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

Beta Release v.3
December 2020
Updated March 2021

Contents

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 Files for NHATS Sample Persons (SP) and Family Members and Friends (FF).

Early-release files include approximately 98% of completed SP cases and 94% of completed FF cases. The files have 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 files may contain errors.

Early-release files also include the Round 9 analytic weight and survey design variables for the user's convenience, and guidance on how to adjust these weights to take into account non-response by a few key factors. These adjustments should be considered preliminary.

A set of final release files, planned for later in 2021, will include all cases, a set of nonresponse adjusted weights and also an FF tracker file with one record for each eligible FF.

Version 1 of this guide included a description of the Beta SP File. Version 2 added guidance on survey design adjustments. The current version (3) includes a description of the Beta FF File and corrections to guidance around preliminary adjustment factors for the SP weights.

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. We classified as ineligible paid aides or someone from the place where SP lived (based on opid) and individuals that were not age eligible. A few FFs lived outside the country and were considered eligible but not mailed a questionnaire (hence treated as nonresponse). In calculating response rates we also considered additional FFs included in the count of helpers provided by the SP or Proxy (an edited version of cv10dnumffhlprs, which will be included in the FF Tracker File) but not listed at the end of the questionnaire as non-respondents.

Data Collection

NHATS participant questionnaires were mailed either to the SP or the Proxy (if a Proxy responded to the 2020 NHATS for the SP) from the end of June 2020 through the end of October 2020. Collection continued through the mid-January 2021. NHATS participants whose interview was completed in Spanish were mailed a Spanish version of the SP questionnaire. Proxy FF

questionnaires were mailed with the Proxy questionnaires. Most of the SP and Proxy questionnaires were completed in July and August 2020.

Non-proxy FF questionnaires were mailed from the end of July 2020 and through the end of January 2021. Collection continued through the first week of March 2021. FFs identified at the end of the SP questionnaire were mailed a questionnaire, typically within a week of SP booklet receipt. Proxy respondents to the 2020 NHATS survey were mailed an FF questionnaire (about their own experiences) at the same time they were mailed the Proxy questionnaire (about the SP's experiences). Most FF questionnaires were completed in August and September 2020.

SP, Proxy and FF 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 FF questionnaire, the Spanish language SP questionnaire, and the Proxy questionnaire.

Sample Sizes

The early-release NHATS COVID-19 SP 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.

The early-release NHATS COVID-19 FF Beta file includes data from 1,978 family members or friends (out of 3,083 eligible FFs) associated with the 3,188 SPs on the early-release NHATS SP COVID-19 Beta file. To be included in the Beta file, FFs had to return their questionnaire before December 14, 2020. An additional 9 participants who returned their questionnaires in this timeframe were determined to be incomplete because they answered less than half the item(s) 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 first column of Table 1).

Through mid-December, the unweighted response rate for the NHATS FF COVID-19 supplement (for SP/Proxy questionnaires completed by the end of October 2020) was 64.2%. Among eligible FFs, response rates were lower for FFs of SPs who were in younger age groups, female, a racial/ethnic minority, living in the community in Round 9, and who answered the Round 9 interview for themselves (see last column of Table 1). FFs who were not spouses and who were not Round 10 proxy respondents also had lower response rates.

| Table 1. Percentage of Eligible SPs or Proxies or FFs Returning Completed Questionnaire |

	SP/Proxy RR	FF RR
Rd 9 SP Age+1 in 10-yr age groups		
70-79	85.2	62.6
80-89	82.0	64.4
90+	74.6	67.0
SP Gender		
Male	84.5	68.5
Female	82.7	61.4
SP Race/ethnicity		
White, non-Hispanic	87.3	67.8
Black, non-Hispanic & Other	68.8	52.7
Rd 9 SP Residential Care Setting		
Community	84.3	63.7
Residential care	70.9	70.0
Rd 9 SP's Proxy Status		
Self	84.1	63.6
Proxy	62.2	75.4
FF Relationship[1]		
Spouse/partner	-	89.3
Adult Child	-	67.7
Other and missing	-	64.1
Not listed[2]		-
FF is Proxy		
Yes	-	94.8
No	-	61.9
Total	83.5	64.2
N	3,188/3,961	1,978/3,083

[1]Source Rd 9 opfile and COVID SP booklet information.
[2]Includes 355 cases not listed by the SP or proxy.

