Time Use Survey, 2022

Public Use Microdata File User Guide

March 2025

Statistics Canada Statistique Canada

Canada

Table of contents

1. Introduction 3

2. Objectives of the Time Use Survey 4

3. Content and concepts of the 2022 Time Use Survey 4

4. Summary of key changes and comparability of estimates 6

5. Survey and sample design 8

6. Collection and response rate 10

7. Processing 11

8. Estimation 13

9. Release guidelines and data reliability 19

10. Additional information 25

Appendix A – List of primary activity codes 26

Appendix B – Concordance table 31

Appendix C – Guidelines for statistical analysis, variance estimation and constructing confidence intervals 68

Appendix D – A guide to using the time use data files 71

2022 Time Use Survey
User Guide for Analytical File

This record is part of the General Social Statistics Program (GSSP). The GSSP originated in 1985. The program is made of surveys on core topics, using focus or exploratory questions and a standard set of socio-demographic questions used for classification. More recent surveys have also included some qualitative questions, that explore intentions and perceptions.

1. Introduction

This guide provides information for users of the public use microdata file (PUMF) of the 2022 Time Use Survey (TUS). This is the seventh iteration of the TUS, conducted from July 16th, 2022, to July 15th, 2023. It contains information on the objectives, methodology and estimation procedures used in the survey. It also describes how to use the analytical files.

The main survey sample of the 2022 TUS was distributed over the ten provinces. Data were collected using an electronic questionnaire (EQ) and the computer-assisted telephone interviewing (CATI) method.

This user guide includes 4 appendices. Appendix A contains the activity codes used for the 2022 TUS. Appendix B contains a concordance table between 2022 TUS and 2015 TUS PUMFs. Appendix C provides more details on the use of bootstrap weights in calculating the sampling error used in variances, and confidence intervals. Appendix D provides tips for using the diary files.

The PUMF for the 2022 Time Use Survey includes a subset of variables from the analytical files. The PUMF needs to ensure that a respondent cannot be directly or indirectly identified from the files. Caution needs to be taken to avoid having unique combinations of characteristics that could be used to identify a respondent. To avoid the possibility of disclosure, some variables were suppressed, capped or categories were collapsed.

New to the 2022 TUS

The Time Use Survey has made several changes for 2022 compared to previous iterations. The first change is the frame that is used to select the sample. The survey is now using a dwelling-based frame instead of a telephone-based frame.

A few content changes were also made. In the diary portion of the questionnaire, the number of activities available to choose from has increased and the organization of categories now takes the form of a two-level hierarchical tree to make searching for a specific activity easier. Activity categories are also now adapted from the International Classification of Activities for Time-Use Statistics (2016). In 2022, only one simultaneous activity can be selected per episode. This discourages grouping multiple different activities together in one episode.

In addition, two questions have been added to the diary:

- A follow-up question for unpaid work activities, asking for whom the work or care was done.
- A follow-up question if no 'eating' activities are mentioned during the 24-hour period.

The following content has been added to the rest of the survey:

- A question about gender identity, in addition to sex at birth.
- A module on childcare for households with at least one child aged 14 or under, and at least two household members aged 15 or older.
- A module on telework for respondents who worked for pay in the past week and who are employees.
- Additional questions about transportation and access to transportation.

2. Objectives of the Time Use Survey

The Time Use Survey (TUS) helps better understand how Canadians organize their time to accomplish the diverse daily activities. The TUS is the only Statistics Canada's survey that measures the time spent on the different activities including unpaid work and care for children or older people, and that this contribution will be valuated as part of the GDP measures. It is also the main source of data to measure gender inequalities specifically around the different types of unpaid work.

The two primary objectives of the Time Use Survey are:

a) To gather data on how Canadians use their time in a day to monitor changes over time, particularly around paid and unpaid work (including caregiving), transportation, and personal care; and
b) To provide immediate information on specific social policy issues of current or emerging interest.

To meet the stated objectives, the data collected by the TUS are made up of three components: classification content, a diary and core content. Classification content consists of variables which provide the means of delineating population groups for use in the analysis of the diary and core data. Examples of classification variables are age, sex, gender, education, and income. The diary represents activities done by an individual during a specific 24-hour day and the core content is designed to measure changes in society related to living conditions and well-being and to supply data to inform policy issues and decisions.

3. Content and concepts of the 2022 Time Use Survey

3.1 Concepts

The survey collected a large amount of data for each selected respondent as well as some information about each member of the respondent's household. The documentation for the analytical files includes an annotated list of all variables included in the files as well as the entire questionnaire. There are 48 modules in the Time Use Survey. Section 3.2 of this document gives a summary of the questionnaire content. Here is a brief outline:

- Section 1: Basic household information and demographic variables
- Section 2: Time use and the time use diary
- Section 3: Unpaid work and care, life satisfaction, health and disability
- Section 4: Employment
- Section 5: Transportation, education, information about partner
- Section 6: Socio-demographic variables

3.2 Survey content

Entry
The purpose of this section is to introduce the survey and select a respondent. A Household Roster is created, which collects key demographic information on each member of the household, including age, sex, gender and relationship to other household members. Selected respondents are asked for their birth date. They are also asked about their marital status (MS). Age and marital status are used to determine if certain questions are asked later in the survey. Age and date of birth are also used for certain derived variables and to validate responses where ages are involved.

Section 1: Basic household information and demographic variables
To confirm that all respondents who will be answering the 2022 TUS are 15 years or over, a question is asked on their date of birth. This section also confirms the marital status of the respondent and allows for any necessary corrections. This section included the following:

- Address confirmation (INF)

- Roster (RRS)
- Roster-demographic information (RRS3)
- Relationship to selected respondent (RSR2)
- Marital status (MS)
- Age (AGE)
- Sex and gender (GDR)

Section 2: Time use and the time use diary

In this section, information on what the respondent did in a 24-hour period was collected. A diary listing is an efficient way to obtain accurate information on how people use their time. For this survey, the diary listing started at 4:00 in the morning as most people are expected to be asleep at that time. The respondents were asked to report the nature of the primary (or main) activities and the related questions regarding the length, the location, who the respondent was with and if information technology devices were used during the activity. The diary also collected information on simultaneous activities, i.e., those that are performed at the same time as a primary activity. Respondents could report one simultaneous activity related to a primary activity. The question on simultaneous activities was not asked in the case of sleep activity. A subjective well-being question was asked at the end of each activity reported in the diary.

In 2022, new questions were added to the diary questions. In case no eating activity was mentioned in the 24-hour period of the diary, follow-up questions were asked about whether the respondent had any food during this period. This section also introduced respondents to the survey. Respondents were asked a few general questions about their time use relating to whether they felt they had enough time to do what they wanted to do. This section included the following:

- General time use (GTU)
- Satisfaction with time use (UOT)
- 24-hour diary, follow-up questions (TUI)
- Similarity to average day (TUT)
- Time asleep (DAS)
- Perception of time (TCS)

Section 3: Unpaid service and care, life satisfaction, health, disability, and level and sources of stress

In the unpaid work activities module, the respondents indicated how many hours they spent doing activities such as housework, yard work or household maintenance, caring for children or helping seniors in the previous week. This section included the following:

- Unpaid service (UH)
- Childcare (CHLD)
- Life satisfaction (LSM)
- General health (GEN)
- Disability screening (DSQ)
- Self-rated stress (SRS)
- Main source of stress (MSS)

Section 4: Paid work and work-life balance

This section focused on the main activity of the respondent. The module on main activity collects information about the respondent’s main activity during the past 12 months and confirms if the respondent’s main activity was the same for the week preceding the interview.

It collected details regarding the respondent’s labour force activity (if applicable) including self-employment, work arrangement, satisfaction regarding work life balance. This section included the following:

- Main activity (MRW)
- Past paid work (REW)
- Paid work in past twelve months (WET)
- Self-employed – business information (RBI)

- Telework (TLWK)
- Last year employer information (WLY)
- Worked last week employer details (WLW)
- Hours worked (WHW)
- Flexible work schedule (WFS)
- Work-life balance (SRC, WLB)

Section 5: Services, transportation, education, information about partner

This section focused on transportation to work or school, education and partner information. It included the following:

- Household regularly hires paid services (HRH)
- Access to transportation (ATT)
- Commute to work or school (CTW)
- Education and school attendance (ED, EDC)
- Main activity of partner (MAP)

Section 6: Socio-demographic variables

This section provides a variety of socio-demographic measures—many of which are repeated each year in the Time Use Survey—concerning respondents, their spouses/partners, and parents in order to support the analysis of Canadian families and individuals. This cycle of the TUS includes place of birth, immigration status, aboriginal identity and visible minority status, religion of respondent, language, as well as sexual orientation. This section included the following:

- Housing characteristics (DOR)
- Place of birth, immigration, and citizenship (IM)
- Place of birth of parents (BPR)
- Birthplace of partner (BPP)
- Aboriginal identity (ABM)
- Aboriginal identity of spouse or partner (AIP)
- Sociodemographic characteristics-visible minority status (PG)
- Sociodemographic characteristics of spouse or partner-visible minority status (PGP)
- Religion (REL)
- Language (LAN)
- Sexual orientation (SOR)

4. Summary of key changes and comparability of estimates

This section summarizes key changes to the survey content, frame, coding, processing, and weights and discusses the issue of comparability of estimates for the 2022 Time Use Survey to previous cycles.

4.1 Summary of key changes

1) Core content

Several content changes were made in 2022. In the diary portion of the questionnaire, the number of activities available to choose from has increased and the organization of categories now takes the form of a two-level hierarchical tree to make searching for a specific activity easier. Activity categories are now adapted from the International Classification of Activities for Time-Use Statistics (2016). In 2022, only one simultaneous activity could be selected per episode. This was to discourage grouping multiple different activities together in one episode. In addition, two questions were added to the diary:

- A follow-up question for unpaid work activities, asking for whom the work or care was done.
- Follow-up questions if no 'eating' activities were mentioned during the 24-hour period. Data from previous years of TU showed that some respondents forgot to mention any episodes of eating

during their reference day. These questions were important to add content to the diary and in a way correct the collected data in the diary.

The following content was added to the rest of the survey:

- A module on childcare for households with at least one child aged 14 or under, and at least two household members aged 15 or older.
- A module on telework for respondents who worked for pay in the past week and who were employees.
- Additional questions about transportation and access to transportation.

Some questions were also cut from the 2015 TUS:

- The question on Time spent texting
- Three questions on period respondents live in their dwelling, neighbourhood and city or community

See Appendix B for the list of new variables, revised, and deleted variables for the 2022 TUS.

2) Respondent Selection

To select a survey respondent for the TUS, the age-order selection method was used whereby the household respondent listed household members aged 15 and over either from oldest to youngest or youngest to oldest. The possible selections were the oldest, the youngest, the second oldest/youngest or third oldest/youngest.

3) Socio-demographic classification

A question about gender identity was added for both the selected respondent and for the spouse or partner of the selected respondent. Sex at birth is still asked for the respondent, but only gender identity is available for the spouse or partner of the respondent.

When analyzing gender, data users may have to use a two-category gender variable to protect the confidentiality of responses (GENDER2 or GENPR2). When using this variable, the following text should be included in disseminated documents.

- Gender: Given that the non-binary population is small, data aggregation to a two-category gender variable is sometimes necessary to protect the confidentiality of responses. In these cases, individuals in the category “non-binary persons” are distributed into the other two gender categories and are denoted by the “+” symbol.
- Men+: This category includes men, as well as some non-binary persons.
- Women+: This category includes women, as well as some non-binary persons.

4) Frame

In 2015, the survey used the redesigned GSS frame created in 2013, which integrated data from sources of telephone numbers (landline and cellular) available to Statistics Canada and the Address Register (AR). In 2022, the Time Use Survey used a dwelling-based frame instead of the telephone-based frame.

5) Coding

Activity categories are now adapted from the International Classification of Activities for Time-Use Statistics (2016). The North American Industry Classification System (NAICS) 2022 and National Occupational Classification (NOC) 2021 were used for industry and occupation coding.

6) Processing

Most of the ongoing data processing steps are standard, including consistency edits and family edits. Two aspects of processing are new for the 2022 TUS: Manual review of Diaries and imputation of data.

7) Derived variables

Created by collapsing or combining variables. In the PUMF, variables may have been collapsed, capped, or grouped to avoid the possibility of disclosure. The PUMF data dictionary identifies which variables are derived and the nature of their derivation.

4.2 Comparability of estimates

The 2022 TUS offered an Internet option to almost all survey respondents. This approach to data collection was in recognition of the need to adapt to the changing use of technology and the ever-present demands on Canadians' time. By having both telephone and Internet modes of data collection, the 2022 TUS offered survey respondents greater flexibility and convenience in providing key and vital information to Statistics Canada. It is important to point out that any significant change in survey methodology can affect the comparability of the data over time. It is impossible to determine with certainty whether, and to what extent, differences in a variable are attributable to an actual change in the population or to changes in the survey methodology. At every stage of processing, verification and dissemination, considerable effort was made to produce data that are as precise in their level of detail, and to ensure that the published estimates are of good quality in keeping with Statistics Canada standards. However, there are reasons to believe that the use of an electronic questionnaire might have an impact on the estimations. The impact of the collection mode on the estimates has been analyzed by selecting certain groups of key questions. It wasn't possible to analyze all questions/variables due to sample size of these variables.

Trend analysis is not recommended when there is a strong mode effect, which was identified for the following variables:

- sleepdur: Sleep activities, relaxing and bed rest (duration)
- chlddur: Care of children (duration)
- socdur: Socializing and communicating (participation)
- mediadur: Mass media activities (participation)
- transdur: Transportation to or from activities (participation)
- mealsdur: Eating or drinking (participation)
- dur1202: Television (participation)

Trend analysis is possible but should be done with caution when analyzing variable with mild mode effect, which was identified for the following variables:

- hswkdur: Unpaid household work (participation)
- leisdur: Active leisure, sports, culture, and entertainment (participation)
- mediadur: Mass media activities (duration)
- dur1202: Television (duration)
- durs01: Duration of being alone (duration)
- GTU_110: General time use - feel rushed

Like other GSSP surveys, trend monitoring is an important component of the 2022 Survey on Time Use. Analysts can count on the same concepts and high-level indicators of time use to make comparisons between the 2022 Survey and earlier surveys on the same topic.

For details on the questions where comparisons between 2022 and previous surveys will not be possible, either due to the mode effect described above or due to changes in questions or concepts, please see Appendix B – Concordance table.

5. Survey and sample design

Data for 2022 Survey on Time Use was collected from July 16, 2022, to July 15, 2023. Please see the following sections for descriptions of the target population, stratification, frame, sampling strategy, sample size and sample allocation.

5.1 Target population

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

1. Residents of the Yukon, Northwest Territories, and Nunavut
2. Full-time residents of institutions
3. Residents of Native reserves

5.2 Frame

The survey used the Dwelling Universe File (DUF), a file produced at Statistics Canada, as the sampling frame. This was done to produce quality estimates at the provincial level, and to facilitate an initial contact by mail for the invitation to complete the questionnaire electronically. This sampling frame can include up to five telephone numbers per household (landline and cellular telephone numbers) to allow for telephone follow-up. However, only two were kept on the sample.

Since the survey used a sample of addresses, almost all households could be contacted at least by mail. Dwellings identified as out-of-scope at the time of the creation of the sampling frame were excluded. Dwellings that had neither a mailing address nor an associated telephone number were not collected, as they could not be contacted by any of the survey collection modes. However, the survey estimates were weighted to include persons living in these dwellings.

Please note that for the remaining sections of this document, the word “record” will refer to the dwelling that consists of our sampling unit on the survey frame.

5.3 Stratification

The sample design for the 2022 Time Use Survey was a stratified two-phase random sample. The provinces by rural/urban area formed the strata for waves 1 to 5 and the provinces only formed the strata for the remaining waves. In the first phase, dwellings were selected randomly, and in the second phase, one person was selected from within the household using the age-order selection method. The selection algorithm was based on the number of eligible members (persons aged 15 and over) in the household and the ordered age of each member.

An introduction letter followed by an email was sent to the selected household and a household member was selected, via the instructions provided in the email. For cases without an email address, an invitation letter was sent to the selected household and a household member was selected, via the instructions provided in the letter. The selected person was invited to complete the questionnaire by accessing it online and entering a secure access code (SAC) provided in the email or the letter.

Age-order selection was also used for CATI respondents (computer-assisted telephone interviews). Selection was done with the interviewer. The instructions in the letter, as well as the selection made with the interviewer, were consistent for the same sampled household to ensure that the same person was selected to participate in the survey for a given household, regardless of the collection mode used to complete the questionnaire.

5.4 Sampling strategy

Each record in the main survey frame was assigned to a stratum. A simple random sample without replacement of records was next selected in each stratum.

For the 2022 Time Use Survey, 87.6% of the selected dwelling reached eligible households. To be eligible, a household had to include at least one person 15 years of age or older. During collection, households that did not meet the eligibility criteria were terminated after an initial set of questions that determined eligibility.

A respondent from each household was then selected using the age-order method to complete an electronic questionnaire or to respond to a telephone interview.

5.5 Sample size and allocation

The target sample size (i.e., the number of respondents) for 2022 TUS was 18.410 while the actual number of respondents was 12.336. For each province by rural/urban status, minimum sample sizes were determined to ensure that certain estimates would have acceptable sampling variability at the stratum level. Once these stratum sample size targets had been met, the remaining sample was allocated to the strata in a way that balanced the need for precision of both national-level and stratum-level estimates.

6. Collection and response rate

6.1 Collection

Computer assisted telephone interviewing (CATI) and an electronic questionnaire were used to collect data for the 2022 Survey on Time Use. Respondents were interviewed in the official language of their choice. Proxy interviews were not permitted.

All interviewing took place using centralized telephone facilities in two of Statistics Canada's regional offices (Sherbrooke and Edmonton), with calls being made from 9:00 a.m. to 9:30 p.m. Mondays to Fridays. Interviewing was also scheduled from 10:00 a.m. to 5:00 p.m. on Saturdays and 1:00 p.m. to 9:00 p.m. on Sundays. Interviewers were trained by Statistics Canada staff in telephone interviewing techniques using CATI, as well as in survey concepts and procedures.

