

NATIONAL STUDY OF CAREGIVING (NSOC) III

TIME DIARY SUPPLEMENT

USER GUIDE (FINAL RELEASE)

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## Overview and Design

The National Study of Caregiving (NSOC) is a nationally representative study of family and other unpaid caregivers to older persons living with limitations in daily activities. NSOC has been conducted three times in conjunction with the National Health and Aging Trends Study (NHATS) at periodic intervals (2011, 2015, 2017).

At the end of NSOC III, participants who reported providing help to a living NHATS Sample Person were offered a time diary follow-up interview. The diary covers a 24 hour period, starting with 4:00 am on the previous day and continuing until 4:00 am on the day of the interview.

The diary interview is modeled after the Panel Study of Income Dynamic’s Disability and Use of Time (DUST) supplement (see Freedman and Cornman, 2015), which drew upon the American Time Use Study design ([www.bls.gov/tus/](http://www.bls.gov/tus/)). Respondents were asked to report what they were doing and how long it took. For some activities there were additional follow-up questions such as where they were, who was doing the activity with them, who else was there, and for household and care activities for whom the activity was done. At the end of each activity NSOC also included a question about how the respondent felt during that activity (mostly unpleasant, mostly pleasant, or neither). This last question allows one to capture wellbeing throughout the previous day.

After the diary was completed, the computer randomly selected (up to) three times of day and more detailed questions were asked about how the respondent felt while doing activities occurring at these times. These questions provide what is referred to as “detailed” subjective wellbeing on the previous day. These items were modeled after DUST (see Freedman and Cornman, 2015), which in turn drew upon the Day Reconstruction Method (Kahneman et al., 2004) and Princeton Affect and Time Study (described in Krueger, 2007).

## Eligibility and Sample Sizes

NSOC III participants who cared for a living NHATS sample person in the last month were eligible for the time diary. The time diary data may be used with the NSOC III cross-sectional or longitudinal samples or pooled for analyses. Table 1 shows sample sizes for each sample.

**Table 1. Sample sizes for the Cross-sectional, Longitudinal and Pooled Time Diary Samples**

	Cross-sectional	Longitudinal	Pooled
NSOC III Participants	2,652	1,453	3,210
Ineligible for Time Diary	379	328	605
Last Month of Life Caregiver	318	288	513
Did Not Care Last Month	61	40	92
Eligible for Time Diary	2,324	1,074	2,605
Completed Time Diary	1,901	928	2,136

**Cross-sectional.** Users may use the cross-sectional sample of diaries (fl7dnsoccross=1 & t7dtimed diary=1; N=1,901) if they are interested in caregivers who were identified by both the NHATS sample person and the NSOC caregiver as providing help. They may use this sample with the subset of the NSOC Cross-sectional file for whom the SP is living.

**Longitudinal.** Users may also be interested in analyzing the time diaries for the sample of cases who were helping in 2015 and are still helping in 2017 (longitudinal sample; fl7dnsoclong=1 & t7dtimed diary=1; N=928). This sample may be used with the NSOC Longitudinal file.

**Pooled cross-sectional and longitudinal.** Some users may wish to pool the two samples together (i.e. use (fl7dnosccross=1 or fl7dnsoclong=1) & t7dtimed diary=1; N=2,136). The pooled sample includes all current caregivers to a living NHATS SP, whether the NHATS SP mentioned them as helping or not. Unlike the cross-sectional sample, it also includes individuals helping in the NSOC III interview for whom the NHATS SP in 2017 did not mention that they were helping. See discussion below of weighting for the pooled sample.

## Response Rates

Response rates for each of the three samples are shown in Table 2.

**Table 2. Eligible and Completed Time Diary Interviews and Response Rates for NSOC III Time Diary Interviews by Sample Type**

	<b>Cross-sectional</b>	<b>Longitudinal</b>	<b>Pooled</b>
Eligible for Time Diary	2,324	1,074	2,605
Completed Time Diary	1,901	928	2,136
Response Rate (Completed Time Diary/Eligible for Time Diary)	81.8%	86.4%	82.0%

The vast majority of time diary interviews (80%) took place within two weeks of the NSOC interview; nearly half took place within a week.

## Sampling of Days and Activities

### Systematic Assignment of Interview Days

Two possible interview days were systematically assigned to each eligible caregiver: one primary day and one backup day. The majority of completed cases participated in the interview on the primary day (2049/2136 or 96%). The random backup was used if an interview could never be scheduled on the primary day (N=87). The distribution of expected and actual days of the week on which interviews occurred is shown in Table 3. When used with diary weights (described below) the distribution of days equals the expected distribution.

**Table 3. Expected and Actual Interviews by Day of the Week**

Interview Day	Diary Day	Expected	Actual	
			N	%
SU	SA	14.3%	280	13.1%
M	SU	14.3%	326	15.2%
T	M	14.3%	313	14.7%
W	T	14.3%	322	15.1%
R	W	14.3%	307	14.4%
F	R	14.3%	307	14.4%
SA	F	14.3%	281	13.2%
		100%.0*	2,136	100.0%*

\*Totals do not add to 100% because of rounding.

### **Random Selection of Activities to Assess Detailed Wellbeing**

The time diary interview included questions to obtain more detailed information on wellbeing for a subset of activities.

Following Freedman and Cornman (2015), we randomly selected three times of day between 8 AM and 8 PM and preloaded this information into the interview. We chose this block of time to minimize the chances that respondents would be asleep. In order to ensure an even distribution across the day, we further subdivided the day into three 4-hour windows: 8 AM to 11:59 AM, 12 PM to 3:59 PM, and 4 PM to 7:59 PM. For each window of time, respondents were assigned a random primary time and random backup time. The activity that crossed the primary time was selected. If a respondent was asleep, couldn't remember or refused to give an activity for that time, or if the activity had been previously selected for a prior window, the backup time was considered instead. Questions about how the respondent felt were then asked about the activity that crossed the randomly selected time.

This approach yields a sample of activities that are length-biased. Among all eligible activities between 8 am and 8 pm, the average (edited, unweighted) activity length was 36 minutes whereas the mean duration for activities selected for detailed wellbeing questions was 81 minutes. The length bias can be corrected analytically (by controlling for the original, unedited duration if appropriate) or by using the detailed wellbeing sample weights provided on the final activity level file.

## **Content: The NSOC Time Diary**

### **The Time Diary**

The instrument was designed as a 30-40-minute diary. The diary asked about all the activities occurring on the previous day, beginning at 4 am and continuing until 4 am the morning of the interview.

Respondents were read the following introduction:

We'd like to start by finding out how you spent your day yesterday, {YESTERDAY}.

I'm going to ask you what you were doing starting at 4:00am. Then I'll ask a few more questions about the activity, like:

- how long it took;
- where you were;
- who was doing the activity with you, and;
- who else was there.

We'll repeat this series of questions until we reach the end of the day.

If you were traveling, we'll treat that as a separate activity. So, for instance, driving to the doctor would be separate from being at a doctor's appointment, and then driving home would also be a separate activity.

If you were doing more than one activity for the time I ask you about, that's fine. You can tell me more than one activity for a given time.

Sometimes people want to know how much detail we are looking for.

If you tell me you worked from 9 to 5, I may ask you to break that down for me, for example, into having meetings from 9 to 11, answering e-mails for an hour until 12, having lunch until 1, and so on.

Or, if you tell me you cleaned the house all morning, I may ask for more detail, for example, you straightened up from 9 to 9:30, folded laundry for half an hour, made the beds at 10:00, and so on.

On the other hand, you don't need to tell me about changing the TV channel or walking from room to room in your house. So, somewhere in between.

And if an activity is too personal, there's no need to mention it.

Ok? Let's begin.

### **Sequential and Secondary Activities**

In the NSOC time diary, an attempt is made to distinguish sequential activities from simultaneous activities. If more than one activity is mentioned for a particular time, respondents are asked: Just to be clear, were you doing [both / all] of these activities at [START TIME]? If the respondent says yes, they are asked: If you had to choose, which of these would you say was the main activity? The interviewer is given the option of reading the definition: By

main activity, we mean the one that you were focused on most. For the main activity, the respondent is asked, “What time did you start doing that?”

### **Assessment of Duration**

The NSOC time diary assesses the duration (and all remaining follow-up items) for the main activity. Respondents may either report an end time (e.g. 11:00 am) or a duration (e.g. 1 hour). In both cases the interviewer confirms with the respondent. “So you (were) [ACTIVITY] from about [START TIME] to [END TIME], is that correct?” This approach allows the respondent to make corrections and adjust their end time if necessary before the next diary entry is made. These checks help maintain a structured, but conversational tone to the interview.

### **Probing**

To minimize extremes in reporting of detail (too much, too little), interviewers were trained to use the following probes: “Let’s break that down” for someone reporting substantial amounts of time (> 4 hours) and “To do what?” (e.g., went in the kitchen, to do what?) for excessively fine-grained reports. Among non-sleeping activities, 5% lasted less than 5 minutes and 1% lasted more than 4 hours.

### **Follow-ups Tailored to Pre-coded Activities**

After recording main and secondary activities and recording/confirming the duration of the main activity, interviewers selected one of nine categories best matching the main activity. These “precodes” were not designed to be analytic; all main and secondary activities were post-coded based on open text to 3-digit values (see Appendix C). Instead, precodes were used to route the respondent to the appropriate follow-up questions.

Follow-up questions for precodes were asked as follows:

#### Precode 1 (sleeping) if first or last activity

- Did it take you more than half an hour to fall asleep?
- Did you wake up during the night, that is, between the time you fell asleep and [END TIME reported for sleeping episode]?
- If yes, did you have trouble falling back to sleep?
- How would you rate your sleep on {DAY BEFORE DIARY/DAY BEFORE INTERVIEW} night? Would you say it was excellent, very good, good, fair, or poor?

#### Precode 2 (washing/dressing/grooming):

- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

#### Precode 3 (travelling to/from a place to pick up/drop off a person):

- Who did you (pick up/drop off)? (relationship of person to R was recorded, e.g. mother, neighbor, friend) (*who active*)
- Who else went with you? (*who passive*)



- Where did you (pick up/drop off) your [relationship of person picked up/dropped off]?
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

Precode 4 (other travel, travelling between places/activities):

- Who went with you? (*who active*)
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

Precode 5 (working for pay, work-related activities, volunteering) follow-up questions:

- Where were you while you were doing that?
- Who did that with you? (*who active*)
- [If at home, outdoors, work, someone else's home] Who else was [there] with you? (*who passive*)
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

Precode 6 (talking to others) follow-up questions:

- Where were you while you were doing that?
- Who were you talking to? [relationship of person to R recorded] (*who active*)
- Was this on the phone or in person?
- [If at home, outdoors, work, someone else's home] Who else was [there] with you? (*who passive*)
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

Precode 7 and 8 (household chores/helping and caring activities) follow-up questions:

- Where were you while you were doing that?
- Who did you do that for? (*who for*)
- Who did that with you? (*who active*)
- [If not in a public place] Besides [person already mentioned] who else was [LOCATION] with you? (*who passive*)
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

Precode 9 (all other activities):

- Where were you while you were doing that?
- Who did that with you? (*who active*)
- [If not in a public place] Besides [person already mentioned], who else was [LOCATION] with you? (*who passive*)
- While you were [ACTIVITY] did you feel mostly unpleasant, mostly pleasant, or neither?