Content

The SP questionnaires includes 13 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. Most of the items in the SP and proxy questionnaires were identical (except for the reference to "you" vs. "the NHATS participant").

The FF questionnaire includes 17 sections, many of which align with the sections in the SP/Proxy questionnaires (see Table 2). In addition, the FF questionnaire asks about the FF's relationship with the NHATS participant, help given to the NHATS participant before and during the outbreak and reasons for helping. For those who helped for health or functioning reasons, three additional sections about caregiving are included: time spent helping the NHATS participant, dementia caregiving (if help is memory related) and helping challenges and supports.

Table 2. NHATS COVID-19 SP/Proxy and FF Questionnaire Sections							
	SP/Proxy			**FF**			
Section: Topic	**Section**	**Item**	**Page**	**Section**	**Item**	**Page**	**Notes About Source**
Today's Date & About You	1-2	2-4	3	1-2	1-14	4-6	Aligned with NHATS (SP/Proxy) or NSOC (FF)
Symptoms of COVID-19	3	5-9	4	3	15-19	7	Adapted from MESA; Common symptoms adapted from CDC definitions
Meaning of During the Outbreak	4	10	5	4	20-21	8	-
Measures to Limit Spread of COVID-19	5	12	6	5	22	9	Adapted from MESA
Assisted Living	6	13-16	6-7	-	-	-	Based on AHCA guidance
Changes in Living Situation	7	17-24	8-9	9	41-44	9	17, 18, 21, and 22 (SP/Proxy) aligned with items in the HRS COVID telephone module.
Changes in Living Situation: Distance	-	-	-	9	45	9	Aligned with NSOC (DI)
Changes in Contact (SP/Proxy: with Friends and Family; FF: with NHATS SP)	8	25-26	9-10	10	46-47	17	-
Changes in Contact (SP/Poxy)/Relationship with NHATS Participant (FF): Give/Get Emotional Support	8	27-28	10	11	50-51	18	Aligned with HRS COVID SAQ
Changes in Other Activities: Life events and Life space constriction	9	29-30	11	-	-	-	Some life events in HRS COVID SAQ; Life space constriction items simplified version of Stalvey et al. (1999)[5]
Changes in Other Activities: Coping Behaviors	9	31	12	6	23	10	-
Changes in Other Activities: Caregiving	9	32	12	6	24	10	-
Changes in Other Activities: Participation	9	33-34	13	-	-	-	Aligned with content in NHATS
Changes in Other Activities (SP/Proxy)/ Changes in Contact (FF): Learned technology	9	35-36	13	10	48	17	Aligned with HRS COVID SAQ
Changes in Other Activities: Grocery Shopping	9	37-40	14-15	-	-	-	Aligned with content in NHATS
Changes in Health Care	10	41-45	16-17	-	-	-	41-42 (SP/Proxy) adapted from NSOC III (HC) 43-45 (SP/Proxy) adapted from HRS COVID telephone module
Changes in Work and Finances	-	-	-	7	25-28	11	-
Changes in Finances: Financial Difficulties	11	46-48	18	7	29-31	12	46 (SP/Proxy) 29 (FF) adapted from HRS COVID telephone module; 47-48 (SP/Proxy) 30-31(FF) adapted from PSID shutdown / COVID-19 module
Changes in Wellbeing	12	49-59	19-21	8	32-40		49-52 (SP/Proxy) aligned with HRS COVID SAQ; 57 (SP/Proxy) 38 (FF) PTSD-8[4]; 32 (FF) aligned with NSOC (HC); 33 (FF) aligned with PHQ2 and GAD in NHATS (HC); 53 (SP/Proxy) 34 (FF) aligned with NHATS (HC)
Changes in Daily Activities	13	60-69	22-27	-	-	-	Aligned with NHATS (SC, MO, HA, DT, MC)
Relationship with the NHATS Participant	-	-	-	11	49, 52	18	49 (FF) aligned with NSOC (AC)[3]
Help Given Before the Outbreak	-	-	-	12	53-54	19	Aligned with NHATS (SC, MO, HA, DT, MC)
Help Given During the Outbreak	-	-	-	13	55-56	20	Aligned with NHATS (SC, MO, HA, DT, MC)
Reasons for Helping	-	-	-	14	57-58	21	Aligned with NHATS (HA)
Time Spent Helping the NHATS Participant[1]	-	-	-	15	59-66	22-23	59-64 aligned with NSOC (CA)
Dementia Caregiving[1,2]	-	-	-	16	67-70	24	69 Aligned with NHATS (CP)
Helping Challenges and Supports[1]	-	-	-	17	71-79	25-26	71-76, 78-79 (FF) aligned with NSOC (AC)

