********	13.5	13.1	12.7	12.3	11.9	11.5	11.0	10.1	7.8	4.5			
60	**********	12.9	12.6	12.2	11.8	11.4	11.0	10.6	9.6	7.5	4.3			
65	**********	12.4	12.1	11.7	11.3	11.0	10.6	10.1	9.3	7.2	4.1			
70	**********	12.0	11.6	11.3	10.9	10.6	10.2	9.8	8.9	6.9	4.0			
75	**********	11.6	11.2	10.9	10.6	10.2	9.8	9.4	8.6	6.7	3.9			
80	**********	11.2	10.9	10.6	10.2	9.9	9.5	9.1	8.3	6.5	3.7			
85	**********	10.9	10.6	10.2	9.9	9.6	9.2	8.9	8.1	6.3	3.6			
90	**********	10.3	10.0	9.6	9.3	9.0	8.6	7.9	6.1	3.5				
95	**********	10.0	9.7	9.4	9.1	8.7	8.4	7.7	5.9	3.4				
100	**********	9.7	9.4	9.1	8.8	8.5	8.2	7.5	5.8	3.3				
125	**********	8.7	8.4	8.2	7.9	7.6	7.3	6.7	5.2	3.0				
150	**********	7.7	7.5	7.2	6.9	6.7	6.1	4.7	2.7					
200	**********	6.5	6.2	6.0	5.8	5.3	4.1	2.4						
250	**********	5.6	5.4	5.2	4.7	3.7	2.1							
300	**********	4.9	4.7	4.3	3.3	1.9								
350	**********	4.0	3.1	1.8										
400	**********	3.7	2.9	1.7										
450	**********	2.7	1.6											
500	**********	2.6	1.5											
750	**********	1.2												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR SASKATCHEWAN

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	101.9	101.3	99.8	97.1	94.4	91.6	88.7	85.7	82.5	79.3	72.4	56.1	32.4
2	********	72.0	71.7	70.6	68.7	66.7	64.7	62.7	60.6	58.4	56.1	51.2	39.7	22.9
3	********	58.8	58.5	57.6	56.1	54.5	52.9	51.2	49.5	47.7	45.8	41.8	32.4	18.7
4	********	50.9	50.7	49.9	48.6	47.2	45.8	44.3	42.8	41.3	39.7	36.2	28.0	16.2
5	********	45.6	45.3	44.6	43.4	42.2	41.0	39.7	38.3	36.9	35.5	32.4	25.1	14.5
6	********	41.6	41.4	40.7	39.7	38.5	37.4	36.2	35.0	33.7	32.4	29.6	22.9	13.2
7	********	38.5	38.3	37.7	36.7	35.7	34.6	33.5	32.4	31.2	30.0	27.4	21.2	12.2
8	**********	35.8	35.3	34.3	33.4	32.4	31.3	30.3	29.2	28.0	25.6	19.8	11.4	
9	**********	33.8	33.3	32.4	31.5	30.5	29.6	28.6	27.5	26.4	24.1	18.7	10.8	
10	**********	32.0	31.6	30.7	29.8	29.0	28.0	27.1	26.1	25.1	22.9	17.7	10.2	
11	**********	30.6	30.1	29.3	28.5	27.6	26.7	25.8	24.9	23.9	21.8	16.9	9.8	
12	**********	29.3	28.8	28.0	27.2	26.4	25.6	24.7	23.8	22.9	20.9	16.2	9.3	
13	**********	28.1	27.7	26.9	26.2	25.4	24.6	23.8	22.9	22.0	20.1	15.6	9.0	
