COVID-19 Supplement to the
National Health and Aging Trends Study
USER GUIDE

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Overview

In 2020, the National Health and Aging Trends Study (NHATS) conducted a supplemental mail study about participants' experiences during the COVID-19 outbreak. Adult family members and friends who helped NHATS participants were also surveyed about their experiences helping the NHATS participant during the outbreak.

This User Guide describes the NHATS COVID-19 Beta File for NHATS Sample Persons (SP). Version 2 includes new guidance on survey design adjustments. The file combines responses to the self-administered questionnaire sent to NHATS Sample Persons and to the proxy version of the questionnaire sent to Round 10 proxy respondents.

This early-release file includes approximately 98% of completed cases. It has been released ahead of the Round 10 Beta files, but can be linked to Round 9 and earlier rounds. Minimal editing has been conducted, and the file may contain errors. Additional cases and non-response weights will be added in a future release. This file also includes a Round 9 analytic weight and survey design variables for the user's convenience, but these should be considered preliminary because they do not take into account differential nonresponse to Round 10 or to the NHATS COVID-19 Supplement.

An early-release file for Family Members and Friends is expected to be released in 2021 and this user guide will be updated at that time.

Design & Eligibility

NHATS participants who completed a Sample Person (SP) interview in Round 10 were eligible to receive the self-administered COVID-19 questionnaire (either in English or Spanish, depending on the language of the Round 10 interview). Proxies who answered the Round 10 NHATS interview for living NHATS participants were sent a proxy version of the questionnaire.

In both the self-administered (SP) and Proxy versions of the NHATS COVID-19 questionnaire, respondents were asked to provide contact information for up to two adult family members or friends who helped the NHATS sample person most during the COVID-19 outbreak. Individuals who were named were eligible to receive the Covid-19 Family Members and Friends questionnaire.

Data Collection

NHATS participant questionnaires were mailed beginning at the end of June 2020 through the end of October 2020. Most of the questionnaires were completed in July and August 2020.

The timeline for mailing the Family Members and Friends questionnaire began at the end of July 2020 and is anticipated to continue through January 2021. Proxy respondents to the 2010 NHATS survey were mailed both the Proxy Questionnaire (about the SP's experiences) and a Family Members and Friends Questionnaire (about their own experiences).

Questionnaires were mailed with a pre-paid $5 incentive. Email and postcard reminders were sent 10 and 20 days after the initial mailing. Non-respondents then received reminder phone calls, over a 10-day period. A second copy of the booklet with an additional pre-paid $5 incentive was sent to non-respondents to the Family Members and Friends questionnaire and to the self-administered Spanish language SP questionnaire and to the Proxy questionnaire.

Sample Sizes

The early-release NHATS SP COVID-19 Beta file includes data from 3,188 participants or proxies (out of 3,961 eligible SPs) who returned a completed questionnaire before November 1, 2020. An additional 40 participants who also returned their questionnaires in this time frame were determined to be incomplete (because they answered less than half the items) and are therefore not included.

Response Rates

Through the end of October 2020, the unweighted response rate for the NHATS SP COVID-19 supplement was 83.5%. Response rates were lower for older age groups, minority groups. those in residential care settings (particularly nursing homes, not shown) in Round 9, and Round 9 proxy respondents (see Table 1).

Table 1. Percentage of Eligible Cases Returning Completed SP or Proxy Questionnaire	
	Preliminary Response Rate
Rd 9 Age+1 in 10-yr age groups	
70-79	85.2
80-89	82.0
90+	74.6
Gender	
Male	84.5
Female	82.7
Race/ethnicity	
White, non-Hispanic	87.3
Black, non-Hispanic & Other	68.8
Rd 9 Residential Care Setting	
Community	84.3
Residential care	70.9
Rd 9 Proxy Status	
Self	84.1
Proxy	62.2
Total	83.5
N	3,188/3,961

Content

The SP and Proxy Questionnaires include 14 sections. Topics cover symptoms of COVID-19, measures to limit spread of the virus, and changes in the NHATS participants' living situation, contact with family and friends, other activities, grocery shopping, health care, finances, wellbeing and daily activities. Participants were also asked to provide contact information for the two adult family members or friends who helped most during the outbreak.