[1]Caregiving sections limited to those helping for health or functioning related reasons. [2]Limited to those helping for dementia or memory-related reasons. [3]FF questionnaire was missing 'not at all' category. [4]https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3023946/ [5]https://www.uab.edu/medicine/ophthalmology/images/research/LifeSpace.pdf

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.

Alignment between SP and Proxy Questionnaires. 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 Beta File includes 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 SP 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).

The NHATS COVID-19 FF Beta File includes one record for each FF who responded to the COVID-19 FF supplemental collection. Both Proxy FF's and non-Proxy FF's received the same questionnaire. The FF file includes identifiers spid and opid, which allow linkage to other NHATS files. There is also a variable ff10drespflag that indicates whether the person responding to the questionnaire is likely the same FF that the questionnaire was mailed to (97.3% of cases) or likely a spouse of that FF (.5%) or likely another family member of that FF (2.2%). An additional variable was included that specifies whether the FF was the proxy respondent to the SP's questionnaire (ff10dproxyofSP). For variables that we have filled in from other sources we provide users with source variables. Finally, we have included a 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 files. A codebook is also provided with the data file that includes frequencies for categorical variables and means for continuous variables.

Linking to other NHATS Files

Spid may be used to link files to NHATS Round 9 and earlier. On the FF file, users are given both spid and opid. The opid indicates the individual to whom the questionnaire was mailed (see discussion of ff10drespflag below under Data Editing). Values of 298 and 299 are interim opid values for cases added to the NHATS opfile in R10. An opid will be assigned to these cases in the final release of the FF data. Values of 998 and 999 indicate FFs who have never been mentioned in any round of NHATS (that is, not listed on the opfile).

Non-response Weights

The Round 9 analytic weight has been included on the NHATS COVID-19 SP and FF Beta files 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 SP Supplement (with a preliminary 84% response rate) or the NHATS COVID-19 FF Supplement (with a preliminary response rate of 64%). 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 to match totals in Table 3 (for SPs) or Table 4 (for FFs). Adjusted weights can be created by multiplying for each group in Table 3 (for SPs) or Table 4 (for FFs) the Round 9 weight by the adjustment factors shown in the last column of corresponding table. We caution users that this approach may result in weights that are excessively large and trimming may be warranted.

Survey Design Adjustments

The NHATS COVID-19 SP and FF Beta files also include 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 files (e.g. if w9varstrat=49 then recode it to 48). We also recommend using the subpop option with stata svy commands or domain with SAS commands rather than subsetting the file for analysis.

Table 3. Weighted Counts of Round 10 Living Sample Persons Eligible for the COVID-19

Group	Age	Race/ethnicity	Community/ Residential Care	Self/Proxy	Weighted Count	Preliminary Adjustment Factor
Supplement and Preliminary Adjustment Factors						
1	70-79	White, non-Hispanic	Community	Both	15874188	1.171
2	70-79	All Others	Community	Self	4366523	1.599
3	80-89	White, non_Hispanic	Community	Self	6803373	1.201
4	80-89	All Others	Community	Self	1704071	1.515
5	90+	White, non-Hispanic	Community	Self	1292618	1.281
6	90+	All Others	All settings	Self	342151	1.612
7	70-79	All Others	All settings	Proxy	156751	2.264
8	80-89	White, non-Hispanic	Community	Proxy	118649	1.497
9	80-89	All Others	Community	Proxy	110264	1.796
10	90+	White, non-Hispanic	All settings	Proxy	203328	1.603
11	90+	All Others	All settings	Proxy	127243	3.083
12	70-79	White, non-Hispanic	Res Care	Self	218454	1.480
13	70-79	All Others	Res Care	Self	121380	1.338
14	80-89	White, non-Hispanic	Res Care	Both	810297	1.455
15	80-89	All Others	Res Care	Both	120895	3.963
16	90+	White, non-Hispanic	Res Care	Self	384354	1.555
17	70-79	White, non-Hispanic	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. Total weighted count=32,797,849

Note an earlier version of this table in previous user guides labeled age and race/ethnic groups incorrectly.