14	**********	27.1	26.7	26.0	25.2	24.5	23.7	22.9	22.1	21.2	19.3	15.0	8.7	
15	**********	26.2	25.8	25.1	24.4	23.6	22.9	22.1	21.3	20.5	18.7	14.5	8.4	
16	**********	24.9	24.3	23.6	22.9	22.2	21.4	20.6	19.8	18.1	14.0	8.1		
17	**********	24.2	23.6	22.9	22.2	21.5	20.8	20.0	19.2	17.6	13.6	7.9		
18	**********	23.5	22.9	22.2	21.6	20.9	20.2	19.5	18.7	17.1	13.2	7.6		
19	**********	22.9	22.3	21.7	21.0	20.3	19.7	18.9	18.2	16.6	12.9	7.4		
20	**********	22.3	21.7	21.1	20.5	19.8	19.2	18.5	17.7	16.2	12.5	7.2		
21	**********	21.8	21.2	20.6	20.0	19.3	18.7	18.0	17.3	15.8	12.2	7.1		
22	**********	21.3	20.7	20.1	19.5	18.9	18.3	17.6	16.9	15.4	12.0	6.9		
23	**********	20.8	20.3	19.7	19.1	18.5	17.9	17.2	16.5	15.1	11.7	6.8		
24	**********	20.4	19.8	19.3	18.7	18.1	17.5	16.8	16.2	14.8	11.4	6.6		
25	**********	20.0	19.4	18.9	18.3	17.7	17.1	16.5	15.9	14.5	11.2	6.5		
30	**********	18.2	17.7	17.2	16.7	16.2	15.6	15.1	14.5	13.2	10.2	5.9		
35	**********	16.9	16.4	16.0	15.5	15.0	14.5	14.0	13.4	12.2	9.5	5.5		
40	**********	15.4	14.9	14.5	14.0	13.5	13.1	12.5	11.4	8.9	5.1			
45	**********	14.5	14.1	13.7	13.2	12.8	12.3	11.8	10.8	8.4	4.8			
50	**********	13.7	13.3	12.9	12.5	12.1	11.7	11.2	10.2	7.9	4.6			
55	**********	13.1	12.7	12.3	12.0	11.5	11.1	10.7	9.8	7.6	4.4			
60	**********	12.5	12.2	11.8	11.4	11.1	10.7	10.2	9.3	7.2	4.2			
65	**********	12.0	11.7	11.4	11.0	10.6	10.2	9.8	9.0	7.0	4.0			
70	**********	11.6	11.3	10.9	10.6	10.2	9.9	9.5	8.7	6.7	3.9			
75	**********	11.2	10.9	10.6	10.2	9.9	9.5	9.2	8.4	6.5	3.7			
80	**********	10.6	10.2	9.9	9.6	9.2	8.9	8.1	6.3	3.6				
85	**********	10.2	9.9	9.6	9.3	9.0	8.6	7.9	6.1	3.5				
90	**********	9.9	9.7	9.3	9.0	8.7	8.4	7.6	5.9	3.4				
95	**********	9.7	9.4	9.1	8.8	8.5	8.1	7.4	5.8	3.3				
100	**********	9.4	9.2	8.9	8.6	8.3	7.9	7.2	5.6	3.2				
125	**********	8.2	7.9	7.7	7.4	7.1	6.5	5.0	2.9					
150	**********	7.5	7.2	7.0	6.7	6.5	5.9	4.6	2.6					
200	**********	6.1	5.8	5.6	5.1	4.0	2.3							
250	**********	5.2	5.0	4.6	3.5	2.0								
300	**********	4.6	4.2	3.2	1.9									
350	**********	3.9	3.0	1.7										
400	**********	2.8	1.6											
450	**********	2.6	1.5											
500	**********	2.5	1.4											