Interviewers were instructed to make all reasonable attempts to obtain a completed interview with the randomly selected member of the household. Those who at first refused to participate were re-contacted up to two more times to explain the importance of the survey and to encourage their participation. For cases in which the timing of the interviewer's call was inconvenient, an appointment was arranged to call back at a more convenient time. For cases in which there was no one home, numerous call backs were made.

Interviewer manuals are not included in this documentation package but can be made available by contacting Statistics Canada (see Section 10).

6.2 Sample set-up

Data for the survey on Time Use were collected from July 16th, 2022, to July 15th, 2023. The total sample of 45 000 was divided into 12 waves of collection. The sample was divided into 2 different parts: weekday and weekend. The weekday cases have a reference day of Monday, Tuesday, Wednesday and Thursday and the rest of the week is considered weekend. Both parts had a start and an end date for the 12 waves of collection. Cases were presented to the respondent on the reference day for which the diary must completed.

For example, if a respondent receives an email invitation on Tuesday morning, the online questionnaire displayed Monday as the reference day to complete. In the iEQ (CATI) the reference day was displayed as "yesterday" for interviewers.

6.3 Response rate

The overall response rate was 30.7%.

The response rate for the 2022 Survey on Time Use and that of previous cycles are not directly comparable. The 2022 sample was selected using a new frame and instead of using a telephone frame as it was the case in 2015, the 2022 TUS used a dwelling frame. Therefore, the sampling unit is not the same and the way in which status (in-scope, out-of-scope) is determined under the new design is different, which can affect comparability of the response rate.

7. Processing

7.1 Data capture

Responses to survey questions were entered directly into computers by respondents who self-completed the electronic questionnaire (rEQ) and by interviewers who completed interviews with respondents by telephone (iEQ). Both respondents and interviewers used the same data capture system to complete the questionnaire. The data capture program allowed a valid range of codes for each question, had built in edits, and automatically followed the flow of the questionnaire. The data output was encrypted and transmitted electronically to Statistics Canada's head office.

7.2 Coding

Several questions allowed for write-in responses. These responses were coded into existing categories (where a match was possible), grouped into new categories or left in "other-specify" (if a match with an existing category was not possible or frequencies were too small to create a new category). Where necessary (e.g., occupation, industry, language, education, country of birth, religion), coding followed standard classification systems used at Statistics Canada.

7.3 Edit and imputation

Electronic files containing the daily transmissions of completed respondent survey records were combined to create the "raw" survey file. Before further processing, verification was performed to identify and eliminate potential duplicate records and to drop non-response and out-of-scope records.

A number of out-of-scope respondents were identified during the data processing and data cleanup stages. A small percentage of the sample identified through specific questions related to age and whether or not selected dwelling was a private home were determined to be out-of-scope. Records where the diary had less than 3 episodes resulting in 24 hours of data, were also considered incomplete and out-of-scope. All records deemed to be out-of-scope or to be nonresponse cases were removed from the data file.

All survey records were subjected to computer edits throughout the course of the interview. The CATI system identified 'out-of-range' values as they were entered. As a result, the interviewer could immediately solve such problems with the respondent, or the system would show an error for rEQ so the respondent can change or fix the wrong answer. In most cases, it was possible to bypass edits in the questionnaire which meant in some cases that the errors remained in the data. In those cases, the data were reviewed and corrected, when possible, at head office based for example, on contextual information registered by the interviewers.

Head office edits performed the same checks as the CATI system as well as more detailed edits. Records with missing or incorrect information were, in a small number of cases, completed, corrected deterministically, or imputed from other information on the questionnaire.

The flow editing carried out by head office followed a 'top down' strategy, in that whether a given question was considered 'on path' was based on the response codes to the previous questions. If the response codes to the previous questions indicated that the current question was 'on path,' the responses, if any, to the current question were retained. If, however, a response was missing to the current question, it was coded as 'Not Stated' (i.e., 9 99 or 999, etc.). If the response codes to the previous questions indicated that the current question was 'off path' because the respondent was clearly identified as belonging to a sub-population for which the current question was inappropriate or not of interest, the current question was coded as 'Valid Skip', (i.e., 6 96 or 996, etc.).

Non-response was not permitted for those items required for weighting. Values were imputed in the rare cases where the sex of the respondent was missing. The imputation was based on a detailed examination of the data and the consideration of any useful data such as the age and sex of other household members, and the interviewer's comments.

As most responses came from self-completed electronic questionnaires, additional editing steps were added to ensure data quality. Records with missing or incorrect information were completed, corrected deterministically, or imputed from other information on the questionnaire in a small number of cases. A summary of these automatic and manual processes is provided below.

- System errors were corrected. For example, if respondents went back to change information in their diary, some flows to display questions or erase previous data did not function and had to be manually updated.
- Information from other questions in the survey was used to impute missing or incorrect information on sleeping, eating, as well as travel and commuting. Several of these questions were added to the 2022 survey based on analysis of data from the 2015 survey, to enhance data quality when issues related to underreporting were present.
- For cases with implausible or impossible information in the diary, including for location, primary and simultaneous activity, duration of activity, and presence of other people, manual checks were done, and information was edited, if possible, based on other responses in the diary.
- Automated and manual post-collection edits were implemented for issues related to travel. For example, ensuring that both the activity and location were entered as travel, mistaken substitution of travel for related activities such as exercising, or using survey questions to impute missing travel episodes.
- An automated set of rules were used to deterministically correct location of activities, similar to the 2015 Time Use Survey.
- Missing information was at times imputed manually based on other responses in the diary. For example, simultaneous activities were used to update primary activities, if appropriate, when the latter was missing.
- Automatic recoding was put in place for cases where soft or hard edits could not be programmed into the application. For example, ensuring that no household members who did not exist in the household roster were reported as present in activities, or recoding activities related to unpaid work and care based on questions about for whom the activity was done.
- Diaries with a low number of episodes (between the minimum of 3 episodes and 5 episodes) were also examined manually for quality issues and missing information.

In addition to edits through review of the diaries by head office, there were edits programmed into the application for the time diary. This included one hard edit (which prevented the respondent from moving forward) and two soft edits (which prompted the respondent to change their response). First, if respondents did not enter a duration for the activity, they could not move forward in the diary. Second, if respondents changed locations between activities but did not enter a travel activity, a message was displayed or read by the interviewer to prompt them to return and change their activity. Third, if respondents reported an activity for more than 13 hours, a message was displayed or read by the interviewer that the time reported was unusually high.

The information collected during the 2022 GSS has been linked to the personal tax records (T1, T1FF or T4) of respondents. In 2022, personal income questions were not asked as part of the survey. Personal income information was obtained instead through a linkage to administrative data for respondents who did not object to this linkage. Income information was obtained from the 2022 T1FF for 83.7% of the respondents. As it has been the case since GSS 2016, the **family income** (i.e., linking directly to a variable on the T1FF that corresponds to the census family income) was used for GSS 2022. In total, a family income value was obtained for 83.5% of households. Missing information for all other respondents was imputed.

7.4 Creation of combined and derived variables

A few variables on the file were derived from information collected on the questionnaires. In some cases, the derived variables are straightforward and involve collapsing of categories. In other cases, two or more

variables were combined to create a new variable. In the PUMF, variables may have been collapsed, capped, or grouped to avoid the possibility of disclosure. The PUMF data dictionary identifies which variables are derived and the nature of their derivation.

8. Estimation

When a probability sample is used, as is the case for the GSSP surveys, the principle behind estimation is that each person selected in the sample represents (in addition to himself or herself) several other persons not in the sample. For example, in a simple random sample of 2% of a population size of 1000, each person in the sample represents 50 persons in the population. The number of persons represented by a given person in the sample is usually known as the weight or weighting factor of the sampled person.

There are two microdata files from which the 2022 Survey on TU estimates can be made. The Main File contains questionnaire responses and associated information from 12,336 respondents. Characteristics on this file concern the person as opposed to information about any individual daily activities which he or she may have done for a given day.

One weighting factor was placed on the Main File and is explained below:

WGHT_PER: This is the basic weighting factor for analysis at the person level, i.e. to calculate estimates of the number of persons (non-institutionalized, living outside reserves and aged 15 or over) having one or several given characteristics. WGHT_PER should be used for all person-level estimates. For example, to estimate the number of persons who are very worried while waiting for or using public transportation, the value of WGHT_PER is summed over all records with this characteristic.

The second microdata file is the episode file. The episode file consists of 168,078 records. Each record represents a single activity in a respondent's day and all of the respondent's episodes must add up to twenty-four hours (1440 minutes).

WGHT_EPI: This is the basic weighting factor for the analysis at the episode level i.e. to calculate estimates on the number of time an activity is done by the Canadian population. The WGHT_EPI has the same value as the person weight; it does, however, have a different interpretation. It indicates the number of time use episodes that a record on the Episode File represents.

In addition to the estimation weights, bootstrap weights have been created for the purpose of design-based variance estimation1. For more information, see Appendix C.

8.1 Weighting of persons

As mentioned earlier, the frame used for the 2022 Survey on Time Use is different from other TU surveys, which has an impact on the sampling unit and therefore, the weighting process. For the main microdata file, a final set of person weights were assigned to each record to represent the number of sampled persons that the record represents. Interim household weights had to first be calculated in order to calculate these person weights.

The weighting for the 2022 TUS file consisted of several steps, beginning with household weight:

1. calculation of initial weight: each household selected represents multiple other households within the stratum;
2. removal of out-of-scope records,
3. adjustments for non-responding households (key questions missing),
4. adjustments to make the household estimates consistent with known provincial totals obtained from

[1] Two set of 500 standard bootstrap weights are available for the 2022 Survey on Time Use: WTBS_001 to WTBS_500 at the person level; WTBS_EPI_001 to WTBS_EPI_500 at the episode level.

demographic projections regularly produced by Statistics Canada.

Person weight calculation starts with the household weights in step 4:

5. calculation of weight for the selection of the person in the household, based on age selection.
6. adjustments to make the population estimates consistent with known province, age groups, sex, Census Metropolitan Area (CMA), diary reference day and the season of response totals from the population projections,

Here is the description for each step of the weighting procedure:

1) Initial weight calculation

Each unit in the sample was assigned a basic weight, W_1 **,** equal to the inverse of its probability of selection within each province and rural/urban area.

$$W_{1,i} = \left(\frac{Number\ of\ eligible\ units\ in\ the\ stratum\ on\ the\ frame}{Number\ of\ sampled\ units\ in\ the\ stratum}\right)$$

There were 45,947 sampled units with assigned weights.

2) Removal of out-of-scope records

Out-of-scope units, such as those with an address corresponding to a business, institution, seasonal or collective dwelling, were removed; their weight was set to 0 and the units are not kept on the file. First, out-of-scope units were identified using collection paradata (e.g., telephone interviewers confirming an out-of-scope residence). Subsequently, among units whose out-of-scope status was still unresolved, some were imputed as out-of-scope according to occupancy rates from Census and from demographic projections, within groups defined by geography, quality of contact information, and expected household characteristics. There were 5,705 units identified as out-of-scope.

If out-of-scope units,

$$W_{2,i} = 0$$

Else,

$$W_{2,i} = W_{1,i}$$

3) Adjust for non-responding households

If no response was obtained from a selected household, then the household was considered to be a non-respondent. Among in-scope households, 27,906 were non-respondents. Weights for responding households were adjusted to also represent non-responding households. Weights of the non-responding units were redistributed to responding units with similar characteristics within response homogeneity groups (RHGs).

The variables used for building the RHGs were available for both responding and non-responding units. These included variables related to quality of contact information, characteristics of the surrounding geographic community, and expected household characteristics. An adjustment factor was calculated within each RHG.

The weights of the 12,336 respondent households were multiplied by these factors to produce the household-level weights, adjusted for survey non-response. The non-responding units were dropped from the weighting process.

$$W_{3,i} = W_{2,i} * \left(\frac{\sum W_2 \ for \ household \ respondents + \sum W_2 for \ household \ non-respondents}{\sum W_2 \ for \ household \ respondents}\right)$$

4) Adjust to known external household totals

An adjustment was made to the household weights on records within each province and household size in order to make household estimates consistent with known external household counts. This corresponds to the final household weight. The final household weights, including the adjustment factor by province*household size was defined as:

$$W_{4,i} = W_{3,i} * \left(\frac{Known \ external \ household \ count}{\sum W_3 \ for \ responding \ households \ in \ the \ sample}\right)$$

5) Calculate selected person weight

A weight was assigned to all survey respondents. The initial weight of each person is equal to the final weight of their household, multiplied by the inverse of the probability of having been selected in the household, according to age selection:

$$W_{5,i} = W_{4,i} * \left(\frac{1}{selection \ probability \ in \ the \ household}\right)$$

6) Adjustment of person weights to external totals

The person weights were adjusted several times using a Chi-square distance procedure. This adjustment was made to the person weights in order to ensure population estimates are consistent with external population counts for persons 15 years and older. Three sets of external control totals were used for this survey:

1) Population totals for each region[2]-sex-age group.
2) Population totals for each province-CMA-season[3]
3) Population totals for each region-season-reference day[4]

All three adjustments were made simultaneously to ensure the totals obtained from one adjustment weren't changed from a following adjustment. This ensures all control totals have been respected at the end of calibration.

2 Region: Atlantic, Quebec, Ontario, Prairies, British Columbia
3 Season: Summer, Autumn, Winter, Spring
4 Reference Date: The day of the week for which the respondent completed the diary

6a) Region - age group - sex adjustment

The next weighting step was to adjust the weights to agree with projected region-age group-sex population distributions.

Projected population counts were obtained for males and females within the following sixteen age groups:

15-19	20-24	25-29	30-34
35-39	40-44	45-49	50-54
55-59	60-64	65-69	70-74
75-79	80-84	85-89	90+

When sample sizes were small (< 15), adjacent age group data for the same province and sex were combined before this adjustment was made.

6b) Province – CMA - Season Adjustment

An adjustment was made to the person weights on records within each province-CMA-season in order to make population estimates consistent with the corresponding projected population counts.

6c) Region - Reference Day - Season Adjustment

An adjustment was made to the person weights on records within each region-reference day-season to make population estimates consistent with the corresponding projected population counts.

7) Weight trimming

The adjusted person weights produced after the adjustments described in step 6 represent the person weights consistent with the external control totals used. However, some extreme high-value weights were identified. To reduce the weight variation found within the respondents, a weight trimming procedure was applied. This consists of defining a cut-off weight, and to set all weights that are greater than this cut-off weight to the cut-off weight.

In other words, let w_i be the weight of person i before trimming, and w_0 be the cut-off weight. Then the weight w_i^T after trimming of person i would be defined as:

$$w_i^T = \begin{cases} w_0 & \text{if } w_i > w_0 \\ w_i & \text{otherwise.} \end{cases}$$

8) Adjustment of person weights to external totals (round 2)

Following the weight trimming procedure, the person weights were readjusted using the methods described in step 6 to ensure population estimates are consistent with external population counts once more.

9) Final person weight

The weight produced at the end of step 6) is the final person weight WGHT_PER placed on the main data file.

8.2 Weighting policy

Users are cautioned against releasing unweighted tables or performing any analysis based on unweighted survey results. As was discussed in Section 8.1, there were several weight adjustments performed that were dependent on the province, age and sex of the respondent. Sampling rates as well as non-response rates varied significantly from province to province, and non-response rates varied with demographic characteristics. For example, non-respondents were often more likely to be males and more likely to be younger. In the responding sample, 1.19% were males between the ages of 15 and 24, while in the overall population, approximately 7.29% were males between 15 and 24. Therefore, it is clear that unweighted sample counts cannot be considered representative of the survey target population.

The total number of households in the sample's scope was estimated at 40,242**.** Among these resolved households, 12,336 usable responses were obtained, which gives an overall response rate of 30.7%. The distribution of the non-response and response categories is presented in the following table:

	Total sample	
Source	**Number**	**%**
1. Household non-response	24,750	61.5
2. Non-response (person level)	3,156	7.8
3. Response	12,336	30.7
Total Households	**40,242**	**100.0**

In all, there were 27,906 non-response cases (lines 1 and 2), which represented 69.3% of the household sample. The non-response includes cases of refusal by the selected person or because of language difficulties or other problem for example. Responses obtained from Electronic Questionnaire (EQ) represents 70.2% of the 12,336 responses obtained.

8.3 Types of estimates

Two types of 'simple' estimates are possible from the results of the TUS. These are qualitative estimates (estimates of counts or proportions of people possessing certain qualities or characteristics) and quantitative estimates involving quantities or averages. More complex estimation and analyses are covered in Section 8.5.

1) Qualitative estimates

The target population for the 2022 TUS was non-institutionalized persons aged 15 and older, living in the ten provinces and not residents of Native reserves. Qualitative estimates are estimates of the number or proportion of this target population possessing certain characteristics. The number of people (3,936,518) who describe their state of health as excellent (GEN_01 = 1) is an example of this kind of estimate. These estimates are readily obtained by summing the person weights (WGHT_PER) of the records possessing the characteristic of interest. This estimate does not, however, adjust for non-response to the question in any way.

If we assume that those who either refused to answer the question or who responded 'Don't know' have the same distribution as those who responded, then an adjusted estimate can be made. To do this, the proportion of the target population with this characteristic is estimated excluding respondents with a 'Not stated' or 'Don't know' answer to question GEN_01 and calculating the ratio of the total of the weights of

those respondents who answered that their state of health was 'Excellent' (GEN_01=1) to that of all respondents who answered the question (GEN_01=1, 2, 3, 4, or 5). This proportion is then multiplied by the size of the target population to produce the final estimate (it should be noted that this adjustment does not have to be done, but it can be if needed):

$$4{,}077{,}108 = 32{,}136{,}802 \times \frac{3{,}936{,}518}{31{,}028{,}634}$$

32,136,802 is the estimated number of persons aged 15 and over in the population (target population). 31,028,634 is the sum of the weights of all respondents who answered question GEN_01 (i.e. GEN_01= 1,2,3,4 or 5). When the proportion of responses that are 'Don't know' or 'Refused' are high, the differences between the two estimates will be large.

2) Quantitative estimates

Some variables on the 2022 TUS analytical files are quantitative in nature (e.g. age, number of weeks worked in the past 12 months). From these variables, it is possible to obtain such estimates as the average number of weeks worked in the past 12 months[5]. These quantitative estimates are of the following ratio form:

$$\text{Estimate (average)} = \frac{X}{Y}$$

The numerator (*X*) is a quantitative estimate of the total of the variable of interest (for example, the number of weeks employed in the past 12 months) for a given sub-population (for example, males who worked in the past 12 months). In this example, *X* would be calculated by multiplying the person weight (WGHT_PER) by the variable of interest (WET_110) when it is known, 1 ≤ WET_110 ≤ 52, (i.e. not equal to '96' or '99'), and summing this product over all records for males who worked i.e. GENDER2=1 and (1 ≤ WET_110 ≤ 52), which yields 485,396,200.

