

NATIONAL HEALTH AND AGING TRENDS STUDY (NHATS) USER GUIDE

ROUNDS 1, 2 & 3

FINAL RELEASE

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PREFACE

The NHATS User Guide is designed to provide analysts with documentation about concepts, measures, and characteristics relevant to data analysis. The user guide provides comprehensive descriptions of the NHATS conceptual framework, content of the data collection instruments, data file structure, created measures (including their origin), and selected special topics (e.g., imputation, weighting).

This document reflects scientific contributions of the NHATS leadership team—Judith D. Kasper, Vicki A. Freedman, Graham Kalton, Emily Agree, Brad Edwards, Vincent Mor, Brenda Spillman, Robert Wallace and Douglas Wolf—who conceptualized and guided the study’s design. Others who made contributions in key areas are: Susan Allen to the formulation of items on unmet need; Jack M. Guralnik, Christopher L. Seplaki, and Carlos Weiss to the data collection instruments for the physical performance activities; Jack M. Guralnik to the interviewer training protocol for administering the physical performance activities; Robert Moffitt to the data collection instruments and strategy for the Labor Force and Income and Asset Sections; Liliana E. Pezzin to the development of the approach to the person roster; Brenda L. Plassman to the formulation of the cognitive assessment measures for both participants and proxies; Jennifer Wolff and Cynthia Boyd to the Medical Care Section items on involvement of others in doctor visits. Data collection procedures, interviewer training, and fieldwork oversight were provided by Laura Branden, Tamara Bruce, Tammy Cook, and Susan Genoversa at Westat. Ray Saunders, Rick Dulaney, Naoko Okuma and Hong-ji Liu at Westat, and Marlene Niefeld and Maureen Skehan at Johns Hopkins University, played critical roles in database design, production and dissemination.

We are also grateful for the guidance of the NHATS Scientific Advisory Panel and the contributions of John Haaga, NHATS Project Scientist, and Georgeanne Patmios, NHATS Program Officer, of the National Institute on Aging.

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I. Overview of NHATS Content

I.A. Basic Facts

The National Health and Aging Trends Study (NHATS) is a unique national resource for the scientific study of functioning in later life. NHATS is intended to foster research that will guide efforts to reduce disability, maximize health and independent functioning, and enhance quality of life at older ages. As the population ages, NHATS will provide the basis for understanding trends and dynamics in late-life functioning, how these differ for various population subgroups, and the economic and social consequences of aging and disability for individuals, families, and society.

To achieve these aims, NHATS is gathering information in person from a nationally representative sample of Medicare beneficiaries ages 65 and older. Study participants were first interviewed in 2011 and annual re-interviews are carried out to document change over time. A Last Month of Life interview captures end-of-life details for decedents. The NHATS sample design, which is drawn from the Medicare enrollment file, oversamples persons at older ages and Black individuals. Replenishment of the sample to maintain its ability to represent the older Medicare population is planned for a future round.

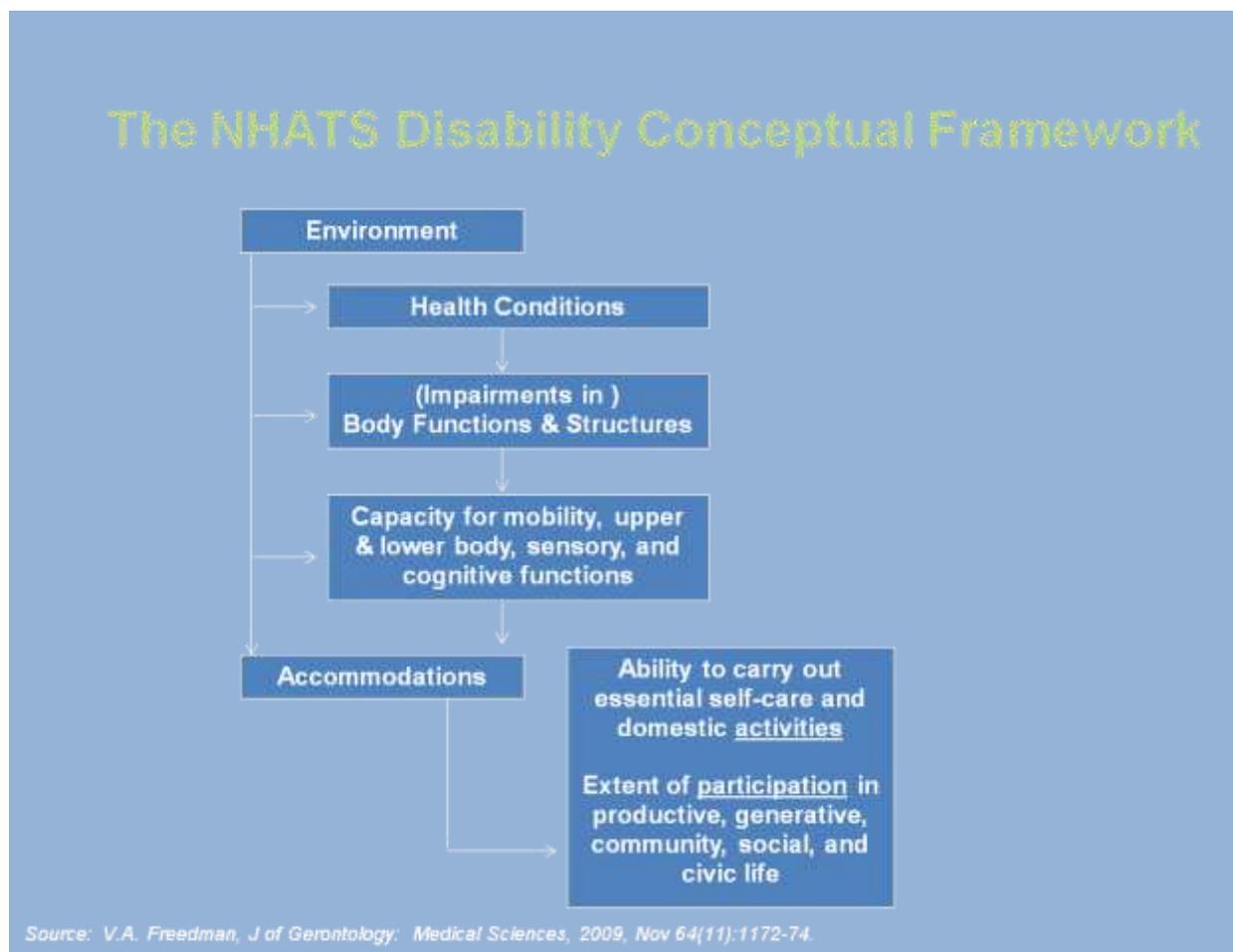
Detailed information is collected on participants' physical and cognitive capacity, how activities of daily life are carried out, the social, physical, and technological environment, and participation in valued activities. A series of activities performed by respondents provide complimentary measures of physical and cognitive capacity. In addition, information on living arrangements, economic status and well-being, and aspects of early life is collected. For those who die between rounds, a Last Month of Life interview collects details on place and quality of end-of-life care and daily activities since the prior interview.

NHATS is being supported by the National Institute on Aging under a cooperative agreement with the Johns Hopkins University Bloomberg School of Public Health (U01AG032947), with data collection by Westat. NHATS' design and content were developed by a multidisciplinary team of researchers from the fields of demography, geriatric medicine, epidemiology, health services research, economics, and gerontology.

I.B. NHATS Conceptual Framework & Content At-A-Glance

Development of disability-related content for NHATS was guided by a conceptual framework that blends the language of the World Health Organization's International Classification of Functioning with the Nagi model of disablement (see Figure 1 below and Freedman 2009 for details).

Figure 1. The NHATS Disability Conceptual Framework

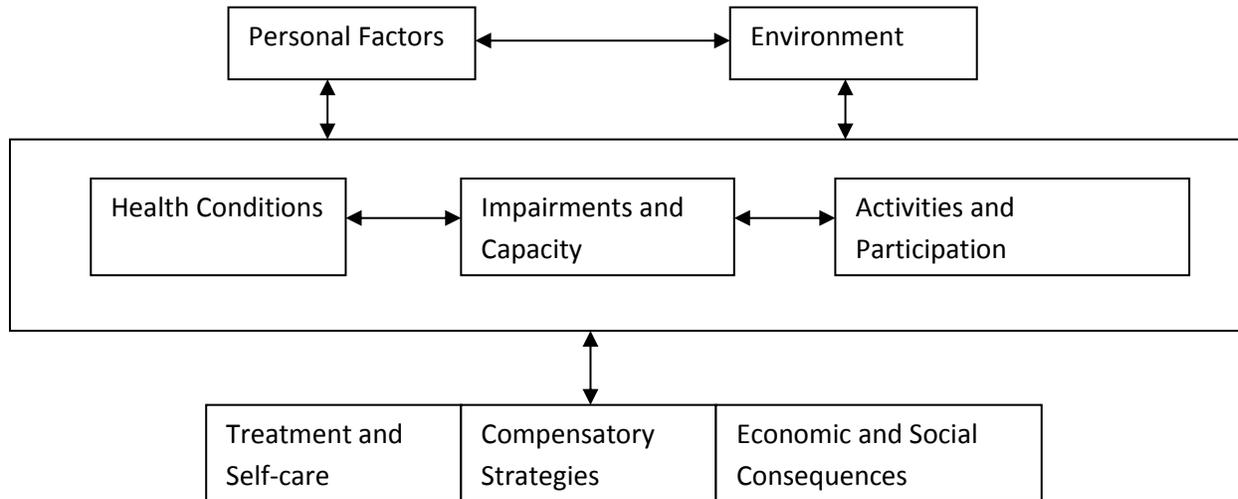


Over a two-year period, the NHATS team reengineered self-reported measures of physical capacity and activity limitations and developed new items to measure participation and restrictions in valued activities. The process involved obtaining input from the scientific community and several rounds of cognitive testing, followed by instrument refinement. A final step involved a validation study, which established the reliability and validity of the core activity and participation measures (Freedman et al. 2011) and measures of accommodations (Freedman et al. 2013).

The final NHATS disability protocol supports study of more traditional measures of functioning (activities of daily living, instrumental activities of daily living, functional limitations) while expanding their scope—in particular recognizing the role of accommodations (or compensatory strategies such as adopting devices, changing one’s environment, changing one’s behavior, or getting help or services), broadening measures of physical capacity, and introducing new measures of late-life participation restrictions. NHATS also collects performance-based measures of physical and cognitive capacity to complement the self-reported measures.

NHATS embedded the disability concepts in Figure 1 into a broader conceptual framework that encompassed precursors and consequences of disability for individuals, their families, and society. The key concept areas in Figure 2 form the basis for measurement areas in NHATS.

Figure 2. Key Concept Areas in NHATS



The following table provides an overview of content in each section of NHATS and how each section links to the concept areas in Figure 2. All sections, except for the Facility Questionnaire (FQ) and Interviewer Remarks (IR), are administered to the sample person (SP) or a designated proxy for the SP. These sections are referred to collectively as the SP interview in the remainder of this guide.

NHATS CONTENT AT-A-GLANCE

Section Name (Abbreviation)	Round 1	Rounds 2&3	Last Month of Life	Concept Area	Brief Description of Contents
Interview Setup (IS)	√	√	√	Personal Factors	Self or proxy respondent; reason for proxy; SP age and gender
Residence (RE)	√	√	√ brief	Environment	Physical structure of residence; address where SP lives
Place of Death (PD)	--	--	√	Environment; Capacity	Where the SP died, whether the SP was awake and able to communicate during the last month of life, and whether the SP was able to get out of bed in the last month.
Quality of Care in the Last Month (LM)	--	--	√	Treatment	Quality of end of life care
Health Conditions (HC)	√	√	--	Health Conditions; Treatment and Self-Care	Self-rated health; self-reported diseases & chronic conditions; hospital stays and surgeries; falls; depression; anxiety; sleep quality
Housing Type (HT)	√	√ if moved	--	Environment	Length of residence at place SP lives; description of type of place SP lives (including questions that trigger need for FQ administration); is place part of retirement community
Service Environment (SE)	√	√	--	Environment	Asked only of persons living in residential care (excluding nursing homes): services available at place; services used by SP; does SP pay extra for services used
Household Members (HH)	√	√	--	Personal Factors	Marital status; years together/when marriage ended; spouse/partner: gender, age, education, whether needs help with personal care, where lives if not in household; other household members: relationship to SP, gender, age
Children & Siblings (CS)	√	√ brief	--	Personal Factors	Children not in household: relationship to SP, age, city/state where live; All children: education, marital status, how many children & how many under age 18; SP any living sisters or brothers
Social Network (SN)	√	√	--	Environment; Personal Factors	Up to 5 people SP talks with about important things: relationship to SP, gender, age, city/state where live
Home Environment (HO)	√	√	--	Environment; Compensatory Strategies	<i>Entrance:</i> stairs, (if multi-unit shared),ramp; <i>Features:</i> elevator, stair lift, shared spaces for meals/socializing, number of floors, bedroom/kitchen/bath on same floor; <i>Inside private space:</i> private bathroom with shower/tub, bathtub/stall/grab bars; shower seat; raised toilet/grab bars, medical emergency system, private kitchen space, microwave
Environmental Modifications (EM)	√	√	--	Environment; Compensatory Strategies	For modifications in HO: there when moved in or added, any added in last year, pay any of the cost of adding; pay anything for other devices that help with daily activities in last year; how much paid altogether in last year
Community (CM)	√	√	--	Environment	Agreement with statements about community: know each other, willing to help, trust
Technological Environment (TE)	√	√	--	Environment; Compensatory Strategies	<i>Technology:</i> cell phone, other phone, working computer; <i>Use computer:</i> in home, other places; Sent messages by