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR ALBERTA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	132.5	131.9	131.2	129.2	125.8	122.2	118.6	114.8	110.9	106.9	102.7	93.7	72.6	41.9
2	93.7	93.3	92.8	91.4	88.9	86.4	83.8	81.2	78.4	75.6	72.6	66.3	51.3	29.6
3	********	76.1	75.8	74.6	72.6	70.6	68.4	66.3	64.0	61.7	59.3	54.1	41.9	24.2
4	********	65.9	65.6	64.6	62.9	61.1	59.3	57.4	55.5	53.4	51.3	46.9	36.3	21.0
5	********	59.0	58.7	57.8	56.2	54.7	53.0	51.3	49.6	47.8	45.9	41.9	32.5	18.7
6	********	53.8	53.6	52.7	51.3	49.9	48.4	46.9	45.3	43.6	41.9	38.3	29.6	17.1
7	********	49.8	49.6	48.8	47.5	46.2	44.8	43.4	41.9	40.4	38.8	35.4	27.4	15.8
8	********	46.6	46.4	45.7	44.5	43.2	41.9	40.6	39.2	37.8	36.3	33.1	25.7	14.8
9	********	44.0	43.7	43.1	41.9	40.7	39.5	38.3	37.0	35.6	34.2	31.2	24.2	14.0
10	********	41.7	41.5	40.9	39.8	38.6	37.5	36.3	35.1	33.8	32.5	29.6	23.0	13.3
11	********	39.8	39.6	39.0	37.9	36.8	35.7	34.6	33.4	32.2	31.0	28.3	21.9	12.6
12	********	38.1	37.9	37.3	36.3	35.3	34.2	33.1	32.0	30.8	29.6	27.1	21.0	12.1
13	********	36.6	36.4	35.8	34.9	33.9	32.9	31.8	30.8	29.6	28.5	26.0	20.1	11.6
14	********	35.2	35.1	34.5	33.6	32.7	31.7	30.7	29.6	28.6	27.4	25.1	19.4	11.2
15	********	34.1	33.9	33.4	32.5	31.6	30.6	29.6	28.6	27.6	26.5	24.2	18.7	10.8
16	********	33.0	32.8	32.3	31.4	30.6	29.6	28.7	27.7	26.7	25.7	23.4	18.2	10.5
17	********	32.0	31.8	31.3	30.5	29.6	28.8	27.8	26.9	25.9	24.9	22.7	17.6	10.2
18	********	31.1	30.9	30.5	29.6	28.8	27.9	27.1	26.1	25.2	24.2	22.1	17.1	9.9
19	********	30.3	30.1	29.6	28.8	28.0	27.2	26.3	25.4	24.5	23.6	21.5	16.7	9.6
20	********	29.5	29.3	28.9	28.1	27.3	26.5	25.7	24.8	23.9	23.0	21.0	16.2	9.4
21	**********	28.6	28.2	27.4	26.7	25.9	25.1	24.2	23.3	22.4	20.5	15.8	9.1	
22	**********	28.0	27.5	26.8	26.1	25.3	24.5	23.6	22.8	21.9	20.0	15.5	8.9	
23	**********	27.4	26.9	26.2	25.5	24.7	23.9	23.1	22.3	21.4	19.5	15.1	8.7	
24	**********	26.8	26.4	25.7	24.9	24.2	23.4	22.6	21.8	21.0	19.1	14.8	8.6	
25	**********	26.2	25.8	25.2	24.4	23.7	23.0	22.2	21.4	20.5	18.7	14.5	8.4	
30	**********	24.0	23.6	23.0	22.3	21.6	21.0	20.2	19.5	18.7	17.1	13.3	7.7	
35	**********	22.2	21.8	21.3	20.7	20.0	19.4	18.7	18.1	17.4	15.8	12.3	7.1	
40	**********	20.7	20.4	19.9	19.3	18.7	18.2	17.5	16.9	16.2	14.8	11.5	6.6	
45	**********	19.3	18.7	18.2	17.7	17.1	16.5	15.9	15.3	14.0	10.8	6.2		
50	**********	18.3	17.8	17.3	16.8	16.2	15.7	15.1	14.5	13.3	10.3	5.9		
55	**********	17.4	17.0	16.5	16.0	15.5	15.0	14.4	13.8	12.6	9.8	5.7		
60	**********	16.7	16.2	15.8	15.3	14.8	14.3	13.8	13.3	12.1	9.4	5.4		