Many of the questions were designed to align with information collected in the core NHATS and NSOC interviews (sections 1, 9, 10, 11, and 14 in Table 2). Other sections were adapted from or aligned with sources that had drafted COVID questionnaires available before June 2020 (e.g., Multi-ethic Study of Atherosclerosis (MESA), the Health and Retirement Study (HRS), and the Panel Study of Income Dynamics (PSID)). Details are provided in Table 2.

Table 2. NHATS COVID-19 Questionnaire Sections			
Section	**Item #**	**Page #**	**Notes About Source (Item)**
1-2. Date & About you (Proxy)	2-4	3	Aligned with NHATS
3. Symptoms of COVID-19	5-9	4	Adapted from MESA (5-9) Common symptoms adapted from CDC definitions (5)
4. Meaning of During COVID-10 Outbreak	10	5	--
5. Measures to Limit Spread of COVID-19	12	6	Adapted from MESA
6. Assisted Living	13-16	6-7	Based on AHCA guidance
7. Changes in Living Situation	17-24	8-9	Some items aligned with HRS COVID telephone module
8. Changes in Contact with Friends and Family	25-28	9-10	Aligned with HRS COVID SAQ
9. Changes in Other Activities	29-36	12-13	Aligned with NHATS
10. Changes in Grocery Shopping	37-40	14-15	Aligned with content in NHATS
11. Changes in Health Care	41-45	16-17	41-42 adapted from NSOC III (HC) 43-45 adapted from HRS COVID telephone module
12. Changes in Finances	46-48	18	46 adapted from HRS COVID telephone module 47,48 adapted from PSID shutdown / COVID-19 module
13. Changes in Wellbeing	49-59	19-21	49-51 aligned with HRS COVID SAQ 57 PTSD-8 (Source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3023946/)
14. Changes in Daily Activities	60-69	22-27	Aligned with NHATS

Most of the items in the SP and proxy questionnaires were identical (except for the reference to "you" in the self-administered booklet vs. "the NHATS participant" in the proxy booklet).

Items diverge for SP and proxy booklets in two sections: section 1-About You and section 12-Changes in Wellbeing.

About You – Q2-Q4. In the SP questionnaire Q2 asks whether the respondent is an NHATS participant or a proxy respondent. If the person filling out the booklet is a proxy, we obtain relationship to NHATS participation (Q3) and reason for proxy (Q4). We do not determine how familiar the person answering is with the SP's routine. In the Proxy questionnaire, we do not ask who is filling out the questionnaire. Instead, Q2 asks relationship to NHATS SP, Q3 asks reason and Q4 asks the proxy how familiar he/she is with the NHATS participant's daily routine.

Changes in Wellbeing – Q49-Q50 (frequency of loneliness before/during outbreak); Q51-Q52 (frequency of not enough time alone before/during outbreak) and Q58-Q59 (frequency of feeling hopeful about the future before/during outbreak) in the self-administered questionnaire are not included in the Proxy questionnaire.

Data Files and Documentation

The NHATS COVID-19 SP file provides one record for each NHATS participant who responded to the COVID-19 supplemental collection. Both self-administered (SP) and proxy booklet responses are included and variables have been combined as appropriate.

The file includes a sample person identifier (spid, which allows linkage to other NHATS files), combined variables from the questionnaires (almost all with derived variable designations, see Variable Names, below), booklet type (cv10dbooklet) and respondent type (cv10dproxy), and preliminary weight, cluster, and stratum variables from Round 9 of NHATS (see next section on non-response weights).

A crosswalk is provided that links each item in the mail questionnaires to variable names in the data file. A codebook is also provided with the data file that includes frequencies for categorical variables and means for continuous variables.

Non-response Weights

The Round 9 analytic weight has been included on the NHATS COVID-19 SP Beta file for users' convenience. These weights account for differential probabilities of selection and non-response through Round 9. The weights do not take into account non-response to Round 10 (which had a 95% response rate) or to the NHATS COVID-19 Supplement (with an 84% response rate so far). Updated non-response weights will be added to the final released version of the data file and we recommend users revise analyses once final weights are available.

Given the differential response rates reported above, users may wish to adjust the Round 9 weighted counts by age group, race/ethnicity, and Round 9 residential care and proxy status to match totals in Table 3. That is, Round 9 weights for observations in each group may be multiplied by adjustment factors shown in the last column of Table 3 so that weighted counts of COVID-19 respondents equal weighted counts shown in the table. We caution users that this approach may result in weights that are excessively large and trimming may be warranted.