The denominator (*Y*) is the qualitative estimate of the number of persons within that sub-population (males who worked in the past 12 months). In this example, *Y* would be calculated by summing the person weight (WGHT_PER) over all male respondents with 1 ≤ WET_110 ≤ 52, yielding 11,077,497.

The two estimates *X* and *Y* are derived independently and then divided to provide the quantitative estimate. The average number of weeks is then calculated to be:

$$\frac{485{,}396{,}200}{11{,}077{,}497} = 43.8$$

8.4 Guidelines for analysis

As detailed in Section 5 of this document, the 2022 TUS respondents 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

[5] The average number of weeks worked in the past 12 months (WET_110) is not available on the public use microdata file. However, it has been used as an example of a quantitative estimate.

presents analytical challenges because the survey design and the selection probabilities affect the estimation and variance calculation procedures that should be used.

The 2022 TUS used a stratified design, with significant differences in sampling fractions between strata. Thus, some areas were over-represented in the sample (relative to their populations) while some other areas were relatively under-represented; this means that the unweighted sample was not representative of the target population, even if there was no non-response. Non-response rates may vary by demographic group, making the unweighted sample even less representative.

The survey weights must be used when producing estimates or performing analyses to account as much as possible for the over- and under-representation of geographic areas, age-sex groups and months of the year in the unweighted file. 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 incorrect.

For many analytical 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 on the subset of the data that is of interest, are rescaled so that the average weight is one (1), then the variances produced by the standard packages will be more reasonable; even if they do not consider 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. Section 9 describes sampling variability and data reliability in more detail.

8.5 Methods of estimation and interpretation of estimates

Estimating numbers of persons by using WGHT_PER on the main file

As previously mentioned, a basic person weight has been assigned to each sampled individual and, as described in Section 8.1, these weights have been adjusted to reflect the age and sex composition of the various provincial populations as estimated by Statistics Canada for each month covered by 2022 TUS.

$$\sum_{i=1}^{12,336} \text{WGHT\_PER}_i = 32,136,802^{1}$$

[1] Estimate of the number of persons aged 15 and over in the population of the survey.

In general, when an estimate is based on the unit of observation being the person, the main data file and WGHT_PER should be used. Examples of this are the average number of weeks worked by persons aged 25 to 34 years old, the percentage of persons who voted in the last provincial election, and the number of people aged between 25 and 44 who are currently attending school, college, CEGEP or university.

The last example would be calculated as follows: WGHT_PER would be summed up for all records on the main file with 2 <= AGEGR10 <= 3 and EDC_10 = 1, giving an estimate of 1,040,679 persons aged 25 to 44 who are currently attending school, college, CEGEP or university.

9. Release guidelines and data reliability

This section discusses survey error (non-sampling error and sampling error), computing variance estimates and confidence intervals, and the rules that should be used to decide whether an estimate can be released.

9.1 Non-sampling errors

Survey errors come from a variety of different sources. They can be classified into two main categories: non-sampling errors and sampling errors. Non-sampling errors 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 in the system, 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.

Non-response is another source of non-sampling error. Non-response errors result from a failure to collect complete information on all units in the selected sample. Non-response produces errors in the survey estimates in two ways. Firstly, non-respondents may have different characteristics from respondents, which can result in biased survey estimates if non-response is not fully corrected through weighting. Secondly, it reduces the number of respondents, which increases the sampling variance and decreases the precision of the estimates. A response rate of 30.7% was obtained for the 2022 TUS (see section 6.2 for more details). The risk of non-response bias was reduced as much as possible through the non-response weighting adjustments and through calibration.

9.2 Sampling error

Sampling error is defined as the error that results from estimating a population characteristic by measuring a portion of the population rather than the entire population. For probability sample surveys, methods exist to estimate sampling error. These methods derive directly from the sample design and method of estimation used by the survey.

The most commonly used measure to quantify sampling error is sampling variance. Sampling variance measures the extent to which the estimate of a characteristic from different samples of the same size and design differ from one another. The standard error of an estimate is the square root of its sampling variance. This measure provides an indication of sampling error using the same scale as the estimate.

The coefficient of variation (CV) of an estimate is a relative measure of the sampling error. It is defined as the estimate of the standard error divided by the estimate itself, usually expressed as a percentage (10% instead of 0.1). It is very useful for measuring and comparing the sampling error of quantitative variables with large positive values. However, it is not recommended for estimates such as proportions, estimates of change or differences, and variables that can have negative values.

It is considered a best practice at Statistics Canada to report the sampling error of an estimate through its 95% confidence interval (CI). The 95% confidence interval of an estimate means that if the survey were repeated over and over again, then 95% of the time (or 19 times out of 20), the confidence interval would cover the true population value.

9.3 Guidelines for statistical analysis

The GSSP surveys are based upon a complex sample design, with stratification, 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. In order for survey estimates and analyses to be free from bias, the survey weights must be used.

While many analysis procedures found in statistical packages allow weights to be used, the meaning or definition of the weight in these procedures may differ from that which is appropriate in a sample survey framework without use of the bootstrap weights. In many cases the estimates produced by the packages are correct, but if the variances are not based on the bootstrap weights then that the variances calculated are poor.

For other analytical techniques (for example linear regression, logistic regression and analysis of variance), a method exists which can make the variances calculated by the standard packages more meaningful (if not using the bootstrap weights), by incorporating the unequal probabilities of selection. The method rescales the weights so that there is an average weight of 1.

For example, suppose that analysis of all male respondents is required. The steps to rescale the weights are as follows:

- select all respondents from the file who reported SEX = male;
- calculate the AVERAGE weight for these records by summing the original person weights from the microdata file for these records and then dividing by the number of respondents who reported SEX = male;
- for each of these respondents, calculate a RESCALED weight equal to the original person weight divided by the AVERAGE weight;
- perform the analysis for these respondents using the RESCALED weight.

However, because the stratification of the sample's design are still not taken into account, the variance estimates calculated in this way are likely to be under-estimated.

Wherever possible, users should use the bootstrap weights in analyses in order to correctly estimate the variances. If using a statistical package that allows analysis with the bootstrap weights, the user should apply the bootstrap weights and not re-scale. For more details on the use of bootstrap weights in calculating the sampling error used in variances, and confidence intervals, please see *Appendix C.*

In addition to following data confidentiality and data quality guidelines, a data user can conduct analysis using GENDER (gender, 3 categories) or GENDER2 (gender, 2 categories) but not both to ensure the confidentiality of gender diverse respondents. Similarly, a data user can conduct analysis using GENPR (partner's gender, 3 categories) or GENPR2 (partner's gender, 2 categories), but not both.

9.4 Quality guidelines for the release of estimates

Before releasing and/or publishing any estimates from the GSSP surveys, users should consider the quality level of the estimate. Note that, in addition to the quality, the confidentiality should also be considered. Please refer to the Statistics Canada confidentiality rules before releasing and/or publishing any estimates. Data quality is affected by both sampling and non-sampling errors as discussed above. This section covers quality in terms of sampling error. There are different ways of measuring and reporting sampling error. It is considered a best practice at Statistics Canada to report the sampling error of an estimate through its 95% confidence interval. The confidence interval should be released with the estimate, in the same table as the estimate. In addition to the confidence intervals, estimates are categorized into one of three release categories:

Category A

Estimates and confidence intervals can be released with no warning. Data users should use the 95% confidence interval to decide whether the quality of the estimate is sufficient. Note that 'A' is not a quality indicator; it should not be released with the estimate. The 95% confidence interval is the quality indicator.

Category E – Marginal Quality

Estimates and confidence intervals are deemed of marginal quality. Estimates and confidence intervals should be flagged with the letter E (or some similar identifier) and be accompanied by a warning to use the estimate with caution. For example,
"The user is advised that the estimates and confidence intervals flagged with the letter E are considered to be of marginal quality due to high sampling variability, and should be used with caution."

Category F – Poor Quality

Estimates and confidence intervals are deemed of poor quality, and are not recommended for release. The estimates contain a very high level of instability, making them unreliable and potentially misleading. If users insist on releasing estimates of poor quality, even after being advised of their accuracy, the estimates should be accompanied by a disclaimer. The user should acknowledge the warnings given and undertake not to disseminate, present or report the estimates, directly or indirectly, without this disclaimer. They should be flagged with the letter F (or some similar identifier) and the following warning should accompany the estimates and confidence intervals:

"Please be warned that these estimates and confidence intervals [flagged with the letter F] do not meet Statistics Canada's quality standards. Conclusions based on these data will be unreliable, and may be invalid."

The table below provides the rules for assigning an estimate $\hat{Y}$and its confidence interval to a quality category (A, E or F). The rules are mainly based on sample counts; the thresholds for the sample counts are denoted by MIN1 and MIN2. This minimum count threshold is calculated as 60 times an approximate design effect for the domain (the design effect is a measure of the efficiency of the sample design) for MIN1 and 30 times an approximate design effect for the domain for MIN2. The values of the thresholds depend on the domain of interest and are given in Tables 9.2 to 9.3.

Table 9.1: Release Guidelines

Type of Estimate	Category A*	Category E Marginal Quality	Category F Poor Quality
Proportion	n ≥ MIN1	Not A and Not F	n < MIN2
Weighted count	m ≥ MIN1	Not A and Not F	m < MIN2
Mean, $\hat{Y}$	n ≥ MIN1 and CV≤25%	Not A and Not F	n < MIN2 or CV>50%
Total, $\hat{Y}$	m ≥ MIN1 and CV≤25%	Not A and Not F	m < MIN2 or CV>50%
Difference, $\hat{Y} = \hat{Y_1} - \hat{Y_2}$	$\hat{Y_1}$ and $\hat{Y_2}$ are Category A	Not A and Not F	$\hat{Y_1}$ or $\hat{Y_2}$ is Category F

* Note that 'A' is not a quality indicator; it should not be released with the estimate. The 95% confidence interval is the quality indicator.

Notation:

n: Domain sample size. For proportions, n represents the unweighted count of the number of respondents included in the denominator of the proportion; there are no sample size requirements for the numerator of a proportion. For means, n represents the unweighted count of the number of respondents that contribute to the calculation of the mean (including respondents with values of zero). For reasons of confidentiality, the minimum value in a numerator is 5.

m: Unweighted count of the number of respondents with nonzero values that contribute to the estimate

CV: Coefficient of variation. A relative measure of the sampling error. It is defined as the estimate of the standard error divided by the estimate itself, usually expressed as a percentage

L: Length of the 95% confidence interval of $\hat{Y}$. The length of the confidence interval is used for quantitative variables such as income (as opposed to dichotomous or categorical variables).

The rules in Table 9.1 depend on the type of estimate. Proportions and weighted counts are estimates based on dichotomous or categorical variables. An example of a weighted count is the estimated number of immigrants. On the other hand, the rules for means and totals apply to quantitative variables, such as income. Estimates of the difference between two variables include estimates of change between two survey cycles, and estimates of the difference between two domains.

The release rules for estimated proportions and estimated counts are based on sample size, denoted by n. Table 9.2 provides the thresholds for all estimated proportions and counts. The rules are based on geography, as follows:

- Rule 1.1 applies to the following regions: Quebec, Ontario and British Columbia. The rule applies to the latter regions and below: for example, Rule 1.1 applies to estimates for Quebec by gender, age group or urban/rural.
- Rule 1.2 applies to the Prairies and Canada. The rule applies to the latter region and below. As well, Rule 1.2 applies to Canada-level estimates; for example, it applies to estimates for people in Canada by gender, age group or urban/rural excluding the PEI indicator.
- Rule 1.3 applies to the Atlantic region. The rule applies to the latter region and below: for example, Rule 1.3 applies to estimates for Atlantic by gender, age group or urban/rural excluding the PEI indicator. Rule 1.3 also applies to estimates covering more than one region.

Table 9.2: Thresholds for proportions and counts

Rule	Geography	Category A (no warning)	Category E (warning)	Category F (suppress)
1.1	QC, ON, BC	n ≥ 150	75 ≤ n < 150	n < 75
1.2	Prairies, Canada	n ≥ 180	90 ≤ n < 180	n < 90
1.3	Atlantic	n ≥ 240	120 ≤ n < 240	n < 120

The release rules for the estimated means and totals of quantitative variables or amounts are based on the sample size, denoted by n, and on the CV of the estimate. Table 9.3 provides the release guidelines for all estimated means and totals. The rules for Table 9.3 apply as described above for Table 9.2.

Table 9.3: Thresholds for means and totals

Rule	Geography	Category A (no warning)	Category E (warning)	Category F (suppress)
2.1	QC, ON, BC	n ≥ 150 and CV ≤ 25%	Not A and Not F	n < 75 or CV>50%
2.2	Prairies, Canada	n ≥ 180 and CV ≤ 25%	Not A and Not F	n < 90 or CV>50%
2.3	Atlantic	n ≥ 240 and CV ≤ 25%	Not A and Not F	n < 120 or CV>50%

Release Rules for Differences

In order to assign a release category for an estimated difference between two estimates, the analyst must first determine the release category of each of the two estimates using the rules described above. Next, the release category of the estimated difference or the estimate of change is assigned the lower release category of the two estimates; this can be specified as follows:

- If one or both estimates are category F estimates, then assign the estimated difference to category F and suppress it.
- Otherwise, if one or both estimates are category E estimates, then assign the estimated difference to category E.
- If both estimates are category A estimates, then assign the estimated difference to category A.

In addition to the rules specified by Tables 9.2 and 9.2, there are two conditions that indicate that a confidence interval is of poor quality. The quality of an estimate and its confidence interval should be categorized as poor quality if either of the following two conditions is true:

1) Length of the 95% confidence interval is zero; i.e., L=0. (An exception is if the estimate is based on a census rather than a sample, or if the estimate corresponds to a calibration control total; see Section 8 for more information on the calibration.)

2) The lower bound or upper bound of the 95% confidence interval is not a plausible value for the estimate. This is an indication that the assumptions about the distribution of the estimate are violated. For example, the lower bound for the estimated number of immigrants should not be negative.

9.5 Rounding

In order for estimates produced from the GSSP surveys microdata files to 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.

9.5.1 Rounding guidelines

Under no circumstances are unrounded estimates to be published or otherwise released by users. Here are rounding guidelines for producing estimates and statistical tables.

a) Estimates are to be rounded using a rounding method that does not introduce systematic bias. The following method of rounding is acceptable: 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. The rounding down method (i.e., all estimates are rounded down) or the rounding up method (i.e., all estimates are rounded up) are not acceptable methods of rounding because they introduce a systematic bias.

b) Marginal sub-totals and totals are to be derived from their corresponding unrounded components and then are to be rounded themselves. Averages, rates, percentages, proportions and ratios are to be computed from unrounded components (i.e., numerators and denominators) and then are to be rounded themselves. Sums and differences are to be derived from their corresponding unrounded components and then are to be rounded themselves.

Estimates should be rounded for two reasons: 1) to protect the confidentiality of estimates, and 2) because unrounded estimates imply greater quality than actually exists. An appropriate rounding base for an estimate from a quality perspective can be computed using the estimate's confidence interval: it is given by the decimal place value of the left-most non-zero value in the difference between the upper bound and lower bound of the interval. If this rounding base is smaller than the rounding base for protecting confidentiality, then the latter rounding base should be used.

Here are two fictitious examples illustrating how to compute an appropriate rounding base using an estimate's confidence interval. For the estimate 11,123,853 with confidence interval (10,723,532 to 11,434,234), the difference between the two interval bounds is 710,702 which is 6 decimal places to the left of the decimal point; the rounding base for the estimate is therefore 100,000, and the rounded estimate

becomes 11,100,000 with confidence interval (10,700,000 to 11,400,000). For the estimate 62.598 with confidence interval (62.552 to 62.638), the difference between the two interval bounds is 0.086 which is 2 decimal places to the right of the decimal point; the rounding base for the estimate is therefore 0.01, and the rounded estimate becomes 62.60 with confidence interval (62.55 to 62.64).

When releasing estimates in a table, it is usually desirable to use the same rounding base for all estimates in a column (or row). In such situations, the minimum rounding base of the estimates in the same column (or row) can be used. For example, suppose the rounding bases for a column of estimates ranges from 1,000 to 100,000, then a rounding base of 1,000 would be used. Using the minimum rounding base implies that some estimates may be released with more decimal places than was computed through their confidence interval.

10. Additional information

Additional information about this survey can be obtained from the individuals listed below.

Data from the survey is available through published reports, special request tabulations, and the microdata file. The microdata file will be available from the Social and Aboriginal Statistics Division of Statistics Canada. Tabulations can be obtained at a cost that will reflect the resources required to produce the tabulation.