65	**********	16.0	15.6	15.2	14.7	14.2	13.8	13.3	12.7	11.6	9.0	5.2		
70	**********	15.4	15.0	14.6	14.2	13.7	13.3	12.8	12.3	11.2	8.7	5.0		
75	**********	14.9	14.5	14.1	13.7	13.3	12.8	12.3	11.9	10.8	8.4	4.8		
80	**********	14.4	14.1	13.7	13.3	12.8	12.4	11.9	11.5	10.5	8.1	4.7		
85	**********	14.0	13.6	13.3	12.9	12.5	12.0	11.6	11.1	10.2	7.9	4.5		
90	**********	13.6	13.3	12.9	12.5	12.1	11.7	11.3	10.8	9.9	7.7	4.4		
95	**********	13.3	12.9	12.5	12.2	11.8	11.4	11.0	10.5	9.6	7.4	4.3		
100	**********	12.9	12.6	12.2	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2		
125	**********	11.2	10.9	10.6	10.3	9.9	9.6	9.2	8.4	6.5	3.7			
150	**********	10.3	10.0	9.7	9.4	9.1	8.7	8.4	7.7	5.9	3.4			
200	**********	8.9	8.6	8.4	8.1	7.8	7.6	7.3	6.6	5.1	3.0			
250	**********	7.7	7.5	7.3	7.0	6.8	6.5	5.9	4.6	2.7				
300	**********	7.1	6.8	6.6	6.4	6.2	5.9	5.4	4.2	2.4				
350	**********	6.3	6.1	5.9	5.7	5.5	5.0	3.9	2.2					
400	**********	5.9	5.7	5.5	5.3	5.1	4.7	3.6	2.1					
450	**********	5.4	5.2	5.0	4.8	4.4	3.4	2.0						
500	**********	5.1	5.0	4.8	4.6	4.2	3.2	1.9						
750	**********	3.7	3.4	2.7	1.5									
1000	**********	3.0	2.3	1.3										
1500	**********	1.1												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR BRITISH COLUMBIA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	148.4	147.7	147.0	144.7	140.9	136.9	132.8	128.6	124.2	119.7	115.0	105.0	81.3	47.0
2	104.9	104.5	103.9	102.3	99.6	96.8	93.9	90.9	87.8	84.6	81.3	74.2	57.5	33.2
3	********	85.3	84.9	83.5	81.3	79.0	76.7	74.2	71.7	69.1	66.4	60.6	47.0	27.1
4	********	73.9	73.5	72.4	70.4	68.4	66.4	64.3	62.1	59.8	57.5	52.5	40.7	23.5
5	********	66.1	65.7	64.7	63.0	61.2	59.4	57.5	55.6	53.5	51.4	47.0	36.4	21.0
6	********	60.3	60.0	59.1	57.5	55.9	54.2	52.5	50.7	48.9	47.0	42.9	33.2	19.2
7	********	55.8	55.6	54.7	53.2	51.7	50.2	48.6	47.0	45.2	43.5	39.7	30.7	17.7
8	********	52.2	52.0	51.2	49.8	48.4	47.0	45.5	43.9	42.3	40.7	37.1	28.8	16.6
9	********	49.2	49.0	48.2	47.0	45.6	44.3	42.9	41.4	39.9	38.3	35.0	27.1	15.7
10	********	46.7	46.5	45.8	44.5	43.3	42.0	40.7	39.3	37.9	36.4	33.2	25.7	14.8
11	********	44.5	44.3	43.6	42.5	41.3	40.0	38.8	37.5	36.1	34.7	31.7	24.5	14.2
12	********	42.6	42.4	41.8	40.7	39.5	38.3	37.1	35.9	34.6	33.2	30.3	23.5	13.6
13	********	41.0	40.8	40.1	39.1	38.0	36.8	35.7	34.5	33.2	31.9	29.1	22.6	13.0
14	********	39.5	39.3	38.7	37.6	36.6	35.5	34.4	33.2	32.0	30.7	28.1	21.7	12.5
15	********	38.1	37.9	37.4	36.4	35.3	34.3	33.2	32.1	30.9	29.7	27.1	21.0	12.1