Table 4. Weighted Counts of Round 10 Family Members and Friends of Living Sample Persons Eligible for the COVID-19 Supplement and Preliminary Adjustment Factors

Group	SP Age	SP Race / ethnicity	Round 9 SP Community/Residential Care	Round 9 SP interview Self/Proxy	FF Relationship to SP	Weighted Count	Preliminary Adjustment Factor
1	70-79	White, non-Hispanic	Community	Both	1 Spouse / partner	5809682	1.453
2	70-79	White, non-Hispanic	Community	Both	2 Children	4621011	2.311
3	70-79	White, non-Hispanic	Community	Both	3 Others and missing	2089967	1.825
4	80-89	White, non-Hispanic	Community	Self	1 Spouse / partner	1650275	1.517
5	80-89	White, non-Hispanic	Community	Self	2 Children	3480898	1.846
6	80-89	White, non-Hispanic	Community	Self	3 Others and missing	1439686	2.091
7	90+	White, non-Hispanic	Community	Self	1 Spouse / partner	187429	1.554
8	90+	White, non-Hispanic	Community	Self	2 Children	1250792	2.007
9	90+	White, non-Hispanic	Community	Self	3 Others and missing	332671	1.770
10	80-89	White, non-Hispanic	Community	Proxy	All relationships	206720	1.908
11	90+	White, non-Hispanic	All settings	Proxy	All relationships	275442	2.140
12	80-89	White, non-Hispanic	Res Care	Both	All relationships	972205	1.963
13	90+	White, non-Hispanic	Res Care	Self	All relationships	510060	2.179
14	70-79	White, non-Hispanic	Res Care	Proxy	All relationships	287908	2.255
15	70-79	All Others	All settings	Both	All relationships	3969782	3.278
16	80-89	All Others	All settings	Both	All relationships	2006780	2.846
17	90+	All Others	All settings	Both	All relationships	618609	3.519

Uses Round 9 analytic weight. Age is single year of age of SP in Round 9+1. SP residential care and SP proxy status are from Round 9. FF Relationship to SP (ff10drelashp4wts) is included in the FF Beta file for users who wish to apply these preliminary adjustment factors. Total weighted count = 29,709,916.

Variable Names and Missing Data Conventions

Variable names. Variable names in both the NHATS COVID-19 SP and FF files follow NHATS conventions. In the SP file, variables start with "cv" (for COVID-19) and in the FF file, variables start with "ff" (for family and friends). In both cases this prefix is 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. For the SP file, because we brought together SP and Proxy information to construct the variables, we have designated almost all variables as derived.

Variable labels. Variable labels in both the NHATS COVID-19 SP and FF files follow NHATS 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#. For variables on the FF file we use FF Q# whre Q# is the item number from the FF booklet. 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). In the FF file if all items in a grid were not checked, we coded all of them as -9 Missing. See *Data Editing* for details.

Data Editing

Upcoding other specify fields. The questionnaires included several items 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"

Three new variables were created as a result of this upcoding process (and therefore are not answers shown on the instruments; see Table 5).

Table 5. Additional response options created through review of other specify

Item number	Question wording	Response option added	Variable Name
Q44 (SP/Proxy)	What type(s) of care did you put off? Mark all that apply	12. Tests or lab work	cv10ddelaycare12
Q45 (SP/Proxy)	What are the reason(s) that you put off that care? Mark all that apply	8. In quarantine	cv10ddelayreas8
Q66 (FF)	What is the reason(s) the amount of help has changed? Mark all that apply.	16. NHATS SP injured or had surgery	ff10hlphrschg16

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), we did the following. For all cases in the SP file and for cases with at least one response checked in the FF file, response options that were not checked were coded "7 Not checked." In addition, in the FF file, if all response options were unchecked, we coded all of them as -9 Missing. 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 in the SP/Proxy and FF questionnaires 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). For four caregiving-related questions in the FF file (Q67, Q71, Q73 and Q75), for a small number of cases missing the lead-in question, we filled the question with a Yes response (n=17, 9, 6, and 3, respectively) when follow-up questions had been answered.