					email/texting; <i>Gone on internet/online</i> : grocery shopping, bills/banking, order/refill meds, contact medical providers, handle Medicare/insurance
Mobility Devices (MD)	√	√	√	Compensatory Strategies	Used: cane, walker, wheelchair (is it where SP lives), scooter (is it where SP lives)
Sensory and Physical Impairments & Symptoms (SS)	√	√	--	Impairments & Capacity	Hearing; vision; chewing & swallowing; speaking & being understood; pain: limits activities, frequency of meds, location; breathing problems (limits activities); strength or movement shoulders, arms, hands, feet (limits activities); strength or movement hips, legs, knees, feet (limits activities); low energy/easily exhausted (limits activities); balance/coordination (limits activities)
Physical Capacity (PC)	√	√	--	Capacity	Able to: walk 6 blocks/walk 3 blocks, climb 20 stairs/climb 10 stairs, lift and carry 20 lbs/10 lbs, kneel down/bend over, heavy object overhead/reach overhead, open sealed jar/grasp small objects
Cognitive Assessments: Proxy (CP)	√	√	√ brief	Capacity	Overall memory rating; 8 items on changes in thinking/memory; behavior: getting lost, wanders off, able to leave alone, sees/hears things
Cognitive Assessments: Self (CG)	√	√	--	Capacity	Self-rated memory (current, interferes activities, one year ago); date (mo/day/year) and day of week; 10 word immediate recall; clock-drawing test; naming President and Vice President; 10 word delayed recall
Stroop Assessment (STROOP)	--	√ R2	--	Capacity	Computerized Stroop test providing executive function assessment
Mobility (MO)	√	√	√ brief	Activities: Self-care & Domestic	<i>Going outside home/building</i> : frequency, frequency of mobility device use, help and who helps, frequency done by self, difficulty by self, unmet need for help; If multiunit: Frequency of leaving private space to go other areas in building; frequency leaving room where SP sleeps; <i>Getting around inside home/building</i> : frequency, frequency of mobility device use, frequency hold onto walls/furniture, help and who helps, frequency done by self, difficulty by self, frequency compared to a year ago, unmet need for help; <i>Getting out of bed</i> : frequency use cane/walker, help and who helps, frequency done by self; difficulty by self, unmet need for help
Duration of Mobility Accommodations (DM)	√	√	√	Activities: Self-care & Domestic	Duration of mobility help (getting outside, getting around inside, getting out of bed) and mobility device use (cane, walker, wheelchair, scooter).
Driving & Transportation (DT)	√	√	--	Activities: Self-care & Domestic; Participation	<i>Drive yourself</i> : frequency, date or age drove last, driving situations people avoid (night, alone, busy roads, bad weather); <i>How else get places</i> : walk, ride (who gives SP ride), van/shuttle service, public transportation, taxi, other

<p>Household Activities (HA)</p>	<p>√</p>	<p>√</p>	<p>--</p>	<p>Activities: Self-care & Domestic</p>	<p><i>How did laundry</i> (always by self, always with someone, someone else always did, it varied, not done): where done, who did with or for, reason someone else did with or for (health/functioning or other), difficulty by self, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>How did shopping for groceries or personal items</i> (always by self, always with someone, someone else always did, it varied, not done): pay by check/cash/debit card/credit card, who did with or for, reason someone else did with or for (health/functioning or other), difficulty by self, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>How hot meals made</i> (always by self, always with someone, someone else always did, it varied, not done): frequency restaurant meals/ eat-in/take out (not meals on wheels), who did with or for, reason someone else did with or for (health/functioning or other), difficulty by self, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>How handle bills and banking</i> (always by self, always with someone, someone else always did, it varied, not done): who did with or for, reason someone else did with or for (health/functioning or other), difficulty by self, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>Handled less common money matters</i> (opening/closing accounts, loans): did any of these; help and who helps</p>
<p>Self-Care Activities (SC)</p>	<p>√</p>	<p>√</p>	<p>√ brief</p>	<p>Activities: Self-care & Domestic</p>	<p><i>Eating</i>: frequency use adapted utensils, help and who helps, frequency by self, difficulty by self with adapted utensils if used, unmet need (due to no help/difficulty); <i>Getting cleaned up</i>: usually bath/shower/other, which most often, frequency use grab bars, frequency use shower or tub seat, help and who helps, frequency by self, difficulty by self with grab bars/shower or tub seat if used, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>Using the toilet</i>: use a portable commode/disposable pads or undergarments/grab bars around toilet/raised toilet or seat, help and who helps, frequency by self, difficulty by self with grab bars/raised toilet or seat if used, unmet need (due to no help/difficulty); <i>Getting dressed</i>: use a button hook/reacher or grabber/special clothes, help and who helps, frequency by self, difficulty by self with special items if used,; frequency compared to a year ago, unmet need (due to no</p>

					help/difficulty)
Duration of Self-Care Accommodations (DS)	√	√	√	Activities: Self-care & Domestic	Duration of self-care help (eating, getting cleaned up, using the toilet, or getting dressed)
Medical Care Activities (MC)	√	√	--	Activities: Self-care & Domestic	Take medications prescribed by a doctor; <i>How keep track of medications:</i> (always by self, always with someone, someone else always did, it varied, not done): where get medicines, how get medicines (SP picks up, other picks up, delivery), frequency use reminders, help and who helps, reason someone else did with or for (health/functioning or other), difficulty by self, frequency compared to a year ago, unmet need (due to no help/difficulty); <i>How handle medical care:</i> regular doctor, seen in last year, how get to doctor, who takes SP, anyone sit in with SP and doctor during visits, who sits in (most often), does person who sits in help, remind, ask, help understand; Handling medical bills and insurance: changes plans in last year, help and who helps
Participation in Activities (PA)	√	√	√ brief	Participation	Visit in person with friends/family not co-resident, health/functioning keep from doing, transportation keep from doing; how important to SP; Attend religious services, health/functioning keep from doing, transportation keep from doing; how important to SP; Participate in clubs, classes, or other organized activities, health/functioning keep from doing; transportation keep from doing, how important to SP; Go out for enjoyment, health/functioning keep from doing, transportation keep from doing; how important to SP; Work for pay or in a business SP owns, health/functioning keep from doing; Do volunteer work, health/functioning keep from doing; Provide care/look after an adult or child who cannot care for themselves, who was that; Go walking for exercise; Do vigorous activities What is favorite activity, health/functioning keep from doing
Smoking (SD)	√	√ brief	--	Personal Factors	Ever smoked, smokes now, cigarettes per day, age when first smoked regularly, age when last smoked regularly
Physical Performance Assessment Eligibility Questions (PE)	√	√	--	Capacity	Grip strength: exclude if surgery/serious injury or flare-up of pain in both hands, exclude if surgery/serious injury or flare-up of pain in arm/shoulder on both sides, test on dominant hand if not excluded, test on other hand if dominant hand excluded; Chair Stands: exclude if surgery or serious injury on both hips, exclude if SP who always uses mobility device to get out of bed or always has help to get out of bed says not able to get up out of chair by him/herself and without mobility

					devices (if used); Balance Stands: exclude if SP who always uses mobility device to get out of bed or always has help to get out of bed says cannot stand without holding onto anyone or anything; Walking: exclude if SP uses wheelchair or scooter every time to get around home or building, exclude if SP says cannot walk a short distance in room by him/herself
Performance Activities Booklet	√	√	--	Capacity	Balance Stands; Walking Course; Chair Stands; Grip Strength; Waist Circumference; Peak Air Flow
Height & Weight (HW)	√	√ brief	--	Personal factors	Current weight; weight at age 50; lost 10 pounds in last year; trying to lose weight; height, height at age 50
Early Life (EL)	√	√ brief	--	Personal factors	Born in US; State or country of birth; year or age came to US to live; health as a child; how well off financially when growing up; live with both parents to age 15; where lived at age 15; education; mother still living; father still living
Race, Ethnicity & Language (RL)	√	--	--	Personal factors	Race; primary race if more than one; Hispanic ethnicity; (interview in Spanish); speak language other than English; how well understand English when spoken to; how well speak English
Veteran's Status (VA)	√	--	--	Personal factors	Served on active duty, period of service, active member of National Guard/military reserve
Well-Being (WB)	√	√	--	Economic and Social Consequences	Frequency of feelings in last month: cheerful, bored, full of life, upset; Agreement with statements about life: meaning and purpose, confident, gave up trying to improve life, like living situation; Age SP feels; Agreement with statements: other people determine activities, I do what I want, I adjust to change
Insurance Plans (IP)	√	√	--	Personal factors; Economic and Social Consequences	Prescription drug coverage; Medicare supplemental; Medicaid; TRICARE; long-term care insurance: services covered, premiums, how long had policy
Labor Force Participation (LF)	√	√	--	Personal factors; Economic and Social Consequences	Status (working, unemployed, not in labor force); if working: hours per week, hours last week, payment schedule, amount of last paycheck, amount earned last month; occupation most of life; is work now different; does spouse work; spouse pay last month
Home Ownership (HP)	√	√	--	Personal factors; Economic and Social Consequences	Own or rent; mortgage: paid off, payment amounts, time left, amount owed; present value of home; rent amount; is home public or low income housing
Income & Assets (IA)	√	√ brief R3	--	Personal factors; Economic and Social Consequences	Sources of income: Social Security, SSI, Veteran's Administration, pension, other retirement plans, mutual funds/stocks, bonds, checking account, savings/money market, CD, business/farm/real estate;

					Payment amounts in last month: Social Security, SSI, VA, pension; Other retirement plans: worth, amount withdrawn last month, amount withdrawn last calendar year; Mutual funds/stocks/bonds: worth; Checking/savings-money market/CD: worth; interest/dividend income in last calendar year from all mutual funds/stocks/bonds/bank accounts/CD ; Business/farm/real estate: worth if sold today, income in last calendar year; Total income last calendar year from all sources
Car Ownership (CO)	√	--	--	Personal factors; Economic and Social Consequences	Own cars/trucks/vans; how many; worth if sold today
Economic Well-Being (EW)	√	√	--	Personal factors; Economic and Social Consequences	Credit card: usually pay off monthly, current balance, amount owed for medical care, paying medical bills over time and amount; Financial transfers: SP receives from children/relatives, who, amount last year; SP gives to children/relatives, who, amount last year ; SP receives food stamps, other food assistance such as meals on wheels, energy assistance, food insecurity, problems paying rent/utility bills/medical or drug bills
Helpers (HL)	√	√	--	Compensatory Strategies	For each helper (other than staff at residential care): schedule, days per week or month, hours per day, whether paid to help, sources of payment, amount paid by SP/family
Modules	√	√	--	Varies	Round 1: NLTCS screening questions (LS) Round 2: ACS Disability Questions (AD); Engagement in health care (EH); End of life planning (EP) Round 3: Pain (PN); Personality Traits (PT); Sleep (SL)
Facility Questionnaire (FQ)	√	√	--	Environment; Compensatory Strategies	All residential care places where SPs reside (including nursing homes): name and address, type of place, type of unit where SP lives, services available to persons at SP's level of care; sources of payment for SP, amount paid in last month by source; total monthly payment, primary payer
Interviewer Remarks (IR)	√	√	--	Home Environment; Interview environment	Where interview occurred if not at SP's home; Observed condition of home: flaking paint, pests, broken furniture, flooring, tripping hazards, clutter in home; Observed condition of environment around home: litter, graffiti, vacant houses, foreclosure signs; Observed condition of home exterior: windows, foundation, outside of home, roof, walking surfaces. Rounds 2 and forward added continuous sidewalks; Interviewer remarks on # of sessions to complete; SP understanding; help with interview; FQ in person or by phone.

I.C. Data Collected by Residential Status and Round

In Round 1, for purposes of data collection, distinctions are made among persons living in: residential care settings that are nursing homes, residential care settings other than nursing homes, and all other community settings.

The table below summarizes how residential status was identified in Round 1 for purposes of data collection. See detailed descriptions of the Housing Type (HT) and Facility Questionnaire (FQ) in the Content Documentation for additional information.

Identification of residential status in Round 1	Community	Residential Care not Nursing Home	Nursing Home
How residential status was determined for data collection:			
HT section of SP Interview ¹	X	X	---
FQ Interview ²	---	X	X
<p>¹The status of “residential care not nursing home” was assigned and an FQ interview was attempted if: a respondent who lived in a multi-unit building (or “other” structure) or in a retirement community said the place he/she lives has different units/areas SP can move to if care is needed, offers help with medications or bathing/dressing, or offers meals for residents (these 3 questions are in HT section); or a respondent lived in a free standing or attached home and described the type of place he/she lives as either a “group home/board and care/supervised housing” or as “assisted living facility or continuing care retirement community.”</p> <p>²The status of “residential care not nursing home” or “nursing home” was assigned in the FQ. In Round 1 an SP interview was administered when the FQ interview (based on items FQ6, FQ10, and FQ11) indicated that the facility type was not a nursing home.</p>			

In Round 1, persons in all settings except nursing homes were eligible for the In-Person Sample Person (SP) Interview (including the Performance Activities Booklet). The Facility Questionnaire (FQ) was administered to a staff person whenever a sample person was determined to live in a residential care setting—both nursing homes and residential care settings other than nursing homes.