Survey Manager
Patricia Houle
Diversity and Sociocultural Statistics
(613) 854-8507
patricia.houle@statcan.gc.ca

Analyst
Dana Wray
Diversity and Sociocultural Statistics
343-597-7075
dana.wray@statcan.gc.ca

Sample Selection Procedures, Weighting and Estimation
Caroline Pelletier
Social Statistics Methods Division
caroline.pelletier@statcan.gc.ca

Appendix A – List of primary activity codes

Main Activities		
100		Sleeping
	101	Essential sleep (night or day)
	102	Sleeplessness, insomnia
	103	Naps, lying down, resting, relaxing
	104	Sick in bed, prescribed bed rest, convalescence, rehabilitative rest
	109	Sleeping, not stated
125		Own personal care
	126	Personal care (personal hygiene, getting dressed, meditating, sexual activities)
	127	Self-administered medical care (taking blood pressure, sugar level, medication, treatment)
	128	Health professional visit, consultation (doctor, dentist, physiotherapist, alternative care practitioner, psychologist, personal support worker)
	129	Receiving personal care from another household member
	130	Receiving personal care from other personal care providers (hair stylist, barber, beauty specialist, nail technician)
	199	Personal care, not stated
	401	Travel to or from receiving personal care
300		Caring for household members **17 years of age or younger**
	301	Child less than 15 years old: Personal care, getting ready for school, emotional help, medical care
	302	Child less than 15 years old: Reading, playing, talking
	303	Child less than 15 years old: Supervising homework, educational help, reprimanding
	304	Child less than 15 years old: Accompanying to or from school, bus stop, sports, activities, parent school meetings or appointments
	305	Teenager (15-17): Personal care, getting ready for school, playing, emotional support, talking, medical care
	306	Teenager (15-17): Helping with homework, educational help, reprimanding
	307	Teenager (15-17): Accompanying to or from school, bus stop, sports, activities, parent school meetings or appointments
	399	Caring for household members 17 years of age or younger, not stated
	402	Travel related to caring for household members **17 years of age or younger**
350		Caring for household members **18 years of age or older**
	351	Adult: Personal care, emotional support, medical care
	352	Adult: Accompanying to or from appointments, shopping
	353	Adult: Preparing meals, cleaning, financial or household management, indoor or outdoor maintenance or repair, taking care of a pet
	359	Caring for household members 18 years of age or older, not stated
	403	Travel related to caring for household members **18 years of age or older**
150		Eating or drinking
	151	Eating (meals, snacks)
	152	Drinking other than with meals or snacks
	153	Break or lunch related to paid work activities

Main Activities		
	154	Break or lunch related to studying or learning
	159	Eating or drinking, not stated
	404	Travel to or from eating (drinking)
200		**Regular** household tasks
	201	Preparing or serving meals or snacks
	202	Food (or meal) cleanup, dish washing
	203	Preserving foods (baking, freezing, sealing, packing foods, home brewing)
	204	Unpacking groceries
	205	Indoor house cleaning, tidying, care of house plants
	206	Taking out garbage, recycling, compost, or unpacking of goods
	207	Laundry, putting clothes on the line, mending, ironing, folding, shoe care
	208	Organizing, planning, paying bills, managing mail
	209	Pet care (feeding, walking, grooming, playing, training, using veterinary care or other pet services)
	299	Household tasks, not stated
	405	Travel related to **regular** household tasks
230		**Occasional** household tasks
	231	Dressmaking, sewing clothes (for self or household member)
	232	Interior do-it-yourself improvement, maintenance (painting, plastering, repairs to ceiling, floor, walls, plumbing, wiring, carpentry, decorating)
	233	Installation, servicing or repair of personal or household goods, including technology devices (tablet, smartphone, computer or laptop)
	234	Packing or unpacking of luggage, car, trailer, boat for a trip or camping
	235	Packing or unpacking for a move of the household
	236	Outdoor cleaning (cutting grass, raking leaves, snow removal, routine cleaning of yard, pool)
	237	Exterior do-it-yourself improvement, maintenance or repair of home (exterior painting, minor repair of roof, siding, driveway, landscaping, decorating)
	238	Do-it-yourself construction (building a deck, shed, fence, gazebo, house)
	239	Vehicle maintenance or repairs
	240	Harvesting, stacking or cutting firewood
	241	Gardening, planting (picking), maintaining a fruit, vegetable or herb garden, raising animals or gathering wild products for household use
	299	Household tasks, not stated
	406	Travel related to **occasional** household tasks
400		Travel or going from place to place
	401	Travel to or from receiving personal care
	402	Travel related to caring for household members **17 years of age or younger**
	403	Travel related to caring for household members **18 years of age or older**
	404	Travel to or from eating (drinking)
	405	Travel related to **regular** household tasks
	406	Travel related to **occasional** household tasks
	407	Travel to or from paid work activities
	408	Travel to or from studying or learning activities

Main Activities		
	409	Travel to or from shopping
	410	Travel to or from socializing or communicating activities
	411	Travel to or from providing unpaid help or care to other households, the community, organization-based volunteering or other unpaid work
	412	Travel to or from civic or religious activities or community social events
	413	Travel to or from sports participation or physical exercise
	414	Travel to or from culture or sports events
	415	Travel to or from hobbies, leisure (vacation) or outdoor activities
	416	Travel related to mass media activities (reading, television, music, technology)
	499	Travel, not stated
500		Paid work activities
	501	Paid work
	502	Paid training
	504	Waiting or idle time related to paid work activities
	505	Selling of goods or services for pay or profit in household enterprises or self-employment
	506	Other income-generating activities
	507	Looking for work
	599	Paid work, not stated
	407	Travel to or from paid work activities
600		Studying or learning
	601	Schooling full time or part time - on site
	602	Schooling full time or part time - online
	603	Homework, studying or being tutored
	604	Self-development, leisure or special interest classes on site or online
	699	Studying or learning, not stated
	408	Travel to or from studying or learning activities
260		Shopping
	261	In-person shopping for goods (gasoline, groceries, clothing, car)
	262	In-person shopping for services (legal services, financial services, vehicle maintenance, post office, real estate agency)
	263	Online shopping for goods or services
	264	Researching for purchasing goods or services
	269	Shopping, not stated
	409	Travel to or from shopping
700		Socializing or communicating
	701	Socializing or communicating - in person (talking, visiting with family or friends)
	702	Socializing or communicating - using any type of technology (phone, email, social media, video call, text messaging)
	799	Socializing or communicating, not stated
	410	Travel to or from socializing or communicating activities
800		Unpaid help or care provided to other households or the community, organization-based volunteering or other unpaid work

Main Activities		
	801	Unpaid help provided to other households by caring for a child: Supervision or instruction, feeding, talking, accompanying
	802	Unpaid help provided to other households by caring for an adult: Personal care, emotional support, accompanying for appointments, shopping
	803	Unpaid help provided to other households: Preparing meals, financial management, indoor or outdoor maintenance or repair, taking care of a pet
	804	Unpaid work in enterprises owned by other households
	805	Unpaid coaching or administering sports
	806	Organization-based volunteering (unpaid, non-compulsory work for schools, religious groups, health, social, cultural, political associations, etc.
	807	Unpaid work not on behalf of a group or organization aimed at improving the community
	808	Unpaid work required by a school, employer, court or other organization
	899	Unpaid help or care provided to other households or the community, organization-based volunteering or other unpaid work, not stated
	411	Travel to or from providing unpaid help or care to other households, the community, organization-based volunteering or other unpaid work
900		Civic or religious activities or community social events
	901	Participating in community cultural or social events (non-religious ceremony, festival, local parade, historic event)
	902	Civic participation (voting, jury duty)
	903	Religious practices such as private prayer, participating in collective religious practice or service, religious ceremonies
	999	Civic or religious activities or community social events, not stated
	412	Travel to or from civic or religious activities or community social events
1000		Sports participation or physical exercise
	1001	Exercising (walking, running, weight-training, yoga, exercise or aerobics class)
	1002	Organized recreational sports (hockey, soccer, football, baseball, volleyball, tennis, rugby, ultimate, curling, judo, boxing, wrestling, badminton)
	1003	**Suppressed**: Competitive sports for elite or promising athletes at local, provincial, national or international levels, including Olympic competitors **Note:** This variable is available in the analytical file, but due to low cell count it was grouped with 1099 (Sports participation or physical exercise, not stated).
	1004	Outdoor sports (non-competitive): Hike, bike, ski, skate, swim, row, kayak, canoe, sail, paddle board, skateboard, snowboard, golf
	1005	Other sports activities (bowling, table tennis, frisbee, catch, track and field)
	1099	Sports participation or physical exercise, not stated **Note:** In the PUMF, this includes 1003 (Competitive sports for elite or promising athletes at local, provincial, national or international levels, including Olympic competitors) due to small cell counts.
	413	Travel to or from sports participation or physical exercise
1100		Culture, sports events, hobbies, leisure or outdoor activities
	1101	Attending cinema
	1102	Attending a concert, theatre, exhibition, fair or live entertainment event
	1103	Attending sporting events
	1104	Visiting museums, art galleries, heritage sites, zoos, observatories, botanical gardens, amusement parks
	1105	Arts, hobbies or playing games (drawing, painting, crafting, writing, playing an instrument, dancing, collecting, knitting, photography, board or card games, video games, gambling)

Main Activities		
	1106	Leisure or outdoor activities (fishing, hunting, camping, birdwatching, boating, horseback riding, window-shopping)
	1199	Culture, sports events, hobbies, leisure or outdoor activities, not stated
	414	Travel to or from culture or sports events
	415	Travel to or from hobbies, leisure (vacation) or outdoor activities
1200		Mass media activities (reading, television, music, technology)
	1201	Reading (online or paper version books, periodicals, newspapers)
	1202	Watching television shows, movies or videos online or TV broadcast
	1203	Listening to music, radio or podcasts online or radio broadcasts
	1204	Use of technology (general computer use, Internet, art, music or video production)
	1299	Mass media activities, not stated
	416	Travel related to mass media activities (reading, television, music, technology)
1300		Waiting time, doing nothing or other activities
	1301	Waiting time
	1302	Free time, thinking, smoking
	1303	Doing nothing
	1304	Other activity
	9999	Not stated

Appendix B – Concordance table

Note: Only variables included on the 2022 TUS PUMF are included in this concordance table. For a full list of variables in the TUS analytical file, please reach out to the Research Data Centres or one of the contacts listed in this User Guide.

Case Variables 33
DMHC – Demographic and Household Composition Derived Variables 33
GDV – Geographic Derived Variables 34
GTU – General Time Use 34
DDV – Diary Derived Variables 34
DDV – Time Diary Variables – Duration by Main Activity 34
DDV – Time Diary Variables – Duration of Social Contact 47
DDV – Time Diary Variables – Duration by Location 48
DDV – Time Diary Variables – Duration by Main Activity (Grouped) 50
TUT – Time Use Diary 56
TCS – Perceptions of time 57
UH – Unpaid Service 57
CHLD – Care of children 58
LSM – Life satisfaction (Subjective Wellbeing) 59
GEN – General Health 59
DSQ – Disability Screening Questions 59
SRS – Self-rated Stress 60
MSS – Main Source of Stress 60
MRW – Main Activity of Respondent - Last Week 60
WET – Work Activities (Employment type) 60
TLWK – Telework 60
WLY – Last Year Employer Information 61
WHW – Hours Worked 62
WFS – Work Flexible Schedule 62
SRC – Satisfaction of Respondent with Current Balance between Job and Home Life 62
WLB – Work Life Balance 62
HRH – Household Regularly Hires Paid Help 63
ATT – Access to Transportation 63
CTW – Commute to Work/School 64
EDC – Education – School Attendance 65
ED – Educational Attainment 65

MAP – Main Activity of Spouse/Partner 65
DOR – Type of dwelling 65
IM – Place of birth, immigration and citizenship 66
BPR – Place of birth of parents 66
BPP – Birthplace of spouse or partner 66
ABM – Indigenous Identity of the Respondent 66
AIP – Indigenous identity of Respondent's Spouse/Partner 66
PG – Sociodemographic Characteristics of the Respondent 66
PGP – Sociodemographic Characteristics of the Respondent's Spouse/Partner 66
REL – Religion 66
LAN – Language Minimum 67
UOT –Satisfaction with the Respondent's Use of Time 67
IDV – Income-derived Variables 67

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
Case Variables			
PUMFID	PUMF record identification	PUMFID	
DDAY	Diary reference day	DDAY	
SURVMNTH	Survey month of data collection	SURVMNTH	
EQFLAG	Survey collection mode	EQFLAG	
WTBS_001 – WTBS_500	Bootstrap weights	WTBS_001 – WTBS_500	
WGHT_PER	Person weight	WGHT_PER	
DMHC – Demographic and Household Composition Derived Variables			
AGEGR10	Age group of respondent (groups of 10)	AGEGR10	
GENDER2	Gender after distribution of non-binary persons	N/A	**New variable for the 2022 Time Use Survey.** Given that the non-binary population is a small population, data aggregation is necessary in order to protect the confidentiality of responses provided by respondents. In these cases, individuals in the category 'non-binary persons' are distributed into the other two gender categories and are denoted by the '+' symbol.
MARSTAT	Marital status of respondent	MARSTAT	
PHSDFLG	Whether respondents reported having a spouse/partner living in the household	PHSDFLG	
AGEPRC	Age of respondent's spouse/partner (collapsed)	N/A	**Variable categories regrouped for the PUMF.**
GENPR2	Gender of respondent's spouse or partner after distribution of non-binary persons	N/A	**New variable for the 2022 Time Use Survey.** Given that the non-binary population is a small population, data aggregation is necessary in order to protect the confidentiality of responses provided by respondents. In these cases, individuals in the category 'non-binary persons' are distributed into the other two gender categories and are denoted by the '+' symbol.
COUPGEN2	Type of partner respondent has living in the household	PRTYPE	Gender, rather than sex, of the respondent and partner is now used in 2022.
CXRFLAG	Whether there is a child of the respondent living in the household (includes birth, adopted and stepchildren)	CXRFLAG	
CHH0004C	Number of children aged 0-4 in respondent's household	N/A	**This variable was collapsed into a binary variable (yes/no) for the PUMF.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
CHH0514C	Number of children aged 5-14 in respondent's household	N/A	**New variable for the 2022 Time Use Survey. This variable was collapsed into a binary variable (yes/no) for the PUMF.**
CHH0014C	Number of children aged 0-14 in respondent's household	CHH0014C	**This variable was collapsed into a binary variable (yes/no) for the PUMF.**
SENFLAG	Whether there are any people aged 65 or older living in the household	SENFLAG	
PARNUM	Number of parents the respondent has in the household	PARNUM	
HSDSIZEC	Household size of the respondent	HSDSIZEC	**This variable was capped for the PUMF.**
MULTIGEN	Whether the respondent's household consists of 3 or more generations	MULTIGEN	
GDV – Geographic Derived Variables			
PRV	Province of residence	PRV	
LUC_RST	Population centre indicator	LUC_RST	
GTU – General Time Use			
GTU_110	How often the respondent feels rushed	GTU_Q110	Warning: Comparison across TUS cycles for this variable should be done with caution. There is a mild mode effect linked to changes in the survey methodology. For more information, see section 4.2.
GTU_130	How often the respondent feels they have time on your hands that they don't know what to do with	GTU_Q130	
DDV – Diary Derived Variables			
DVTDAY	Type of day (weekday, Saturday, or Sunday) on which the time use diary was collected (the diary reference day)	DVTDAY	
DIARYREC	Recall period of the diary	DIARYREC	
DDV – Time Diary Variables – Duration by Main Activity			
DUR101 / EPI101	Total duration (in minutes) / total occurrences of essential sleep (night or day)	DUR01 / EPI01	DUR101 / EPI101, DUR102 / EPI102, DUR103 / EPI103 and DUR104 / EPI104 (2022) replace the following 2015 variable: • DUR01 / EPI01: (Sleeping, napping, resting, relaxing, sick in bed)
DUR102 / EPI102	Total duration (in minutes) / total occurrences of sleeplessness, insomnia		
DUR103 / EPI103	Total duration (in minutes) / total occurrences of naps, lying down, resting, relaxing		

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR104 / EPI104	Total duration (in minutes) / total occurrences of sick in bed, prescribed bed rest, convalescence, rehabilitative rest		
DUR109 / EPI109	Total duration (in minutes) / total occurrences of sleeping, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR126 / EPI126	Total duration (in minutes) / total occurrences of personal care (personal hygiene, getting dressed, meditating, sexual activities)	DUR02 / EPI02	
DUR127 / EPI127	Total duration (in minutes) / total occurrences of self-administered medical care (taking blood pressure, sugar level, medication, treatment)	DUR04 / EPI04	
DUR128 / EPI128	Total duration (in minutes) / total occurrences of health professional visit, consultation (doctor, dentist, physiotherapist, alternative care practitioner, psychologist, personal support worker)	DUR03 / EPI03	
DUR129 / EPI129	Total duration (in minutes) / total occurrences of receiving personal care from another household member	N/A	**New variable for the 2022 Time Use Survey.**
DUR130 / EPI130	Total duration (in minutes) / total occurrences of receiving personal care from other personal care providers (hair stylist, barber, beauty specialist, nail technician)	N/A	**New variable for the 2022 Time Use Survey.**
DUR199 / EPI199	Total duration (in minutes) / total occurrences of personal care, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR151 / EPI151	Total duration (in minutes) / total occurrences of eating (meals, snacks)	DUR06 / EPI06	DUR151 / EPI151 and DUR152 / EPI152 (2022) replace the following 2015 variable: • DUR06 / EPI06: (Eating or drinking > Meals, snacks, drinks)
DUR152 / EPI152	Total duration (in minutes) / total occurrences of drinking other than with meals or snacks	DUR06 / EPI06	
DUR153 / EPI153	Total duration (in minutes) / total occurrences of break or lunch related to paid work activities	DUR12 / EPI12	DUR153 / EPI153 and DUR154 / EPI154 (2022) replace the following 2015 variable:

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR154 / EPI154	Total duration (in minutes) / total occurrences of break or lunch related to studying or learning	DUR12 / EPI12	• DUR12 / EPI12: (Break or lunch at work or school)
DUR159 / EPI159	Total duration (in minutes) / total occurrences of eating or drinking, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR201 / EPI201	Total duration (in minutes) / total occurrences of preparing or serving meals or snacks,	DUR05 / EPI05	
DUR202 / EPI202	Total duration (in minutes) / total occurrences for food (or meal) cleanup, dish washing	DUR18 / EPI18	DUR202 / EPI202 (2022) replaces part of the following 2015 variable: • DUR18 / EPI18 (Indoor house cleaning, dish washing, tidying)
DUR203 / EPI203	Total duration (in minutes) / total occurrences of preserving foods (baking, freezing, sealing, packing foods, home brewing)	DUR17 / EPI17	
DUR204 / EPI204	Total duration (in minutes) / total occurrences of unpacking groceries	DUR23 / EPI23	DUR204 / EPI204 (2022) replaces part of the following 2015 variable: • DUR23 / EPI23 (Unpacking groceries, packing and unpacking luggage for travel and/or boxes for a move) In 2022, this activity was split up into three activities: unpacking groceries (DUR204 / EPI204), packing and unpacking for a trip (DUR234 / EPI234), and packing and unpacking for a move (DUR235 / EPI235).
DUR205 / EPI205	Total duration (in minutes) / total occurrences of indoor house cleaning, tidying, care of house plants	DUR18 / EPI18	DUR205 / EPI205 (2022) replaces part of the following 2015 variable: • DUR18 / EPI18 (Indoor house cleaning, dish washing, tidying)
DUR206 / EPI206	Total duration (in minutes) / total occurrences of taking out garbage, recycling, compost, or unpacking of goods	DUR19 / EPI19	
DUR207 / EPI207	Total duration (in minutes) / total occurrences of laundry, putting clothes on the line, mending, ironing, folding, shoe care	DUR20 / EPI20	
DUR208 / EPI208	Total duration (in minutes) / total occurrences of organizing, planning, paying bills, managing mail	DUR22 / EPI22	
DUR209 / EPI209	Total duration (in minutes) / total occurrences of pet care (feeding, walking, grooming, playing, training,	DUR26 / EPI26	DUR209 / EPI209 (2022) replaces the following 2015 variable: • DUR26 / EPI26 (Pet care > Feeding, walking, grooming, playing)