FF Caregiver checkpoints. In the FF questionnaire, there are two key checkpoints, Q57 (any help was given to the SP; ff10anyhelp) and Q58 (help was because of SP's health or functioning; ff10healthfunc). The two checkpoints determine whether an FF continues into the 'caregiving' sections of the questionnaire (sections 15-17).

- We edited ff10anyhelp based on whether respondents answered Yes to any part of Q53, Q54, Q55 or Q56 (=1) or No to all parts of all four questions (=2). If all parts of all four questions were missing, we accepted the original answer to Q57.
- We assigned ff10healthfunc to the original value of Q58 and then edited it based on two variables: (1) edited ff10anyhelp and (2) a variable we constructed based on endorsement of any item suggesting care was provided for health or functioning reasons (care=1 if any sub-item of Q56=1, any sub-item of Q54=1, Q61>1, Q64>1, Q67=1, or Q78D=1 or 2; otherwise care=0). If ff10healthfunc was missing and care=1, we assigned ff10healthfunc=1. If ff10healthfunc was missing and care=0, we assigned ff10healthfunc=1 if Q59=0 & Q60=0 & Q62=0 & Q63=0 and we assigned ff10healthfunc=2 if the caregiver was not a spouse (Q2~=1)
- We then made ff10anyhelp and ff10healthfunc consistent based on values of care. If care is yes (1) we set ff10anyhelp and ff10healthfunc both equal to yes (1). If care is no (0) then we set the value of ff10healthfunc to either missing (-1) or no (2), depending on the value of ff10anyhelp (no (2) or yes (1), respectively). If care is yes (1) and ff10anyhelp is missing (-1) and ff10healthfunc= no (2), we set ff10anyhelp to no (2) and ff10healthfunc to missing (-1)

Other SP file 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).

Other FF File edits. 12 additional variables were edited as follows:
- Respondents with reversed relationship (i.e., FF should report relationship to SP but reported SP's relationship to FF) were corrected in ff10relatnshp (N=18 cases)
- Response to ff10intmonth (Q1_MM) was constructed based on the month of receipted date minus 10 days (the average time gap for dated questionnaires) if missing or Q1 date later than receipt date (N=114 cases).

13

- Responses to ff10monthend (Q21) were edited to "13 Reported month in the future" if the month reported was later than the month the questionnaire was completed (N=6 cases).
- Response to ff10numinhh18older (Q13) were edited to be the same as ff10numinhh (Q12) if Q12 > 0 and Q13 = 0 (respondents likely misread Q13 as number of people age 18 or younger; N = 129 cases); Responses to Q12 were edited to be the same as Q13 if Q13 > Q12 (N = 22); Responses to both variables were edited to be -9 Missing if both Q12 and Q13 were missing (N = 16 cases).
- Responses to ff10symplvl (Q18) were edited to "5 Does not apply" if ff10symptoms (Q15) was 2 (No) and Q18 was missing (N = 71 cases); Responses to Q15 were edited to 1 (Yes) if Q18 was "1 Mild" to "4 Very severe" (N = 4 cases)
- Responses to ff10befhlpdays (Q59) were edited to 7 if Q59 > 7 (N = 1 case); Responses to ff10befhlphrs (Q60) and ff10durhlphrs (Q63) were edited to 24 if Q60 / Q63 > 24 (N = 5 cases for Q60; N = 4 cases for Q63).
- The COVID-19 FF questionnaire had a label error for item Q8 in the second category "1st – 8th grade." We therefore collapsed categories 1st -8th and 9th -12th (no diploma) in creating ff10educ. For those with missing values in Q8, education from the Round 9 OP file was used to fill in the missing information if ff10drespflag=1 (Likely same person). (N=16 cases)
- We flagged cases that were likely filled out by the spouse of the FF or by another relative of the FF in the variable ff10drespflag. To make this determination, we identified differences between information provided in the COVID-19 FF questionnaire and in the Round 9 OP file for age (>2 years different), gender and relationship. If two of the three indicators were different, we coded respondents as either "2 Likely spouse of FF completed" or "3 Likely other family member of FF completed" (depending on relationship). When only one or two indicators were available, we used one different indicator as the threshold. (N=53 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 each file before the 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	If Q1_MM missing or	1 Response to Q1