### **Experienced Wellbeing Measures**

We collected a single-item experienced wellbeing measure for all main activities (except sleeping) and more detailed measures of experienced wellbeing for activities that took place at three randomly selected times of day (see Freedman and Cornman 2015). Respondents were told:

“The computer has selected [# periods] (activity/activities) for me to ask you about. For the following questions, please use a scale from 0 to 6, where 0 means you did not have this feeling at all and 6 means the feeling was very strong.

You told me that from [Start Time] to [End Time] you [Activity] with [your Who\_Active] [WHERE]. From 0 to 6, how CALM did you feel during this time, where 0 means not at all calm and 6 means very calm?”

This question was repeated for six other emotions (happy, frustrated, worried, sad, tired, stressed).

### **Typical Day Questions**

The final section of the questionnaire asked respondents how strongly they agreed with each of the following statements.

- I follow the same general routine most weekdays, Monday through Friday.
- I follow the same general routine most weekends.
- Yesterday ({YESTERDAY}) was a typical {weekend day/weekday}.

## **Data Files and Linking IDs**

NSOC Time Diary data are organized into two files: a Summary File and an Activity File.

### **Summary File (N=3,210)**

The Summary File contains all Round 7 NSOC cross-sectional and longitudinal respondents. The file includes information about whether the respondent was eligible for and completed the diary, and if so, the number of activities, day of the interview and of the diary day, relationship of the caregiver to the care recipient, and whether yesterday was a typical day.

### **Activity File (N=56,361)**

The Activity File includes information on all activities reported in 2,136 diaries. The variable t7actno numbers the activities sequentially within each diary. For each activity, the start and end time is provided, along with unedited and edited duration, unedited and edited precode, and answers to follow-up questions. Activities that were randomly selected for more in-depth questions about wellbeing are indicated with the variable t7wdwb. The variable t7ddwbw indicates the time period from which the activity was randomly drawn.

## Linking Data Files

Table 4 provides the names of variables used to link observations among the various NSOC and NHATS files. Both ‘spid’ and ‘opid’ are required to uniquely identify each caregiver in the NSOC files. Information from NHATS can be linked using spid.

**Table 4. Variables to Link Time Diary Files to NSOC and NHATS files**

Linking / ID Variable	Summary File <sup>1</sup>	Activity File	NSOC Files	NHATS Files
NHATS sampled person ID	spid	spid	spid	spid
Other person ID	opid	opid	opid	--
Activity number ID	--	t7actno	--	--

<sup>1</sup>The summary file contains two flags to facilitate identification of respondents in the NSOC cross-sectional and longitudinal files. If fl7dnsoccross=1 the respondent can be found in the NSOC cross-sectional file and if fl7dnsoclong=1 the respondent can be found in the NSOC longitudinal file. Respondents may appear in both files.

## Weights

The NSOC Time Diary Summary and Activity files permit analysis of activities that occurred yesterday for a sample of caregivers. Researchers also can analyze detailed wellbeing (DWB) of caregivers on the previous day for a random set of activities. Several series of weights were created to support these analyses (see Table 5 for overview).

**Table 5. Overview of Weight Variables for NSOC III Time Diary Analyses.**

File (Weights)	Sample	Full sample weight	Replicate weights	Stratum	Cluster
Summary (Diary)	Cross-sectional	t7diarywgt0	t7diarywgt1-56	t7varstrat	t7varunit
Summary (Diary)	Longitudinal	lt7diarywgt0	lt7diarywgt1-56	t7varstrat	t7varunit
Activity (DWB)	Cross-sectional	t7dwbwgt0	t7dwbwgt1-56	t7varstrat	t7varunit
Activity (DWB)	Longitudinal	lt7dwbwgt0	lt7dwbwgt1-56	t7varstrat	t7varunit

The summary file contains two series of time diary weights - one for the cross-sectional sample and the other for the longitudinal sample. The activity-level data file contains two set of weights for analysis of detailed wellbeing – one for the cross-sectional sample and the other for the longitudinal sample. Cross-sectional and longitudinal weights within a series may be combined, as described below, to form weights for pooled samples. Design variables (stratum, cluster) that allow for proper variance estimation with software that uses the Taylor series linearization method are also provided for each series of weights.

The remainder of this section describes the construction of each of these series of weights.

### **Time Diary Weights**

Researchers interested in summarizing activities over the day to the diary level – for instance, to indicate whether or how long an activity was performed, where, and whether spent with or for a particular individual – should use the diary weights on the Summary file.

The computation of the diary weights began with the final NSOC caregiver-level weights. Cross-sectional and longitudinal weights were adjusted separately for nonresponse to the time diary interview. The nonresponse adjustment used a weighting class adjustment.

The candidate variables for forming the adjustment cells included the caregiver's age group, gender, highest level of education, whether the caregiver worked for pay last week, whether the caregiver has children under age 18, and a categorized version of the number of hours of care provided last month. Details on non-response adjustments are provided in Appendix D.

The cross-sectional and longitudinal nonresponse adjusted weights were then calibrated separately so that the weighted total for each day of the week was  $1/7^{\text{th}}$  of the overall weighted total (i.e., so each day of the week is equally represented).

To create replicate weights, we used the modified balanced repeated replication (BRR) method suggested by Fay (Judkins 1990), assuming a perturbation factor (K) of 0.3.

### **Detailed Wellbeing Weights**

Analysts interested in studying detailed wellbeing (DWB) of caregivers on the previous day for a random set of activities should use the detailed wellbeing weights on the Activity file.

The detailed wellbeing weight is positive only for activities that were randomly selected (or split off from an activity that was randomly selected as discussed in Appendix B) for follow-up detailed wellbeing questions to be asked ( $t7wdwb=1$ ). The detailed wellbeing weight accounts for the fact that longer activities had a greater chance of being selected for detailed wellbeing follow-up questions.

The computation of the detailed wellbeing weights began with the cross-sectional and longitudinal diary weights. The diary weights are divided the probability of selecting the (original, unedited) activity from the given time window. For activities that span one window, the probability of the activity being selected is the original unedited time spent on the activity during the window divided by the total time in the window originally eligible to be selected. Time eligible to be selected was calculated by subtracting from the four-hour window time spent asleep and engaged in unknown activities (according to the original unedited precode and duration values). For activities that span two (or three) windows, the activity's overall probability of selection is the probability of selection within the earlier window(s) plus the product of the probability the activity was not selected in the earlier window(s) and the probability of selection within the last window. For activities that were split during editing, the weight is distributed evenly across the original and split-off activities. The detailed wellbeing weights have been trimmed at the 95th percentile weight value and rescaled to preserve the weighted total.

Replicate weights are also provided and were computed using the method described above for the diary weights.

### **Pooled Weights**

To analyze the pooled sample (cross-sectional and longitudinal cases together), the user needs to create a pooled weight. For cases in the cross-sectional sample only and cases in both cross-sectional and longitudinal samples, we recommend using the cross-sectional weight as the pooled weight. For cases that are only in the longitudinal file we recommend using the longitudinal weight as the pooled weight. This approach may be used for pooling the time diary weights and for pooling the detailed wellbeing weights across the two samples. If the data user is using the replicate weights, this approach may also be used to compute pooled replicate weights.

## **Variable Naming Conventions**

Variable names follow the same convention as in NHATS and NSOC. In both the Summary File and Activity File, variables begin with t (for time diary section) 7 (for the round number). If the variable is derived the next letter is “d”. This stem is followed by an abbreviated word that maps in the item or derived variable. The weights for the longitudinal samples on the files follow the same convention, but begin with the letter “l” (for longitudinal). Flags (with values 1=yes or -1=inapplicable) start with fl7.

## **Derived Variables and Flags**

### **Derived variables**

The following derived variables were created for users. Note that all derived variables are set to -1 Inapplicable if the caregiver was ineligible for the time diary. All variables except t7dtmediary, which indicates the reason for nonresponse, are set to -1 Inapplicable if the time diary was not completed.

<b>File/Variable</b>	<b>Description</b>
<b>Summary File</b>	
t7deligible	indicates whether the individual was eligible (=1) for the time diary interview (a current caregiver according to NSOC to a living 2017 NHATS respondent). This variable is set in the AP section of NSOC III (HELPED LAST MONTH flag = 1 (YES) and SP DECEASED flag <> 1 (YES))
t7dtmediary	indicates whether eligible (values 1-6) and if so whether interviewed (1) or type of nonresponse (2-6)
t7dnumact	count of the number of activities on the activity file
t7drandom	primary random interview day preloaded into interview (set at AP1PRE); 1=Monday through 7=Sunday
t7dbackup	backup random interview day preloaded into interview (set at AP1PRE); 1=Monday through 7=Sunday
t7dday	actual day <u>on</u> which interview conducted (set in pre-load); 1=Monday through

	7=Sunday
t7dyesterday	day of the week <u>about</u> which interview was conducted (day before interview day; set in pre-load); 1=Monday through 7=Sunday
t7dintdays	number of days between the NSOC interview and the Time Diary interview; 1=<=7; 2=7-14; 3=14-21; 4=22-30; 5>30
t7dsprelcg	SP's relationship to the caregiver (reverse of relationship of caregiver to SP); created using c7relatnshp and r5dgender
<b>Activity File</b>	
t7dudur	the unedited (original) duration of the activity (in minutes)
t7dedur	the edited duration (following editing) of the activity (in minutes)
t7dwact#	Who did the activity with the respondent or who was picked up/dropped off; from TD26 or TD22
t7dwpas#	Who else was [where] with the respondent or went with the respondent; from TD27 or TD23
t7ddwbw	if the activity was selected for detailed wellbeing follow-up items, which window the activity was drawn from (window 1: 8 am – 11:59 pm; window 2: 12:00 pm – 3:59 pm; and window 3: 4 pm – 8:00 pm)

**Flags**

Both files include flags indicting if the caregiver was part of the cross-sectional and longitudinal NSOC III files. In addition, the activity file includes a series of editing flags. See Appendix B for details on editing.

File/Variable	Description
<b>Summary and Activity File</b>	
fl7dnsoccross	= 1 if in NSOC III Cross-sectional file; -1 otherwise
fl7dnsoclong	= 1 if in NSOC III Longitudinal file; -1 otherwise
<b>Activity File</b>	
fl7pfix	= 1 if precode (t7pcode) was edited to be different from the original precode (t7ocode) in order to be consistent with detailed code (t7mcode); -1 otherwise
fl7sfix	= 1 if start time edited; -1 otherwise
fl7efix	= 1 if end time edited; -1 otherwise
fl7split	= 1 if this activity split off from previous activity; -1 otherwise

## References

Freedman VA, Cornman JC. 2015. The Panel Study of Income Dynamic: Second Supplement on Disability and Use of Time (DUST 2013) User Guide: Release 2015.3. Institute for Social Research, University of Michigan.