Table 3. Weighted Counts of Round 10 Living Sample Persons Eligible for the COVID-19 Supplement and Preliminary Adjustment Factors

Group	Age	Race/ethnicity	Community/ Residential Care	Self/Proxy	Weighted Count	Preliminary Adjustment Factor
1	70-79	All Others	Community	Both	15874188	1.171
2	70-79	Black, non-Hispanic	Community	Self	4366523	1.599
3	80-84	All Others	Community	Self	6803373	1.201
4	80-84	Black, non-Hispanic	Community	Self	1704071	1.515
5	90+	All Others	Community	Self	1292618	1.281
6	90+	Black, non-Hispanic	All settings	Self	342151	1.612
7	70-79	Black, non-Hispanic	All settings	Proxy	156751	2.264
8	80-84	All Others	Community	Proxy	118649	1.497
9	80-84	Black, non-Hispanic	Community	Proxy	110264	1.796
10	90+	All Others	All settings	Proxy	203328	1.603
11	90+	Black, non-Hispanic	All settings	Proxy	127243	3.083
12	70-79	All Others	Res Care	Self	218454	1.480
13	70-79	Black, non-Hispanic	Res Care	Self	121380	1.338
14	80-84	All Others	Res Care	Both	810297	1.455
15	80-84	Black, non-Hispanic	Res Care	Both	120895	3.963
16	90+	All Others	Res Care	Self	384354	1.555
17	70-79	All Others	Res Care	Proxy	43310	1.000

Uses Round 9 analytic weight. Age is single year of age in Round 9+1. Residential care and proxy status are from Round 9. Weighted sample =32,797,849

Survey Design Adjustments

The NHATS COVID-19 SP Beta file also includes round 9 strata (w9varstrat) and cluster (w9varunit), which allow users to adjust standard errors and statistical tests to account for the complex survey design of NHATS. To avoid encountering a single sampling unit per strata, users should combine w9varstrat values of 48 and 49 on the Beta file. We also recommend using the subpop option with stata svy commands or domain with SAS commands rather than subsetting the file for analysis.

Variable Names and Missing Data Conventions

Variable names. Variable names in the NHATS COVID-19 SP file follow NHATS conventions. Variables start with "cv" (for COVID-19), followed by NHATS round number (i.e., 10). This "stem" is followed by a name that reflects the question asked. A "d" is before the stem if the variable is derived. Given that brought together SP and Proxy information to construct the data files, we have designated almost all variables as derived.

Variable labels. Variable labels in the NHATS COVID-19 SP file follow NHAT conventions. Labels start with the Round number (R10) followed by a D if derived and followed by COVID-19 to indicate the file. Next, we provide information on the item(s) for the variable. For variables with the same item numbers in both the SP and Proxy booklets, we use SP PROXY Q# where Q# is the item number from the booklet; for variables with different items numbers in the two booklets we use SP Q# PROXY Q#; and for variables in one booklet and not the other we use either SP or PROXY and then Q#. The rest of the label includes an abbreviated description of the content of the variable.

Missing Data. NHATS COVID-19 files use the NHATS and NSOC conventions of assigning -1 to variables with purposeful skips and -9 to missing. In the NHATS COVID-19 SP file we expanded the purposeful skip indicator to reflect *why* an individual skipped an item as follows:

-3 Question not in self-administered booklet
-2 Question not in proxy booklet

Note that for items that involve grids and instructions to "mark all that apply," we assigned a code of "7 Not checked" for unselected items (rather than missing). See *Data Editing* for details.

Data Editing

Upcoding other specify fields. The NHATS COVID-19 questionnaire had several questions that had a list of options for respondents to choose from and also provided an open-ended response box for respondents to specify another answer. We took the following steps when reviewing this open text:
- If the text corresponded to available answer category, we recoded the response to match an existing category;
- If more than 10 respondents mentioned an answer that was not available as an answer category, we created a new response.
- If the text did not correspond to an available or new answer, but provided a relevant answer, we coded the response to "other"

Two new variables were created as a result of this upcoding process (and therefore are not answers shown on the instruments; see Table 4).