R10 D COVID-19 SP PROXY INTERVIEW MONTH Q1_MM SOURCE	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.	2 Month receipted
ff10drespflag R10 D COVID-19 FF RESPONDENT FLAG	Based on differences between (see *Data Editing*): • Age (Q4, OP file op9age+1) • Gender (Q3, OP file op9dgender) • Relationship (Q2, OP file op9relatnshp)	1 Likely same person questionnaire mailed to 2 Likely spouse of family or friend of SP (FF) completed 3 Likely other family members of FF completed
ff10dproxyofSP R10 D COVID-19 FF PROXY RESPONDENT TO R10 NHATS SP INTERVIEW	Based on receipt system	1 Yes 2 No
ff10drelashp4wts R10 D COVID-19 FF RELATIONSHIP TO SP FOR PRELIMINARY WTS	Based on OP file op9relatnshp and (if missing) relationship reported in COVID-19 SP or Proxy questionnaire; may be used to assign preliminary weighting adjustment (see *Non-response Weights* and Table 4)	1 Spouse/partner 2 Children 3 Others and missing
ff10drecdmonth R10 D COVID-19 FF MONTH QUESTIONNAIRE RECEIPTED	Based on receipt system	7 July 8 August 9 September 10 October 11 November 12 December
ff10dintmosrc R10 D COVID-19 FF INTERVIEW MONTH Q1_MM SOURCE	If Q1_MM missing or Q1 is later than questionnaire receipt date then ff10dintmosrc=2 (Constructed based on date questionnaire receipted – 10 days)	1 Response to Q1 2 Time questionnaire receipted

	Else ff10dintmosrc =1	
ff10drelatnsrc R10 D COVID-19 FF RELATIONSHIP TO SP Q2 SOURCE	If Q2 missing and ff10drespflag=1 then ff10drelatnsrc=2 Else ff10drelatnsrc=1	1 Response to Q2 2 Round 9 OP file
ff10dgndersrc R10 D COVID-19 FF GENDER Q3 SOURCE	If Q3 missing and ff10drespflag=1 then ff10dgndersrc=2 Else ff10dgndersrc=1	1 Response to Q3 2 Round 9 OP file
ff10dbthmosrc R10 D COVID-19 FF BIRTH MONTH Q4_MM SOURCE	If Q4_MM missing and ff10drespflag=1 then ff10dbthmosrc=2 Else ff10dbthmosrc=1	1 Response to Q4_MM 2 Round 9 OP file
ff10dbthyrsrc R10 D COVID-19 FF BIRTH YEAR Q4_YYYY SOURCE	If Q4_YYYY missing and ff10drespflag=1 then ff10dbthyrsrc=2 Else ff10dbthyrsrc=1	1 Response to Q4_YYYY 2 Round 9 OP file
ff10dage R10 D COVID-19 FF AGE	Age constructed based on Q4_MM and Q4_YYYY; If missing, ff10dage=Round 9 OP file op9age+1	-9 Missing 18-100
ff10dagesrc R10 D COVID-19 FF AGE SOURCE	If age constructed based on Q4_MM and Q4_YYYY missing and ff10drespflag=1 then ff10dagesrc=2 Else ff10dagesrc=1	1 Response to Q4 2 Round 9 OP file
ff10deducsrc R10 D COVID-19 FF HIGHEST DEGREE OR GRADE Q8 SOURCE	If Q8 missing and ff10drespflag=1 then ff10deducsrc=2 Else ff10deducsrc=1	1 Response to Q8 2 Round 9 OP file
ff10dmartlsrc R10 D COVID-19 FF MARITAL STATUS Q9 SOURCE	If Q9 missing and ff10drespflag=1 then ff10dmartlsrc=2 Else ff10dmartlsrc=1	1 Response to Q9 2 Round 9 OP file