Freedman VA, Skehan ME, Wolff J, Kasper JD. 2019. National Study of Caregiving I-III User Guide. Baltimore: Johns Hopkins Bloomberg School of Public Health. Available at [www.nhats.org](http://www.nhats.org).

Kahneman D, Krueger AB, Schkade D, Schwarz N, Stone AA. 2004. A survey method for characterizing daily life experience: The Day Reconstruction Method (DRM). *Science*, 306, 1776-1780.

Kasper JD, Freedman VA. 2019. National Health and Aging Trends Study User Guide: Rounds 1-8 Final Release. Baltimore: Johns Hopkins University School of Public Health. Available at [www.NHATS.org](http://www.NHATS.org)

Krueger A. 2007. Are We Having More Fun Yet? Categorizing and Evaluating Changes in Time Allocation. *Brookings Papers on Economic Activity*. 2:193-215.

## Appendix A: Time Diary Coding

### Overview

The National Study of Caregivers (NSOC) data were entered by interviewers into the computer assisted telephone interview (CATI) system. The CATI program had several features that facilitated diary coding: for example, the program does not allow gaps in time or overlapping activities and discourages reporting of multiple activities per line. In addition, interviewers instructed respondents to provide travel separately.

Following the completion of the interviewer, the data were provided to coders, who carried out three main tasks:

- Coded primary activities
- Coded secondary activities (up to 5, using the same coding scheme used for primary activities)
- Flagged cases to be edited after coding

Note that coders did not edit cases but helped to identify (“flag”) cases that needed editing so that edits could be carried out consistently and systematically following the coding task. See Appendix B for a discussion of editing.

### Approach

The NSOC coding was based on the 3-digit scheme developed for the Disability and Use of Time supplement to the Panel Study of Income Dynamics (Freedman and Cornman, 2015). The first digit is referred to as the **supercategory**, the second is the **category** and the third the **subcategory**. The three digits together are referred to as the “**activity code**.” See Appendix C for a full list of the 3-digit activity codes.

#### ***Supercategories***

The first digit distinguishes “SUPERCATEGORIES” of activities.

There are 9 supercategories (1-9):

- 1: SELF-CARE ACTIVITIES: Taking care of oneself, including sleep
- 2: PRODUCTIVE ACTIVITIES: Working, volunteering, and school
- 3: OBTAINING GOODS: Shopping for groceries & food, other goods, and real estate
- 4: HOUSEHOLD ACTIVITIES: Taking care of/helping with chores, pets and cars
- 5: PHYSICAL CARE, LOOKING AFTER OTHERS & SCHOOL- RELATED ACTIVITIES
- 6: NON-ACTIVE LEISURE: Socializing, TV and movies, games (not sports) & puzzles, hobbies, reading, writing, and using computer (unspecified reason), relaxing/no activity
- 7: ACTIVE LEISURE, ARTS & ENTERTAINMENT, & TRAVEL: Playing or attending sports, attending arts & entertainment, and travel as leisure
- 8: ORGANIZATIONAL ACTIVITIES: Religious & spiritual practice, participation in



other organizations (not volunteer/not sports) and in government/civic activities

9: DATA ISSUES: Reserved for data issues, such as missing/refused and for temporary codes that flagged for editing.

### **Categories**

Within each supercategory there are up to 7 specific categories. (There are 40 categories altogether).

#### **SUPERCATEGORY 1. SELF CARE ACTIVITIES:**

- 1 1. Sleeping
- 1 2. Washing, Dressing, and Grooming
- 1 3. Eating and Drinking
- 1 4. Health-Related Self-Care & Medication
- 1 5. Use of Medical, Health, & Long Term Care Services
- 1 6. Personal Emergencies

#### **SUPERCATEGORY 2. PRODUCTIVE ACTIVITIES:**

- 2 1. Work and Work-related Activities
- 2 2. Other Income Generating Activities
- 2 3. Looking for Work
- 2 4. Volunteering
- 2 5. Using Unemployment and other Social Services
- 2 6. Educational Activities

#### **SUPERCATEGORY 3. OBTAINING GOODS**

- 3 1. Obtaining Groceries and Food
- 3 2. Obtaining Other Non-Durable Goods
- 3 3. Obtaining Durable Goods (cars, furniture, large appliances)
- 3 4. Real Estate Related Activities

#### **SUPERCATEGORY 4. HOUSEHOLD ACTIVITIES (Includes helping with household activities)**

- 4 1. Food and Drink Preparation
- 4 2. Laundry and Clothing repair
- 4 3. Household Care
- 4 4. Animal and Pet Care
- 4 5. Vehicle Care
- 4 6. Appliance, Computer, Tool and Toy Care
- 4 7. Financial Management & Household Planning

#### **SUPERCATEGORY 5. PHYSICAL CARE, LOOKING AFTER OTHERS, & SCHOOL-RELATED ACTIVITIES**

- 5 1. Physical Care and Assistance to Others
- 5 2. Medical Care for Others

- 5 3. School-Related Assistance to Others
- 5 4. Mobility Assistance to Others

**SUPERCATEGORY 6. NON-ACTIVE LEISURE**

- 6 1. Socializing and Personal Communication
- 6 2. TV & Movie Viewing
- 6 3. Games & Puzzles
- 6 4. Other Non-Active Leisure
- 6 5. Smoking and Drinking Alcohol
- 6 6. No Activity: Relaxing, Emotions

**SUPERCATEGORY 7: ACTIVE LEISURE, ARTS & ENTERTAINMENT & TRAVEL**

- 7 1. Sports and Physical Activity
- 7 2. Arts and Entertainment
- 7 3. Travel as Leisure

**SUPERCATEGORY 8. ORGANIZATIONAL ACTIVITIES**

- 8 1. Religious and Spiritual Practice
- 8 2. Other Organizations (Not Volunteer)
- 8 3. Government and Civic Activities

**SUPERCATEGORY 9. DATA ISSUES**

- 9 9. Data Issues (Missing/Not Ascertained)

***Subcategories:***

Each of the categories have up to 9 additional subcategories from which to choose.

Meanings of subcategories 1-4 differ for each category. Except in Supercategory 9 where these codes are not used, third digits of 5, 6, 7, 8 and 9 (where relevant) always mean the same thing:

- 5. Using services related to [category]
- 6. On the computer or on line performing activity related to [category] or researching/reading material related to [category]
- 7. Travel related to [category]
- 8. Waiting and watching related to [category]
- 9. [Category] not elsewhere classified (“n.e.c.”)

***Special rules for subcategories XX5 – XX9***

When using subcategories XX5-XX8 coders were given the general rule to “code as low as possible” (CLAP) [meaning the lowest number] and only use XX9 if the activity could not be classified in subcategories 1-8.

More specifically:

Code XX5

Using services includes use of services related to categories 1-4 ONLY. All activities related to using services are coded according to the type of activity for which the service is used. The appropriate supercategory and category are assigned and then 5 is assigned as the subcategory.

Code XX6

We reserved “XX6” for computer and time spent on-line related to the category. An individual can go “on-line” using a computer, and also through a phone, tablet and other technologies. Sometimes individuals perform activities on the computer or online (e.g. banking, shopping, emailing) and other times they are doing research about or reading about a particular topic area (e.g., research or reading about pet care, appliance care, household care).

Using computer or online performing activity includes activities listed in categories 1-5 ONLY. For example, research on the computer about using home health services or about transportation options for persons with disabilities is 146 (self-care, health related activity, on the computer). Coders assumed that the activity was not on a computer or on-line (use codes XX1-XX4) unless explicitly mentioned or clear from context (“surfing web to find...”).

When the purpose of the computing or on-line activity was known from the open text, the activity was coded using the category that best reflected the purpose of the activity. For example:

OPEN TEXT:	ACTIVITY CODE
Used computer to work on project for work	216 (productive activity, work, on computer)
Ordered groceries on line	316 (obtaining goods, groceries, on computer)
Ordered prescriptions on computer	326 (obtaining goods, non-durable goods, on computer)
Checked bank statement on line	476 (household activities, financial management, on computer)
Texted my daughter	616 (non-active leisure, personal communication, on computer)
Played computer games	636 (non-active leisure, games, on computer)

When the purpose was not given or was not clear from the open text, rules about generic computer use were followed. Activities such as “on computer”, “worked on computer”, “got on computer”, “went on line”, “sent emails on computer”, “read emails”, or “texting on cell” were considered “generic computer use or on-line” activity, or **GCO** for short. The first step in coding a “GCO” was to check the other information on the screen, including pre-code and where the respondent was at the time of the activity. Context may also be provided by previous activities that took place earlier in the day. The following table outlines the rules used.

Table A1. Rules for classifying GCO activities

If open text is GCO and precode is:	GCO Rule: Try Supercategory-Category-Subcategory:
Working for pay, work-related activities, volunteering	2-X-6; use context to decide Category; If volunteer and other income-related activities not explicitly mentioned earlier in the day, assume computer use/on line/texting is for work <b>216</b>
Talking on phone, socializing/talking in person, sending text messages by phone	Use context to decide Supercategory and Category. If at work, <b>216</b> If not at work, <b>616</b>
All other activities	Use context to decide Supercategory and Category. If email, Facebook, Skype or other form of communicating with others mentioned <b>616</b> Otherwise <b>646</b> .

An exception to using code XX6

The only computer-related activity that is not XX6 is helping someone else with computer or other online problems (not at work). This follows the rule of other household activities, which are coded the same way whether the respondent is doing the activity him/herself or helping someone else with it. Thus if a respondent reports “helping someone with a computer problem” the activity is coded 462 (household activity, computer care, computer set-up/maintenance & repair). Computer set-up, repair & maintenance (self): Includes fixing, installing, repairing, hooking up, maintaining computer and accessories (printers, modems) and helping with computer and on-line activities/problems (connections, hardware, software, network). We could not use 466 for this because 466 is reserved for “Using the computer or going online researching or reading material related to appliance, computer, tool or toy care.”

Code XX7

Travel includes travel related to categories 1-6, including travel related to using services. For example, drove to the drycleaner is 427 (household activities, laundry/clothing repair, travel related to laundry).

All traveling (including walking with a destination) was coded according to the purpose of the trip, regardless of mode or purpose. A supercategory and category were assigned first and then “7” was given as the final digit.

The only exceptions are:

- |   |  |
|---|--|
| 1. Walking for exercise or walking for pleasure                               | 712 (active leisure; sports/physical activity, walking/jogging for exercise/pleasure)  |
| 2. Walking a pet  | 442 (household care, pet care, walking/exercising/playing with animal/pet)   |
| 3. Walking around a place (e.g., grocery store, mall, car dealership, museum) | 311 (obtaining goods, groceries/food, grocery shopping) 321 (obtaining goods, non-durable goods, purchase clothes)<br>331 (obtaining goods, durable goods, car |

shopping)  
721 (active leisure, arts & entertainment, arts  
outside of home)

Note that travel for leisure purposes, such as going on a trip, vacation, or driving around, sightseeing, is 737 (active leisure, travel as leisure, going on a trip/vacation/driving round, sightseeing).