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
	using veterinary care or other pet services)		In 2015, this code excluded using veterinary care or other pet services.
DUR231 / EPI231	Total duration (in minutes) / total occurrences of dressmaking, sewing clothes (for self or household members	N/A	**New variable for the 2022 Time Use Survey.**
DUR232 / EPI232	Total duration (in minutes) / total occurrences of interior do-it-yourself improvement, maintenance (painting, plastering, repairs to ceiling, floor, walls, plumbing, wiring, carpentry, decorating)	DUR21 / EPI21	DUR232 / EPI232 (2022) replaces part of the following 2015 variable: • DUR21 / EPI21 (Repair, painting, or renovation) In 2022, this activity was split across three new codes: DUR232 / EPI232 (for interior work), DUR233 / EPI233 (for goods), and DUR237 / EPI237 (for exterior work).
DUR233 / EPI233	Total duration (in minutes) / total occurrences of installation, servicing, or repair of personal or household goods, including technology devices (tablet, smartphone, computer or laptop)	DUR21 / EPI21	DUR233 / EPI233 (2022) replaces part of the following 2015 variable: • DUR21 / EPI21 (Repair, painting, or renovation) In 2022, this activity was split across three new codes: DUR232 / EPI232 (for interior work), DUR233 / EPI233 (for goods), and DUR237 / EPI237 (for exterior work).
DUR234 / EPI234	Total duration (in minutes) / total occurrences of packing or unpacking of luggage, car, trailer, boat for a trip or camping	DUR23 / EPI23	DUR234 / EPI234 (2022) replaces part of the following 2015 variable: • DUR23 / EPI23 (Unpacking groceries, packing and unpacking luggage for travel and/or boxes for a move) In 2022, this activity was split up into three activities: unpacking groceries (DUR204 / EPI204), packing and unpacking for a trip (DUR234 / EPI234), and packing and unpacking for a move (DUR235 / EPI235).
DUR235 / EPI235	Total duration (in minutes) / total occurrences of packing or unpacking for a move of the household	DUR23 / EPI23	DUR235 / EPI235 (2022) replaces part of the following 2015 variable: • DUR23 / EPI23 (Unpacking groceries, packing and unpacking luggage for travel and/or boxes for a move) In 2022, this activity was split up into three activities: unpacking groceries (DUR204 / EPI204), packing and unpacking for a trip (DUR234 / EPI234), and packing and unpacking for a move (DUR235 / EPI235).
DUR236 / EPI236	Total duration (in minutes) / total occurrences of outdoor cleaning (cutting grass, raking leaves, snow removal, routine cleaning of yard, pool)	DUR24 / EPI24	DUR236 / EPI236 (2022) replaces part of the following 2015 variable: • DUR24 / EPI24 (Outdoor maintenance > Car repair, ground maintenance, snow removal, cutting grass) In 2022, this activity was split across two other new codes: DUR239 / EPI239 (car repair) and DUR237 / EPI237 (exterior maintenance and repair).

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR237 / EPI237	Total duration (in minutes) / total occurrences of exterior do-it-yourself improvement, maintenance or repair of home (exterior painting, minor repair of roof, siding, driveway, landscaping, decorating)	DUR21 / EPI21 DUR24 / EPI24	DUR237 / EPI237 (2022) replaces the following 2015 variables: • DUR21 / EPI22 (Repair, painting, or renovation) • DUR24 / EPI24 (Outdoor maintenance > Car repair, ground maintenance, snow removal, cutting grass)
DUR238 / EPI238	Total duration (in minutes) / total occurrences of do-it-yourself construction (building a deck, shed, fence, gazebo, house)	N/A	**New variable for the 2022 Time Use Survey.**
DUR239 / EPI239	Total duration (in minutes) / total occurrences of vehicle maintenance or repairs	N/A	DUR239 / EPI239 (2022) replaces part of the following 2015 variables: • DUR24 / EPI24 (Outdoor maintenance > Car repair, ground maintenance, snow removal, cutting grass)
DUR240 / EPI240	Total duration (in minutes) / total occurrences of harvesting, stacking or cutting firewood	N/A	**New variable for the 2022 Time Use Survey.**
DUR241 / EPI241	Total duration (in minutes) / total occurrences of gardening, planting (picking), maintaining a fruit, vegetable or herb garden, raising animals or gathering wild products for household use	DUR25 / EPI25	
DUR299 / EPI299	Total duration (in minutes) / total occurrences of household tasks, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR261 / EPI261	Total duration (in minutes) / total occurrences of in-person shopping for goods (gasoline, groceries, clothing, car)	DUR37	
DUR262 / EPI262	Total duration (in minutes) / total occurrences of in-person shopping for services (legal services, financial services, vehicle maintenance, post office, real estate agency)	DUR38	
DUR263 / EPI263	Total duration (in minutes) / total occurrences of online shopping for goods or services	N/A	**New variable for the 2022 Time Use Survey.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR264 / EPI264	Total duration (in minutes) / total occurrences of researching for purchasing goods or services	DUR39	
DUR269 / EPI269	Total duration (in minutes) / total occurrences of shopping, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR301 / EPI301	Total duration (in minutes) / total occurrences of caring for a child from your household or family members, less than 15 old: Personal care, getting ready for school, emotional help, medical care,	DUR27 / EPI27	DUR301 / EPI301, DUR302 / EPI302 and DUR303 / EPI303 (2022) replace the following 2015 variable: • DUR27 / EPI27 (Caring for a child from your household (less than 15): Personal care, getting ready for school, supervising homework, reading, playing, reprimanding, educational, emotional help)
DUR302 / EPI302	Total duration (in minutes) / total occurrences of caring for a child from your household or family members, less than 15 old: Reading, playing, talking,	DUR27 / EPI27	
DUR303 / EPI303	Total duration (in minutes) / total occurrences of caring for a child from your household or family members, less than 15 old: Supervising homework, educational help, reprimanding	DUR27 / EPI27	
DUR304 / EPI304	Total duration (in minutes) / total occurrences of caring for a child from your household or family members, less than 15 years old: Accompanying to or from school, bus stop, sports, activities, parent school meetings or appointments	DUR28 / EPI28	
DUR305 / EPI305	Total duration (in minutes) / total occurrences of caring for a teenager from your household or family members (15-17): Personal care, getting ready for school, playing, emotional support, talking, medical care	DUR29 / EPI29	DUR305 / EPI305, and DUR306 / EPI306 (2022) replaces the following 2015 variable: • DUR29 / EPI29 (Caring for a teenager from your household (15-17): Helping with homework, playing, reprimanding, educational, personal care, getting ready for school, emotional help)

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR306 / EPI306	Total duration (in minutes) / total occurrences of caring for a teenager from your household or family members (15-17): Helping with homework, educational help, reprimanding	DUR29 / EPI29	
DUR307 / EPI307	Total duration (in minutes) / total occurrences of caring for a teenager from your household or family members (15-17): Accompanying to or from school, bus stop, sports, activities, parent school meetings or appointments	DUR30 / EPI30	
DUR399 / EPI399	Total duration (in minutes) / total occurrences of caring for household members 17 years of age or younger, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR351 / EPI351	Total duration (in minutes) / total occurrences of caring for household or family members 18 years of age or older: Personal care, emotional support, medical care	DUR351 / EPI351	DUR351 / EPI351 (2022) replaces part of the following 2015 variable: • DUR31 / EPI31 (Caring for an adult from your household: Washing, dressing, care giving, financial management)
DUR352 / EPI352	Total duration (in minutes) / total occurrences of caring for household or family members 18 years of age or older: Accompanying to or from appointments, shopping	DUR32 / EPI32	
DUR353 / EPI353	Total duration (in minutes) / total occurrences of caring for household or family members 18 years of age or older: Preparing meals, cleaning, financial or household management, indoor or outdoor maintenance or repair, taking care of a pet	N/A	DUR351 / EPI351 (2022) replaces part of the following 2015 variable: • DUR31 / EPI31 (Caring for an adult from your household: Washing, dressing, care giving, financial management)
DUR359 / EPI359	Total duration (in minutes) / total occurrences of caring for household members 18 years of age or older, not stated	N/A	**New variable for the 2022 Time Use Survey.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR401 / EPI401	Total duration (in minutes) / total occurrences of travel to or from receiving personal care	DUR07 / EPI07	DUR401 / EPI401, DUR402 / EPI402, DUR403 / EPI403, DUR404 / EPI404, DUR405 / EPI405, DUR406 / EPI406, DUR407 / EPI407, DUR408 / EPI408, DUR409 / EPI409, DUR410 / EPI410, DUR411 / EPI411, DUR412 / EPI412, DUR413 / EPI413, DUR414 / EPI414, DUR415 / EPI415, and DUR416 / EPI416 (2022) replace the following 2015 variable: • DUR07 / EPI07 (Transport to or from activity)
DUR402 / EPI402	Total duration (in minutes) / total occurrences of travel related to caring for household members 17 years of age or younger	DUR07 / EPI07	
DUR403 / EPI403	Total duration (in minutes) / total occurrences of travel related to caring for household members 18 years of age or older	DUR07 / EPI07	
DUR404 / EPI404	Total duration (in minutes) / total occurrences of travel to or from eating (drinking)	DUR07 / EPI07	
DUR405 / EPI405	Total duration (in minutes) / total occurrences of travel related to regular household tasks	DUR07 / EPI07	
DUR406 / EPI406	Total duration (in minutes) / total occurrences of travel related to occasional household tasks	DUR07 / EPI07	
DUR407 / EPI407	Total duration (in minutes) / total occurrences of travel to or from paid work activities	DUR07 / EPI07	
DUR408 / EPI408	Total duration (in minutes) / total occurrences of travel to or from studying or learning activities	DUR07 / EPI07	
DUR409 / EPI409	Total duration (in minutes) / total occurrences of travel to or from shopping	DUR07 / EPI07	
DUR410 / EPI410	Total duration (in minutes) / total occurrences of travel to or from socializing or communicating activities	DUR07 / EPI07	
DUR411 / EPI411	Total duration (in minutes) / total occurrences of travel to or from providing unpaid help or care to other households, the community, organization-based volunteering or other unpaid work	DUR07 / EPI07	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR412 / EPI412	Total duration (in minutes) / total occurrences of travel to or from civic or religious activities or community social events	DUR07 / EPI07	
DUR413 / EPI413	Total duration (in minutes) / total occurrences of travel to or from sports participation or physical exercise	DUR07 / EPI07	
DUR414 / EPI414	Total duration (in minutes) / total occurrences of travel to or from culture or sports events	DUR07 / EPI07	
DUR415 / EPI415	Total duration (in minutes) / total occurrences of travel to or from hobbies, leisure (vacation) or outdoor activities	DUR07 / EPI07	
DUR416 / EPI416	Total duration (in minutes) / total occurrences of travel related to mass media activities (reading, television, music, technology)	DUR07 / EPI07	
DUR499 / EPI499	Total duration (in minutes) / total occurrences of travel, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR501 / EPI501	Total duration (in minutes) / total occurrences of paid work	DUR08 / EPI08	
DUR502 / EPI502	Total duration (in minutes) / total occurrences of paid training	DUR11 / EPI11	
DUR503 / EPI503	Total duration (in minutes) / total occurrences of waiting or idle time related to paid work activities	N/A	**New variable for the 2022 Time Use Survey.**
DUR504 / EPI504	Total duration (in minutes) / total occurrences of selling of goods or services for pay or profit in household enterprises or self-employment	DUR40 / EPI40	
DUR505 / EPI505	Total duration (in minutes) / total occurrences of other income-generating activities	DUR10 / EPI10	
DUR506 / EPI506	Total duration (in minutes) / total occurrences of looking for work	DUR09 / EPI09	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR599 / EPI599	Total duration (in minutes) / total occurrences of paid work, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR601 / EPI601	Total duration (in minutes) / total occurrences of schooling full time or part time - on site	DUR13 / EPI13	
DUR602 / EPI602	Total duration (in minutes) / total occurrences of schooling full time or part time - online	DUR14 / EPI14	
DUR603 / EPI603	Total duration (in minutes) / total occurrences of homework, studying or being tutored	DUR15 / EPI15	
DUR604 / EPI604	Total duration (in minutes) / total occurrences of self development, leisure or special interest classes on site or online	DUR16 / EPI16	
DUR699 / EPI699	Total duration (in minutes) / total occurrences of studying or learning, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR701 / EPI701	Total duration (in minutes) / total occurrences of socializing or communicating - in person (talking, visiting with family or friends)	DUR41 / EPI41	
DUR702 / EPI702	Total duration (in minutes) / total occurrences of socializing or communicating - using any type of technology (phone, email, social media, video call, text messaging)	DUR42 / EPI42	
DUR799 / EPI799	Total duration (in minutes) / total occurrences of socializing or communicating, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR801 / EPI801	Total duration (in minutes) / total occurrences of unpaid help provided to other households by caring for a child: Supervision or instruction, feeding, talking, accompanying	DUR33 / EPI33	DUR801 / EPI801 (2022) replaces the following 2015 variable: • DUR33 / EPI33 (Caring for a child from another household: Supervision, feeding, talking, accompanying)
DUR802 / EPI802	Total duration (in minutes) / total occurrences of unpaid help provided to other households by caring for an adult: Personal care, emotional	DUR34 / EPI34 DUR35 / EPI35	DUR802 / EPI802 (2022) replaces the following 2015 variables: • DUR34 / EPI34 (Caring for an adult from another household: Preparing meals, cleaning, care giving, financial and household management, indoor or outdoor maintenance)

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
	support, accompanying for appointments, shopping		• DUR35 / EPI35 (Caring for and adult from another household: Accompanying to or from appointments, shopping)
DUR803 / EPI803	Total duration (in minutes) / total occurrences of unpaid help provided to other households: Preparing meals, financial management, indoor or outdoor maintenance or repair, taking care of a pet	DUR36 / EPI36	DUR803 / EPI803 (2022) replaces the following 2015 variable: • DUR36 / EPI36 (Helping relatives, friends, neighbours, acquaintances > Exclude: caregiving)
DUR804 / EPI804	Total duration (in minutes) / total occurrences of unpaid work in enterprises owned by other households	N/A	**New variable for the 2022 Time Use Survey.**
DUR805 / EPI805	Total duration (in minutes) / total occurrences of unpaid coaching or administering sports	DUR52 / EPI52	
DUR806 / EPI806	Total duration (in minutes) / total occurrences of organization-based volunteering (unpaid, non-compulsory work for schools, religious groups, health, social, cultural, political associations, etc.)	DUR43 / EPI43	DUR806 / EPI806 (2022) replaces the following 2015 variable: • DUR43 / EPI43 (Organizational activities)
DUR807 / EPI807	Total duration (in minutes) / total occurrences of unpaid work not on behalf of a group or organization aimed at improving the community	DUR44 / EPI44	DUR807 / EPI807 (2022) replaces the following 2015 variable: • DUR44 / EPI44 (Voluntary work)
DUR808 / EPI808	Total duration (in minutes) / total occurrences of unpaid work required by a school, employer, court or other organization	N/A	**New variable for the 2022 Time Use Survey.**
DUR899 / EPI899	Total duration (in minutes) / total occurrences of unpaid help or care provided to other households or the community, organization-based volunteering or other unpaid work, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR901 / EPI901	Total duration (in minutes) / total occurrences of participating in community cultural or social events	N/A	**New variable for the 2022 Time Use Survey.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
	(non-religious ceremony, festival, local parade, historic event)		
DUR902 / EPI902	Total duration (in minutes) / total occurrences of civic participation (voting, jury duty)	DUR46 / EPI46	
DUR903 / EPI903	Total duration (in minutes) / total occurrences of religious practices such as private prayer, participating in collective religious practice or service, religious ceremonies	DUR02 / EPI02	DUR903 / EPI903 (2022) replaces part of the following 2015 variable: • DUR02 / EPI02 (Personal care > Personal hygiene; praying, spiritual activities, meditating; sexual activities).
DUR999 / EPI999	Total duration (in minutes) / total occurrences of civic or religious activities or community social events, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR1001 / EPI1001	Total duration (in minutes) / total occurrences of exercising (walking, running, weight-training, yoga, exercise or aerobics class)	DUR47 / EPI47	
DUR1002 / EPI1002	Total duration (in minutes) / total occurrences of organized recreational sports (hockey, soccer, football, baseball, volleyball, tennis, rugby, ultimate, curling, judo, boxing, wrestling, badminton)	DUR48 / EPI48	
DUR1004 / EPI1004	Total duration (in minutes) / total occurrences of outdoor sports (non-competitive): Hike, bike, ski, skate, swim, row, kayak, canoe, sail, paddle board, skateboard, snowboard, golf	DUR50 / EPI50	DUR1004 / EPI1004 (2022) replaces the following 2015 variable: • DUR50 / EPI50 (Outdoor sports (non-competitive) > Skiing, skating, swimming, tennis, football, baseball)
DUR1005 / EPI1005	Total duration (in minutes) / total occurrences of other sports activities (bowling, table tennis, frisbee, catch, track and field),	DUR51 / EPI51	**New variable for the 2022 Time Use Survey.**
DUR1099 / EPI1099	Total duration (in minutes) / total occurrences of sports participation or physical exercise, not stated	N/A DUR49 / EPI49	**New variable for the 2022 Time Use Survey.** In the PUMF, this includes DUR1003 / EPI1003 (Competitive sports for elite or promising athletes at local, provincial, national or international levels, including Olympic competitors) due to small cell counts.