16	********	36.9	36.7	36.2	35.2	34.2	33.2	32.1	31.1	29.9	28.8	26.2	20.3	11.7
17	********	35.8	35.6	35.1	34.2	33.2	32.2	31.2	30.1	29.0	27.9	25.5	19.7	11.4
18	********	34.8	34.6	34.1	33.2	32.3	31.3	30.3	29.3	28.2	27.1	24.7	19.2	11.1
19	********	33.9	33.7	33.2	32.3	31.4	30.5	29.5	28.5	27.5	26.4	24.1	18.7	10.8
20	********	33.0	32.9	32.4	31.5	30.6	29.7	28.8	27.8	26.8	25.7	23.5	18.2	10.5
21	********	32.2	32.1	31.6	30.7	29.9	29.0	28.1	27.1	26.1	25.1	22.9	17.7	10.2
22	********	31.5	31.3	30.9	30.0	29.2	28.3	27.4	26.5	25.5	24.5	22.4	17.3	10.0
23	********	30.8	30.6	30.2	29.4	28.5	27.7	26.8	25.9	25.0	24.0	21.9	17.0	9.8
24	********	30.2	30.0	29.5	28.8	27.9	27.1	26.2	25.4	24.4	23.5	21.4	16.6	9.6
25	********	29.5	29.4	28.9	28.2	27.4	26.6	25.7	24.8	23.9	23.0	21.0	16.3	9.4
30	**********	26.8	26.4	25.7	25.0	24.2	23.5	22.7	21.9	21.0	19.2	14.8	8.6	
35	**********	24.8	24.5	23.8	23.1	22.4	21.7	21.0	20.2	19.4	17.7	13.7	7.9	
40	**********	23.2	22.9	22.3	21.6	21.0	20.3	19.6	18.9	18.2	16.6	12.9	7.4	
45	**********	21.9	21.6	21.0	20.4	19.8	19.2	18.5	17.8	17.1	15.7	12.1	7.0	
50	**********	20.8	20.5	19.9	19.4	18.8	18.2	17.6	16.9	16.3	14.8	11.5	6.6	
55	**********	19.8	19.5	19.0	18.5	17.9	17.3	16.7	16.1	15.5	14.2	11.0	6.3	
60	**********	18.7	18.2	17.7	17.1	16.6	16.0	15.5	14.8	13.6	10.5	6.1		
65	**********	17.9	17.5	17.0	16.5	15.9	15.4	14.8	14.3	13.0	10.1	5.8		
70	**********	17.3	16.8	16.4	15.9	15.4	14.8	14.3	13.7	12.5	9.7	5.6		
75	**********	16.7	16.3	15.8	15.3	14.8	14.3	13.8	13.3	12.1	9.4	5.4		
80	**********	16.2	15.7	15.3	14.8	14.4	13.9	13.4	12.9	11.7	9.1	5.2		
85	**********	15.7	15.3	14.8	14.4	13.9	13.5	13.0	12.5	11.4	8.8	5.1		
90	**********	15.3	14.8	14.4	14.0	13.6	13.1	12.6	12.1	11.1	8.6	4.9		
95	**********	14.8	14.5	14.0	13.6	13.2	12.7	12.3	11.8	10.8	8.3	4.8		
100	**********	14.5	14.1	13.7	13.3	12.9	12.4	12.0	11.5	10.5	8.1	4.7		
125	**********	12.9	12.6	12.2	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2		
150	**********	11.5	11.2	10.8	10.5	10.1	9.8	9.4	8.6	6.6	3.8			
200	**********	10.0	9.7	9.4	9.1	8.8	8.5	8.1	7.4	5.8	3.3			
250	**********	8.9	8.7	8.4	8.1	7.9	7.6	7.3	6.6	5.1	3.0			
300	**********	7.9	7.7	7.4	7.2	6.9	6.6	6.1	4.7	2.7				
350	**********	7.3	7.1	6.9	6.6	6.4	6.1	5.6	4.3	2.5				
400	**********	6.8	6.6	6.4	6.2	6.0	5.8	5.2	4.1	2.3				
450	**********	6.3	6.1	5.9	5.6	5.4	4.9	3.8	2.2					
500	**********	5.9	5.8	5.6	5.4	5.1	4.7	3.6	2.1					
750	**********	4.5	4.4	4.2	3.8	3.0	1.7							
1000	**********	3.8	3.6	3.3	2.6	1.5								
1500	**********	2.1	1.2											
2000	**********	1.8	1.0											