Coders adhered to the following rules when selecting a supercategory/category for travel:

- For all travel except homebound trips, supercategory and category were selected by looking ahead to the next activity/destination before coding a travel episode.
- For all homebound trips, supercategory and category were selected by looking backwards to the previous activity.
- Picking up a child or someone else to do an activity together (e.g., picked up a friend to go shopping) was coded as travel related to the destination.
- Picking up or dropping off a child or someone else as an activity (e.g., picked up my son at school, dropped off my niece at practice) was coded as travel related to care & assistance to others.
- Single leg, single destination trips: Direct trips to/from a destination are considered as Travel related to [category]. For example, traveling to and from work was coded as “Travel related to work” (217).
- Multi-leg trips: All legs associated with one destination were coded according to the trip destination. For example, driving to the train station, waiting for the train, taking the train to work, and walking from the train station to work should all be coded as Travel related to work (217).
- Multiple destination trips: Each travel episode of a multiple destination trip was coded according to each destination. For example, code driving from home to work as travel related to working (217), from work to the bank as travel related to financial services and banking (477), from the bank to the grocery store as travel related to grocery shopping (317), and from the grocery store to home as travel related to grocery shopping (317).
- Trips home: These episodes were coded according to the last stop before home. For example, if someone had been at work, then drove from work to the bank, made a withdrawal, and then drove home, code driving from the bank to home as “Traveling/Related to financial services and banking” (477).
- Waiting related to travel: Any waiting related to travel was coded as waiting, following CLAP when possible. For example, waiting for the bus (e.g. to commute to work) was coded as waiting related to working (218) and waiting for the school bus to drop off a grandchild was coded waiting related to physical care and assistance (518).
- Travel as part of job: Travel time for taxi drivers, bus drivers, chauffeurs, for whom travel is their job, was coded “Work” (211) (note: these activities are likely to have precodes of “5”). The first and last travel episodes for people who drive for a living were coded under “Travel related to working” (because they are going to/from work)

(217). For salespeople who travel between clients, time traveling between meeting clients was coded as travel related to work (217).

- Travel as a volunteer activity: Some volunteer activities involve driving as the activity (for example, delivering meals to people with disabilities or older adults, transporting individuals who need a ride, driving a float in a parade, providing on-the-road driving instruction, etc.) Reports of ***driving as a volunteer activity*** were coded as “Volunteer Activity” (241). ***Driving to/from a volunteer*** activity was coded as 247, traveling related to volunteering.
- Travel and dining out: If a respondent stayed and ate at a restaurant, codes 137 (travel to meal) then 131 (ate meal) then 137 (travel back to start) were used. If a respondent was going out to pick up food, the episodes were coded 317 (travel to purchase food) then 312 (purchase food) then 317 (travel back). That is, code 137 is driving to restaurant to eat whereas code 317 is driving to restaurant to pick up food.
- Travel and pre-code 3 (pick up/drop off): Some travel codes with a precode of 3 do not require an activity with a matching 2 digit code. For example, 517 could be dropped off someone cared for and 617 could be picked up a friend. Similarly, 537 could be picked up child at bus stop or school. Also 457 (move car) does not require an activity code with 45.
- Travel and farming: Use other income generating activities for time working/going to/from SP's farm: traveling to farm 227 and working on farm 221.
- For situations where no travel was reported between adjacent activities, coders flagged the case for editing, and coding was handled as part of data editing activities. See Chapter 8 Data Editing.

### Code XX8

Waiting and watching (XX8) included waiting and watching related to categories 1-7, including waiting and watching related to using the computer, travel, and to using services. These episodes, then, were coded according to the purpose of the waiting or watching. Some examples include:

- |  |  |
|--|--|
| • Waited in the car at the dry cleaner                             | 428 (household activities; laundry/clothing repair; waiting)                               |
| • Watched my son send email on the computer                        | 618 (non-active leisure, socializing and personal communication, watching)                 |
| • Waiting to see the doctor for the respondent's own appointment   | 158 (self-care activities; use of medical, health, & long term care services; waiting)     |
| • Watching someone fix a computer                                  | 468 (household activities; appliance, computer, tool and toy care, watching)               |
| • Waiting with someone else for the other person to see the doctor | 528 (Physical care, looking after others, & school-related; medical care others; waiting.) |

Any waiting or watching related to using services was coded as waiting and watching,

remembering **CLAP**. For example, waiting to talk to a loan officer about a loan was coded 478 (household activity, financial management, waiting & watching) and watching the cable repairperson as 468 (household activities, appliance care, waiting & watching).

Any waiting or watching related to travel was coded as waiting. For example, waiting for the bus (to commute to work) was coded as waiting and watching related to working (218).

#### Code XX9

N.E.C. includes activities related to categories 1-8 that cannot be placed in any of these categories. These codes were reserved for use *after* consulting with a supervisor through the 911 mechanism (see below). If it was determined that there was not a relevant code and one would be added, a final code of XX9 to identify activities that belong in the given category but are not elsewhere classified was used. 999 is a final code reserved for cases that could not be classified at the 2-digit level.

#### ***Multiple activities on a line***

The interviewers were trained to record each activity mentioned in a separate field. If a respondent reported that they changed body position and then carried out an activity, or changed rooms in the house and then carried out an activity, the interviewer was trained to treat this as a single activity. Coders were also trained to ignore the change in body position or location. Some examples include:

- “Went upstairs and used the bathroom”- “went upstairs” was ignored and the activity was assigned the code 124, going to the bathroom.
- “Shifted position on couch and grabbed a beer”—“shifted position on couch” was ignored and the activity was assigned the code 652, drinking alcohol.
- “Went to bed to read” = 642, reading
- “Went to bed and watched TV” = code 621, watching TV.
- Went to bed with no other activity is 112.
- “Went into the kitchen to make breakfast” = 411, made breakfast.
- “Bent over to play with grandson” = 513, playing with grandson.
- “Went outside to sit in the sun” = 661, doing nothing, relaxing.

Coders were trained to flag other instances of multiple activities per line with a temporary code for supervisory review.

#### ***Temporary (911) and other data issue codes (9XX-9XX)***

If at any time a coder was unsure of which code to choose, he/she was instructed to use a temporary code of 911. This placed the entire case into review status so that assistance from a supervisor could be given. 911 could be used multiple times within the case if necessary.

The standard procedure for using 911 was to:

- Code the problematic activity “911” and continue coding as much of the diary as possible. An explanation could also be added to the comment field.

- All 911 cases were reviewed by the supervisor. The supervisor reviewed/changed the code during the editing phase.

The system provided flags the coders could check to indicate that multiple activities, missing travel or other issues were present and that further editing was required. Three final data issue codes were also generated during editing:

- 912 Can't remember/DK
- 913 Too personal/RF
- 999 Missing/Not Ascertained

### Related Codes

Coders were trained to be aware of similar codes across multiple supercategories. Table A2 shows examples of some of these codes. This list does not include every similarity that exists, but it does contain some of the more common ones. When selecting a code, coders were instructed to concentrate on the primary purpose of the activity and to also consider the context (who, what, where).

Table A2: Examples of Related Codes

Example #	Related Codes:	Includes
1	112 621 642 913	Going to bed no other activity mentioned Went to bed to watch TV (code watch TV) Went to bed to read (code reading) Went to bed and engaged in personal activity (code private)
2	121-124 511 145	Washing, dressing, grooming, toileting self Washing, dressing, grooming, toileting someone else Receiving help from an aide with washing, dressing, grooming or toileting
3	125 511	Using washing, dressing, or grooming services (getting own hair cut, manicure, pedicure, massage, and talking with people who provide such services) Giving haircut to someone else
4	131 145 312 611 652	Eating breakfast, lunch, dinner, snack; eating at home or restaurant; having drink (not alcohol); having coffee or tea; having dessert Being fed by an aide (at home) Ordering fast food/take out Socializing at a bar, cocktail lounge, nightclub (emphasis on "socializing") Drinking alcohol, including beer, wine and other alcohol
5	137 317	Travel to/from restaurant or bar Travel related to picking up fast food or take out (Fast food is in the 300"s)
	141	Taking medication; taking care of own health needs (dressing wound,



6	712	giving a shot, icing, bandaging); checking blood pressure or insulin Exercise; walking for exercise; working out
7	241	Tasks related to volunteering including raising money, stuffing envelopes, donating clothing, volunteering in a soup kitchen or senior center (NOT volunteering in religious capacity)
	811	Volunteering in religious capacity-leading services
	812	Volunteering in religious capacity-teaching religion
8	255	Applying for/collecting unemployment and other social services such as welfare, food stamps
	835	Using government services (e.g., police, fire, licensing, permits, inspection services)
9	261	Attending class, lecture or seminar; taking exams
	211	Attending training for work
10	262	Attending school-related clubs(play, band, choir) & practices
	711	Playing sports or practicing for school teams
11	311	Buying, ordering, paying for groceries
	431	Bringing in or putting away the groceries/putting shopping away
	412	Cleaning up kitchen, washing/drying dishes, loading/unloading dishwasher, putting food away (all coded as 412)
12	341	Purchasing, renting, selling home/apartment/real estate
	221	Maintaining rental property (other income generating)
13	415	Hiring caterer, chef, wait staff, and arranging for meals on wheels (Food and Drink Services)
	312	Ordering fast food/take out (not online)
14	421	Washing, drying, hanging clothes, sorting, ironing, putting clothes away, hemming or repairing clothing (not a service)
	425	Using dry cleaner (using a service)
15	473	Making lists, organizing, planning, looking for misplaced item, assigning chores for household related activities (Household planning)
	431	Bringing in or putting away the groceries/putting shopping away
16	614	Reading mail, sending mail or packages, bringing in the mail and newspaper, writing cards/letters, checking phone messages (not email or other electronic communication)
	616	Socializing or communicating by computer or with other technology (includes email) On computer or online performing non-active leisure activities including reading, writing, listening to music, or reading/research related to arts and crafts, photography, sewing, jewelry making and all collecting; <u>includes computer use or online unspecified reason (not at work)</u>
	646	

17	515	Hiring/paying for/talking to/interviewing care givers including babysitters, summer camp, nanny, adult day care, aide (not education related)(Assume it's for someone else)
	535	Hiring a tutor or paying for instruction or lessons(Assume for someone else)
18	621	Watching TV, video, movie, VCR, DVD, DVR, borrowing videos, or listening to talk radio, music on the radio, recorded music
	721	Attending concerts
	723	Attending movies (outside home)

### **Ensuring Quality of Coding**

Every 10<sup>th</sup> activity was coded by both a coder and a validator. Values were compared and adjudicated when they differed. Agreement was 87% prior to review and corrections. To improve consistency of coding even more, an editor reviewed all open text assigned to a given code and made corrections as necessary to ensure consistent application of coding rules.

## Appendix B: Data Editing

Of the 56,361 activities reported in all 2,136 diaries, approximately 1% of activity lines required editing (defined as a change in start or end times or splitting off an activity from a prior activity; N=660). In addition, in order to make precodes and final activity codes consistent, 6% of activities had their original precode edited (and follow up questions marked as missing or inapplicable accordingly). Additional detail on the editing process is provided below.