All persons who were administered the In-Person Sample Person Interview in Round 1 are eligible for the SP interview in subsequent rounds. In Round 3, there were 23 SPs with a Round 1 and Round 3 interview, but no Round 2 interview. For 8 of these, the Round 3 interview was a Last Month of Life Interview because the SP died prior to Round 3. These cases can be identified by Tracker File variables (r1status = 60 or 63 and r2status=64 and r3status = 60 or 63; r1status = 60 or 63 and r2status=64 and r3status = 62).

Respondents who lived in a nursing home in Round 1 or who lived in residential care other than a nursing home and did not complete a Round 1 SP interview were not eligible for an SP interview in later rounds. An FQ interview is conducted at each round for persons still living and determined to be in residential care settings (nursing home or other residential care).

For sample persons who die between rounds, a Last Month of Life (LML) Interview is conducted with a proxy respondent, usually a family member. The LML interview is a subset of the SP interview and includes one question to identify type of residence (residential care vs. community) prior to death. LML interviews are conducted for all Round 1 participants including those who lived in a nursing home or residential care settings and completed only an FQ interview in Round 1. These cases, with no Round 1 SP interview and an LML in a later round, can be identified by Tracker File variables (r1status = 61 and r#status = 62; r1status = 64 and r#status = 62). For Round 1 nursing homes residents (r1status = 61) there were 120 LML interviews in Round 2 and 96 in Round 3. For Round 1 residential care not nursing home with FQ only (r1status = 64), there were 27 LML interviews in Round 2 and 23 in Round 3.

Data Collection by Round	Residential Care Status		
	Community	Residential Care not Nursing Home	Nursing Home
Round 1			
SP Interview	√	√	--
FQ Interview	--	√	√
Round 2 and subsequent rounds			
SP Interview	√	√ ¹	√ ¹
FQ Interview (if residential care) ²	--	√	√
Decedents			
LML Interview with proxy	√	√	√
<p>¹SPs who completed an SP interview in Round 1. Round 1 nursing home residents or persons in residential care who did not complete an SP interview in Round 1 were not eligible for an SP interview in later rounds.</p> <p>² An FQ was administered if the SP was in residential care, including a nursing home. As in Round 1, items in the HT section of the SP interview triggered an FQ.</p>			

II. Content Documentation

Introduction

This section describes the content of the data collection instruments for the National Health and Aging Trends Study (NHATS). Like the content summary table in *Section I.B.*, it is organized in the order sections are administered in the NHATS interview. A description of items in each section is provided, with relevant information about administration and, where applicable, information on sources for items and references.

Who does the NHATS sample represent?

The sample represents Medicare beneficiaries ages 65 and older living in the contiguous United States. 96% of all persons living in the United States that are in this age group are Medicare beneficiaries.¹

How were NHATS participants sampled?

Round 1 of NHATS used a stratified three-stage sample design: 1) selection of 95 primary sampling units (PSUs), which are individual counties or groups of counties, 2) selection of 655 secondary sampling units (SSUs), which are ZIP codes or ZIP code fragments within sampled PSUs, and 3) selection of beneficiaries within sampled SSUs who were age 65 and older as of September 30, 2010, with oversamples by age and for Black non-Hispanic persons. The probabilities of selection at each of the three stages were designed to yield equal probability samples and targeted sample sizes by age group and race/ethnicity. 12,411 cases were released to the field in all. For more details on NHATS Round 1 sample design and selection see Montaquila, Freedman, Edwards, and Kasper (2012).

What is the response rate?

Round 1: Of the 12,411 individuals selected for NHATS, 774 were deceased prior to fieldwork or living outside the target PSUs (ineligible), 3,392 were non-respondents, and 8,245 were respondents. The Round 1 unweighted response rate is 70.9% ($8,245/(8,245+3,392)$) and the weighted response rate is 71.3%.

Round 2: The Round 2 unweighted response rate conditional on R1 response is 86.1% and the weighted response rate is 85.3%. These response rates combine those for the Last Month of Life interview with a proxy respondent for deceased sample persons (94.4% unweighted; 94.6% weighted) and those for all living sample persons (85.6% unweighted; 84.9% weighted).

Round 3: The Round 3 unweighted response rate conditional on R2 response is 88.3% and the weighted response rate is 87.4%. These response rates combine those for the Last Month

¹ According to the 2010 US Census, there are 40.3 million individuals ages 65 and older living in the United States (Howden and Meyer, 2010). CMS estimates Medicare enrollment for its aged beneficiaries to be 38.8 million (excluding Puerto Rico and the Virgin Islands, but including if state is unknown <https://www.cms.gov/MedicareEnRpts/Downloads/10Aged.pdf>).

of Life interview with a proxy respondent for deceased sample persons (94.1% unweighted; 93.8% weighted) and those for all living sample persons (87.8% unweighted; 87.0% weighted).

Who are NHATS respondents?

Most sample persons respond to the SP interview for themselves. Proxy respondents are used in instances where the sample person cannot respond and information is collected on the reasons a proxy is used (see IS section of the interview). When the sample person is living in a residential care setting, a staff person at the place serves as a respondent to the Facility Questionnaire (see FQ). When a sample person is deceased, the Last Month of Life portion of the SP interview is administered to a proxy, typically a family member.

What are the data collection instruments for NHATS?

The primary data collection instrument is the Sample Person (SP) Interview, which is administered in Round 1 to all sample persons living in the community and in residential care settings other than nursing homes. As part of the SP interview, the Performance Activities Booklet is used to record the results of the physical activities and the IR Section is used to record characteristics of the SP's environment. The Facility Questionnaire (FQ) is administered to a staff person when a sample person resides in a residential care setting, including a nursing home. When a sample person is deceased, the Last Month of Life portion of the SP interview is administered (see next section for detail).

What is the Last Month of Life Interview?

Beginning in Round 2, a Last Month of Life (LML) Interview was introduced. The LML is a portion of the SP interview and is conducted with a proxy respondent, usually a family member, to obtain information on the end of life experience for persons who died between rounds. For persons in residential care if a family member cannot be identified the LML is conducted with a facility staff member. The LML interview contains the following sections of the SP Interview: IS, RE, PD, LM, MD, CP, MO, DM, SC, DS, and PA. Routing through the interview is based on flags indicating the sample person was deceased (and whether the SP was not alert or not mobile in the last month).

In Rounds 2 and 3, for deceased persons who were not alert in the last month of life (based on response to PD6) these LML sections were not administered: CP, MO, DM, SC, DS, PA. For deceased persons who were not mobile in the last month of life (based on response to PD7) these LML sections were not administered: MD, CP, MO, DM.

How is residential care defined for purposes of data collection?

For data collection purposes in Round 1, NHATS distinguishes among residential care settings that are nursing homes, residential care places other than nursing homes, and all other community settings. In Round 1, nursing home residents were not administered an SP interview. Starting in Round 2, all persons who completed an SP interview in the prior round were administered an SP interview regardless of residential setting. Persons for whom only an FQ interview was obtained in Round 1 (all nursing home residents at Round 1 and some residential care residents) were administered an FQ interview only at subsequent rounds.

Residential care places other than nursing homes are identified in the SP interview and in the FQ interview. Questions in the Housing Type section (HT) of the SP interview identify residential care places in two ways: 1) if the SP lives in a multi-unit building (or "other"

structure) or a retirement community and indicates that the place he/she lives has areas you can move to if care is needed, offers help with medications or self-care, or offers meals or 2) if the SP lives in a freestanding or attached home and reports living in a “group home/board and care/supervised housing” or “assisted living facility or continuing care retirement community.” In the FQ interview a staff person also indicates whether the SP is in a residential care setting other than a nursing home (e.g. assisted living, board and care home, non-nursing home part of a CCRC). If the SP interview was conducted first, as happened most often, and SP’s residence was identified as a residential care place, interviewers would follow-up with a staff person to conduct the FQ. In some instances, no staff person could be identified (e.g. residence was senior housing with no onsite staff). If the FQ interview was conducted first, in some instances no SP interview was obtained.

In Round 1, if the interviewer learned that the SP was living in a nursing home—through a spouse or other relative at the address in the Medicare enrollment file or from a facility staff person if the address is a nursing home—and was told that the sample person was not expected to return home, the interviewer administered the FQ to a staff person at the nursing home. If the facility respondent confirmed that the SP was in a nursing home unit then the SP was considered a nursing home resident. If the sample person was expected to leave the nursing home, the interviewer either waited until the SP returned to the community or administered a proxy interview. In subsequent Rounds, SPs who entered a nursing home were interviewed.

Interview Setup (IS)

The Interview Setup provides an introduction to the study, obtains age and gender for the sample person, and identifies whether a proxy respondent is being used and why. When a proxy respondent is used information is collected on:

- reasons a proxy was used (dementia or cognitive impairment reported by proxy, sample person is too ill, speech or hearing impairment, language barrier, SP is temporarily unavailable, beginning in Round 2 sample person is deceased, or another reason);
- relationship of the proxy to the sample person; and,
- proxy familiarity with the sample person’s daily routine.

Residence (RE)

The Residence section collects information on the type of physical structure the sample person lives in—free-standing (detached) single house, single house attached to others, mobile home or trailer, multi-unit (2+) building, or other (specify). A flag indicating type of structure (fl1structure) is used in skip patterns for some other sections of the interview.

At baseline, physical structure is coded by the interviewer based on observation unless the interview is being conducted somewhere other than the sample person’s residence. In these cases, the sample person is asked to identify the physical structure of his/her residence. If the SP lives in a multi-unit building the interviewer also indicates if the building has only one or

more than one floor (fl1bldgfl; used in the Home Environment (HO) section). The sample person’s address is confirmed in this section as well.

Starting in Round 2, a question was added to determine whether the sample person had moved since the last round, and if so the month and year of move. A flag for New Residence was created and used to route persons through the interview so that questions about the new residence were asked (e.g. some questions in Home Environment, Housing Type, Environmental Modifications, and Residence; see *Appendix III. Flag Variable Specifications Rounds 2 & 3*). A small number of cases were routed through the instrument incorrectly (as if they had not moved); these cases are flagged as such with a derived variable (see *Appendix V. Derived Variable Specifications Rounds 2 & 3*).

Parts of the RE section are included in the Last Month of Life interview.

Other sections collecting information on place sample person lives

Housing Type (HT):	Length of residence and type of place
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person’s level of care; payment information in last month

Place of Death (PD)

This section, added in Round 2, is part of the Last Month of Life interview and obtains information on where the Sample Person died. Whether the SP was alert (awake and able to communicate) during the last month of life and whether the SP was mobile (able to get out of bed in the last month) also were obtained. Questions were modeled after instruments developed by Teno and colleagues (Teno, 2000).

Quality of Care in Last Month (LM)

This section, added in Round 2, is part of the Last Month of Life Interview. Questions were modeled after quality of end of life care instruments developed by Teno and colleagues (Teno, 2000). Items include whether the SP experienced pain, breathing troubles, and anxiety/sadness and whether there was help in dealing with these. The proxy respondent is asked about input into decisions about care/treatment and whether the SP’s personal care needs were met, and whether he/she was treated with respect and kept informed. Items are included on interaction with doctors and medical professionals, including attention to religious beliefs. An overall assessment of care quality in the last month is obtained.

Health Conditions (HC)

This section collects self-reported chronic conditions and diseases, selected health care utilization, information on falls, and measures of depression, anxiety, and sleep quality.

General Health Status and Conditions: General health status is asked first, followed by whether the person has ever been told by a doctor that he/she has any of several chronic conditions. Types of cancer, age at diagnosis if dementia/Alzheimer's disease is reported, and broken or fractured bones since age 50 are asked. An open-ended question asks whether there is another serious disease or illness the person has been told he/she has by a doctor.

Starting in Round 2, selected chronic conditions (heart disease, high blood pressure, arthritis, osteoporosis, diabetes, dementia/Alzheimer's disease) are not re-asked if these conditions were reported in a prior round. A value of 7 on these variables indicates the condition was reported in a prior round. For remaining conditions, respondents are asked whether a doctor has told them they had the condition since the last interview.

Hospital Stays and Surgeries: Overnight hospital stays within the last 12 months, the number of overnight hospital stays in the last 12 months, and whether the person ever had certain types of surgery (e.g., knee replacement, hip repair/replacement, cataract, back or spine, heart) are collected in Round 1. For surgeries, the timing—within the last 12 months and, if not, at what age this occurred—is ascertained. Starting in Round 2, questions focus on stays and surgeries since the last interview.

Falls: Falls are defined as “any fall, slip, or trip in which you lose your balance and land on the floor or ground or at a lower level.” This wording mirrors the definition used in the Women's Health and Aging Study (Guralnik et al. 1995). Information includes: falls within the last month and within the last year, number of falls in the last year, whether persons worried about falling down in the last month, and whether that worry limited activities.

Depression and Anxiety: NHATS uses the PHQ-2 and the GAD-2, which are brief screening instruments for depression and anxiety, respectively. The questions are: “Over the last month, how often have you: a) had little interest or pleasure in doing things; b) felt down, depressed, or hopeless; c) felt nervous, anxious, or on edge; d) been unable to stop or control worrying?” Response categories are: not at all, several days, more than half the days, nearly every day. Items “a” and “b” form the PHQ-2; items “c” and “d” form the GAD-2. Scores can be calculated for each measure separately, or for a combined measure, based on summing scores for the items (1 = not at all; 2= several days; 3=more than half the days; 4=nearly every day). The reference period of “one month” was used in NHATS to correspond to the reference period for measures of functioning (e.g. self-care, mobility); the usual reference period is 2 weeks. For sensitivity, specificity, and recommended cut-points for the PHQ-2, the GAD-2 and a 4-item combined measure, see Kroenke et al. (2003, 2007, 2009) and Lowe et al. (2009).