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR ATLANTIC PROVINCES

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	92.7	92.3	91.8	90.4	88.0	85.5	83.0	80.3	77.6	74.8	71.8	65.6	50.8	29.3
2	********	65.3	64.9	63.9	62.2	60.5	58.7	56.8	54.9	52.9	50.8	46.4	35.9	20.7
3	********	53.3	53.0	52.2	50.8	49.4	47.9	46.4	44.8	43.2	41.5	37.9	29.3	16.9
4	********	46.1	45.9	45.2	44.0	42.8	41.5	40.2	38.8	37.4	35.9	32.8	25.4	14.7
5	********	41.3	41.1	40.4	39.3	38.2	37.1	35.9	34.7	33.4	32.1	29.3	22.7	13.1
6	********	37.7	37.5	36.9	35.9	34.9	33.9	32.8	31.7	30.5	29.3	26.8	20.7	12.0
7	********	34.9	34.7	34.2	33.3	32.3	31.4	30.4	29.3	28.3	27.2	24.8	19.2	11.1
8	********	32.6	32.5	32.0	31.1	30.2	29.3	28.4	27.4	26.4	25.4	23.2	18.0	10.4
9	********	30.8	30.6	30.1	29.3	28.5	27.7	26.8	25.9	24.9	23.9	21.9	16.9	9.8
10	********	29.2	29.0	28.6	27.8	27.0	26.2	25.4	24.5	23.6	22.7	20.7	16.1	9.3
11	********	27.8	27.7	27.3	26.5	25.8	25.0	24.2	23.4	22.5	21.7	19.8	15.3	8.8
12	********	26.6	26.5	26.1	25.4	24.7	23.9	23.2	22.4	21.6	20.7	18.9	14.7	8.5
13	********	25.6	25.5	25.1	24.4	23.7	23.0	22.3	21.5	20.7	19.9	18.2	14.1	8.1
14	********	24.7	24.5	24.2	23.5	22.9	22.2	21.5	20.7	20.0	19.2	17.5	13.6	7.8
15	********	23.8	23.7	23.3	22.7	22.1	21.4	20.7	20.0	19.3	18.5	16.9	13.1	7.6
16	********	23.1	23.0	22.6	22.0	21.4	20.7	20.1	19.4	18.7	18.0	16.4	12.7	7.3
17	********	22.4	22.3	21.9	21.3	20.7	20.1	19.5	18.8	18.1	17.4	15.9	12.3	7.1
18	********	21.8	21.6	21.3	20.7	20.2	19.6	18.9	18.3	17.6	16.9	15.5	12.0	6.9
19	********	21.2	21.1	20.7	20.2	19.6	19.0	18.4	17.8	17.2	16.5	15.0	11.7	6.7
20	**********	20.5	20.2	19.7	19.1	18.5	18.0	17.4	16.7	16.1	14.7	11.4	6.6	
21	**********	20.0	19.7	19.2	18.7	18.1	17.5	16.9	16.3	15.7	14.3	11.1	6.4	
22	**********	19.6	19.3	18.8	18.2	17.7	17.1	16.5	15.9	15.3	14.0	10.8	6.3	
23	**********	19.1	18.8	18.3	17.8	17.3	16.7	16.2	15.6	15.0	13.7	10.6	6.1	
24	**********	18.7	18.5	18.0	17.5	16.9	16.4	15.8	15.3	14.7	13.4	10.4	6.0	
25	**********	18.4	18.1	17.6	17.1	16.6	16.1	15.5	15.0	14.4	13.1	10.2	5.9	
30	**********	16.8	16.5	16.1	15.6	15.1	14.7	14.2	13.7	13.1	12.0	9.3	5.4	
35	**********	15.5	15.3	14.9	14.5	14.0	13.6	13.1	12.6	12.1	11.1	8.6	5.0	
40	**********	14.3	13.9	13.5	13.1	12.7	12.3	11.8	11.4	10.4	8.0	4.6		
45	**********	13.5	13.1	12.7	12.4	12.0	11.6	11.1	10.7	9.8	7.6	4.4		
50	**********	12.8	12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.3	7.2	4.1		
55	**********	12.2	11.9	11.5	11.2	10.8	10.5	10.1	9.7	8.8	6.8	4.0		
60	**********	11.7	11.4	11.0	10.7	10.4	10.0	9.7	9.3	8.5	6.6	3.8		
65	**********	11.2	10.9	10.6	10.3	10.0	9.6	9.3	8.9	8.1	6.3	3.6		
70	**********	10.8	10.5	10.2	9.9	9.6	9.3	8.9	8.6	7.8	6.1	3.5		
75	**********	10.4	10.2	9.9	9.6	9.3	9.0	8.6	8.3	7.6	5.9	3.4		
80	**********	10.1	9.8	9.6	9.3	9.0	8.7	8.4	8.0	7.3	5.7	3.3		
85	**********	9.8	9.5	9.3	9.0	8.7	8.4	8.1	7.8	7.1	5.5	3.2		
90	**********	9.5	9.3	9.0	8.7	8.5	8.2	7.9	7.6	6.9	5.4	3.1		
95	**********	9.3	9.0	8.8	8.5	8.2	8.0	7.7	7.4	6.7	5.2	3.0		
100	**********	8.8	8.6	8.3	8.0	7.8	7.5	7.2	6.6	5.1	2.9			
125	**********	7.9	7.6	7.4	7.2	6.9	6.7	6.4	5.9	4.5	2.6			
150	**********	7.2	7.0	6.8	6.6	6.3	6.1	5.9	5.4	4.1	2.4			
200	**********	6.0	5.9	5.7	5.5	5.3	5.1	4.6	3.6	2.1				
250	**********	5.4	5.2	5.1	4.9	4.7	4.5	4.1	3.2	1.9				
300	**********	4.8	4.6	4.5	4.3	4.1	3.8	2.9	1.7					
350	**********	4.4	4.3	4.1	4.0	3.8	3.5	2.7	1.6					
400	**********	4.0	3.9	3.7	3.6	3.3	2.5	1.5						
450	**********	3.8	3.7	3.5	3.4	3.1	2.4	1.4						
500	**********	3.5	3.3	3.2	2.9	2.3	1.3							
750	**********	2.6	2.4	1.9	1.1									
1000	**********	1.6	0.9											
1500	**********	0.8												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