### Review of Secondary Activities

All records listing one or more secondary activities were reviewed. Consistent with instructions to interviewers and coders, any remaining instances of secondary activities that were changes in body position or location (e.g. got up, came in, left, went in, came out, sat down) were eliminated. Grooming-related secondary activities that also appeared in the next time period as a primary activity or that were redundant with the primary activity or another secondary activity at the same time period were also eliminated (e.g. combing hair and putting on makeup would be considered a single activity 123 grooming). Secondary activities that could not be done at the same time as the main activity were treated as sequential activities (see below).

### Activity Lines Containing More than One Activity

Some activity lines were flagged during the coding process because the line contained more than one activity (e.g. showered and got dressed). To code these activity lines, it was first determined whether the activities on the line were simultaneous or sequential. If the activities were simultaneous, rules guided which activity was the main activity and which one was the secondary activity. If the activities were sequential, a separate set of rules guided which activity came first and which came second.

Coders were instructed to use the following temporary code of 911 to indicate activity lines containing more than one activity and check the multiple activity, missing travel or other box to flag case:

- Mention of more than one self-care activity (washing, dressing, grooming, toileting, getting ready) on one line: editor to split line into separate activities in order mentioned
- Mention of travel and another activity, when the other is clearly sequential: editor to split into separate activities
- Travel is the ONLY activity but what they travel to do is missing: editor to add activity
- Any other example of multiple activities on one line that are clearly sequential – that is, not happening at the same time: editor to split into multiple lines
- Main activity and watched child or adult: editor to add secondary “care” activity
- Main activity and TV or Radio: editor to add TV or Radio as secondary activity
- Main Activity and Talking/Socializing or on Phone: editor to add talking/socializing or on phone as secondary activity
- Main Activity and Other Eating/Drinking/Snacking (not a meal): editor to add eating/drinking/snacking as secondary activity
- Main Activity is Eating/Drinking (meal) and other activity on Main line: editor to make eating Main activity and add secondary “other”

Further details on handling of simultaneous and sequential activities are provided below.

**Simultaneous activities**

Table B1 shows the combinations of activities that were found on a single line and allowed to occur simultaneously.

**Table B1: Coding Simultaneous Activities That Appeared On One Line**

Activities listed on line	Coding rule
Any combination of laundry, dishes/kitchen cleanup, and household chores	Main activity is first mentioned
Any activity with watching television or listening to the radio	Main activity is first mentioned
Any activity + care giving	Main activity selected based on consistency with pre-code.
Any activity + socializing	Main activity selected based on consistency with pre-code.
Any activity + eating (not a meal)	Main activity selected based on consistency with pre-code. If both main and secondary should be precoded 9, eating (non meal) is secondary. An exception is eating (non meal) and drinking/smoking, where drinking/smoking is secondary.
Any activity + having/eating a meal	Eating meal is always main activity.

In most cases, the first activity mentioned was considered the main activity and each subsequent activity was classified as a secondary activity. For example, combinations of laundry, dishes/kitchen cleanup, and household chores were allowed to be simultaneous with the first mentioned activity the main activity. The same approach was used if any activity was mentioned with watching television or listening to the radio (first mentioned is considered main). In other cases (any activity + socializing; any activity + care giving), the main activity was selected to be consistent with the precode. Rules for eating depended on whether the activity was a meal.

**Sequential activities**

Remaining cases of multiple mentions per line were considered sequential. When a set of activities on a single line was designated as sequential, the activities were separated into multiple activity lines with rules governing which activity came first.

For cases identified during coding as multiple self-care activities per line, the activities were split into sequential activities in the order of mention, with time split proportionately. For example:

- Shower and dress;
- Bathe and dress;
- Made breakfast (lunch, dinner) and ate breakfast (lunch, dinner);  
were all split into multiple lines in the order of mention.

For cases identified during coding as having activity and travel on one line, the activity and travel were split into sequential lines and context was used to determine the order and fill in appropriate travel mode and who went with the respondent or appropriate where/who for activity codes. When the length of one leg of a roundtrip was known, the other leg was assigned the same length.

For brief activities prior to sleep (e.g. read a book and went to sleep; watched TV and went to sleep), the brief activity was assigned 5 minutes and the remaining time assigned to sleep.

All other cases were split into multiple lines in the order of mention, with the length of time split evenly across activities.

### **Start Time, End Time, and Duration**

When a sequential activity was split off from a prior activity, the end time of the prior activity and start time of the new activity were adjusted accordingly. In addition, the following corrections were made to these fields:

- Any activities listed that went past 4am were reviewed.
- If the start or end time of an activity was missing, the start and end time were filled in based on information from previous and subsequent activities in the diary.
- Activities with times > 10 hours (>12 hours for sleeping) were checked to see if they were legitimate.

### **Missing Travel**

Travel was identified as missing by comparing “where” codes for sequential activities and by comparing sequential activity codes (e.g., aberrations from the expected  $xy7$ - $xyN$ - $xy7$  – travel, activity, travel – sequence). Context was used to fill in appropriate travel mode and who went with the respondent. Where travel time was available for one leg of trip to/from same place (e.g. to/from home) the missing duration was filled in using the known travel time; otherwise the activity was split evenly between the missing travel leg and the activity. Movement from inside a home to outside a home was not considered travel.

### **Work and Volunteering**

Edits related to work and volunteering included:

- Respondents who do not report working in either the global wellbeing or participation questions are assumed to be volunteering.
- All farm care was treated as other income generating activity.
- All leisure-related secondary activities that occurred while the main activity was work (211) or traveling to work (216) were coded as 212 (leisure activity at work).

## **Precodes**

“Precodes” that interviewers used in the field were edited to make them consistent with detailed codes applied during coding. For instance, if sleeping (111) or going to bed (112) did not receive a precode of “1” in the field, a precode of “1” was assigned during editing. Follow-up variables were set to INAP according to skips that should have been followed if the corrected pre-code had been used in the field. Similarly, any follow-up questions that should have been asked but were not were set to missing. Approximately 6% of activities had a precode that was edited. The activity file includes both the original precode (t7ocode) and final precode (t7pcode) values.

## **Editing Flags**

The following editing flags were included in the activity file.

- fl7pfix – This flag indicates that the original pre-code was edited.
- fl7sfix – This flag indicates that the start time of the activity was edited. Note that all activities that were split off have an edited start time.
- fl7efix – This flag indicates that the end time was edited. Note that all activities from which an activity was split off had the end time edited.
- fl7split – This flag indicates that the activity was split off from the previous activity (typically because it was originally recorded on the same activity line as the previous activity or because a distinct travel leg was missing).

## Appendix C: NSOC Activity Codes

### **SUPERCATEGORY 1: SELF-CARE ACTIVITIES**

#### **SLEEPING**

- 111 Sleeping: Sleeping; napping
- 112 Going to bed: Going to bed no other activity mentioned. (Look at the time involved, if many hours code as 111).
- 113 Waking up: Waking or getting up
- 114 Laying down; resting (not to be confused with 111-nap or 661-relaxing)
- 116 --
- 117 --
- 118 Sleeplessness (Waiting to Sleep): Trying to sleep; laying awake; waiting to fall asleep
- 119 Sleeping, n.e.c.

#### **WASHING DRESSING AND GROOMING**

- 121 Washing Oneself: Washing own body, bathing/showering and running bath for self
- 122 Dressing Oneself: Putting on/taking off own clothes, pajamas
- 123 Grooming Oneself: Includes cleaning own teeth, hair-related, contact-related, make-up and shaving activities
- 124 Using the toilet: Includes using the bathroom, urinating, moving bowels and all euphemisms
- 125 Using services related to washing, dressing, grooming: Includes getting own hair cut, manicure, pedicure, massage, and talking with people who provide such services
- 126 -
- 127 Travel related to washing, dressing, grooming, toileting
- 128 Waiting and watching related to washing, dressing, grooming, using the toilet
- 129 Washing, Dressing, Grooming, Toileting, n.e.c.: Includes "getting ready" without detail about specific activities

#### **EATING AND DRINKING**

- 131 Eating and drinking: Includes eating breakfast, lunch, dinner, snack; eating at home or restaurant; having drinks (not alcohol); having coffee or tea; having dessert (see 652 for drinking beer, wine, or other alcoholic drinks)
- 135 --
- 136 --
- 137 Travel related to eating and drinking
- 138 Waiting and watching related to eating and drinking
- 139 Eating and drinking, n.e.c.

#### **HEALTH-RELATED SELF-CARE & MEDICATION**

- 141 Health-related self-care and taking medication (except exercise): Includes taking

- medication; taking care of own health needs (dressing wound, giving a shot, icing, and bandaging); checking blood pressure or insulin
- 145 Using in-home health and care services (paid): Includes use of services for own health or care at home such as in-home health care, physical therapy at home, or a home health aide or therapist, ordered medication on the phone
- 146 On the computer or online performing activities related to self-care & medication use: Includes researching/reading about health condition and medications, reading health-related blog
- 147 Travel related to health-related self-care
- 148 Waiting and watching related to health-related self-care
- 149 Self-care, n.e.c

### **USE OF MEDICAL, HEALTH, & LONG TERM CARE SERVICES**

- 151 Receiving medical care from a family member or friend
- 155 Using medical, health, and long-term care services outside the home: Includes use of/paying for medical, dental, vision, inpatient, outpatient, mental health, adult day care
- 156 On the computer or online making performing activities related to using medical, health & long-term care services: Includes making appointments on line, checking health records, communicating with doctor or doctor's office, research/reading about providers
- 157 Traveling related to use of medical, health, and long-term care services outside home: Includes travel to/from medical, dental, vision, inpatient, outpatient, mental health, long-term care services
- 158 Waiting and watching related to use of medical, health and long-term care services outside home
- 159 Using medical services, n.e.c.

### **PERSONAL EMERGENCIES**

- 161 Personal emergencies: Includes being in an accident, calling for help, losing consciousness
- 165 -
- 166 -
- 167 Travel related to personal emergencies
- 168 Waiting and watching related to personal/private activities or emergencies
- 169 Personal/private or personal emergencies, n.e.c.

## **SUPERCATEGORY 2: PRODUCTIVE ACTIVITIES**

### **WORK AND WORK-RELATED ACTIVITIES**

- 211 Working, main or other job: Includes time spent working for pay, whether at work or at home (not on computer or online)
- 212 Leisure activities at work: Includes time spent socializing, eating/drinking, on arts & entertainment, and active and non-active leisure as part of work (not on computer or online); work break or lunch break; getting ready to leave work



- 215 -
- 216 On the computer or online performing work or work-related activities at main or other job at work or at home (includes texting for work or work-related purposes)
- 217 Travel related to work & work-related activities
- 218 Waiting and watching related to working & work-related activities
- 219 Working & work-related activities, n.e.c.

#### **OTHER INCOME GENERATING ACTIVITIES**

- 221 Other income generating activities: Includes all other income generating activities including selling arts and crafts, babysitting, maintaining rental property, garage or flea market (not on computer or online), working on farm
- 225 -
- 226 On the computer performing other income generating activities: Includes selling goods on eBay or craigslist, handling email related to other income generating activities
- 227 Travel related to other income-related activities
- 228 Waiting and watching related to other income-related activities
- 229 Other income-related activities, n.e.c.