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DUR1101 / EPI1101	Total duration (in minutes) / total occurrences of attending cinema	DUR53 / EPI53	DUR1101 / EPI1101 and DUR1102 / EPI1102 (2022) replace the following 2015 variable: • DUR53 / EPI53 (Attending cinema, exhibitions, library, concerts, theatre, entertainment events).
DUR1102 / EPI1102	Total duration (in minutes) / total occurrences of attending a concert, theatre, exhibition, fair or live entertainment even	DUR53 / EPI53	
DUR1103 / EPI1103	Total duration (in minutes) / total occurrences of attending sporting events	DUR54 / EPI54	
DUR1104 / EPI1104	Total duration (in minutes) / total occurrences of visiting museums, art galleries, heritage sites, zoos, observatories, botanical gardens, amusement parks	DUR55 / EPI55	
DUR1105 / EPI1105	Total duration (in minutes) / total occurrences of arts, hobbies or playing games (drawing, painting, crafting, writing, playing an instrument, dancing, collecting, knitting, photography, board or card games, video games, gambling)	DUR56 / EPI56	DUR1105 / EPI1105 (2022) replaces the following 2015 variables: • DUR56 / EPI56 (Arts and hobbies > Drawing, painting, crafting, playing an instrument, dancing, collecting, knitting, photography, board and card games, gambling). • DUR59 / EPI59 (Writing > Letters, cards, books, poems).
DUR1106 / EPI1106	Total duration (in minutes) / total occurrences of leisure or outdoor activities (fishing, hunting, camping, birdwatching, boating, horseback riding, window-shopping	DUR57 / EPI57	DUR1106 / EPI1106 (2022) replaces the following 2015 variables: • DUR57 / EPI57 (Leisure Activity > Walking, pleasure driving, birdwatching) • DUR51 / EPI51 (Outdoor activities > Fishing, hunting)
DUR1199 / EPI1199	Total duration (in minutes) / total occurrences of culture, sports events, hobbies, leisure, or outdoor activities, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR1201 / EPI1201	Total duration (in minutes) / total occurrences of reading (online or paper version books, periodicals, newspapers	DUR58 / EPI58	
DUR1202 / EPI1202	Total duration (in minutes) / total occurrences of watching television shows, movies, or videos online or TV broadcast	DUR60 / EPI60	Warning: Comparison across TUS cycles for the PARTICIPATION RATE for this variable is not recommended, as there is a strong mode effect linked to changes in the survey methodology.

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
			Comparison across years for the DURATION for this variable should be done with caution, as there is also a mild mode effect. For more information, see section 4.2.
DUR1203 / EPI1203	Total duration (in minutes) / total occurrences of listening to music, radio, or podcasts online or radio broadcasts	DUR61 / EPI61	
DUR1204 / EPI1204	Total duration (in minutes) / total occurrences of use of technology (general computer use, Internet, art, music, or video production)	DUR62 / EPI62	
DUR1299 / EPI1299	Total duration (in minutes) / total occurrences of mass media activities, not stated	N/A	**New variable for the 2022 Time Use Survey.**
DUR1301 / EPI1301	Total duration (in minutes) / total occurrences of waiting time	DUR63 / EPI63	DUR1301 / EPI1301, DUR1302 / EPI1302 and DUR1303 / EPI1303 (2022) replaces the following 2015 variable: • DUR63 / EPI63 (Other activity > Waiting time, free time, insomnia, thinking, smoking).
DUR1302 / EPI1302	Total duration (in minutes) / total occurrences of free time, thinking, smoking	DUR63 / EPI63	
DUR1303 / EPI1303	Total duration (in minutes) / total occurrences of doing nothing	DUR63 / EPI63	
DUR1304 / EPI1304	Total duration (in minutes) / total occurrences of other activity	DUR95 / EPI95	DUR1304 / EPI1304 and DUR9999 / EPI9999 (2022) replaces the following 2015 variable: • DUR95 / EPI95 (Other activities)
DUR9999 / EPI9999	Total duration (in minutes) / the total occurrences) for unspecified activities	DUR95 / EPI95	
TOTEPI	Total number of episodes the respondent reported for the reference day	TOTEPISO	
DDV – Time Diary Variables – Duration of Social Contact			
DURS01	Total duration (in minutes) for being alone	DURS200	Warning: Comparison across TUS cycles for the DURATION of this variable should be done with caution. There is a mild mode effect for the duration linked to changes in the survey methodology. For more information, see section 4.2.
DURS02	Total duration (in minutes) for social contact with spouse/partner	DURS201	
DURS03	Total duration (in minutes) for social contact with household child(ren) (less than 15 years old)	DURS202	
DURS04	This derived variable indicates the duration (in minutes) for social contact	DURS203	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
	with household children (15 years of age or older)		
DURS05	Total duration (in minutes) for social contact with parents or parents-in-laws	DURS204	
DURS06	Total duration (in minutes) for social contact with other household adult(s)	DURS205	
DURS07	Total duration (in minutes) for social contact with other family member(s) from other households	DURS206	
DURS08	Total duration (in minutes) for social contact with friend(s)	DURS207	
DURS09	Total duration (in minutes) for social contact with colleague(s) or classmate(s)	DURS208	
DURS10	Total duration (in minutes) for social contact with other people	DURS209	
DURS99	Total duration (in minutes) for social contact - Not stated	DURS999	
DDV – Time Diary Variables – Duration by Location			
DURL3300	Total duration (in minutes) - At home or on property	DURL300	
DURL3301	Total duration (in minutes) - At place of work or school	DURL301	
DURL3302	Total duration (in minutes) - Away on business	DURL302	
DURL3303	Total duration (in minutes) - At someone else's home or property	DURL303	
DURL3304	Total duration (in minutes) - In the neighbourhood	DURL304	
DURL3305	Total duration (in minutes) - Outdoors	DURL305	
DURL3306	Total duration (in minutes) - At the grocery store, other stores or mall	DURL306	
DURL3307	Total duration (in minutes) - At the library, museum, or theater	DURL307	
DURL3308	Total duration (in minutes) - At a sports centre, field or arena	DURL308	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DURL3309	Total duration (in minutes) - At a restaurant, bar or club	DURL309	
DURL3310	Total duration (in minutes) - At a place of worship	DURL310	
DURL3311	Total duration (in minutes) - At a medical, dental or other health clinic	DURL311	
DURL3312	Total duration (in minutes) - Elsewhere	DURL312	
DURL3313	Total duration (in minutes) spent travelling by car, truck or van (as driver)	DURL313	
DURL3314	Total duration (in minutes) spent travelling by car, truck or van (as passenger)	DURL314	
DURL3315	Total duration (in minutes) spent travelling by walking	DURL315	
DURL3316	Total duration (in minutes) spent travelling by public transit (bus, streetcar, subway, light-rail transit, commuter train)	DURL316	
DURL3317	Total duration (in minutes) spent travelling by airplane	DURL317	
DURL3318	Total duration (in minutes) spent travelling by bicycle	DURL318	
DURL3319	Total duration (in minutes) spent travelling by motorcycle, scooter or moped	N/A	**New variable for the 2022 Time Use Survey.**
DURL3320	Total duration (in minutes) spent travelling by taxi or limousine service	DURL319	In 2022, this travel mode was also split into DURL3321 (travelling by ride-hailing service).
DURL3323	Total duration (in minutes) spent travelling - Other	DURL321 DURL320	In the PUMF, this includes DURL3321 (Ride-hailing service) and DURL3322 (Boat or ferry) due to small cell counts.
DURL3399	Total duration (in minutes) - Travel - Not stated	N/A	**New variable for the 2022 Time Use Survey.**
DURL9999	Total duration (in minutes) - Location - Not stated	DURL999	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
DDV – Time Diary Variables – Duration by Main Activity (Grouped)				
Note: In 2022, travel time was included in the main activity groups. Therefore, it is only possible to duplicate 2015 groupings by excluding travel.				
SLEEPDUR	Total duration (in minutes) of sleep activities, relaxing, and bed rest	SLEEPDUR	In 2022, equivalent to: • DUR101 • DUR102 • DUR103 • DUR104 • DUR109	In 2015, equivalent to: • DUR01
			Warning: Comparison across TUS cycles for the DURATION of this variable is not recommended. There is a strong mode effect for the duration linked to changes in the survey methodology. For more information, see section 4.2.	
PERSDUR	Total duration (in minutes) of personal activities	PERSDUR	In 2022, equivalent to: • DUR126 • DUR127 • DUR129 • DUR401 • DUR199	In 2015, equivalent to: • DUR02
			In 2022, PERSDUR does not include praying and spiritual activities, which are now a separate activity that is grouped under CIVICDUR.	
PDWKDUR	Total duration (in minutes) of paid work activities	PDWKDUR LKWKDUR BREAKDUR	In 2022, equivalent to: • DUR501 • DUR502 • DUR503 • DUR504 • DUR505 • DUR506 • DUR153 • DUR407 • DUR599	In 2015, equivalent to: • DUR08 • DUR10 • DUR11 • DUR40
			In 2022, PDWKDUR includes break or lunch for paid work activities (part of BREAKDUR in 2015) and looking for paid work (LWKDUR in 2015).	
HSWKDUR	Total duration (in minutes) of unpaid household work for household or family members	HSWKDUR	In 2022, equivalent to: • DUR201 • DUR202 • DUR203	In 2015, equivalent to: • DUR05 • DUR17 • DUR18

<table>
<tr><th>TUS 2022 PUMF Variable name</th><th>TUS 2022 PUMF Variable description</th><th>TUS 2015 PUMF Variable name</th><th colspan="2">Changes between 2015 and 2022 TUS PUMFs</th></tr>
<tr><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td>DUR204
DUR205
DUR206
DUR207
DUR208
DUR209
DUR405
DUR231
DUR232
DUR233
DUR234
DUR235
DUR236
DUR237
DUR238
DUR239
DUR240
DUR241
DUR406
DUR299</td><td>DUR19
DUR20
DUR21
DUR22
DUR23
DUR24
DUR25
DUR26</td></tr>
<tr><td colspan="2">Warning: Comparison across TUS cycles for the PARTICIPATION RATE of this variable should be done with caution. There is a strong mode effect for the participation rate linked to changes in the survey methodology. For more information, see section 4.2.</td></tr>
<tr><td rowspan="2">CHLDDUR</td><td rowspan="2">Total duration (in minutes) of care of household or family members 17 years of age or younger</td><td rowspan="2">CHLDDUR</td><td>In 2022, equivalent to:
DUR301
DUR302
DUR303
DUR304
DUR305
DUR306
DUR307
DUR399
DUR402</td><td>In 2015, equivalent to:
DUR27
DUR28
DUR29
DUR30</td></tr>
<tr><td colspan="2">Warning: Comparison across TUS cycles for the DURATION of this variable is not recommended. There is a strong mode effect for the duration linked to changes in the survey methodology. For more information, see section 4.2.</td></tr>
</table>

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
ADLTDUR	Total duration (in minutes) of care of household or family members 18 years of age or older	ADLTDUR	In 2022, equivalent to: • DUR351 • DUR352 • DUR353 • DUR359 • DUR403	In 2015, equivalent to: • DUR31 • DUR32
HELPDUR	Total duration (in minutes) of unpaid help or care provided to other households or the community, organization-based volunteering or other unpaid work	OHHLDUR CIVICDUR	In 2022, equivalent to: • DUR801 • DUR802 • DUR803 • DUR804 • DUR805 • DUR806 • DUR807 • DUR808 • DUR899 • DUR411	In 2015, OHHLDUR is equivalent to: • DUR33 • DUR34 • DUR35 • DUR36 In 2015, the parts of CIVICDUR now in this code (see note) are equivalent to: • DUR43 • DUR44 • DUR52
			To align with ICATUS 2016 standards on informal volunteering, HELPDUR in 2022 combines OHHLDUR and parts of CIVICDUR. The parts of CIVICDUR in 2015 that were moved to HELPDUR in 2022 include DUR805 (DUR52 in 2015) and DUR806 (DUR43 and part of DUR44 in 2015).	
CIVICDUR	Total duration (in minutes) of civic or religious activities, or community social event	CIVICDUR	In 2022, equivalent to: • DUR901 • DUR902 • DUR903 • DUR999 • DUR412	In 2015, equivalent to: • DUR43 • DUR44 • DUR45 • DUR46 • DUR52
			CIVICDUR in 2022 is not directly comparable with CIVICDUR in 2015. Parts of the grouping in 2015 were moved to HELPDUR in 2022, including DUR52 in 2015 (DUR805 in 2022) and DUR44 and part of DUR43 in 2015 (DUR806 in 2022). In addition, the activity for private religious practices was moved from PERSDUR in 2015 to CIVICDUR in 2022.	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
SHOPDUR	Total duration (in minutes) of shopping for goods and services for household or family members	SHOPDUR	In 2022, equivalent to: • DUR128 • DUR130 • DUR261 • DUR262 • DUR263 • DUR264 • DUR269 • DUR409	In 2015, equivalent to: • DUR03 • DUR37 • DUR38 • DUR39
SCHLDUR	Total duration (in minutes) of education & related activities	SCHLDUR BREAKDUR	In 2022, equivalent to: • DUR601 • DUR602 • DUR603 • DUR604 • DUR699 • DUR154 • DUR408	In 2015, equivalent to: • DUR13 • DUR14 • DUR15 • DUR16
			In 2022, SCHLDUR includes DUR154 (break or lunch related to studying or learning), which was part of BREAKDUR in 2015.	
LEISDUR	Total duration (in minutes) of active leisure, sports, culture, and entertainment events	EVENTDUR ACTLDUR	In 2022, equivalent to: • DUR1101 • DUR1102 • DUR1103 • DUR1104 • DUR1105 • DUR1106 • DUR1199 • DUR414 • DUR415	In 2015, EVENTUDR equivalent to: • DUR53 • DUR54 • DUR55 In 2015, ACTLDUR equivalent to: • DUR56 • DUR57 • DUR59 • DUR62

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
			LEISDUR is not directly comparable to 2015 due to multiple changes, including: • Writing (DUR59 in 2015) is no longer a separate activity code • Use of technology (DUR62 in 2015) is now included in MEDIADUR. • Walking (DUR57 in 2015) is now included in SPRTSDUR. • Changed activity code for outdoor activities (DUR1106 in 2022, DUR51 in 2015). Warning: Comparison across TUS cycles for the PARTICIPATION RATE for this variable should be done with caution. There is a strong mode effect for the participation rate linked to changes in the survey methodology. For more information, see section 4.2.	
SPRTSDUR	Total duration (in minutes) of sports participation and physical exercise	SPRTSDUR	In 2022, equivalent to: • DUR1001 • DUR1002 • DUR1004 • DUR1005 • DUR1099 • DUR413	In 2015, equivalent to: • DUR47 • DUR48 • DUR49 • DUR50 • DUR51
			In 2022, SPRTSDUR no longer includes outdoor activities (DUR51 in 2015); this activity is now included under LEISDUR (DUR1106 in 2022). In addition, SPRTSDUR in 2022 includes walking under exercising (DUR1001), which was previously included in ACTLDUR in 2015 (DUR57).	
SOCDUR	Total duration (in minutes) of socializing and communicating	SOCPRDUR SOCTCDUR	In 2022, equivalent to: • DUR701 • DUR702 • DUR799 • DUR410	In 2015, equivalent to: • SOCPRDUR: DUR41 • SOCTCUDR: DUR42
			Warning: Comparison across TUS cycles for the PARTICIPATION RATE of this variable is not recommended. There is a strong mode effect for the participation rate linked to changes in the survey methodology. For more information, see section 4.2.	
MEDIADUR	Total duration (in minutes) of mass media activities (including reading, watching TV, listening to music, and use of technology)	TVDUR READDUR OTHLDUR	In 2022, equivalent to: • DUR1201 • DUR1202 • DUR1203	In 2015, equivalent to: • TVDUR: DUR60 • READDUR: DUR58 • OTHLDUR: DUR61