APPROXIMATE SAMPLING VARIABILITY TABLES FOR PRAIRIES

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	120.4	119.9	119.3	117.5	114.3	111.1	107.8	104.4	100.8	97.2	93.3	85.2	66.0	38.1
2	85.2	84.8	84.4	83.1	80.8	78.6	76.2	73.8	71.3	68.7	66.0	60.3	46.7	26.9
3	69.5	69.2	68.9	67.8	66.0	64.1	62.2	60.3	58.2	56.1	53.9	49.2	38.1	22.0
4	********	60.0	59.6	58.7	57.2	55.6	53.9	52.2	50.4	48.6	46.7	42.6	33.0	19.1
5	********	53.6	53.4	52.5	51.1	49.7	48.2	46.7	45.1	43.5	41.7	38.1	29.5	17.0
6	********	49.0	48.7	48.0	46.7	45.4	44.0	42.6	41.2	39.7	38.1	34.8	26.9	15.6
7	********	45.3	45.1	44.4	43.2	42.0	40.7	39.4	38.1	36.7	35.3	32.2	24.9	14.4
8	********	42.4	42.2	41.5	40.4	39.3	38.1	36.9	35.6	34.4	33.0	30.1	23.3	13.5
9	********	40.0	39.8	39.2	38.1	37.0	35.9	34.8	33.6	32.4	31.1	28.4	22.0	12.7
10	********	37.9	37.7	37.1	36.2	35.1	34.1	33.0	31.9	30.7	29.5	26.9	20.9	12.1
11	********	36.2	36.0	35.4	34.5	33.5	32.5	31.5	30.4	29.3	28.1	25.7	19.9	11.5
12	********	34.6	34.4	33.9	33.0	32.1	31.1	30.1	29.1	28.0	26.9	24.6	19.1	11.0
13	********	33.3	33.1	32.6	31.7	30.8	29.9	28.9	28.0	26.9	25.9	23.6	18.3	10.6
14	********	32.0	31.9	31.4	30.6	29.7	28.8	27.9	26.9	26.0	24.9	22.8	17.6	10.2
15	********	31.0	30.8	30.3	29.5	28.7	27.8	26.9	26.0	25.1	24.1	22.0	17.0	9.8
16	********	30.0	29.8	29.4	28.6	27.8	26.9	26.1	25.2	24.3	23.3	21.3	16.5	9.5
17	********	29.1	28.9	28.5	27.7	26.9	26.1	25.3	24.5	23.6	22.6	20.7	16.0	9.2
18	********	28.3	28.1	27.7	26.9	26.2	25.4	24.6	23.8	22.9	22.0	20.1	15.6	9.0
19	********	27.5	27.4	26.9	26.2	25.5	24.7	23.9	23.1	22.3	21.4	19.5	15.1	8.7
20	********	26.8	26.7	26.3	25.6	24.8	24.1	23.3	22.5	21.7	20.9	19.1	14.8	8.5
21	********	26.2	26.0	25.6	24.9	24.2	23.5	22.8	22.0	21.2	20.4	18.6	14.4	8.3
22	********	25.6	25.4	25.0	24.4	23.7	23.0	22.3	21.5	20.7	19.9	18.2	14.1	8.1
23	********	25.0	24.9	24.5	23.8	23.2	22.5	21.8	21.0	20.3	19.5	17.8	13.8	7.9
24	********	24.5	24.4	24.0	23.3	22.7	22.0	21.3	20.6	19.8	19.1	17.4	13.5	7.8
25	********	24.0	23.9	23.5	22.9	22.2	21.6	20.9	20.2	19.4	18.7	17.0	13.2	7.6
30	********	21.9	21.8	21.4	20.9	20.3	19.7	19.1	18.4	17.7	17.0	15.6	12.1	7.0
35	********	20.3	20.2	19.9	19.3	18.8	18.2	17.6	17.0	16.4	15.8	14.4	11.2	6.4
40	**********	18.9	18.6	18.1	17.6	17.0	16.5	15.9	15.4	14.8	13.5	10.4	6.0	
45	**********	17.8	17.5	17.0	16.6	16.1	15.6	15.0	14.5	13.9	12.7	9.8	5.7	
50	**********	16.9	16.6	16.2	15.7	15.2	14.8	14.3	13.7	13.2	12.1	9.3	5.4	
55	**********	16.1	15.8	15.4	15.0	14.5	14.1	13.6	13.1	12.6	11.5	8.9	5.1	
60	**********	15.4	15.2	14.8	14.3	13.9	13.5	13.0	12.5	12.1	11.0	8.5	4.9	
65	**********	14.8	14.6	14.2	13.8	13.4	12.9	12.5	12.1	11.6	10.6	8.2	4.7	
70	**********	14.3	14.0	13.7	13.3	12.9	12.5	12.1	11.6	11.2	10.2	7.9	4.6	
75	**********	13.6	13.2	12.8	12.4	12.1	11.6	11.2	10.8	9.8	7.6	4.4		
80	**********	13.1	12.8	12.4	12.1	11.7	11.3	10.9	10.4	9.5	7.4	4.3		
85	**********	12.7	12.4	12.1	11.7	11.3	10.9	10.5	10.1	9.2	7.2	4.1		
90	**********	12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.8	9.0	7.0	4.0		
95	**********	12.1	11.7	11.4	11.1	10.7	10.3	10.0	9.6	8.7	6.8	3.9		
100	**********	11.7	11.4	11.1	10.8	10.4	10.1	9.7	9.3	8.5	6.6	3.8		
125	**********	10.5	10.2	9.9	9.6	9.3	9.0	8.7	8.3	7.6	5.9	3.4		
150	**********	9.6	9.3	9.1	8.8	8.5	8.2	7.9	7.6	7.0	5.4	3.1		
200	**********	8.1	7.9	7.6	7.4	7.1	6.9	6.6	6.0	4.7	2.7			
250	**********	7.2	7.0	6.8	6.6	6.4	6.1	5.9	5.4	4.2	2.4			
300	**********	6.6	6.4	6.2	6.0	5.8	5.6	5.4	4.9	3.8	2.2			
350	**********	6.1	5.9	5.8	5.6	5.4	5.2	5.0	4.6	3.5	2.0			
400	**********	5.6	5.4	5.2	5.0	4.9	4.7	4.3	3.3	1.9				
450	**********	5.2	5.1	4.9	4.8	4.6	4.4	4.0	3.1	1.8				
500	**********	5.0	4.8	4.7	4.5	4.3	4.2	3.8	3.0	1.7				
750	**********	3.8	3.7	3.5	3.4	3.1	2.4	1.4						
1000	**********	3.2	3.1	3.0	2.7	2.1	1.2							
1500	**********	2.2	1.7	1.0										
2000	**********	1.5	0.9											
3000	**********	0.7												