#### **LOOKING FOR WORK**

- 231 Job searching and interviewing in person: Includes looking for work, updating a resume, interviewing, preparing for an interview, filling out a job application, auditioning (not on computer or online)
- 235 Using an employment seeking or headhunting service
- 236 On the computer or online performing job search or using online employment services
- 237 Travel related to job searching and interviewing
- 238 Waiting and watching related to job searching and interviewing
- 239 Job search and Interviewing, n.e.c.

#### **VOLUNTEERING**

- 241 Volunteering: Includes tasks related to volunteering including raising money, stuffing envelopes, donating clothing, volunteering in a soup kitchen or senior center (not volunteering in religious capacity and not on computer or online)
- 245 -
- 246 On the computer or online performing volunteer tasks: Includes sending email, newsletters in volunteer capacity (not religious capacity)
- 247 Travel related to volunteering
- 248 Waiting and watching associated with volunteer activities
- 249 Volunteer activities, n.e.c.

#### **USING UNEMPLOYMENT AND OTHER SOCIAL SERVICES**

- 255 Using unemployment and other social services in person: Includes applying for/collecting unemployment and other social services such as welfare, food stamps (not on computer or online)
- 256 On the computer or online performing activities related to use of unemployment and

- other social services
- 257 Travel related to unemployment and social services
- 258 Waiting and watching related to unemployment and social services
- 259 Using unemployment and social services, n.e.c.

### **EDUCATIONAL ACTIVITIES**

- 261 Taking a class (not for work): Includes attending class, lecture or seminar; taking exams (not on computer or online)
- 262 Extracurricular activities related to education: Includes attending school-related clubs (play, band, choir) & practices
- 263 Own homework or research for class or educational activities: Includes studying, homework, writing papers, research for class or tests (not on computer or online)
- 264 Administrative time related to taking a class and other educational activities: Includes filling out forms, enrolling, registering, paying tuition, getting ID for class.
- 265 Using services related to educational activities. Includes using tutor, taking a test preparation course (e.g. SAT, LSAT, GRE preparation)
- 266 On computer or online performing education or education-related activities or researching/reading material about education or education-related activities
- 267 Travel related to educational activities
- 268 Waiting and watching related to educational activities
- 269 Educational activities, n.e.c.

### **SUPERCATEGORY 3: OBTAINING GOODS**

#### **OBTAINING GROCERIES AND FOOD**

- 311 Grocery shopping: Includes buying, ordering, paying for groceries (not on computer or online)
- 312 Purchasing other food (not groceries): Including buying, ordering paying for fast food/take out (not on computer or online); paying for meal at restaurant
- 315 Using grocery shopping or food purchasing services
- 316 On computer or online performing grocery shopping or purchasing of other food or researching/reading materials about
- 317 Travel related to grocery shopping or food purchasing
- 318 Waiting and watching related to grocery shopping or food purchasing
- 319 Grocery shopping or food purchasing, n.e.c.

#### **OBTAINING OTHER NON-DURABLE GOODS**

- 321 Shopping for non-durable goods (including running errands not specified): Includes purchasing clothing, gasoline, medicine, household items, running errands, browsing, comparison shopping (not on computer or online)
- 325 -
- 326 On computer or online shopping (not grocery shopping) for or researching/reading material about non-durable goods
- 327 Travel related to shopping for non-durable goods

- 328 Waiting and watching related to shopping for non-durable goods
- 329 Shopping for non-durable goods, n.e.c.: Includes “shopping” with no details.

#### **OBTAINING DURABLE GOODS (CARS, FURNITURE, LARGE APPLIANCES)**

- 331 Shopping for durable goods: Includes shopping for a car, furniture, and large appliances (not on computer or online).
- 335 -
- 336 On computer or online shopping for or researching/reading material about durable goods
- 337 Travel related to shopping for durable goods
- 338 Waiting and watching related to shopping for durable goods
- 339 Shopping for durable goods, n.e.c.

#### **REAL ESTATE RELATED ACTIVITIES**

- 341 Real estate related activities: Includes purchasing, renting, selling home/apartment/real estate
- 345 Using services related to purchasing renting selling home/apartment/real estate
- 346 On computer or online shopping for or researching/reading material about home/apartment/real estate
- 347 Travel related to purchasing renting selling home/apartment/real estate
- 348 Waiting and watching related to purchasing renting selling home/apartment/real estate
- 349 Real estate related activities, n.e.c.

#### **SUPERCATEGORY 4: HOUSEHOLD ACTIVITIES (INCLUDES HELPING WITH HOUSEHOLD ACTIVITIES)**

##### **FOOD & DRINK PREPERATION**

- 411 Food and drink preparation & presentation: Includes cooking, preparing meals and snacks, setting table, and serving and helping with these activities
- 412 Kitchen and food clean-up: Includes cleaning up kitchen, washing/drying dishes, loading/unloading dishwasher, putting food away and helping with these activities
- 415 Using meal prep or clean up services: Includes hiring caterer, chef, wait staff, and arranging for meals on wheels
- 416 Using computer or online researching/reading material related to food preparation and/or recipes
- 417 Travel related to using food & drink preparation, presentation, & clean-up and using such service
- 418 Waiting and watching related to food & drink prep, presentation, and clean-up
- 419 Food & drink prep, presentation, & clean-up, n.e.c.

##### **LAUNDRY AND CLOTHING REPAIR**

- 421 Laundry & repairing clothing: Includes washing, drying, hanging clothes, sorting, ironing, putting clothes away, hemming or repairing clothing and helping with these activities
- 425 Using laundry services. Includes using drycleaner, tailor

- 426 Using computer or online researching/reading material related to laundry and clothing repair
- 427 Travel related to laundry. Includes travel to/from drycleaner, laundromat.
- 428 Waiting and watching related to laundry.
- 429 Laundry & repairing clothing, n.e.c.

#### **HOUSEHOLD CARE**

- 431 Indoor cleaning (except laundry) and storing: Includes indoor cleaning (rooms other than kitchen), recycling, tidying up, picking up), bringing in or putting away groceries/putting away shopping, and helping with these activities
- 432 Indoor maintenance, repair, improvements, & decoration (including arranging and indoor plant care): Includes indoor home maintenance, indoor home improvements, heating and cooling, indoor decorating, watering and caring for indoor houseplants, and helping with these activities
- 433 Outdoor cleaning: Includes outdoor cleaning, shoveling, cleaning garage, gutters, walkways, and helping with these activities
- 434 Outdoor maintenance, repair, improvements, & decoration (including lawn, garden): Includes care for deck, shed, roof, porch, fence, mailbox, lawn, garden, pools, ponds, and hot tubs
- 435 Using services related to household cleaning, storing, maintenance, repair, improvement & decoration. Includes hiring/paying/doing business with cleaner, electrician, contractor, decorator, landscaper for indoor or outdoor chores
- 436 On computer or online researching/reading material related to indoor or outdoor household care
- 437 Travel related to household cleaning, storing, maintenance, repair, improvement & decoration.
- 438 Waiting and watching related to household cleaning, storing, maintenance, repair, improvement & decoration. Includes waiting and watching household chores being done
- 439 Household chores, n.e.c.: Includes can't tell if indoor or outdoor care

#### **ANIMAL AND PET CARE**

- 441 Care for animals and pets (not veterinary care): Includes feeding, grooming, letting outside, bathing animals and pets (not walking, exercising or playing with) and helping with these activities
- 442 Walking/exercising/playing with animals and pets: Includes walking, exercising, and playing with animals or pets (not caring for) and helping with these activities
- 445 Using animal and pet services (including vet care): Includes hiring/talking to/paying for/attending pet training, kennel, groomer, veterinary services
- 446 On computer or online researching/reading material related to animal or pet care
- 447 Travel related to animal and pet care/exercise
- 448 Waiting and watching related to animal and pet care and exercise
- 449 Pet and animal care and exercise, n.e.c.

## **VEHICLE CARE**

- 451 Vehicle repair and maintenance (not service use): Includes fixing car, changing oil, cleaning, working on engine and helping with these activities
- 455 Using vehicle repair and maintenance service
- 456 On computer or online researching/reading material related to vehicle care
- 457 Travel related to vehicle repair and maintenance and care (includes moving car to/from street to driveway/garage)
- 458 Waiting and watching related to vehicle repair and maintenance
- 459 Vehicle repair and maintenance, n.e.c.

## **APPLIANCE, COMPUTER, TOOL AND TOY CARE**

- 461 Appliance tool, and toy set-up, repair, & maintenance (self): Includes fixing, installing, repairing, hooking up, maintaining appliances, stereo/TV/VCR/DVD player/satellite dish, camera, security system, lawn-mower, and toys and helping with these activities
- 462 Computer set-up, repair & maintenance (self): Includes fixing, installing, repairing, hooking up, maintaining computer and accessories (printers, modems) and helping with computer and online activities/problems (connections, hardware, software, network)
- 465 Using services related to appliance, computer, tool, and toy setup, repair & maintenance: Includes hiring/talking to/paying for installation, repair, and maintenance of appliances, computers, tools, and toys
- 466 On computer or online researching/reading material related to appliance, computer, tool or toy care
- 467 Travel related to appliance, computer, tool, and toy set-up, repair & maintenance
- 468 Waiting and watching related to appliance, computer, tool, and toy setup, repair & maintenance
- 469 Appliance, computer, tool, and toy set-up, repair, & maintenance (by self), n.e.c.

## **FINANCIAL MANAGEMENT & HOUSEHOLD PLANNING**

- 471 Financial management: Includes paying bills, writing checks, doing taxes, balancing checkbook, checking balances and investments (on paper or by phone), looking at bills, giving money/allowance to household member and helping with these activities
- 472 Using banking services: Includes using banking services, making deposits, withdrawals, transfers in person, or using the ATM and helping with these activities
- 473 Household & personal organization, management, and planning: Includes making lists, organizing, planning, looking for misplaced items, assigning chores for household related activities (not on computer or online) and helping with these activities ; packing and unpacking vehicle for trip; packing/unpacking bags/suitcases; paper work, unspecified (not for work)
- 475 Using loan, other financial and legal services: Includes meeting with or talking to or paying a loan or mortgage officer, lawyer or paralegal, accountant, stockbroker, claims adjuster, mediator, debt manager, or insurance agent.
- 476 On the computer or online performing financial management, banking, or household/personal organization: includes using the computer to pay bills, write checks, do taxes (e.g., Turbo tax), balance checkbook (e.g., Quicken), make deposits,

- withdrawals or transfers, make lists, organize, plan, assign household chores, make a budget, helping with these activities, or research/reading material related to these activities
- 477 Travel related to financial management, & banking, loan, and other financial and legal, household & personal organization services
- 478 Waiting and watching related to financial management, & banking, loan, and other financial and legal services & household & personal organization
- 479 Financial management and banking, loan and other financial and legal services, & household & personal organization, n.e.c.