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
			• DUR1204 • DUR1299 • DUR416	
			In 2022, MEDIADUR combines three grouped variables from 2015: TVDUR, READDUR, OTHLDUR. It also includes use of technology (DUR62 in 2015), part of ACTLDUR in 2015. Warning: Comparison across TUS cycles for the PARTICIPATION RATE for this variable is not recommended, as there is a strong mode effect linked to changes in the survey methodology. Comparison across years for the DURATION for this variable should be done with caution, as there is also a mild mode effect. For more information, see section 4.2.	
TRANSDUR	Total duration (in minutes) of transportation to or from activities	TRANSDUR	In 2022, equivalent to: • DUR401 • DUR402 • DUR403 • DUR404 • DUR405 • DUR406 • DUR407 • DUR408 • DUR409 • DUR410 • DUR411 • DUR412 • DUR413 • DUR414 • DUR415 • DUR416 • DUR499	In 2015, equivalent to: • DUR07
			In 2015, a light time diary was used and travel was only measured by one code. In 2022, travel is measured in multiple codes depending on the purpose. All grouped variables in 2022 include the associated travel codes. To compare with 2015, travel codes must be removed from the grouped variables. Warning: Comparison across TUS cycles for the PARTICIPATION RATE of this variable is not recommended. There is a strong mode effect for the participation	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs	
			rate linked to changes in the survey methodology. For more information, see section 4.2.	
MEALSDUR	Total duration (in minutes) of eating or drinking	MEALSDUR	In 2022, equivalent to: • DUR151 • DUR152 • DUR159 • DUR404	In 2015, equivalent to: • DUR06
			Warning: Comparison across TUS cycles for the PARTICIPATION RATE of this variable is not recommended. There is a strong mode effect for the participation rate linked to changes in the survey methodology. For more information, see section 4.2.	
FREEDUR	Total duration (in minutes) of waiting time, free time, smoking, and doing nothing.	OTHERDUR	In 2022, equivalent to: • DUR1301 • DUR1302 • DUR1303	In 2015, equivalent to: • DUR63
OTHDUR	Total duration (in minutes) of other or unknown activities.	RESIDUR	In 2022, equivalent to: • DUR1304 • DUR9999	In 2015, equivalent to: • DUR95
TUT – Time Use Diary				
TUT_970	Whether reference diary day was different than most days	TUT_970		
SLEEP1S	Start of the sleep episode for the first night	SLEEP1S		
SLEEP1D	Sleep duration (in minutes) for the first night	SLEEP1D		
SLEEP2S	Sleep episode for the second night	N/A	**New variable for the 2022 Time Use Survey.**	
SLEEP2D	Sleep duration (in minutes) for the second night	N/A	**New variable for the 2022 Time Use Survey.**	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
TCS – Perceptions of time			
TCS_110	Do you plan to slow down in the coming year?	TCS_Q110	
TCS_120	Do you consider yourself a workaholic?	TCS_Q120	
TCS_130	When you need more time, do you tend to cut back on your sleep?	TCS_Q130	
TCS_140	At the end of the day, do you often feel that you have not accomplished what you had set out to do?	TCS_Q140	
TCS_150	Do you worry that you don't spend enough time with your family or friends?	TCS_Q150	
TCS_160	Do you feel that you're constantly under stress trying to accomplish more than you can handle?	TCS_Q160	
TCS_170	Do you feel trapped in a daily routine?	TCS_Q170	
TCS_180	Do you feel that you just don't have time for fun anymore?	TCS_Q180	
TCS_190	Do you often feel under stress when you don't have enough time?	TCS_Q190	
TCS_200	Would you like to spend more time alone?	TCS_Q200	
TIMECR	Time crunch indicator	TIMECR	
TIMENS	Number of not stated responses to TCS_Q110 to TCS_Q200	TIMENS	
UH – Unpaid Service			
UH_01	Last week, how many hours did you spend looking after one or more of the children living in your household, without pay?	UH_01	
UH_02	Last week, how many hours did you spend looking after one or more children living outside your household, without pay?	UH_02	
UH_03	Last week, how many hours did you spend doing unpaid housework, yard	UH_03	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
	work or home maintenance for your household?		
UH_04	Last week, how many hours did you spend doing unpaid housework, yard work or home maintenance for persons living outside your household?	UH_04	
UH_05	Last week, how many hours did you spend providing unpaid care or assistance to one or more seniors living in your household?	UH_05	
UH_06	Last week, how many hours did you spend providing unpaid care or assistance to one or more seniors living outside your household?	UH_06	
CHLD – Care of children			
CHLD_01C	During the week, who is mainly providing physical care to the children such as bathing, feeding, dressing?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_02C	During week, who is mainly helping the children with homework or other school related matters?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_03C	During the week, who mainly plays with, reads to, does outside activities or takes part in leisure activities with the children?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_04C	During the week, who mainly accompanies the children to daycare, school, the bus stop, appointments or practices?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_05C	During the weekend, who is mainly providing physical care to the children such as bathing, feeding, dressing?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_06C	During the weekend, who is mainly helping the children with homework or other school related matters?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**
CHLD_07C	During the weekend, who mainly plays with, reads to, does outside activities or takes part in leisure activities with the children?	N/A	**New variable for the 2022 Time Use Survey. Variable categories regrouped for the PUMF.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
CHLD_08C	During the weekend, who mainly accompanies the children to daycare, school, the bus stop, appointments or practices?	N/A	**New variable for the 2022 Time Use Survey.** **Variable categories regrouped for the PUMF.**
LSM – Life satisfaction (Subjective Wellbeing)			
LSM_01	Subjective well-being	SLM_01	
GEN – General Health			
GEN_01	Self-rated health	SRH_110	
GEN_02	Self-rated mental health	SRH_115	
DSQ – Disability Screening Questions			
DTYPER	Number of disability types a respondent has reported - grouped	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
DUNK_FL	Whether the respondent has a disability of unknown type	DUNK_FL	
DVIS_FL	Whether the respondent has a seeing disability	DVIS_FL	
DDEV_FL	Whether the respondent has a developmental disability	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
DDEX_FL	Whether the respondent has a dexterity disability	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
DDIS_FL	Whether a person has a disability	DDIS_FL	
DFLEX_FL	Whether the respondent has a flexibility disability	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
DHEAR_FL	Whether the respondent has a hearing disability	DHEA_FL	
DLRN_FL	Whether the respondent has a learning disability	DCOG_FL	
DMEM_FL	Whether the respondent has a memory disability	N/A	**New variable for the 2022 Time Use Survey.** All questions in the DSQ block follow Statistics Canada standards around this harmonized content.
DMENT_FL	Whether the respondent has a mental health-related disability	DMEN_FL	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
DMOB_FL	Whether the respondent has a mobility disability	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
DPAIN_FL	Whether the respondent has a pain-related disability	DPAIN_FL	
DCLASS	Global (disability) severity class	N/A	**New variable for the 2022 Time Use Survey.** This derived variable is created using the standardized DSQ questions.
SRS – Self-rated Stress			
SRS_10	Thinking about the amount of stress in your life, how would you describe most of your days?	SRS_10	
MSS – Main Source of Stress			
MSS_130	What is your main source of stress?	MSS_130	
MRW – Main Activity of Respondent - Last Week			
MRW_05C	During the past 12 months, what was your main activity?	MRW_05	**Variable categories regrouped for the PUMF.**
ACT7DAYC	Main activity of the respondent in the last week	ACT7DAYS	**Variable categories regrouped for the PUMF.**
MRW_D40A	If respondent worked in the last 12 months (derived)	MRW_D40A	
MRW_D40B	If the respondent worked in the last week (derived)	MRW_D40B	
WET – Work Activities (Employment type)			
WET_120	Were you mainly an employee or self-employed?	WET_120	
TLWK – Telework			
TLWK_01A	Teleworked last week from home	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_01B	Teleworked last week from co-working space	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_01C	Teleworked last week from other location	N/A	**New variable for the 2022 Time Use Survey.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
TLWK_01D	Did not do any telework last week	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_02G	How many paid hours did you telework last week? (grouped)	N/A	**New variable for the 2022 Time Use Survey.** **Variable categories regrouped for the PUMF.**
TLWK_03	If it was your choice, how much teleworking would you include in your work schedule?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_04	How important is the possibility to organize your own working hours?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_05	How important is the possibility to use videoconferencing rather than in-person meetings?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_06	How important is the opportunity not to commute every day to your workplace?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_07	How important is the possibility to reduce the number of business trips?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_08	How important is the opportunity to spend more time with family or pets?	N/A	**New variable for the 2022 Time Use Survey.**
TLWK_09	Why didn't you telework last week?	N/A	**New variable for the 2022 Time Use Survey.**
WLY – Last Year Employer Information			
NOCLBR_Y	Occupation group of the respondent's work in the past 12 months, based on the 2021 NOC (10 categories)	NOC1110Y	In 2015, an older version of the classification system (NOC 2011) was used for this variable.
NAIC22CY	Type of industry, business, or service of respondent's work in the past 12 months, based on the 2022 NAICS (20 categories)	NAICS12CY	In 2015, an older version of the North American Industry Classification System (NAICS 2012) was used for this variable.
WLYD170G	Distance (in kilometers) from residence to workplace (grouped)	WLY_170C	**Variable categories regrouped for the PUMF.** In 2022, the option "Working exclusively from home" was added to this question.

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
WHW – Hours Worked			
WHW_110	Respondent had more than one paid job last week	WHW_110	
WHWD140G	Total number of hours the respondent usually works at all jobs in a week (grouped)	N/A	**Variable categories regrouped for the PUMF.**
WHW_230	Usual work schedule	WHW_230	
WFS – Work Flexible Schedule			
WFS_10	Flexible schedule that allows the respondent to choose the time they began or ended their workday	WFS_10	
SRC – Satisfaction of Respondent with Current Balance between Job and Home Life			
SRC_10	Satisfaction with the current balance between your job and home life	SRC_10	
SRC_20A	Reason for dissatisfaction with current balance: Not enough time for family	SRC_20A	
SRC_20B	Reason for dissatisfaction with current balance: Spends too much time on job/main activity	SRC_20B	
SRC_20C	Reason for dissatisfaction with current balance: Not enough time for other activities	SRC_20C	
SRC_20EGR	Reason for dissatisfaction with current balance: Employment related reasons (grouped)	SRC_20D SRC_20E	**In the PUMF, the variables SRC_20D and SRC_20E are grouped due to low cell count.**
SRC_20F	Reason for dissatisfaction with current balance: Health reasons	SRC_20F	
SRC_20HGR	Reason for dissatisfaction with current balance: Other (grouped)	SRC_20H	**In the PUMF, the variables SRC_20G and SRC_20H are grouped due to low cell count.**
WLB – Work Life Balance			
WLB_10	Difficulty fulfilling family responsibilities because of the amount of time spent on job in past 12 months	WLB_10	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
WLB_20	Difficulty fulfilling work responsibilities due to family responsibilities in past 12 months	WLB_20	
HRH – Household Regularly Hires Paid Help			
HRH_10A	Respondent's household does not regularly hire paid services	HRH_10A	
HRH_10B	Respondent's household regularly hires services for: Child care	HRH_10B	
HRH_10C	Respondent's household regularly hires services for: House cleaning	HRH_10C	
HRH_10D	Respondent's household regularly hires services for: Outdoor work (including snow removal, lawn care)	HRH_10D	
HRH_10E	Respondent's household regularly hires services for: Medical help	HRH_10E	
HRH_10F	Respondent's household regularly hires services for: Other activity	HRH_10F	
ATT – Access to Transportation			
ATT_120	How often do you have a vehicle at your disposal?	ATT_120	
ATT_130	Frequency of needing someone else to drive	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_131	Someone else can drive when needed - frequency	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_140A	Who can drive you when you need it: Family living with you	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.
ATT_140B	Who can drive you when you need it: Family member not living with you	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.
ATT_140C	Who can drive you when you need it: Friend	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.
ATT_140D	Who can drive you when you need it: Neighbour	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.
ATT_140E	Who can drive you when you need it: Organization or agency	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.
ATT_150C	Thinking of a typical week, what kind of transportation do you use the most? (Collapsed)	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey. **Variable categories regrouped for the PUMF.**
ATT_160	Availability of public transportation	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2005 Time Use Survey.

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
ATT_170	Frequency of public transportation use in past 12 months	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180A	Reason for not using public transportation: No need - You have a car	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180B	Reason for not using public transportation: No need - Close enough to walk or bike	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180C	Reason for not using public transportation: Concern for personal health	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180D	Reason for not using public transportation: Stops are too far away	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180E	Reason for not using public transportation: Schedule is too inconvenient	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180F	Reason for not using public transportation: Routes do not go where you want	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180G	Reason for not using public transportation: Disabilities prevent use	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180I	Reason for not using public transportation: No need - Have access to parking at work	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
ATT_180J	Reason for not using public transportation: Concern for personal safety	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
CTW – Commute to Work/School			
CTW_140A	Commute to work or school last week: By car, truck, or van - as driver	CTW_140A	
CTW_140B	Commute to work or school last week: By car, truck, or van - as passenger	CTW_140B	
CTW_140C	Commute to work or school last week: By public transit (e.g., bus, streetcar, subway, light-rail transit, commuter train, ferry)	CTW_140C	
CTW_140D	Commute to work or school last week: Walked	CTW_140D	
CTW_140E	Commute to work or school last week: By bicycle	CTW_140E	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
CTW_140GR	Commute to work or school last week: Other (grouped)	CTW_140F CTW_140G CTW_140H CTW_140J	**In the PUMF, the variables CTW_140F, CTW_140G, CTW_140H, and CTW_140J are grouped due to low cell count.**
CTW_140I	Commute to work or school last week: Works or attends school at home	CTW_140H	
CTW_150G	Average length of one-way commute last week (grouped)	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey. **Variable categories regrouped for the PUMF.**
CTW_160	Ever used public transit to travel to current work or school	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
CTW_170	Rating of level of convenience of public transit for user	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
CTW_180	Rating of level of convenience of public transit for non-user	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
CTW_190	Frequency of traffic congestion during commute last week	CTW_190	
CTW_210	Satisfaction with length of commute last week?	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
CTW_215	How serious a problem is traffic congestion for you?	N/A	**New variable for the 2022 Time Use Survey.** Adapted from the 2010 Time Use Survey.
EDC – Education – School Attendance			
EDC_10	School attendance	ESC1_01	
ED – Educational Attainment			
ED_05	Educational attainment – highest level of education	EHG2_01 EHG2_02 EHG2_03 EHG2_04 EHG_ALL	In 2022, ED_05 replaces EHG2 variables and the derived variable EHG_ALL.
MAP – Main Activity of Spouse/Partner			
MAP_110C	Main activity of spouse or partner in past 12 months (collapsed)	MAP_110C	**Variable categories regrouped for the PUMF.**
DOR – Type of dwelling			
DOR_110C	Type of dwelling (collapsed)	DWELC	**Variable categories regrouped for the PUMF.**

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
IM – Place of birth, immigration and citizenship			
IM_01A	Whether respondent was born in or outside of Canada	BRTHCAN	
YRARRI_C	Range of years when the respondent first came to Canada (collapsed)	YRARRI	**Variable categories regrouped for the PUMF.**
BPR – Place of birth of parents			
BPR_20	Whether parents born in or outside of Canada	BRTHMCAN BRTHFCAN	Sex of parents in the household is no longer identified. In 2022, information about Parent A and Parent B replaces information on the mother and father.
BPP – Birthplace of spouse or partner			
BPP_01A	Whether spouse or partner born in or outside Canada	N/A	**New variable for the 2022 Time Use Survey**. Due to data quality concerns, variables on place of birth of the spouse were not available for 2015.
ABM – Indigenous Identity of the Respondent			
ABM_01A	Respondent is not First Nations, Métis or Inuk (Inuit)	AMB_01	
AIP – Indigenous identity of Respondent's Spouse/Partner			
AIP_01A	Spouse or partner is not First Nations, Métis or Inuk (Inuit)	N/A	**New variable for the 2022 Time Use Survey**. Due to data quality concerns, variables on the Indigenous identity of the spouse or partner were not available for 2015.
PG – Sociodemographic Characteristics of the Respondent			
VISMINFL	Visible minority flag	VISMIN	VISIMINFL in 2022 replaces VISMIN in 2015 as the flag for visible minority status.
PGP – Sociodemographic Characteristics of the Respondent's Spouse/Partner			
VISPRFL	Flag for visible minority status of spouse/partner	N/A	**New variable for the 2022 Time Use Survey**.
REL – Religion			
REL_02	Frequency of religious participation	REE_02	
REL_03	Frequency of religious participation on one's own	REE_03	
RELIGFLG	Whether the respondent has a religious affiliation	RELIGFLG	

TUS 2022 PUMF Variable name	TUS 2022 PUMF Variable description	TUS 2015 PUMF Variable name	Changes between 2015 and 2022 TUS PUMFs
LAN – Language Minimum			
LAN_01	Knowledge of official languages (French and English)	LAN_01	
LANHSDC	Language spoken most often at home (collapsed)	LANHOME	**Variable categories regrouped for the PUMF.**
LANCHC	Mother tongue of the respondent (collapsed)	LANMT	In 2015, three different mother tongues could be reported. In 2022, only one mother tongue can be reported. **Variable categories regrouped for the PUMF.**
UOT –Satisfaction with the Respondent's Use of Time			
UOT_01	Satisfaction with use of time	N/A	**New variable for the 2022 Time Use Survey**.
IDV – Income-derived Variables			
INC_C	Respondent's total income (before tax) (grouped)	INCG1	**Variable categories regrouped for the PUMF.**
FAMINC_C	Total family income (before tax) (grouped)	HHINCG1	In 2015, this variable measured the income of all household members. In 2022, this variable measures the income of all members of the census family. **Variable categories regrouped for the PUMF.**

Appendix C – Guidelines for statistical analysis, variance estimation and constructing confidence intervals

In order to measure the sampling error of estimates, variance estimates need to be calculated and confidence intervals need to be constructed. The GSSP surveys use a complex sample design and estimation method, which means that there is no simple formula for calculating variance estimates. The surveys therefore use a resampling method called the bootstrap. Five hundred sets of bootstrap weights were generated, named WTBS_001-WTBS_500. Essentially, the variance is estimated by calculating the value of the desired estimate using each set of bootstrap weights and then measuring the variability between the bootstrap estimates.

Statistical packages for variance estimation

For the GSSP surveys, it is necessary to use bootstrap weights to compute correct estimates of the variance. Several statistical software programs or packages have been developed that are specifically designed for analyses of data from complex survey designs and that can compute variance estimates using replicate weights such as bootstrap weights. These include for example SUDAAN, WesVar, Stata, R and newer versions of SAS. More information on implementing variance estimation in these software can be found by referring to Gagné, Keown and Roberts (2014).

Other standard and/or older statistical analysis software packages, including SPSS, versions of SAS prior to version 9.2, do not have an integrated procedure to calculate variance estimates from bootstrap weights when using data based on a complex survey design like GSS. These packages should not be used to calculate variance estimates, to construct confidence intervals nor to conduct statistical tests (significance tests, regression analysis, et cetera).

SAS version 9.2 and above can calculate variances from bootstrap weights, as well as other types of replicate weights such as Jackknife and Balanced Repeated Replication (BRR) weights. There are also a few procedures, such as regression and logistic regression for instance, that accommodate replicate weights. Confidence intervals for medians using replicate weights are only available in SAS version 9.3 and above.

It should be noted that software packages that do not explicitly support bootstrap weights but do support the BRR method can be used with bootstrap weights. While the bootstrap and BRR methods differ in the way in which the replicate weights are built, once the replicate weights are produced, the two methods use a similar formula to compute variance estimates. For more information on the relationship between the bootstrap and the BRR method, please refer to Phillips (2004).

Confidence intervals

The most used method of constructing 95% confidence intervals is the Wald interval, which is of the form $\hat{y} \pm 1.96\sqrt{\hat{\text{var}}(\hat{y})}$ for an estimate $\hat{y}$ with estimated variance $\hat{\text{var}}(\hat{y})$. Wald intervals assume that the sampling distribution of $\hat{y}$ is approximately normal. For proportions, the normality assumption is known to break down for small sample sizes and for proportions near zero or one. Three alternative methods of constructing confidence intervals are therefore recommended for proportions: the modified Wilson interval, the modified Clopper-Pearson interval, and the logit interval (see Korn and Graubard, 1998; Liu and Kott, 2009). There are options in SAS, SUDAAN and R to produce confidence intervals using these alternative methods.

The examples below show how alternative methods of constructing confidence intervals are specified for proportions in SAS, SUDAAN and R.