Sleep Quality: Three questions are included on sleep in the last month: how often it takes more than 30 minutes to fall asleep at night, how often person had trouble falling back asleep on nights he/she woke up, and how often he/she took medication to sleep. Response categories are: every night, most nights, some nights, rarely, never.

Housing Type (HT)

In Round 1, length of residence at current address is asked and all persons are asked whether their home is part of a retirement community or a senior housing community.

As described in *Section I. C. Data collected by residential status and round*, questions in this section also are used to determine whether the sample person lives in a residential care setting for data collection purposes in Round 1. The items used for this purpose are:

- For SPs in free standing or attached homes, identification of the place the person lives as “group home/board and care/or supervised housing” or “assisted living facility or continuing care retirement community”;
- For SPs in multi-unit buildings (or “other” structures) or retirement communities, a positive response to any of 3 nested trigger questions about the place—are there different areas you can move to if you need care; is help offered with medications or activities like bathing or dressing; are meals for residents offered.

Because the questions that trigger an FQ are nested (SPs move to the next question only if they say no to the prior one), they should not be used for analyses of services in residential care environments. Either the Service Environment (SE) (the person’s report of services available and used) and/or the Facility Questionnaire (FQ) (staff report of services offered at the sample person’s level of care) should be used for this purpose.

A question about what people in residential care settings call their private living space is also asked and the answer fills questions about the home environment later in the interview.

Starting in Round 2, this section is asked only of respondents who moved since the prior round. Length of residence for SPs who moved is captured in RE rather than HT (as in Round 1).

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person’s

	level of care; payment information in last month
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Service Environment (SE)

This section is administered only to persons in residential care. In Round 1 SE is asked only of those in settings other than nursing homes and in subsequent rounds it is asked of all persons in residential care (including nursing homes). The Service Environment questions are asked if questions in the HT section indicate the person is in residential care for data collection purposes. Otherwise this section is skipped.

The questions asked are: services available at the place person lives whether or not he/she uses these; services used in the last month; and, for services used, if there is an extra charge. The list of services covers meals; help with medications, bathing and dressing, laundry, housekeeping; transportation and socializing.

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Housing Type (HT):	Length of residence and type of place
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person's level of care; payment information in last month

Household (HH)

The Household section gathers information on the person's spouse/partner and those who live with the sample person.

Marital Status and History: In Round 1, marital status is asked and, if married or with a partner, years in relationship. For persons widowed or divorced, month and year that a spouse passed away or a marriage ended is obtained. Starting in Round 2, change in marital status since the prior interview is obtained.

Spouse/Partner Characteristics: Spouse/partner gender, date of birth, and education are obtained at Round 1 and for those newly married or with a new spouse/partner starting in Round 2. Spouse/partner's need for help with personal care is obtained for persons who are married/partnered. Whether the spouse/partner lives with the sample person is confirmed and, if the spouse/partner does not, the type of place the spouse/partner lives is asked.

Other Household Member Characteristics: At Round 1, relationship to the sample person, gender, and date of birth are obtained. Starting in Round 2, whether prior round household

members remain in the household is obtained; reason no longer in the household (separation/divorce, deceased, moved elsewhere, other) is asked for those no longer in the household. New household members are identified and relationship to the sample person, gender, and date of birth are obtained (with some exceptions based on relationship).

Other sections collecting information on family

Children and Siblings (CS):	For children who are not living in sample person’s household, relationship to sample person, gender, date of birth, and city and state of residence are asked. For all children, education, marital status, and information on their children are asked. Number of sample person’s living siblings is obtained.
Early Life (EL):	Questions on whether parents are living and age at death are asked.

Children and Siblings (CS)

At Round 1, for children who do not live with the sample person, relationship to the sample person, gender, date of birth, and city and state of residence are asked. For all children, this section obtains education, marital status, number of their children and number of their children under age 18. Starting in Round 2, children reported in the prior round are confirmed and if a child reported in the prior round is deceased, this information is recorded. New stepchildren may be added and education, marital status, number of their children and number of their children under age 18 are obtained.

The section also includes questions on the number of sample person’s living brothers and sisters.

Other sections collecting information on family

Household (HH):	Information about household members who are family includes: relationship to sample person, gender, and date of birth. Additional information is collected for a spouse/partner (education, need for help with personal care, type of residence if not in sample person’s household).
Early Life (EL):	Questions on whether parents are living and age at death are asked.

Social Network (SN)

Persons are asked to name up to 5 people that they “talk to about important things.” Important things may include good or bad things that happen, problems the person is having, or important concerns. Information for each social network member includes relationship to the sample person and gender. Age and location (city/state) are available for all social network members in Round 1 and can be determined for social network members who are children, spouses, or household members. The NHATS approach to social network is consistent with a traditional approach for egocentric social network data collection used in several surveys and is

directly comparable to The National Social Life Health & Aging Project Confidant Roster (<http://www.norc.uchicago.edu/nshap>; Cornwell et al. 2009).

Interviewers may select people already on the person roster from earlier in the interview or the prior round, or may add new persons to the roster. As a result social network members may be chosen in any order and the order in which social network members are listed should not be taken to indicate the order in which they were named by the respondent.

The social network questions are not asked of proxy respondents.

Home Environment (HO)

The Home Environment section collects information on three concepts: access to the home, building amenities, and features inside the person’s home or (residential care) private living space (Freedman et al. 2006).

Access to the Home: Questions ascertain the presence of stairs, common or shared entrances for multi-unit dwellings, and presence of a ramp at the entrance.

Building (multi-unit structure) Amenities: These include: an elevator, stair lift/glide, shared spaces for meals and socializing, bath amenities (a bathtub, shower stall, grab bar in the bathtub/shower, a bath/shower seat, raised toilet/seat, grab bars around toilet, medical emergency system), a private kitchen area, and working microwave. For persons in residential care, an additional question is asked about whether the person has a private bathroom with bath/shower. Starting in Round 2, some building amenity questions are asked only if the sample person has moved to a new residence since the prior round.

Features inside the Home (if not multi-unit structure): These include: number of floors, bedroom/kitchen/bath on same floor, elevator, stair lift/glide, bath amenities (a bathtub, shower stall, grab bar in the bathtub/shower, a bath/shower seat, raised toilet/seat, grab bars around toilet, medical emergency system), and working microwave.

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Housing Type (HT):	Length of residence and type of place
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person’s level of care; payment information in last month

Environmental Modifications (EM)

This section refers to features of the home that were identified in HO and asks for each whether it was present when the person moved in or whether it has been added since. If any features were added, the person is asked to identify those added in the last year. Overall costs for features added in the last year to the person or his/her family is asked. A separate question asks about overall costs in the last year for devices that help with daily activities: glasses, hearing aids, canes, walkers, wheelchairs, scooters, reaching devices, dressing devices, adapted eating utensils. Starting in Round 2, questions to determine whether items were in place or were added when the SP moved in are asked only if the sample person has moved to a new residence since the prior round.

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Housing Type (HT):	Length of residence and type of place
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person's level of care; payment information in last month

Community (CM)

Persons are asked whether they agree a lot, agree a little, or do not agree with three statements about their community: people know each other well, people are willing to help each other, and people in the community can be trusted. These measures were adapted for use in NHATS from Cagney et al. (2009) and Sampson et al. (1997) to accommodate multiple residential settings.

Technological Environment (TE)

Items focus on communication and information technology available to persons and their use of this type of technology. Questions on availability ask whether the person has a working: cell phone, other telephone, and computer. Questions on use ask about frequency of sending messages by email or texting and using a computer at locations outside the home (if no computer in the home). Persons also are asked about going on the Internet or online in the last month to: shop for groceries or personal items, pay bills or do banking, order or refill prescriptions, contact his/her medical providers, handle Medicare or other insurance matters, or get information about his/her health conditions.

Mobility Devices (MD)

The Mobility Device section asks about use of mobility-related assistive technology (cane, walker, wheelchair, scooter) in the last month. These items are used in the Mobility (MO) and Duration of Mobility Accommodations (DM) sections.

The MD section is included in the Last Month of Life interview. In Rounds 2 and 3, this section was not administered if the deceased person was not mobile in the last month of life (based on PD7).

Sensory and Physical Impairments and Symptoms (SS)

This section addresses vision, hearing, and limitations or impairments in several body systems. Also in this section are questions on symptoms of pain and fatigue. The reference period is the last month.

Vision and Hearing: Questions are on close and distant vision, hearing, and use of vision or hearing aids. In Rounds 2 and 3 the vision questions are not asked of persons reported to be blind in any prior round and the hearing questions are not asked of persons reported to be deaf in any prior round.

Chewing/Speaking: Persons are asked about problems with chewing or swallowing and problems in speaking or being understood when talking.

Symptoms of Pain and Fatigue: Persons are asked whether they are bothered by pain, activity limitations due to pain, frequency of medication for pain, and location of pain (back, hips, knees etc.). Persons are asked about having low energy or being easily exhausted and whether this limited their activities.

Physical Impairments and Severity: For a series of problems, respondents are first asked whether they experienced the problem in the last month and, if so, whether the problem limited their activities (adapted from Freedman et al. 2012). The following problems are asked about: breathing problems; limited strength or movement in shoulders, arms, hands; limited strength or movement in hips, legs, knees, or feet; balance/coordination.

Physical Capacity (PC)

Capacity measures represent the building blocks that underlie the ability to do more complex tasks like self-care or household activities. Capacity measures in NHATS include both self-report items, including traditional Nagi measures (1965), and performance-based measures (both physical and cognitive). For a more detailed discussion see Freedman 2009, and Freedman et al. 2011.

Items in this section ask about ability to do 12 activities in the last month. The items are paired as follows: walk 6 blocks (about ½ mile)/walk 3 blocks, walk up 20 stairs/walk up 10 stairs, lift and carry 20 pounds/lift and carry 10 pounds, kneel down without holding on to anyone or anything/bend over without holding on to anyone or anything, put a heavy object on a shelf overhead/reach up over head, open a sealed jar using hands only/grasp small objects. Persons who are able to do the first, and harder, activity in each pair, are not asked the second. Those who say “no” or “don’t know” to the first item, are asked the second.

Analyses from a Validation Study conducted prior to fielding Round 1 of NHATS showed that these items can be nested for purposes of administration and that a scale constructed from these items has good reliability and compares favorably with a scale using traditional Nagi items only (Freedman et al. 2011).

Cognition (Proxy) (CP)

Brief cognitive screening instruments are used in NHATS to provide measures of cognitive functioning (see CG section). When the interview is being administered to a Proxy Respondent the CP section is asked. In addition, an attempt is made to administer the cognitive functioning items to the sample person (see CG Section).

The CP section includes: (1) a rating of the person’s memory at the present time, (2) an 8-item screening instrument designed for administration to informants which differentiates between persons with and without possible dementia (the AD8), and (3) questions on behavior problems.

A single item on memory is included in the Last Month of Life interview (but not administered in Round 2 if the deceased person was not alert in the last month, based on PD6).

The AD8: The AD8 is an 8-item measure that was designed for administration to informants for purposes of identifying persons with possible dementia (Galvin et al. 2005, 2006). The items assess memory, temporal orientation, judgment, and function. The questions ask about “changes due to thinking and memory problems.” In clinical settings the instrument is typically administered to a family member and changes are in the context of “the last several years.” In NHATS this phrasing is used unless the proxy respondent is not a relative and has known the person for less than 1 year. Then the question is framed as “since you have known (sample person).” The AD8 is scored from 0-8 (1 = yes, a change; 0 = no, no change). For information on recommended cutpoints, sensitivity and specificity, and correlations with other dementia screening instruments, see Galvin et al. (2005, 2006).

For NHATS, an additional response (dementia/Alzheimer’s reported by proxy) was added to accommodate situations in which the proxy respondent indicates (in response to questions about “changes”) that there has been no change because the SP has dementia and, for example, does not remember the month or year. The NHATS recommendation is that these responses be scored as 1 for purposes of calculating the AD8 score. Starting in Round 2, the AD8 items were not asked if one or more AD8 items were coded dementia/Alzheimer’s disease

in a prior round. We recommend that these cases be scored an 8 for purposes of calculating the AD8 score.

Behavior Problems: The proxy respondent is asked to report problems observed in the last year: 1) did he/she ever get lost in a familiar environment, 2) did he/she ever wander off and not return by himself/herself, 3) was he/she able to be left alone for an hour or so, and, 4) did he/she hear or see things that were not really there. These questions were drawn from the Health and Retirement Survey (administered to persons 65 and older starting in 1998, Ofstedal et al. 2005).

Cognition (Sample Person) (CG)

The NHATS Cognition section is designed to provide information about several aspects of cognitive functioning including memory (self-rated, whether memory interferes with daily activities, and immediate and delayed 10 word recall), orientation (date, month, year, day of week; naming President and Vice President), and executive function (clock drawing test)..

When a proxy interview is being conducted the proxy respondent is asked whether some questions about memory could be asked of the sample person. If the proxy declines, a reason is obtained (e.g. sample person has dementia/Alzheimer’s disease, is unable to speak or hear). If the proxy agrees, the CG section is administered to the sample person.