**SUPERCATEGORY 5: PHYSICAL CARE, LOOKING AFTER OTHERS & SCHOOL-RELATED ACTIVITIES**

**PHYSICAL CARE & ASSISTANCE TO OTHERS**

- 511 Physical care for someone else: Includes dressing, bathing, feeding, grooming someone and physical care for a baby, child, or adult
- 512 Looking after someone else: Includes supervising, keeping an eye on, watching for health-related reasons a baby, child, or adult
- 513 Other caring-related activities including reading to, playing with (not playing sports or attending sports), teaching someone (not school related). Includes reading to, playing with (not sports), teaching someone (not school related) and disciplining/directing a child as part of care-related activities
- 514 Helped with mobility includes help with getting out of bed or chair, walking, getting around, getting in or out of car, or getting outside.
- 515 Contracting with paid child or adult care services for someone else's care: Includes hiring/paying for/talking to/interviewing caregivers including babysitters, summer camp, nanny, adult day care, aide (not education related)
- 516 On computer or online reading/researching material related to physical care and assistance to others (not education-related)
- 517 Travel related to physical care or looking after someone else including picking up/dropping off another person, not at school or class)
- 518 Waiting and watching related to providing physical care or looking after someone else (including reading, playing with)
- 519 Activities related to providing physical care or looking after someone else n.e.c., including waking someone up

**MEDICAL CARE FOR OTHERS**

- 521 Providing medical care to someone else: Includes giving someone else medicine, taking temperature, changing bandage, giving insulin, helping with physical therapy
- 525 Obtaining medical care for someone else. Includes interacting with medical care provider for someone else (talking with someone else's doctor, being at their appointment with them)
- 526 On computer or online reading/researching material related to medical care for someone else.
- 527 Travel related to medical care for someone else (including picking up/dropping off or

- bringing another person to their doctor or medical provider)
- 528 Waiting and watching related to medical care provided to someone else
  - 529 Activities related to providing physical care or looking after someone else (including reading, playing with), n.e.c.

#### **SCHOOL-RELATED ASSISTANCE**

- 531 Helping someone else with homework or home schooling: Includes reviewing, checking, quizzing someone else about homework
- 532 Attending meetings and school conferences for someone else: Includes parent-teacher conferences, back to school night, meeting with teacher, tutor or other school-related function
- 535 Arranging services for someone else's education. Includes hiring a tutor or paying for instruction or lessons
- 536 On computer or online performing activities related to someone else's education or researching/reading material related to someone else's education
- 537 Traveling related to someone else's educational activities including picking up/dropping off at school or class
- 538 Waiting and watching related to someone else's educational activities
- 539 Activities related to education of someone else, n.e.c.

#### **SUPERCATEGORY 6: NON-ACTIVE LEISURE**

##### **SOCIALIZING AND PERSONAL COMMUNICATION**

- 611 Socializing and communicating with others-in person: Includes talking with, greeting, visiting, hugging/kissing, giving gifts to, entertaining, spending time with friends or family in person, laughing with others, joking around with others (not on computer, telephone, or online)
- 612 Socializing and communication with others by talking on telephone: Includes talking on the phone with friends or family and checking phone messages
- 613 Attending or hosting party, wedding or social occasions: Includes attending/hosting weddings, bar/bat mitzvah receptions, and birthday/holiday/graduation parties
- 614 Reading and sorting through the mail (not email), sending mail or packages, bringing in the mail and newspaper, writing cards/letters (not on the computer); at post office
- 615 Using services related to socializing and personal communication such as a dating service or party planner
- 616 On computer or online or other technology to socialize or communicate: Includes email (non work-related) or other technology such as instant messaging, texting, skypeing, or online at Facebook or other social networking site
- 617 Travel related to social and personal communication, including to/from parties (including giving a friend a ride)
- 618 Waiting and watching related to social and personal communication, including parties
- 619 Social and personal communication, n.e.c.

##### **TV & MOVIE VIEWING**

- 621 Watch television and movies: Includes watching TV, video, movie, VCR, DVD, DVR, borrowing videos (not going to the movies)
- 625 Using services related to watching television or movies. Includes picking out video at the video store.
- 626 On computer or online to watch TV shows or movies or to research/read material related to watching TV shows or movies
- 627 Travel related to television and movie viewing. Includes going to the video store.
- 628 Waiting related to television and movie viewing
- 629 Television and movie viewing, n.e.c.

### **GAMES & PUZZLES**

- 631 Games & puzzles (not part of taking care of someone): Includes doing puzzles, crosswords, board games (not on computer or online)
- 632 Gambling (not at casino or online). Includes playing/winning the lottery, betting, playing poker
- 635 -
- 636 On computer or on line or other technology playing games or doing puzzles. Includes computer games, internet games, Wii, PlayStation, online poker, online gambling
- 637 Travel related to games, videogames and computer games. Includes going to the videogame store.
- 638 Waiting and watching related to games, videogames and computer games.
- 639 Games & puzzles, n.e.c.

### **OTHER NON-ACTIVE LEISURE**

- 641 Arts and crafts, collecting, and hobbies, making music (personal): Includes arts and crafts, playing musical instrument, photography, sewing, jewelry making and collections; senior center activities if no specific activities mentioned
- 642 Reading (personal): Includes reading books, magazines, newspaper, listening to books on tape (not on computer)
- 643 Writing (personal): Includes writing in diary or journal (not on computer)
- 644 Listening to recorded music or radio including talk radio, music on the radio, CDs, iPod (not on computer)
- 645 Using services related to non-active leisure; at the library checking out books
- 646 On computer or online performing non-active leisure including reading, writing, listening to music, or reading/research related to arts and crafts, photography, sewing, jewelry making and all collecting (e.g. coin collecting); includes computer use or online unspecified reason (not at work), "surfing the web", downloading files, burning CDs, uploading pictures.
- 647 Travel related to non-active leisure: include travel to/from collector's conventions, library, senior center if no specific activities mentioned
- 648 Waiting and watching related to non-active leisure
- 649 Non-active leisure, n.e.c.

### **SMOKING AND DRINKING ALCOHOL**



- 651 Smoking or chewing tobacco
- 652 Drinking alcohol: Includes having beer, wine, and alcoholic beverages, getting drunk
- 655 -
- 656 -
- 657 -
- 658 -
- 659 Smoking and drinking alcohol, n.e.c.

**NO ACTIVITY: RELAXING, EMOTIONS**

- 661 Doing nothing, relaxing: Includes thinking, sitting outside, sunbathing; sitting down taking it easy; (if there is another codeable response, do not code “relaxing”)
- 662 Negative emotion w/no activity: Includes crying, worrying, fretting
- 663 Positive emotion w/no activity: laughing (by oneself)
- 665 -
- 666 -
- 667 -
- 668 -
- 669 No activity, n.e.c.

**SUPERCATEGORY 7: ACTIVE LEISURE, ARTS & ENTERTAINMENT, & TRAVEL**

**SPORTS AND PHYSICAL ACTIVITY**

- 711 Playing/practicing sports or taking physical activity class/lessons: Includes all sports, teams, and taking lessons or practice, includes dancing
- 712 Walking/jogging for exercise or pleasure or working out: Includes walking/jogging/running for pleasure or exercise, stretching, working out, using the gym
- 713 Other outdoor recreation activities: Includes camping, fishing, boating, hiking, hunting and other outdoor recreation activities
- 714 Attending sporting events (including family member’s sporting event)
- 715 -
- 716 Using computer or going online to read/research material related to sports or physical activity; following favorite team online (but does not include watching live games on line)
- 717 Travel related to active leisure
- 718 Waiting and watching related to active leisure
- 719 Active leisure, n.e.c.

**ARTS & ENTERTAINMENT**

- 721 Attending arts outside of home: Includes attending plays, theatre, concerts
- 722 Attending family member's play or concert
- 723 Attending movies (outside of home)
- 724 Attending casino
- 725 -
- 726 Using computer or going online to gamble or to read/research about other arts &

- entertainment
- 727 Travel related to arts & entertainment
- 728 Waiting related to arts & entertainment
- 729 Arts & entertainment, n.e.c.

**TRAVEL AS LEISURE**

- 735 Using travel-related services for leisure, including travel agent, AAA
- 736 Using computer or going online to research/read material related to travel as research, including making online reservations, printing boarding passes for leisure trip
- 737 Going on a trip, vacation, or driving around, sightseeing: Includes going on a trip, vacation or driving around to see the sites
- 738 Waiting related to travel for leisure
- 739 Travel for leisure, n.e.c.

**SUPERCATEGORY 8: ORGANIZATIONAL ACTIVITIES**

**RELIGIOUS & SPIRITUAL PRACTICE**

- 811 Attending religious services & practice: Includes attending/leading/participating in church services, praying alone, studying religious texts, attending funerals/weddings/bar mitzvah and other religious ceremonies, attending church choir practice or performance
- 812 Religious & spiritual education activities: Includes participating in religious study group or attending religious class
- 813 Religious & spiritual volunteer activities: Includes attending meetings, events and activities sponsored by church, synagogue, temple, mosque or other organized religion
- 815 Using services related to religious & spiritual activities
- 816 Using computer or going online to participate in religious practice, religious education, or religious volunteer activities or research/read material related to these activities
- 817 Travel related to religious & spiritual, and religious education activities
- 818 Waiting related to religious & spiritual, and religious education activities
- 819 Religious and spiritual activities, n.e.c.

**OTHER ORGANIZATIONS (NOT VOLUNTEER)**

- 821 Attending meetings, events, and activities sponsored by professional, union, fraternal, political, civic, or special interest organizations: Includes attending meetings, events, and activities sponsored by Boy Scout/Girl Scout, unions, fraternal lodge, weight watchers, political party, AA, book club, homeowner's association
- 825 -
- 826 Using computer or going online to participate in other organizations meetings, events, activities or research/read material related to these activities
- 827 Travel related to attending meetings (personal, not volunteer)
- 828 Waiting related to attending meetings
- 829 Attending meetings (personal, not volunteer), n.e.c.

**GOVERNMENT & CIVIC ACTIVITIES**

- 831 Civic obligations & participation. Includes serving on jury duty, appearing in court, voting, participating in surveys other than NSOC, attending town hall meetings, talking to political representative
- 832 NSOC interview on previous day (survey)
- 835 Using government services (not unemployment; social services): Includes using police, fire, licensing, permits, inspection services
- 836 Using computer or going online to participate in government or civic activities or research/read material related to these activities
- 837 Travel related to government or civic activities
- 838 Waiting related to government or civic activities
- 839 Civic or government activities, n.e.c.