1. SAS, modified Wilson confidence intervals (specify ADJUST= NO, TRUNCATE= YES):
   PROC SURVEYFREQ

```
DATA=FILE VARMETHOD=BRR;

WEIGHT WGHT_PER;

REPWEIGHTS WTBS_000-WTBS_500;

TABLES VARIABLE / CL (TYPE=WILSON  ADJUST=NO TRUNCATE=YES);

RUN;
```

2. SUDAAN, modified Clopper-Pearson confidence intervals (specify SMCONF=50):

```
PROC CROSSTAB
DATA=FILE DESIGN=BRR SMCONF=50;
WEIGHT WGHT_PER;
REPWGT WTBS_000-WTBS_500;
CLASS VARIABLE/ nofreq;
TABLES VARIABLE;
RUN;
```

3. R, modified Clopper-Pearson confidence intervals (specify method= ”beta” in svyciprop):

```
survey_design <- as_survey_rep(FILE,
                    weights = WGHT_PER,
                    repweights = starts_with(“WTBS"),
                    type = “BRR”,
                    combined.weights = TRUE,
                    mse = TRUE)

svyciprop(~I(VARIABLE==VALUE), design= survey_design, method="beta",
          na.rm=TRUE)
```

4. STATA, logit transformation confidence intervals

```
svyset RECID [pweight=WGHT_PER], bsrweight(WTBS_001-WTBS_500)
vce(bootstrap) mse


svy: tabulate VARIABLE, cell se ci obs format(%12.0g)
```

Rescaling the weights

As mentioned, it is recommended that users follow procedures designed for the analysis of data from complex survey designs, which can use weights to produce estimates and can use bootstrap weights to produce variance estimates. Analysis procedures not designed for the complex survey framework may allow weights to be used (but not bootstrap weights). However, these procedures may differ in their definition for the weight and produce correct estimates but meaningless variance estimates. For analyses such as linear regression, logistic regression, and analysis of variance, rescaling the weights can make the variance estimates calculated by the procedure more reasonable. The weights for the domain of interest should be rescaled so that the average weight is one (1); this can be accomplished by dividing each weight by the overall average weight for the domain of interest before the analysis is conducted. The rescaling makes the variance estimates more reasonable, but they only consider the unequal probabilities of selection - they do not take into account the stratification and clustering of the sample’s design. This approach should therefore only be used as a last resort when no procedures that can use bootstrap weights are available; users are warned that the results are approximate.

References

Gagné, C., Roberts, G. and Keown, L.-A. (2014) “Weighted estimation and bootstrap variance estimation for analyzing survey data: How to implement in selected software”. The Research Data Centres Information and Technical Bulletin. (Winter) 6(1):5-70. Statistics Canada Catalogue no. 12-002-X.

Korn, E.L., and Graubard, B.I. (1998). “Confidence Intervals for Proportions With Small Expected Number of Positive Counts Estimated From Survey Data”. *Survey Methodology*, 24, 193-201.

Liu, Y.K. and Kott, P.S. (2009). “Evaluating Alternative One-Sided Coverage Intervals for a Proportion”. *Journal of Official Statistics*, Vol. 25, No. 4, 569-588.

Phillips, O. (2004). “Using bootstrap weights with WesVar and SUDAAN” (Catalogue no. 12-002-X20040027032) in The Research Data Centres Information and Technical Bulletin, Chronological index, Fall 2004, vol.1 no. 2 Statistics Canada, Catalogue no. 12-002-XIE.

Appendix D – A guide to using the time use data files

The diary portion in the 2022 Time Use Survey collects information on daily activities of Canadians. Information was collected by asking respondents to report their daily activities during the course of a 24-hour reference day starting at 4:00 in the morning.

For each main activity respondents were asked the start and end time of the activity, where the activity took place and who the respondent was with at the time. Also, the survey provided the respondents with the opportunity to report on simultaneous activities (Question: Were you doing anything else at the same time?). The respondents were allowed to report one simultaneous activity per main activity.

The main activities reported by respondents were coded into 120 independent categories and these categories were then grouped into 18 major activity groups (see Appendix A).

Two separate data files were created from the results of the 2022 Time Use Survey: the main file and the time use episode file. The following is a guide to their use.

Three main measures of time use

Three measures are frequently used to analyse Time Use data.

1. Participation Rate

   A participant in an activity is a person who has reported as least one occurrence of the activity on their reference day. The participation rate is the percentage of the population having reported the activity. It is calculated by dividing the estimated number of persons participating in the activity on reference day by the total number of persons in the population.

   The participation rate is calculated as:

$$P^a = \frac{\sum_i W_i X_i^a}{\sum_i W_i}$$

   where P^a = participation rate for activity a
   X_i^a = 1 if respondent reported activity a, = 0 otherwise
   W_i = weight for person i

   Note that the indicator of participation is a non-zero number of episodes for that activity.

2. Average time spent on activities by participant

   Average time is obtained by dividing the estimated total time spent per day on the activity by the estimated total number of persons who reported this activity.

   The average time spent on activity a by all participants is calculated as:

$$TP^a = \frac{\sum_i W_i t_i^a}{\sum_i W_i X_i^a}$$

   where TP^a = average time for all participants in activity a
   X_i^a = 0 or 1, indication of participation in activity a

t_i^a = time on activity a for person i (=0 if no participation)
W_i = weight for person i

3. Average time spent on activities by the total population

Average time spent on activities is obtained by dividing the estimated total time spent per day on the activity by the estimated total number of persons in a given population

The average time spent on an activity by the total population (including both participants and non participants) is calculated as:

$$T^a = \frac{\sum_i W_i t_i^a}{\sum_i W_i}$$

where T^a = average time for total population in activity a
t_i^a = time on activity a for person i (=0 if no participation)
W_i = weight for person i

This time will always be less than the average time for participants and is equal to the time for participants if the participation rate is 100%.

The following are comments intended to help in using the time use files:

1. The participation rates and the average times can be calculated for any subgroup of the population by including only the individuals in the subgroup.

2. The average time spent on activities is usually calculated based on a 24-hour, over a 7-day week unless a selection is done for a particular day of the week using variable DDAY.

3. For activities like paid work which are normally considered over a 5-day period, a simple conversion will reconstruct activities to a 5-day average. Multiply the daily average by 7 for a weekly average and divide by 5. For example, a paid workday of 5.7 hours (averaged over 7 days) will convert to an 8.0-hour day (averaged over 5 days).

4. The time for the total population summed across all activities is equal to 1440 minutes (24 hours).

5. Average time for all activities for the total population can be added to obtain average time for a grouping of activities.

6. The participation rate can be calculated by dividing the average time for the population by the average time for the participants. Similarly, the average for participants can be calculated by dividing the average time for the population by the participation rate.

7. Adding durations for social contacts (i.e., variables DURS01 to DURS10) will likely exceed 24 hours in most situations since time spent for a given activity with more than one type of social contact is counted each time. For example, watching television for an episode of 45 minutes with spouse and children will account for 45 minutes in DURS02 (spouse/partner) as well as 45 minutes in DURS03 (household children less than 15 years of age).

8. Code 1304 represents time spent on activities the respondent refused to report, was unknown or uncodable.

9. It is possible to link the Main File to the Episode File, by using the variable RECID (found on both files) as a matching key.

WGHT_PER: This is the basic weighting factor for analysis at the person level, i.e., to calculate estimates of the number of persons (non-institutionalized and aged 15 or over) having one or several given characteristics.

In addition to the estimation weights, bootstrap weights have been created for the purpose of design-based variance estimation.

Main File

In addition to the general data or the derived variables available through the bulk of the questionnaire, the Main File provides summary time use activity information for each respondent on:

i) the total time spent on each activity;
ii) the total time spent at various locations;
iii) the total time spent with various persons.

Note that the main file summarizes the data for each respondent for each of these three dimensions of activities. It does not, however, provide the details on individual activity episodes. For example, the Main file provides the total time spent on an 'main' activity such as T.V. watching. It is then the sum of all episodes of T.V. watching reported by a person during the 24-hour period. The Main file indicates the number of episodes of each activity but does not indicate when during the day they occurred.

Similarly, the information for location (Question: Where were you?) and "who with" (Question: Who was with you?) are presented under an aggregated format. The "who with" duration does not add to 24 hours as a respondent could be with more than one person or groups of persons at a time. There is no information on the Main file which links an activity to a location or to who the person was with at the time. This information is provided on the detailed episode file described below.

Examples using the Main file

a) Activity tables

When weighted estimates for the duration of time spent at an activity, for example, employed work, by the population are required, use the variables

WGHT_PER	(weight)
PDWKDUR	(employed work).

When weighted estimates for the duration of time spent at an activity for participants only are required, exclude the respondents who did not report that activity, e.g., employed work,

i.e., Select respondents for whom PDWKDUR> 0.

The participation rate of a given activity is the percentage of the total population that reported the activity and can be derived using the formula provided above.

When weighted estimates are required for a sub-group of the population, select the provided code for the desired sub-group, for example, time spent at employed work (PDWKDUR) for males and employed males. The variables used would be

WGHT_PER	(weight)
PDWKDUR	(employed work)
ACT7DAYS	(main activity in the past 7 days)

SEX (sex of respondent)

The selected subgroup would be defined as those where SEX = 1 and ACT7DAYS = 1.

PDWKDUR	Total Population	Total Participants	Participation Rate (%)
Males	15,901,518	7,709,868	48
Employed Males	9,437,494	6,793,553	72

b) Location of activity or a mode of transportation

When weighted estimates for the duration of time spent at various locations or in various means of transportation by the population are required use the following variables:

WGHT_PER	(weight)
DURL3300	(respondent's home or property)
DURL3301	(at place of work or school)
DURL3302	(away on business)
DURL3303	(at someone else's home or property)
DURL3304	(in the neighbourhood)
DURL3305	(outdoors)
DURL3306	(grocery stores, other stores or mall)
DURL3307	(library, museum or theatre)
DURL3308	(sports centre, field or arena)
DURL3309	(restaurant, bar or club)
DURL3310	(place of worship)
DURL3311	(medical, dental or other health clinic)
DURL3312	(elsewhere)
DURL3313	(travel – car-driver)
DURL3314	(travel – car-passenger)
DURL3315	(travel – walk)
DURL3316	(travel – public transit)
DURL3317	(travel – airplane)
DURL3318	(travel – bicycle)
DURL3319	(travel – motorcycle, scooter or moped)
DURL3320	(travel – taxi/limousine service)
DURL3321	(travel – ride-hailing)
DURL3322	(travel – boat/ferry)
DURL3323	(travel – other)
DURL3399	(travel – other)
DURL9999	(location unspecified)

When weighted estimates for duration of time spent at various locations or in transit by participants only are required, exclude the respondents who did not report any time at that location or in transit.

i.e., Select respondents for whom DURL### > 0.

The participation rate of activity at a given location or given means of transit, is the percentage of the total population that reported activity at the location or in transit and can be derived using the formula provided.

DURL3301 Location (Work)	Total Population	Total Participants	Participation Rate (%)

Employed Males	9,437,494	4,954,038	52

DURL3300 to DURL9999 provides an estimate of the duration of time spent at various locations or in various means of transit. These categories are mutually exclusive, therefore the time will add to 24 hours for any given population.

c) Social contacts

When weighted estimates for the duration of time spent with various social contacts for the population are required, use the following variables:

WGHT_PER	(weight)
DURS01	(alone)
DURS02	(spouse/partner)
DURS03	(with household child(ren) less than 15 years of age)
DURS04	(with household child(ren) 15 years or older)
DURS05	(with parent(s) or parent(s)-in-law)
DURS06	(with other household adult(s))
DURS07	(with other family member(s) other households)
DURS08	(with friend(s))
DURS09	(with colleague(s) or classmate(s))
DURS10	(other people)
DURS99	(not stated)

When weighted estimates for the duration of time spent with social contacts for participants only are required, exclude the respondents who did not report the required social contact,

i.e., Select respondents for whom DURS### > 0

The participation rate of activity with a given social contact is the percentage of the total population that reported some activity with the contact and can be derived using the formula provided.

Social Contact (Spouse) (DURS02)	Total Population	Total Participants	Participation Rate (%)
Employed Males	9,437,494	6,158,368	65

DURS01 to DURS10 provides estimates of the duration of time spent alone or with others. The duration of time with social contacts will not necessarily add to 24 hours because a respondent can spend time in the company of more than one person at a time.

Episode File

The episode file provides the detailed information on each activity episode reported by respondents. For each episode there is information on the start and end time of the activity, the duration of episode (derived from start and end time), the location of the episode, information on simultaneous activities and a set of variables that reflect who the respondent was with during the episode. Since there could be multiple contacts for an episode, the contact data is provided in the form of a set of variables, one for each type of contact.

The episode file consists of 168,078 records. The unit record for this file is the episode and not the respondent. Each record represents a single activity[6] in a respondent's day, and all respondent's episodes must add up to twenty-four hours (1440 minutes). For example, a respondent who has reported 26 different episodes for his/her reference day has generated 26 records on the Episode file. There is no information on the characteristics of the respondent. However, each episode can be linked to the respondent using the RECID and characteristics can be obtained from the Main File. In addition, each episode includes information on the diary day and the total number of episodes for a respondent.

Each episode has a weight, WGHT_EPI. This is the weight to use when using the Episode File to make estimates based on episodes. When the episode file is used to derive a respondent characteristic, the person weight, WGHT_PER, should be used with the derived characteristic.

Examples using the Episode file

The episode file can be used for a number of different types of analysis. One use of the file is to consider a given activity (e.g., T.V. watching) and to analyse the distribution of episodes across time (time of day and/or day of week). The file can also be used to look at where various activities take place (e.g. paid work at home) or the social contacts for various activities. The file can also be used to look at the distribution of activities at any point in time (e.g., what is the population doing at 8:00 a.m., 11:00 p.m., 3:00 a.m., etc). More complicated analysis can be done by linking episodes for an individual and looking at the sequencing of different activities. The episode sequence number INSTANCE will facilitate this. Similarly, by linking the episodes back to the characteristics of respondents, one can look at who in the population engages in various activities at different times during the day.

In cases where an analysis focuses on an activity, e.g., television viewing, that could have more than one episode in a day, the analyst must decide which weight to use. If, in the analysis, each episode should contribute separately to the estimate, then the episode weight, WGHT_EPI, should be used. If, on the other hand, each respondent should contribute at most once to the estimate then the person weight, WGHT_PER, should be used.

For instance, the average length of an episode of watching television is an episode-based statistic, while the average amount of time a person spends watching television in a typical day is a person-based statistic. The first would be estimated as the (weighted) average over all episodes of watching television of the length of the episode. The second would be estimated by taking the weighted average over all respondents of the total length for each respondent of all episodes of watching television.

Here are some examples of the logic and algorithms that should be used when working with the Time Use Episode File. The file should for most purposes be sorted by RECID (the respondent identifier) and INSTANCE (the identifier of separate episodes for the respondent).

a) Person based statistics and estimates

When weighted estimates for the average amount of time spent daily at an activity, e.g., work for pay job, at a given location, e.g., at home, are required, the estimate is a person based one, the average time a person spends each day at an activity.

Use the variables: TUI_01
DURATION
WGHT_PER
LOCATION

[6] It is not uncommon to find a string of two or more episodes with the same activity codes. These would have been reported as separate episodes when the location of the activity changed or when there was a change in the social contacts present.

Select TUI_01= 0501 (Paid work)
LOCATION= 3300 (At home or on property).

Calculate the average time by summing across all records as follows:

$$\frac{\sum_k WGHT\_PER_k(\sum_i DURATION_i, \text{ where TUI\_01=0501 and LOCATION=3300})}{\sum_k WGHT\_PER_k}$$

where $DURATION_i$ = time for episode i for respondent k.
$WGHT\_PER_k$ = weight for respondent k.

This could be done by using the episode file to create a new file with one record for each respondent and these variables: WGHT_PER, DURINT, (where DURINT is the 'duration of interest' for the respondent), the total duration of all episodes for the respondent with TUI_01=0501 and LOCATION=3300.The procedure would be to set DURINT to zero, then look through the episode records for the first respondent, and whenever TUI_01=0501 and LOCATION=3300, add DURATION to DURINT. After examining the last episode for the first respondent, save WGHT_PER and DURINT to the new file, reset DURINT to zero and continue with the second respondent. Continue in this way until a record has been added to the new file for each respondent. Then the equation above become:

$$\frac{\sum_k WGHT\_PER_k DURINT_k}{\sum_k WGHT\_PER_k}$$

$$\frac{1{,}517{,}200{,}694}{32{,}136{,}802} = 47.2 \text{ minutes}$$

Interpretation: On an average day, Canadians spend 47.2 minutes working at their paid job while they are at home or on property.

Calculate the participation rate as follows:

$$\frac{\sum_k WGHT\_PER_k(\substack{for\ those\ with\ \sum DURATION_i,\ where\ TUI\_01 = 0501\ and\ LOCATION = 3300 \\ not\ equal\ to\ zero, (i.e. DURINT\ not\ equal\ to\ zero)})}{\sum_k WGHT\_PER_k}$$

$$= \frac{3{,}846{,}443}{32{,}136{,}802} = 12.0\%$$

Interpretation: On an average day, 12.0 % of Canadians do some work at their paid job while they are at home or on their property.

And so, the average time spent per participant is:

$$\frac{1{,}517{,}200{,}694}{3{,}846{,}443} = 394.4 \text{ minutes}$$

Interpretation: On an average day when they do some work at home, Canadians spend 394.4 minutes working at their paid job while they are at home or on their property.

b) Episode based statistics and estimates

When weighted estimates for the average duration of a single episode of a certain activity, e.g., watching television shows, movies or videos online or TV, the estimate is an episode based one, the average length of an episode of watching t.v.

Use the variables: TUI_01
DURATION
WGHT_EPI

Select TUI_01=1202 (Watching television shows, movies or videos online or TV)

Calculate the average time by summing across all episode records as follows:

$$\frac{\sum_j WGHT\_EPI_j DURATION_j \text{ , where TUI\_01=1202}}{\sum_j WGHT\_EPI_j \text{ , where TUI\_01=1202}}$$

where DURATIONj = time for episode j.
$WGHT\_EPI_j$ = weight for episode j.

This yields an estimate of:

$$= \frac{3{,}339{,}535{,}406}{25{,}285{,}746} = 132.1 \text{ minutes}$$

Statistical analysis software packages and database management software packages are currently used for exploiting these types of data files. For example, SAS is widely used for statistical analysis of this data. While this type of package can be used to merge information from the Main and the Episode files, intensive users of the Episode file may also want to consider bringing these files together in a relational database. Most database management system software packages provide a mechanism for easily linking and retrieving data from the two files with a one-to-many relation. This is usually based on Standard Query Language (SQL).