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

10. WEIGHTING

A self-weighting sample design is one for which the weights of each unit in the sample are the same. The sample design selected for CADS used the Elimination of Non-Working Banks (ENWB) sampling technique, with each household within a stratum having an equal probability of selection.

This probability is equal to:

$$\frac{\text{Number of telephone numbers sampled within the stratum}}{\text{Total number of possible telephone numbers within the stratum}}$$

(The total number of possible telephone numbers for a stratum is equal to the number of working banks for a stratum times 100).

1) Basic Weight Calculation

Each household (responding and non-responding) in the RDD sample was assigned a weight equal to the inverse of its probability of selection. This weight was calculated independently for each stratum as follows:

$$\frac{\text{Number of possible telephone numbers in each stratum}}{\text{Number of sampled telephone numbers in each stratum}}$$

2) Non-Response Adjustment

Weights for responding households were adjusted to represent non-responding households. This was done independently within each stratum. Records were adjusted by the following factor:

$$\frac{\text{Total of the household weights of all households in each stratum}}{\text{Total of the household weights of responding households in each stratum}}$$

Non-responding households were then dropped.

3) Multiple Telephone Adjustment

Weights for households with more than one residential telephone number (i.e. not used for business purposes only) were adjusted downwards to account for the fact that such households had a higher probability of being selected. The weight for each household was divided by the number of residential telephone numbers that serviced the household.

4) Person Weight Calculation

A person weight was then calculated for each person who responded to the survey, by multiplying the household weight for that person by the number of persons in the household who were eligible to be selected for the survey (i.e. the number of persons 15 years of age or older).

5) Adjustment to External Totals.

The weights were adjusted several times using a raking ratio procedure until the weights converged. This procedure ensured that, based on the survey's total sample, estimates produced of province-age-sex groups would match external references. The age groupings used were: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70+.

At each stage in the adjustment process the weights were adjusted by the factor:

$$\frac{\text{reference total for group}}{\text{sum of person weights for group}}$$

It should be noted that persons living in households without telephone service are included in the reference totals even though they were not sampled.

10.1 WEIGHTING POLICY

Users are cautioned against releasing unweighted tables or performing any analysis based on unweighted survey results. As was discussed in Section 10.1, there were several weight adjustments performed independently to the records of each province. Sampling rates as well as non-response rates varied significantly from province to province.

Contact was made or attempted with 16,082 households during the survey. Of these, 2,939 (18.3%) were non-responding households. The non-responding households included 1,666 household refusals, 789 households that could not be reached during the entire survey period ("ring-no-answer" households) and 484 cases where a response could not be obtained due to language difficulties or other problems. An interview was attempted with a person randomly selected from the eligible household members of the 13,143 responding households. From these households, 12,155 usable responses were obtained. The difference consists of 485 person-level refusals, 501 cases where the interview could not be completed for some other reason, and 2 cases where the person interviewed was ineligible. A response rate of 75.6% was obtained, when it is assumed that all of the households for which there was no response were "in scope" (i.e., had at least one eligible member).

It is known that non-respondents are more likely to be males and more likely to be younger. In the responding sample, 3.2% were males between the ages of 15 and 19, while in the overall population, approximately 4.4% are males between 15 and 19. Therefore, it is clear that the sample counts cannot be considered to be representative of the survey target population unless appropriate weights are applied.