Table 4. Additional response options created through review of other specify			
Item number	Question wording	Response option added	Variable Name
Q44	What type(s) of care did you put off? Mark all that apply	12. Tests or lab work	cv10ddelaycare12
Q45	What are the reason(s) that you put off that care? Mark all that apply	8. In quarantine	cv10ddelayreas8

Addition of response option to cv10dproxy. Q2 in the SP questionnaire asked who was filling out the self-assessed booklet (the SP or the proxy). We ascertained from Q2 and Q4 (reason for proxy) that for some cases the NHATS and SP filled out the questionnaire together. We therefore added a third response category to Q2 (3. NHATS SP and Proxy).

Specifically, the following respondents were coded as 3 for cv10dproxy (N=105):
- Respondents who checked both response options 1 and 2 in Q2;
- Respondents who wrote in the text box provided at Q4 that the NHATS SP and proxy filled out the questionnaire together; and
- Respondents who checked that they were an NHATS participant (response option 1 in Q2) but also provided valid answers for Q3 (proxy relationship to SP) or Q4 (reason for proxy).

In addition, two respondents who completed the proxy booklet indicated that they were the NHATS SP in Q3 of the proxy questionnaire (reason for proxy). We coded these two cases as "1 NHATS SP" on cv10dproxy.

"Mark all that apply" (MATA) questions. Several questions directed respondents to mark all response options that applied (MATA). For MATA questions that were supposed to be answered (no skip pattern around the item), response options that were not checked were coded "7 Not checked." For MATA questions that were supposed to be skipped (based on the answer to an earlier question), all response options were coded "-1 Inapplicable."

Grid questions. Several questions were presented in a grid with answers displayed in a row at the top. Respondents were directed to answer every question, but for some grids (e.g., with yes/no response options) they sometimes only checked "Yes" responses. For grid items that were supposed to be answered, items left blank were coded "7 Not checked." For grid items that were supposed to be skipped (based on the answer to an earlier question), all items were coded "-1 Inapplicable."

Questions with skip patterns. In general, follow-up questions to lead-in items that skipped respondents around subsequent questions were edited based on the answer to the lead-in question. If the answer to the lead-in question was missing or if the answer indicated a skip should occur, follow-up questions were coded "-1 Inapplicable." If the lead-in question indicated no skip should occur, follow-up questions without answers were coded "-9 Missing" (except for MATA and grid questions, as discussed above).

Other edits. Four additional variables were edited as follows:
- Responses to cv10dmonthend (Q11) were edited to "13 Reported month in the future" if the month reported was later than the month the questionnaire was completed (N=19 cases).
- Responses to cv10dfacility (Q13), which asks whether the respondent lives in a residential care facility, were edited to be consistent with a preliminary version of r10dresid (N=51 responses edited and 283 missing responses filled in).
- Responses to cv10dnumhlpamt (SP Q63 PROXY Q57) were edited to -9 Missing if cv10dnumhlp (SP Q62 PROXY Q56) was equal to zero and cv10dnumhlpamt was equal to "1 More" (N=3 cases).
- Responses to cv10dhlphrsamt (SP Q65 PROXY Q59) were edited to -9 Missing if cv10dhlphrs (SP Q64 PROXY Q58) was equal to zero and cv10dhlphrsamt was equal to "1 More" (N=13 cases).

Meta Data Variables

Here we document variables about the data collected (but not collected in booklet items). The variables can be found at the end of the file before weighting variables.

Variable Name VARIABLE LABEL	CODING SPECIFICATIONS/ SOURCE	VALUES and VALUE LABELS
cv10dbooklet R10 D COVID-19 SP PROXY BOOKLET TYPE	Based on booklet type received	1 Self-administered SP booklet 2 Proxy booklet
cv10dlanguage R10 D COVID-19 SP PROXY LANGUAGE OF QUESTIONNAIRE	Based on booklet type received	1 English 2 Spanish
cv10drecdmonth R10 D COVID-19 SP PROXY MONTH QUESTIONNAIRE RECEIPTED	Receipt system	-9 Missing 7 July 8 August 9 September 10 October
cv10dintmosrc R10 D COVID-19 SP PROXY INTERVIEW MONTH Q1_MM SOURCE	If Q1_MM missing or Q1_MM>cv10drecdmonth* then cv10dintmosrc=2. Else cv10dintmosrc=1 *Note for a small number of cases (N=16) the month receipted was earlier than the month reported in Q1.	1 Response to Q1 2 Month receipted