## **SUPER CATEGORY 9: OTHER MISCELLANEOUS CODES & DATA ISSUES**

### **DATA ISSUES**

- 912 Can't remember/DK
- 913 Too personal/RF

## Appendix D: Detailed Information on Cross-sectional and Longitudinal Weights

**Table D1. Weighted Response Rates for Variables Used in Nonresponse Adjustment for NSOC III Time Diary Cross-sectional Weights**

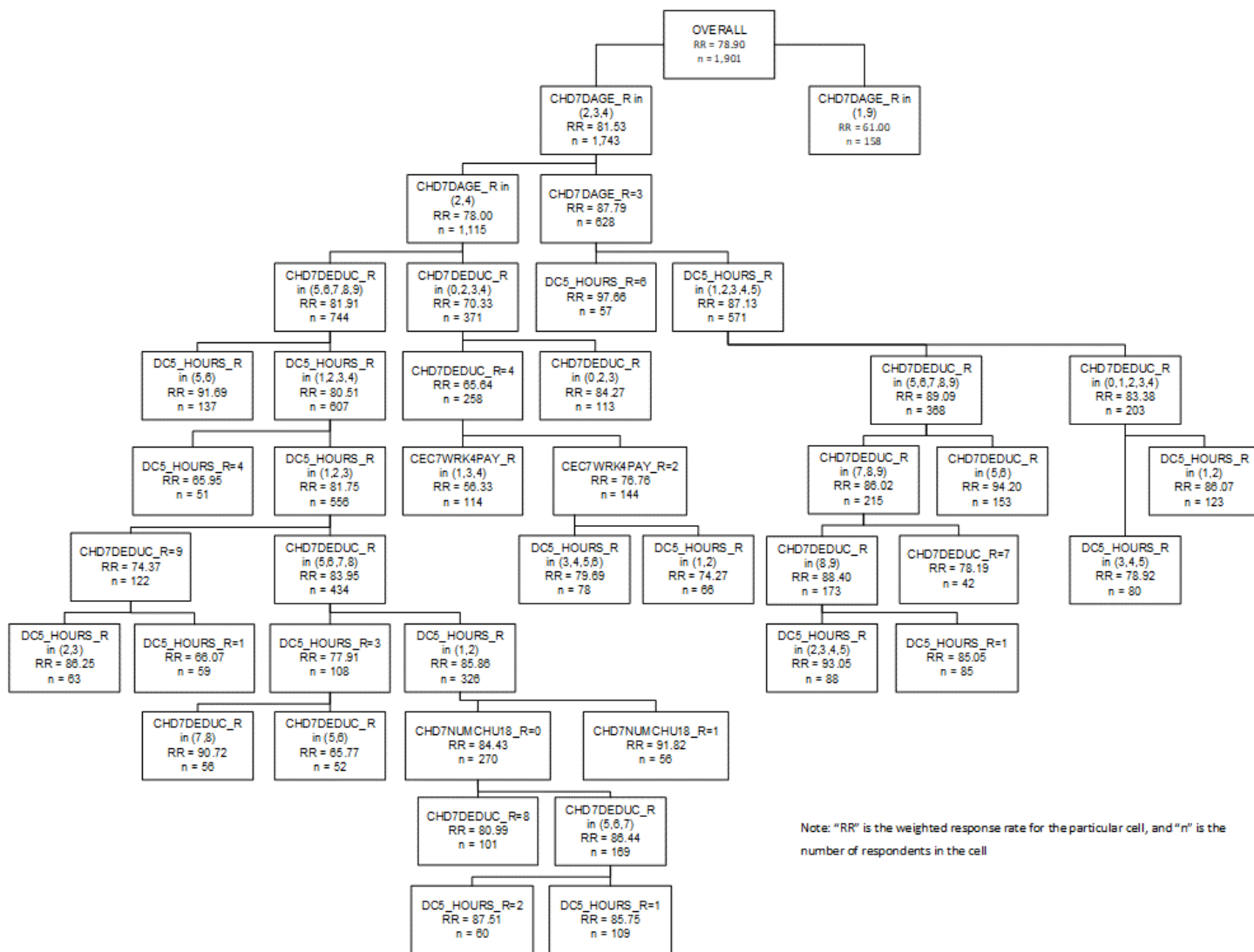
	Time Diary Interview complete (Weighted Response Rate)
<b>OVERALL</b>	78.9
<b>Hours of care Caregiver provided last month * - (DC5_HOURS_R)</b>	
1:20 or less	77.0
2:20-39	83.6
3:40-79	81.3
4: 80-111	66.7
5: 112-223	78.6
6: 224 +	85.4
<b>Caregiver worked for pay last week * – (CEC7WRK4PAY_R)</b>	
1: Yes, has work for pay last week	75.4
2: No, has no work for pay last week	82.8
3:Retired	86.7
4:DK/RF	1.1
<b>Caregiver has kids under age 18 * – (CHD7NUMCHU18_R)</b>	
0: CG has no young children under 18	80.5
1: CG has young children under 18	67.7
<b>R7 Caregiver Age Group * – (CHD7DAGE_R)</b>	
1:39 or less	67.2
2:40-64	77.9
3:65-79	87.8
4:80 +	78.5
9: DK/RF	48.9
<b>Caregiver Highest Level of Education * – (CHD7DEDUC_R)</b>	
0:DK / RF	52.6
1:No schooling completed	+
2:1st - 8th grade	83.7
3: 9th - 12th grade	87.6
4:High school graduate	70.4
5:Vocational, technical, business, or trade school certificate or diploma	84.6
6: Some college but no degree	81.4
7:Associate’s degree	83.8
8: Bachelor’s degree	87.1
9: Master’s, professional, or doctoral degree	78.5
<b>Caregiver Gender – (C7DGENDER)</b>	
1:Male	80.3
2:Female	78.1

\*=retained in classification tree analysis for Caregiver nonresponse adjustment

+ = cell size < 11

Variable names used in classification trees shown parenthetical

Figure D1: NSOC III Time Diary Cross-sectional Weight Nonresponse Adjustment Cells



Note: "RR" is the weighted response rate for the particular cell, and "n" is the number of respondents in the cell

**Table D2. Weighted Response Rates for Variables Used in Nonresponse Adjustment for NSOC III Time Diary Longitudinal Weights**

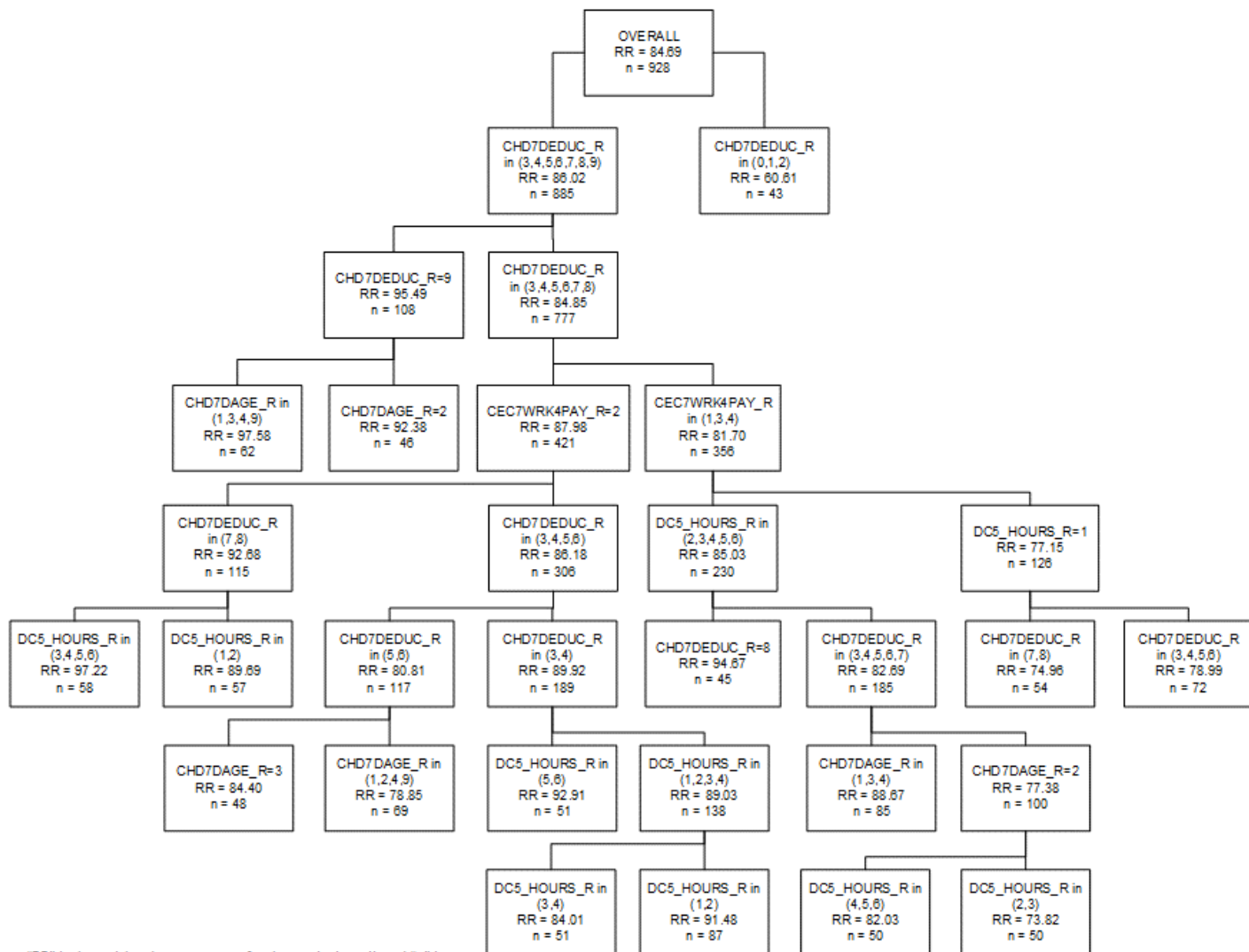
	Time Diary Interview complete (Weighted Response Rate)
<b>OVERALL</b>	84.7
<b>Hours of care Caregiver provided last month * - (DC5_HOURS_R)</b>	
1:20 or less	81.8
2:20-39	88.8
3:40-79	85.2
4: 80-111	79.2
5: 112-223	86.1
6: 224 +	93.0
<b>Caregiver worked for pay last week * – (CEC7WRK4PAY_R)</b>	
1: Yes, has work for pay last week	82.4
2: No, has no work for pay last week	88.8
3:Retired	87.3
4:DK/RF	2.4
<b>Caregiver has kids under age 18 * – (CHD7NUMCHU18_R)</b>	
0: CG has no young children under 18	85.0
1: CG has young children under 18	82.7
<b>R7 Caregiver Age Group * – (CHD7DAGE_R)</b>	
1:39 or less	76.3
2:40-64	84.4
3:65-79	88.6
4:80 +	88.8
9: DK/RF	59.9
<b>Caregiver Highest Level of Education * – (CHD7DEDUC_R)</b>	
0:DK / RF	54.8
1:No schooling completed	+
2:1st - 8th grade	67.9
3: 9th - 12th grade	82.4
4:High school graduate	87.4
5:Vocational, technical, business, or trade school certificate or diploma	85.3
6: Some college but no degree	78.9
7:Associate’s degree	88.0
8: Bachelor’s degree	86.1
9: Master’s, professional, or doctoral degree	95.5
<b>Caregiver Gender – (C7DGENDER)</b>	
1:Male	84.3
2:Female	84.9

\*=retained in classification tree analysis for Caregiver nonresponse adjustment

+ = cell size < 11

Variable names used in classification trees shown parenthetical

Figure D2: NSOC III Time Diary Longitudinal Weight Nonresponse Adjustment Cells



Note: "RR" is the weighted response rate for the particular cell, and "n" is the number of respondents in the cell