This section also includes items where the interviewer can note if there are problems in administration: difficulty hearing words read or interruption during reading of the words; whether the respondent used aids for tasks even when asked not to.

Self-Rated Memory: Persons are asked to rate their memory currently, how often memory problems interfered with daily activities in the last month, and how their memory is currently compared to 1 year ago.

Orientation to date: Respondents are asked “without looking at a calendar or watch, please tell me today’s date.” In Round 1, NHATS records the month, day, year and day of the week and the interviewer notes if the sample person looked at a calendar, newspaper, watch, or other aid for the date. Probes to elicit any component that was not volunteered are allowed (e.g. persons who give the month, day and year but not the day of the week are asked—do you know what day it is today?). Starting in Round 2 day of the week is asked as a separate question rather than as a follow-up probe to the multi-part date item and interviewers note separately use of an aid for date (month, day, and year) and for day of the week.

Immediate and Delayed 10 Item Word Recall: A list of 10 nouns is read to respondents as they appear on the computer screen. The person is asked recall as many words as possible, in any order. The respondent is given up to 2 minutes. Sample persons are randomly assigned to one of three lists that are fielded in the Health and Retirement Study (Ofstedal et al. 2005). (List assignments in subsequent years will rotate so that persons receiving list 1 in Round 1 will receive list 2 in Round 2; those receiving list 2 will receive list 3; those receiving list 3 will receive list 1 and so on). The delayed word recall is administered after the President/Vice

President naming and the Clock Drawing Test. Respondents are asked what words they recall from the list read earlier.

Orientation based on naming President and Vice President: Respondents are asked the names of the President and Vice President. Probes to obtain both the first and last names are allowed.

Clock Drawing: The respondent is given a sheet of paper and an erasable pen. They are asked to draw a clock. The interviewer says, “Start by drawing a large circle. Put all of the numbers in the circle and set the hands to show 11:10 (10 past 11).” The respondent has 2 minutes to complete the activity. Interviewers may repeat the instructions as needed. See *Section III.K. Scoring Methodology for Clock Drawing Test* for details on the clock scoring methodology. PDFs of clock drawings are available (NHATS Round # SP Clock Drawings File.pdf).

Stroop Test: In Round 2, a computerized version of the Stroop test was included to evaluate the cognitive mechanism of inhibition, a component of executive function. It measures the reaction time of two trials, one easy, (reporting color of the symbol X), and one hard, reporting color of a word (e.g. blue, red, or green) printed in a color opposite of its meaning. The participant sat in front of the laptop screen and pressed colored buttons on a keypad to indicate the color being selected.

Mobility (MO)

The mobility (MO), self-care (SC), household activities (HA), and medical care activities (MC) sections include NHATS’ key measures of activity limitations (Freedman et al. 2011). For each activity, questions assess the extent to which the activity was done independently in the last month and the use of accommodations in the form of devices, environment, or assistance from others in the same time frame. A measure of difficulty when doing the activity independently (with devices and any modifications that have been put into place, if used) is also included. Questions about changes in the frequency of the activity and about adverse consequences related to unmet need (Allen & Mor 2007) also are asked in the MO section.

A subset of MO section questions is included in the Last Month of Life interview. In Rounds 2 and 3, the MO Section was not administered to deceased persons who were not alert in the last month (based on PD6) or to persons who were not mobile in the last month (based on PD7).

The MO section obtains measures in the last month of: going outside one’s home, getting around inside one’s home, and getting out of bed. It also provides a measure of life space constriction (how often SP has left the room where they sleep, left their private living space to go into the building, and left their home/building in the last month). Questions for each mobility activity are summarized in the table below:

Summary table of Mobility section questions by activity

Questions	Going Outside	Getting around inside	Getting out of bed
Frequency of doing activity	X	X	X*
Frequency of using mobility devices to do activity	X**	X**	X**
Who helps ¹	X	X	X
Frequency by self (without help)	X	X	X
How difficult by self (using mobility devices)	X**	X**	X**
Compared to a year ago does more or less often	X	X	-
Consequence because too difficult by him/herself or because no one there to help SP ²	X	X	X

*Persons who never leave their home or apartment are asked about leaving the room where they sleep.

**Devices reported in MD section.

¹ Individuals who are named as helpers are flagged and routed to the Helper Section (HL).

² Individuals who report difficulty or getting help or not doing the activity are asked about consequences.

Going outside one's home: Frequency of leaving one's home (or leaving one's building if living in a multi-unit residence, see RE Section) is asked first. Persons who go outside and reported in MD using a mobility device are asked frequency of mobility device use for going outside. Persons who go outside are also asked whether anyone helps with going outside and, if so, who that is. Frequency of going outside by oneself is asked; those who indicate they go outside by themselves are asked about difficulty by themselves (with devices, if used). Persons are then asked compared to a year ago whether they leave their home or building more often, less often or about the same. The final question asks persons who report difficulty, getting help, or who do not go out, whether in the last month they ever had to stay in because it was too difficult to go out by themselves (for those reporting difficulty or not going out) or because there was no one to help (for those reporting help all the time).

Getting around inside one's home (or building, if live in multi-unit building): Persons in multi-unit buildings are asked frequency of leaving their apartment or unit to go to other areas of the building. Persons who indicate they never leave their home (or never go to other areas of the building) are asked frequency of leaving the room where they sleep. Persons who reported in MD using a mobility device are asked frequency of using mobility devices to get around inside their home (or building). Individuals who report leaving the room where they sleep are also asked about frequency of holding onto walls or furniture when getting around inside. Persons are asked whether anyone helps with getting around inside and, if so, who that is. Frequency of getting around inside by oneself is asked; those who indicate they get around by themselves are asked about difficulty by themselves (with devices, if used). Persons are asked compared to a year ago whether they go around their home (or building) more often, less often or about the same. The final question, whether there are places in the home (or building) the person did not go in the last month because it was too difficult or no one was there to help, is asked if the person has difficulty, gets help, or does not go around inside.

Getting out of bed: Persons who report mobility device use in the MD section are asked the frequency of using these devices to get out of bed. Persons are asked whether anyone helps with getting out of bed and, if so, who that is. Frequency of getting out of bed by oneself is asked; those who indicate they get out of bed by themselves are asked about difficulty by

themselves (with devices if used). The final question asks persons who report difficulty or help whether in the last month they ever had to stay in bed because no one was there to help him/her or it was too difficult by himself/herself.

Duration of Mobility Accommodations (DM)

This section assesses the duration of help and mobility device use.

At Round 1 for mobility activities (see MO Section), persons who reported help in the last month with either going outside, getting around inside, or getting out of bed (see MO Section) follow one path, while those who reported no help with all of these activities in the last month follow another. Similarly, persons who reported using a mobility device in the last month (see MD Section) follow one path, while those reporting no device use follow another. Assistance and device use when the person turned age 65 is asked, and for persons reporting no use in the last year, assistance and device use between age 65 and Round 1.

Persons who reported help in the last month: Persons are asked whether they have been getting help for a year or more. Those answering “yes” are asked for how many years. Those answering “no, less than a year” are asked in what month they first got help with any of these mobility activities.

Persons who reported no help in the last month: Persons are asked whether they ever had help in the last year with getting out of bed, getting around inside, or going outside. Those answering “yes” are asked in what month they last got help with any of these mobility activities.

Persons who reported using a mobility device in the last month: Persons are asked whether they have used mobility devices for a year or more. Those answering “yes” are asked for how many years. Those answering “no, less than a year” are asked in what month they first used these.

Persons who reported no mobility device use in the last month: Persons are asked whether they ever used mobility devices in the last year. Those answering “yes” are asked in what month they last used these.

At age 65 and since age 65: Persons are asked whether they had help with mobility activities or were using mobility devices around the time they turned 65. Persons skip this item if they reported “lifetime/since birth” (in response to “how many years” asked earlier) or have a duration of use/help that extends to age 65 or earlier. Persons with no device use or assistance in the last year are asked about use and assistance between age 65 and Round 1 interview.

Starting in Round 2, there are four paths based on current and prior reports of mobility help (MO section) and device use (MD section). Questions ask about months between the last interview month and year and the current interview month and year.

The DM Section is included in the Last Month of Life Interview, but with a time frame of between the last interview month and year and the month and year of death. In Rounds 2 and 3, the DM Section was not administered for deceased persons who were not alert in the last month (based on PD6) or for persons who were not mobile in the last month (based on PD7).

Persons who reported help (device use) in the last month but not at the prior round: Persons are asked in what month since the last interview help (device use) started.

Persons who reported no help (device use) in the last month but reported help (device use) at the prior round: Persons are asked in what month since the last interview help (device use) ended.

Persons who reported no help (device use) in the last month and no help (device use) at the prior round: Persons are asked whether they ever had help (device use) since the last interview and if yes, what month the help (device use) started. (The month help (device use) ended was inadvertently skipped in Rounds 2 and 3 but is planned for future rounds.)

Persons who reported help (device use) in the last month and help (device use) at the prior round: Persons are asked whether they had no help (device use) for a month or longer since the last interview and if yes, for how many months.

Driving and Transportation (DT)

The Driving and Transportation section gathers information on the frequency of driving in the last month, (for persons who no longer drive, the date or age a person last drove), driving situations persons avoided in the last month (nighttime driving, driving alone, on busy roads or highways, in the rain or other bad weather), and other ways someone got around in the last month (walking, getting a ride from a family member, friend or someone paid to help, using a van/shuttle provided by residence, using van/shuttle for seniors or persons with disabilities, public transportation, taxi, other). If the sample person got rides from family, friends, or paid helpers in the last month, the person who gave rides most often and their relationship to the sample person are asked; the respondent is then asked if another person gave rides and if so the relationship to the sample person.

Starting in Round 2, driving questions are skipped for persons who reported never driving at Round 1; transportation questions are asked for all sample persons. For more information on driving and transportation measures in NHATS see Skehan et al. 2014.

Other sections collecting information related to transportation

Participation (PA):	Questions are asked about whether transportation problems ever kept someone from doing selected activities in the last month.
Medical Care (MC):	Persons are asked how they get to their regular doctor.
Household Activities (HA):	Persons are asked how they get to the store to shop for groceries or personal items.

Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Environmental Checklist (IR):	Conditions inside and outside the home
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at sample person's level of care; payment information in last month

Household Activities (HA)

This section provides detailed measures of the following Household Activities in the last month: laundry, shopping for groceries or other personal items, making hot meals, handling bills and banking, and handling less common money matters. These activities (and handling prescribed medicines in the MC Section) are typically included in measures of instrumental activities of daily living (Lawton & Brody 1969).

Summary of Household Activity questions by how the activity(laundry, shopping, hot meals, banking and bills) was done in the last month

Questions	Always did it by self	Always did it together with someone else	Someone else always did it	It Varied		Not Done
				Did by self	Never did by self	
Questions specific to the type of activity (see text below)	X	X	X	X	X	
Who did activity with or for person ¹		X	X	X	X	
Reason someone else did activity for or with SP or reason not done: health/functioning, other, both		X*	X*	X*	X*	X**
How difficult to do by self	X			X		
Compared to a year ago does by self more or less often	X	X		X		
Consequence because too difficult by him/herself or because no one there to help ²	X	X	X	X	X	X

*Not asked if person who helps is staff person from place the person lives.

** If not done, "Was that because of your health or functioning or some other reason?"

¹Individuals who are named as helpers are flagged and routed to the Helper Section (HL).

²Individuals who report difficulty, getting help for health/functioning reasons, getting help from someone in residential care setting where they live, or not doing the activity are asked about consequences.

For each activity, the sequence opens with a question on how the activity was done in the last month: always did activity by self, always did it together with someone else, someone else always did it, it varied. (Persons can also volunteer that the activity was not done in the last month.) These responses are on a card shown to the respondent and are also read by the

interviewer. As shown in the table above, subsequent questions flow from these responses. Validity and reliability of measures of limitations in these activities using NHATS items is reported in Freedman et al. (2011).

The general sequence is the same for laundry, shopping for groceries or personal items, making hot meals, handling bills and banking. The sequence for handling less common money matters differs and is described below (see questions specific to activity).

Always did activity by self: Persons in this category are asked how difficult doing the activity is; compared to a year ago whether they do the activity more or less often; and if they report difficulty, whether there was a consequence because the activity was too difficult to do by him/herself.

Always did it together with someone else: Persons are asked who did the activity with them and—unless the helper was a staff person from the place the sample person lives—whether this was because of health or functioning or some other reason. Also asked is whether compared to a year ago persons do the activity more or less often, and (if help was for a health or functioning reason or helper was a staff person from the place the person lives) whether in the last month a particular consequence occurred because there was no one to help or do that for the SP.

Someone else always did it: Persons are asked who did the activity for them. Whether this was because of health or functioning or some other reason is asked unless the helper was a staff person from the place the person lives. Also asked (if help was for a health or functioning reason or helper was a staff person in place person lives) is whether in the last month a particular consequence occurred because there was no one to help or do that for the SP.

It varied: Persons are asked whether, in the last month, they ever did the activity by themselves. Both response groups (yes/no) are asked who did the activity with or for them and—unless the helper was a staff person from the place the person lives—whether this was because of health or functioning or some other reason.

Those who say “yes” (ever did the activity by themselves) are asked: how difficult it is to do the activity by themselves; compared to a year ago whether they do the activity by themselves more or less often; and whether there was a particular consequence in the last month because it was too difficult to do by him/herself. These questions parallel those for persons who “always did activity by self.”

Those who say “no” (never did activity by themselves) and report that help was for a health or functioning reason or the helper was a staff person from the place the person lives are asked whether in the last month the activity could not be done because there was no one to help or do that for SP. This question parallels the final question for persons who responded “always did it together with someone else” or “someone else always did it.”

Not done in last month: These persons are asked whether the activity was not done for a health or functioning reason or other reason. If the reason was health or functioning, they are

asked whether in the last month there was a particular consequence because it was too difficult to do by him/herself.

Questions specific to activity

Each activity also has questions specific to the activity.

Laundry: where laundry is done

Shopping for groceries or personal items: how groceries or personal items are paid for (cash, check, debit card, credit card); how the sample person got to the store to shop (transportation options); whether a motorized cart was used when at the store; whether the sample person leaned on the shopping cart to help get around the store

Making hot meals: how often hot meals were restaurant meals, including eat-in, take-out or delivered meals (not including meals provided as a service at the place person lives); how often used microwave oven to make hot meals. In Round 3 a question was added about how often hot meals were from Meals on Wheels or other food assistance programs.

Handling bills and banking: none

Handling less common money matters: Persons are asked whether in the last year, money matters—opening, closing or cashing in CDs, checking, money market or retirement accounts or applying for loans—needed handling. If the answer is “yes,” persons are asked whether anyone helped with these and, if so, who. These individuals are flagged as helpers and routed to the Helper Section.

Reasons for help

When someone does the activity with or for the person, or the activity has not been done in the last month, persons are asked whether that is because of the SP’s health or functioning or some other reason. One or both options may be selected.

In a validation study conducted prior to the NHATS baseline, lengthy lists of both health or functioning reasons and other reasons were provided for interviewers. Results from the validation study suggested that a small number of responses are commonly given in addition to saying “health or functioning” or “other reason.” These responses are shown as onscreen aids to assist interviewers in coding. Responses of age; memory; vision; mention of specific health conditions, diseases, or surgery; or unable to drive are shown as responses that should be considered “health or functioning” reasons. Responses of: shared activity, always done this way, someone else wanted to do it, pay someone, doesn’t like to do it, are shown as responses that should be considered “other reasons.”

Other sections collecting information related to Household Activities

Technology (TE):	This section asks about going on the Internet or online in the last month to: shop for groceries or personal items, pay bills or do banking, order or refill prescriptions, contact his/her medical providers, handle Medicare
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	or other insurance matters, or get information about the his/her health conditions.
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Self-Care Activities (SC)

For each activity in the self-care section, questions are structured to provide insight into the extent to which the activity is done independently and the use of accommodations in the form of devices, environment, or assistance from others. Questions about behavior change—changes in the frequency of the activity—and unmet need (Allen & Mor 2007)—in the form of consequences related to difficulty or lack of help—also are asked. For a more detailed discussion see Freedman (2009) and Freedman et al. (2011).

A subset of questions from the SC section is included in the Last Month of Life interview. In Rounds 2 and 3, this section was not administered if the person was not alert in the last month of life (based on PD6).

Activities in the self-care section include: eating, getting cleaned up, using the toilet, and dressing. These activities (together with walking around inside or getting out of bed) are typically included in activities of daily living (Katz et al. 1963; 1970).

Summary of self-care questions by activity (eating, getting cleaned up, using toilet, dressing)

Questions	Eating	Getting cleaned up	Using the toilet	Dressing
Used equipment/devices to do	X			X
Frequency of using equipment/devices	X	X*	X*	X
Help with activity	X	X	X	X
How often by self and without help	X	X	X	X
Who helps ¹	X	X	X	X
How difficult by self (using equipment/devices) and without help	X	X	X	X
Compared to a year ago does by self more or less often		X		X
Consequence because too difficult by him/herself or no one there to help SP ²	X	X	X	X

*Use of equipment/devices is reported in HO section.

¹Individuals who are named as helpers are flagged and routed to the Helper Section (HL).

²Individuals who report difficulty, or getting help, or not doing the activity are asked about consequences.

The general sequence for each activity covers whether devices are used to do the activity and frequency of use, whether there is help with the activity and who provides it, frequency of

doing the activity by oneself, difficulty doing the activity, and whether the activity did not get done in the last month because of difficulty or lack of help.

Eating: Persons are asked whether in the last month they used adapted utensils to eat and, if yes, frequency. Everyone is asked whether anyone ever helped them eat, for instance, by cutting up food or feeding them and, if so, who helps. Persons are asked how often they ate without help, and how much difficulty they had eating—with adapted utensils if used—by themselves and without help. Persons who get help or have any difficulty are asked whether in the last month they ever went without eating because there was no one there to help or because it was too difficult to feed themselves.

Getting Cleaned Up: Persons are asked how, in the last month, they usually clean up— by taking a shower, bathing in a tub, or washing up some other way— and, if more than one is named, which they did most often. Persons who reported using grab bars to shower or bathe (see HO Section) are asked frequency of using grab bars; those who reported using bath or shower seats (see HO section) are asked frequency of using these. Everyone is asked whether in the last month anyone ever helped them shower/bathe/wash up and, if so, who helped. Persons are asked how often they got cleaned up without help, and how much difficulty they had —with grab bars or shower/tub seats if used—by themselves and without help. Persons are asked compared to a year ago whether they get cleaned up more or less often. Those who get help or have any difficulty are asked whether in the last month they ever went without showering/bathing/washing up because there was no one there to help or it was too difficult to do that by themselves.

Using the Toilet: Persons are asked whether in the last month they used: a portable commode, disposable pads or undergarments, grab bars around the toilet (if in the home, see HO Section), raised toilet or raised toilet seat (if in the home, see HO Section). Everyone is asked whether in the last month anyone ever helped them use the toilet. Persons are asked how often they used the toilet by themselves and without help, and how much difficulty they had —with grab bars or raised toilet/toilet seat if used—by themselves and without help. Those who get help or have any difficulty are asked whether in the last month they ever accidentally wet or soiled their clothes because there was no one there to help or it was too difficult to get to or use the toilet by themselves.

Dressing: Persons are asked how often they got dressed in the last month and whether they used any special items to get dressed, such as a button hook, reacher or grabber, or clothes that are designed to get on and off easily. Everyone is asked whether in the last month anyone ever helped them get dressed. Persons are asked how often they got dressed by themselves and without help, and how much difficulty they had —with special items for dressing if used—by themselves and without help. Persons are asked compared to a year ago whether they get dressed more or less often. Those who get help, have difficulty, or did not get dressed are asked whether in the last month they ever went without getting dressed because there was no one there to help or it was too difficult by themselves.

Duration of Self-Care Accommodations (DS)

This section assesses the duration of help with self-care activities (eating, getting cleaned up, using the toilet, or getting dressed) in the prior year and between age 65 and the Round 1 interview. Like the earlier section on duration of mobility accommodations (see DM Section), persons who reported help in the last month follow one path, while those who reported no help with these activities in the last month follow another. A final question asks about help when the sample person “turned 65.”

Persons who reported help in the last month: Persons are asked whether they have been getting help for a year or more. Those answering “yes” are asked for how many years. Those answering “no, less than a year” are asked in what month they first got help with any of these self-care activities.

Persons who reported no help in the last month: Persons are asked whether they ever had help in the last year with eating, getting cleaned up, using the toilet, or getting dressed. Those answering “yes” are asked in what month they last got help with any of these activities.

At age 65 and since age 65: Persons are asked whether they got help with self-care activities around the time he/she turned 65. Persons skip this item if they reported “lifetime/since birth” (in response to “how many years” asked earlier) or have a duration of help that extends to age 65 or earlier. Persons with no help with self-care in the last year are asked about use and assistance between age 65 and Round 1.

Starting in Round 2, there are four paths based on current and prior reports of self-care help (SC section). Questions ask about months between the last interview month and year and the current interview month and year.

The DS Section is included in the Last Month of Life Interview, but with time frame between the last interview month and year and the month and year of death. In Rounds 2 and 3, it is not administered if the person was not alert (based PD6) in the last month of life.

Persons who reported help in the last month but not at the prior round: Persons are asked in what month since the last interview help started.

Persons who reported no help in the last month but reported help at the prior round: Persons are asked in what month since the last interview help ended.

Persons who reported no help in the last month and no help at the prior round: Persons are asked whether they ever had help since the last interview and if yes, what month the help started and what month it ended.

Persons who reported help in the last month and help (device use) at the prior round:
Persons are asked whether they had no help for a month or longer since the last interview and if yes, for how many months.

Medical Care Activities (MC)

This section covers: how the sample person handles their prescription medicines, how doctor visits are managed, and how medical bills and insurance are handled. The items on prescription medicines are structured like those for Household Activities (HA). Questions about doctor visits cover how persons get to the doctor, who goes along, and whether anyone sits in on the visit with the sample person. The questions on medical bills and insurance focus on assistance from others.

Prescription Medicines: The first question asks whether the sample person takes any medicines prescribed by a doctor. Those answering “no” skip to the next set of questions on how doctor visits are managed. Persons taking medicines are asked whether they: always did activity by self, always did it together with someone else, someone else always did it, it varied, or not done in last month (see HA section).² Subsequent questions flow from these responses.

Summary of questions on handling medications by how activity was done in the last month

Questions	Always did it by self	Always did it together with someone else	Someone else always did it	It Varied	
				Did by self	Never did by self
Where medicines from; how obtained; frequency of using reminders	X	X		X	X
Who kept track with or for person ¹		X	X	X	X
Reason someone else did for or with SP or not done: health/functioning or other reason		X*	X*	X*	X**
How difficult to keep track by self	X			X	
Compared to a year ago does by self more or less often	X	X		X	
Consequence because too difficult by self/no one there to help or do for SP ²	X	X	X	X	X

*Not asked if person who kept track with or for the sample person is staff from place sample person lives.

** If not done, asked as “Was that because of your health or functioning or some other reason?”

¹ Individuals who are named as helpers are flagged and routed to the Helper Section (HL).

² Individuals who report difficulty, or getting help for health/functioning reasons or from someone at the place they live, or not doing the activity are asked about consequences.

² In Round 1 interviewers could select either health/functioning or other reason but not both (unlike for activities in the HA section). This inconsistency was corrected in Round 2. See MC section of derived variable table for details.

Always did activity by self: Persons are asked where medicines are from; how they are obtained; and frequency of use of reminders to keep track; how difficult it is to keep track of medicines by themselves; compared to a year ago whether they keep track by themselves more or less often; and whether a mistake was ever made in the last month because it was too difficult to keep track.

Always did it together with someone else: Persons are asked where medicines are from; how they are obtained; frequency of use of reminders to keep track. In addition, they are asked who kept track of their medicines with them and—unless the helper was a staff person from the place the sample person lives—whether this was because of health or functioning or some other reason. Also asked is whether compared to a year ago, persons keep track by themselves more or less often and (if help was for a health or functioning reason or helper was a staff person in place person lives) whether in the last month a mistake in taking medicines was made because no one was there to help or keep track of medicines for them.

Someone else always did it: Persons are asked who kept track of their medicines for them. Whether this was because of health or functioning or some other reason is asked unless the helper was a staff person from the place the sample person lives. If help was for a health or functioning reason or helper was a staff person in place person lives, persons are asked whether in the last month a mistake in taking medicines was made because no one was there to help or keep track of medicines for them.

It varied: Persons are asked whether, in the last month, they ever kept track of their medicines by themselves. Both response groups (yes/no) are asked: where medicines are from; how they are obtained; frequency of use of reminders to keep track. In addition, they are asked who kept track of their medicines with them and—unless the helper was a staff person from the place the sample person lives—whether this was because of health or functioning or some other reason.

Those who said “yes” (ever kept track of their medicines by themselves) are asked: how difficult it is to keep track of medicines by themselves; compared to a year ago whether they keep track by themselves more or less often; and whether a mistake was ever made in the last month because it was too difficult to keep track by him/herself. These questions parallel those for persons who “always did activity by self.”

Those who said “no” (never kept track of medicines by themselves) and reported that help was for a health or functioning reason or helper was a staff person in place person lives are asked whether in the last month a mistake in taking medicines was made because no one was there to help or keep track of medicines for them. This question parallels the final question for persons who responded “always did it together with someone else” or “someone else always did it.”

Not done in last month: These persons are asked whether the reason keeping track of medicines was not done was for health or functioning or other reasons. If the reason was

health or functioning, they are asked whether in the last month they did not keep track because it was too difficult to do.

Medical Care: Respondents are asked if the sample person has a regular doctor and if that doctor (or any doctor if no regular doctor is reported) has been seen in the last year. Persons who have not seen a doctor in the last year are routed to the Medical Bills and Insurance Questions. All others are asked about means of transportation to the doctor, whether anyone sits in with the person on doctor visits and, if so, who that is (who does it most often if more than one person named). Individuals who are named as “sitting in on doctor visits” are flagged and routed to the Helper Section (HL) (except for those who are staff persons from the place the person lives). The last question is about what the person who sits in on the visit does: helps with getting on exam table or dressing, reminders to ask doctor, asks doctor questions, or helps the sample person to understand what the doctor was saying.

Medical Bills and Insurance: If respondents report a change to a Medicare supplemental plan, a prescription drug plan, or managed care enrollment in the last year, they are asked if anyone helped with these decisions. Individuals who are named as helpers are flagged and routed to the Helper Section (HL) (except for helpers who are a staff person from the place the person lives).

Other sections collecting information related to Medical Activities

Technology (TE):	This section asks about going on the Internet or online in the last month to: shop for groceries or personal items, pay bills or do banking, order or refill prescriptions, contact his/her medical providers, handle Medicare or other insurance matters, or get information about the his/her health conditions.
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Participation (PA)

These questions reflect participation in activities that are elective but valued (Freedman 2009). Questions are asked about participation (yes/no) in activities in the last month, whether health or transportation problems ever kept the person from doing the activity, and how important it is to the SP to do the activity. Freedman et al. (2011) confirmed the reliability of the participation measures in the form of a scale; reliability of individual items varies.

Activities with full sequence: The full sequence—was the activity done, did health or functioning ever keep person from doing, did transportation problems ever keep person from doing, how important is it to do—is asked for: visiting in person with friends or family not living with person; attending religious services; participating in clubs, classes or other organized activities; and going out for enjoyment (dinner, a movie, to gamble, hear music or see a play).

Activities with selected follow-up: For both “work for pay or in a business” and “doing volunteer work,” only whether the activity was done and, if so, whether health or functioning ever kept someone from doing the activity are asked. Persons who report “providing care for

or looking after an adult or child who cannot care for themselves” are asked who that person is and how they are related to the sample person.

All persons are asked whether in the last month they ever “walked for exercise” or “did vigorous activities (e.g. working out).”

A last question asks respondents to identify a favorite activity (entered as open text); they are asked in Round 1 whether health or functioning ever kept them from doing this activity in the last month. Starting in Round 2, respondents are asked whether they had done their favorite activity (read from text obtained in Round 1) since the last interview month and year. This question is also asked in the Last Month of Life Interview with reference to the period between the last interview month and year and the month and year of death (but is not asked for persons who were not alert in the last month of life based on PD6).

Smoking (SD)

The Smoking section captures cigarette smoking status (current, past, never smoked), amount if smoked (cigarettes per day) and duration of smoking (age started or stopped). Smoking status is defined by the response to “ever smoked cigarettes regularly, at least 1 cigarette a day.” These items allow measures of pack years and number of years smoking to be calculated. Starting in Round 2, this section is asked only of persons who reported smoking in the prior round.

Performance Activities Eligibility (PE)

The NHATS includes physical performance activities (walking, balance, chair stands, grip strength, peak air flow) as well as waist circumference. Some of these activities should not be attempted by individuals under certain circumstances. This section is administered to determine which activities the respondent should be asked to try.

Exclusion criteria: Questions are asked to determine which activities persons will be asked to do. Exclusion criteria by activity are:

- Grip strength: surgery, or flare up of pain, in both hands or wrists; surgery to both arms or shoulders within last 3 months
- Walking 3 meters: uses a wheelchair or scooter every time to get around inside home (see MO Section); unable to walk a short distance by self (using mobility devices)
- Chair stands: person unable to get up from chair without using mobility devices or help; surgery on both hips within 3 months
- Balance stands: person who always uses a mobility device to get out of bed (see MO Section) or never got out of bed by self (see SC Section) says he/she is unable to stand without holding on to anyone or anything
- Peak air flow: none
- Waist circumference: none

This section also indicates which hand should be used for the grip strength activity (dominant hand unless exclusion criteria apply to that hand). Persons who always use a cane or walker inside the home (see MO Section) are told they may use their cane or walker for the 3 meter walking activity. Whether the device was used is recorded in the Performance Activities Booklet.

Performance Activities Booklet (AB)

The results of the performance activities are recorded in the Performance Activities Booklet which is mailed in by interviewers and scanned for data entry. Before each activity the interviewer reads a description of the activity and demonstrates the activity for the respondent. The interviewer then asks the respondent whether he/she “thinks it would be safe to try this.” If the respondent does not feel safe, the interviewer does not feel the activity would be safe, or a proxy does not feel the activity would be safe, this is recorded and that activity is skipped. Other reasons that an activity is not attempted also are recorded and include: respondent does not understand instructions, could not find appropriate chair (for chair stands) or ample space (for walking course).

Balance activities: There are 5 balance activities —side-by-side, semi-tandem, full tandem, one leg eyes open, one leg eyes closed. Persons are asked to hold the two-leg stands for 10 seconds and the one leg stands for 30 seconds. Whether the activity was completed (yes/no) is recorded. These stands progress from easy (side-by-side) to hard (one leg eyes closed). Persons move on to the next balance activity if they complete the prior (easier) one.

Chair stands: Persons first do a single chair stand (getting up and sitting back down without using arms). Whether the activity was completed (yes/no) is recorded. Persons who complete the single chair stand are asked to attempt the repeated chair stand. Persons are asked to do 5 repeated chair stands as quickly as they can. Time to complete the activity is recorded.

Walking: A 3 meter walking course is laid out on a level surface. Persons are timed as they walk from the start to finish and timed again on the return. Both times are recorded, along with whether any mobility device was used.³

Grip strength: Persons are given a dynamometer and asked to squeeze as hard as they can. The reading on the dynamometer is recorded. The activity is done twice.

Peak air flow: Persons are asked to blow into a peak air flow meter. The reading on the meter is recorded. The activity is done twice.

Waist circumference: A tape measure is used to measure waist circumference while the person is standing (or sitting if they are unable to stand).

³ Individuals who use walking devices (a cane or walker) all the time to get around indoors, and those who use them only sometimes but who do not feel it would be safe to try the walking course without such devices, are told that they may use their device.

The performance activities included in NHATS and the protocols for administration draw on several prior studies including the Women's Health and Aging Study (Simonsick et al. 1997), the Established Populations for Epidemiologic Studies of the Elderly, and the Health and Retirement Study. The walking, balance activities, and chair stands are components of the Short Physical Performance Battery (SPPB) (Guralnik et al. 1994; 2000). Summary scores for each performance activity and two versions of the SPPB (NHATS Expanded SPPB and Original) have been constructed for analysts. See *III.J. Derived Variables* and Kasper, Freedman and Niefeld (2012) for more information.

Height and Weight (HW)

This section obtains self-reported current height and weight, height and weight at age 50, and unintentional weight loss (lost 10 pounds or more in the last year and not trying to lose weight).

Early Life (EL)

The Early Life section covers selected life experiences. Topics in this section are:

- Place of birth (state if US, country otherwise);
- If not born in US, year or age the person came to live in the US;
- Health as a child (excellent, very good, good, fair, poor);
- How well off financially when growing up;
- Lived with both parents at age 15; if not, lived with mother, father, other relatives or nonrelatives;
- Residence at age 15 (city/town, state);
- Education
- Mother and father still living; if not, age at death.

At Round 2 the questions about whether SP's mother and father are still living is asked if they were reported as living in the prior round.

Race, Ethnicity, and Language (RL)

This section collects race (multiple categories are allowed and respondents are asked to select a primary race in these cases). Hispanic ethnicity and subgroups (Mexican American/Chicano, Puerto Rican, Cuban American, Other) are obtained. The NHATS Interview has been translated into Spanish and administration in Spanish is documented. Three questions on language are included: whether the sample person speaks a language other than English (not asked for Spanish language administration), how well the person understands English when spoken, how well he/she speaks English (very well, well, not well, not at all).

The RL Section is asked at Round 1 only.

Veteran's Status (VA)

The Veteran's Status section asks: whether the person served on active duty in the Armed Forces of the United States, periods of service on active duty, and whether the person was an active member of the National Guard or a military reserve unit.

Periods of service on active duty follow those recommended for the American Community Survey (ACS) by a joint VA-Census Bureau Committee. NHATS periods of service are identical to those in the 2010 ACS with two exceptions: the May 1975 to August 1980 and September 1980 to July 1990 are collapsed to May 1975 to July 1990; the February 1955 to February 1961 and March 1961 to July 1964 are collapsed to February 1955 to July 1964.

The VA Section is asked at Round 1 only.

Well-Being and Age Identity (WB)

The Well-Being section obtains information about positive and negative affect (frequency of feelings in the last month e.g., cheerful, bored, full of life, upset), self-realization (agreement with statements about life: life has meaning and purpose, feel confident and good about self, gave up trying to improve life long ago, likes living situation), age identity (age person feels), and self-efficacy and resilience (agreement with statements: other people determine activities, I do what I want, I adjust easily to change). The section draws on similar items that have appeared in MIDUS (Midlife in the U.S. A Study of National Health and Wellbeing). Reference periods and response categories differ across studies that have used these items. NHATS uses "last month" as the reference period and, in general, fewer response categories.

The WB section is not asked of proxy respondents.

Insurance Plans (IP)

Questions are asked about prescription drug coverage, Medigap or Medicare supplemental insurance, Medicaid coverage, and coverage under TRICARE. Questions on long-term care insurance ask whether: "not including government programs, persons have any insurance that would pay for a year or more of care in a nursing home, assisted living, or in their own home." Those who answer "yes" are asked what types of care are covered, premium amount in the last calendar year, and how long they have had the policy (in either years or age at purchase).

Starting at Round 2, persons who reported having long-term care insurance are asked whether they still have the policy reported in the prior round.

Labor Force (LF)

This section is designed to provide a measure of labor force participation – employed, unemployed, not in the labor force—consistent with definitions produced by the Current

Population Survey. In Round 1, work-related income in the past month is asked for persons and their spouses/partners (see IA Section for other income sources and amounts). For those working, hours worked, paycheck schedule, and paycheck amounts are asked. In Round 1, persons who are in residential care for purposes of data collection and who said in the PA Section that they had not worked for pay or in a business they own last month are not asked questions about labor force participation. Also in Round 1, all persons are asked about their longest held occupation (the work they did most of their lives).

Starting in Round 2, a briefer version of this section is administered (without paycheck amounts) and an item asking current occupation for persons who are working is included.

Home Ownership (HP)

Questions are asked about home ownership for all sample persons except those in residential care settings. Topics covered are: whether persons own or rent their home; details about mortgages (if the mortgage is paid off, monthly payment amounts, time left until mortgage is paid off, mortgage balance), and the present value of the home. Assets (and their worth) other than a home are collected in the IA Section. For persons who rent, monthly payment amount is asked. Persons whose monthly rent is less than \$500 are asked if their home is Section 8 or public housing or housing for low-income seniors.

Income and Assets (IA)

In Round 1, the Income and Assets section collects information on: sources of income (except for earned income, see LF Section), income amounts by source and total income from all sources, major assets (other than home ownership, see HP section, and car ownership, see CO section), and the current value or worth of major assets. Other information in this section includes: whether Social Security is received by mail or direct deposit, and the year and month person started receiving Social Security.

Time Frame: Many questions are framed in terms of “last month.” In this section last month refers to the full month prior to the interview month (e.g. for interviews in May, the last month would be April). A few questions are framed in terms of “last year,” meaning the previous calendar year (e.g. for interviews in 2011, calendar year 2010).

Response Options: In order to make responding to the IA questions easier several steps were taken. First, respondents were invited in the opening of the IA section to “Please feel free to refer to any records or other persons that may be of assistance in answering these questions.” Second, in the case of couples, the respondent could choose how to report each income source or asset: jointly (e.g. joint checking), separately (his and her retirement accounts), or some combination of the two (joint checking and her savings). Third, although questions on income amounts and asset values ask for a dollar amount, interviewers could follow-up as needed with a statement that “We don’t need an exact dollar amount. The nearest

\$100/\$1000 is fine. “(The amount varies by type of income and asset). This indicated to the respondent that precision to the exact dollar was not expected.

Don’t Know responses: Income and assets are often sensitive topics and nonresponse tends to be higher for these types of questions. NHATS has addressed this issue in two ways: 1) a statement that explains why this information is needed is in the introduction to the IA Section and can be repeated by the interviewer as needed; 2) use of show cards with bracketed ranges for dollar amounts tailored to types of income and assets when respondents do not provide a dollar amount. Most surveys use a bracketing approach—either unfolding (as in the Health and Retirement Survey) or fixed ranges (as in the Survey of Consumer Finance)—to reduce missing data for responses that ask for answers in dollars. NHATS used 5 fixed brackets with separate ranges for single persons and couples. The ranges were developed based on data from the Survey of Consumer Finance for 2007 adjusted to 2011 dollars.

Summary table of elements in the IA section and location of other income/asset information

Sources of Income and Income Amounts ¹	Time frame	Section if not IA
Social Security	Last Month	
Supplemental Security Income (SSI)	Last Month	
Veteran’s Administration	Last Month	
Pension plan	Last Month	
Earned Income (SP and Spouse/Partner)	Last Month/Last Paycheck	Labor Force (LF)
Interest/dividend income from any: mutual funds/stocks, bonds, bank accounts, or CDs	Last Year	
Total income from all sources	Last Year	
Assets and Value¹		
Retirement accounts	Current worth/amount withdrawn last month/amount withdrawn last year	
Mutual funds or stocks	Current worth	
Bonds	Current worth	
Checking account	Current worth	
Savings account	Current worth	
Certificates of Deposit	Current worth	
Business, farm or real estate (besides home)	Current worth	
Home	Current worth/current outstanding mortgage balance	Home Ownership (HP)
Cars/other vehicles	Current worth	Car ownership (CO)

¹The allowable range for income amounts and asset values began at \$1, rather than \$0, so in cases where the response was \$0, interviewers were instructed to enter \$1 and indicate in a note that the true value was zero.

The IA Section was not asked at Round 2. In Round 3 a brief IA Section asking about sources of income , assets, and total annual income from all sources was administered.

Car Ownership (CO)

In Round 1, questions are: whether any cars, trucks, or vans are owned, the number of vehicles owned, and their present value. Other assets (and their worth) are included in the IA Section and the HP section.

The CO Section was not asked at Rounds 2 or 3.

Economic Well-being (EW)

This Section asks about some types of debt, financial gifts from sample persons to relatives and from relatives to sample persons, and participation in government assistance programs.

Debt: Questions cover whether credit card balances are paid off each month and the total balance owed on all cards. Whether any amount owed on credit cards is for medical care and the amount owed is asked. Respondents also are asked whether any medical bills are being paid off over time and, if so, the amount.

Financial gifts to and from the sample person: Persons are asked whether in the previous calendar year they received “any financial help or financial gifts from children or other relatives either regularly—like every month—or just every so often as needed.” Who helped out is asked and for children the specific child is identified. An amount for the previous calendar year is asked. These questions are repeated for financial help or gifts from sample persons to children or other relatives. Grandchildren are coded separately from children and other relatives.

Government assistance: For individuals living in the community (not residential care)⁴, participation in the last year in food stamps, food assistance such as Meals-on-Wheels, and energy assistance programs is asked.

Food insecurity: Starting in Round 2, questions about skipping meals in the last month because there was not enough food or money to buy food, and frequency of skipping meals were added. These items were used in the National Health and Nutrition Examination Survey III as indicators of food insecurity.

Financial Hardship: Starting in Round 2, questions were added about whether there were times in the last year when the SP did not have enough money to pay the rent/mortgage, pay utility bills, or pay medical/prescription drug bills.

⁴ This skip has been removed for future rounds of NHATS.

Helpers (HL)

This section is designed to obtain information about persons identified in earlier sections as Helpers with activities. Questions are asked about each person who is identified as a “helper” with activities in: Mobility (MO), Driving and Transportation (DT), Household Activities (HA), Self Care Activities (SC), and Medical Care Activities (MC). NHATS identifies as “helpers” people who in the last month have carried out a household activity or medical care-related activity with or for a sample person, given rides to the SP, sat in on doctor visits, or helped with mobility or self-care activities. This information can be used to characterize the involvement of others in meeting the demands of routine daily activities and, when help is for health or functioning-related reasons, understanding how help from others bridges the gap between individual capacity and doing necessary activities.

The Helper section is not administered for persons identified as helping who are “someone/service at the place SP lives/lived” (relationship code = 37).

Activities where Helpers can be identified:

- Getting around outside, getting around inside, getting out of bed (MO Section)
- Persons who give the sample person a ride to get to places (DT Section; two persons can be identified)
- Laundry, shopping for groceries or personal items, preparing hot meals, handling bills and banking, less common money matters (HA Section)
- Eating, getting cleaned up, using the toilet, getting dressed (SC Section)
- Keeping track of medications, sitting in on doctor visits, making decisions about insurance (MC Section)

Helper characteristics: Relationship of the helper to the sample person is obtained when a person is identified as helping with an activity. Questions in the HL Section obtain information on whether the person helping has a regular schedule or whether it varies. If help is given on a regular schedule, days per week and hours per day (on days when help is provided) are asked. Otherwise, days in the last month and hours per day (on days when help is provided) are asked. For helpers other than spouses/partners, whether the helper is paid and who pays (family, government program, insurance, other) is asked. If the person or his/her family pays, the amount for the last month is asked. This amount can be reported as an hourly rate, a weekly rate or a monthly rate. If a government program is named as a source of payment, the type of program is asked (Medicaid, Medicare, a state program or something else).

Modules

National Long-Term Care Survey (NLTC) screener (LS; R1). All respondents were offered this module, which provides a means to cross-walk between NLTC disability prevalence

estimates and estimates based on NHATS. The source of the NLTCs items is the 2004 NLTCs Screener.

Modules in subsequent rounds were assigned to a randomly selected one-third of the sample at each round. These modules were submitted by external investigators and selected through a review process that considered relevance to core NHATS aims and other criteria.

American Community Survey Disability Questions (AD; R2): These items are being used in many federal surveys to identify persons with disabilities. They are included as a means of providing a cross-walk between disability estimates based on these items and estimates based on NHATS.

Engagement in Health Care (EH; R2): These items ask about how individuals manage their health, their preferences for sharing health care decisions with doctors as well as family members/close friends (separately), and their experiences with managing their health. Items are adapted from prior studies that asked about individual preferences for sharing health care decisions with doctors (Levinson et. al, 2005) and family members and close friends (Price et., al., 2011), and about the experience of treatment burden related to activities they undertake to maintain their health (Giovanetti et. al, 2011 and Boyd et al, 2014).

End of Life Plans and Care (EP; R2): These items ask whether the SP has talked to anyone about the medical treatment he/she wants in case of serious illness and, if so, who. Questions include whether there are legal arrangements and a living will or advanced directive. Preferences for medical treatment and long-term care arrangements under different scenarios are asked.

Pain (PN; R3): These items focus on pain intensity and interference. A pain intensity question (0 to 10 rating) from PROMIS-29 (PROMIS 2011) is included, which is also widely used in clinical practice and in clinical trials on pain (Farrar et al. 2001; Turk et al. 2003; Dworkin et al. 2005). Experiencing pain in the last year that lasted more than 24 hours is asked as well. How much pain interferes with specific activities and overall in daily life is asked.

Personality (PT; R3): Respondents are asked to say how well a list of 10 words describes them (not at all, a little, some, a lot). Items were drawn from validated scales of five personality traits (Rammstedt and Oliver 2007).

New Inventions to Make Life Easier (PT; R3): Respondents who received the Personality Module also were asked an open-ended question regarding an activity that they had trouble with where a new invention might help. Answers to this question were coded and are available in the variable pt3invention (Label: R3 PT3 INVENTION HELP ACTIVITY)

Sleep Quality (SL; R3): These items supplement questions on sleep in the HC Section. Items are drawn (and used with permission) from the Pittsburgh Sleep Quality Index (Buysse et al. 1989). A question on overall sleep quality is asked. Questions on daytime sleepiness, snoring, and naps, are included.

Environmental Checklist (IR)

Interviewers recorded their observation of conditions inside and outside the home: conditions in the home (flaking paint, pests, broken furniture, flooring, tripping hazards, clutter), the environment around the home (litter, graffiti, vacant houses, foreclosure signs), and of the home's exterior (windows, foundation, outside of home, roof, walking surfaces). Starting in Round 2, a question on continuous sidewalks was added and the question on foreclosure signs was dropped.

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Housing Type (HT):	Length of residence and type of place
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Facility Questionnaire (FQ):	If sample person is in residential care (including nursing home) services available at place and at the sample person's level of care; payment information in last month

Interview Environment (IR)

Selected items from the Interviewer Remarks section related to the circumstances of the interview are included: SP's attitude toward the interview; how much of the interview SP was present for; was anyone else helping to answer questions and if so, who; was the interview completed in more than one session and if so, the reason; was the FQ completed in person or by telephone

Facility Questionnaire (FQ)

The FQ collects information about the place the person lives when the residence is a nursing home or other residential care setting (see *Section I.C. Data collected by residential status and Section II. Introduction*). Questions focus on: the type of place; whether the part of the place where the person lives has a different name from the overall place; for persons in settings where there could be more than one level of care, whether the person lives in independent living, assisted living, special care/memory care/Alzheimer's unit, nursing home; other levels of care available at place; services available to people at the sample person's current level of care; services that are part of the person's service package; whether there are extra charges for each

service available; sources of payment in the last month for person’s care and total payment by each source; total monthly payment for care; primary source of payment for care.

When the FQ is administered: The FQ is administered for all nursing home residents. The FQ also is administered for SPs in other residential care settings or supportive living environments. Usually the SP interview is conducted first, and responses to items in Housing Type (HT) indicate whether the SP is in a setting where an FQ should be administered. This approach casts a wide net that includes not only assisted living facilities, but other supportive living environments (independent living within a CCRC or retirement community) that have services available to residents. In places where an appropriate staff person cannot be identified the FQ is not administered.

Other sections collecting information on place sample person lives

Residence (RE):	Physical structure of residence
Housing Type (HT):	Length of residence and type of place
Service Environment (SE):	If sample person is in residential care (other than nursing home) services available and used
Home Environment (HO):	Features of the home environment
Environmental Modifications (EM):	Whether features of the home environment were added and out-of-pocket costs if so; out of pocket costs for other devices for daily activities
Environmental Checklist (IR):	Conditions inside and outside the home

III. Data Documentation

III.A. Overview of Public Use Data Files and Documentation

The NHATS Round 1 data release consists of three public use data files:

- (1) the Tracker file
- (2) the Sample Person (SP) file, and
- (3) the Other Person (OP) file.

The files may be linked to one another using the unique variable, “spid” (Sample Person ID).

The NHATS Round 2 & 3 data releases also consist of three files.

- (1) The Tracker file is cumulative and includes all persons initially sampled for NHATS and all prior round variables.
- (2) The Sample Person (SP) File includes all persons with an SP Interview and all variables for that round. The Last Month of Life interview data are included in the SP file for deceased SPs and FQ data are included for those in residential care settings.
- (3) The Other Person (OP) file is cumulative and contains, for all SPs in that round, all other persons from Round 1 and persons added in subsequent rounds.

The Round 1 Tracker File (N=12,411)

The Round 1 tracker file provides information on the total sample selected for the study (see Montaquila, Freedman, Edwards and Kasper, 2012, for details on sample design). The file includes respondents, non-respondents, ineligible cases (those who moved outside the study area prior to interview), and cases who died after September 30, 2010 (when the sample was drawn) and prior to interview.

Variables in the Round 1 tracker file indicate the year SP entered the sample, the final case status, and the month and year the final case status was assigned. Indicators for the SP and FQ interview status and month and year SP and FQ interview were administered are also included.

A tracker weight that adjusts for differential non-response is included in this file (for respondents, ineligibles, and deaths) and may be used to make disability estimates with the full sample. Replicate weights are provided, as are base weights that reflect probabilities of selection but without nonresponse adjustment. See *Section IV. NHATS Weights and Their Use* for further details.

Tracker File for Round 2 and Subsequent Rounds (N=12,411)

The Tracker File released at each Round is cumulative in that it adds information on case status in the current Round to all prior year information. Indicators for the SP and FQ interview status in each Round and the month and year of interview in that Round are also included.

A tracker weight for each Round that adjusts for cumulative differential non-response is included in this file (for respondents, ineligibles, and deaths) and may be used to make disability estimates with the full sample. Computation of the tracker weight for each Round began with the prior Round nonresponse adjusted tracker weight and included further two adjustments—an adjustment for nonresponse and a raking adjustment to estimated population totals for Medicare enrollees in the contiguous U.S. Replicate weights also are provided for each Round. Prior Round tracker weights, including replicate and base weights, are retained on the file for each Round. See *Section IV. NHATS Weights and Their Use* for further details.

Round 1 Sample Person (SP) File (N=8,245)

The Round 1 SP file contains all data on NHATS respondents collected in the Sample Person (SP) interviews, including the Performance Activities Booklet, and the Facility Questionnaire (FQ) interviews. All respondents with an SP interview and respondents residing in nursing homes with an FQ interview have a positive analytic weight (n=8,077), and weights for persons in residential care with both an SP and FQ interview have been adjusted for a small number of respondents in residential care who are missing an SP interview (n=168). An analytic weight and replicate weights with nonresponse adjustment are provided. See *Section IV. NHATS Weights and Their Use* for further details.

Round 2 Sample Person (SP) File (N=7,075)

The Round 2 SP file contains all data on NHATS respondents collected in Round 2 in the Sample Person (SP) interview, including the Performance Activities Booklet; the Facility Questionnaire (FQ) interviews and; the Last Month of Life (LML) interviews. All respondents with an SP interview (n = 6,558) and Round 1 nursing home respondents with a Round 2 FQ interview (n=327) have a positive analytic weight (n=6,885). Weights for persons in residential care or

nursing homes with both an SP and FQ interview in Round 2 have been adjusted for respondents who are missing an SP interview (n=190). An analytic weight and replicate weights with nonresponse adjustment are provided. See *Section IV. NHATS Weights and Their Use* for further details.

Round 3 Sample Person (SP) File (N= 5,799)

The Round 3 SP file contains all data on NHATS respondents collected in Round 3 in the Sample Person (SP) interview, including the Performance Activities Booklet; the Facility Questionnaire (FQ) interviews and; the Last Month of Life (LML) interviews. All respondents with an SP interview (n = 4,884) and Round 1 nursing home respondents with a Round 3 FQ interview (n= 213) have a positive analytic weight (n = 5,097). Weights for persons in residential care or nursing homes with both an SP and FQ interview in Round 3 have been adjusted for respondents who are missing an SP interview (n = 179). An analytic weight and replicate weights with nonresponse adjustment are provided. See *Section IV. NHATS Weights and Their Use* for further details.

The Round 1 Other Person (OP) File (N=38,097)

Each record in the Round 1 OP file represents a person identified in the Round 1 SP interview. Individuals are identified based on one or more of the following roles relative to the SP (section where roles are identified shown parenthetically):

- a proxy respondent (IS),
- spouse/partner (HH),
- household member (HH),
- child or stepchild not in SP's household (CS),
- social network member (SN),
- helper with mobility (MO), driving and transportation (DT), self-care (SC), household activities (HA), medical care activities (MC),
- a person SP takes care of (PA)
- a contact person, i.e. someone outside of SP's household who could get in touch with SP (Closing Section: CL).

The type of information collected varies, depending on the reason the person was identified. For further details see *Section III.B. The Other Person File*.

Other Person (OP) File for Round 2 and Subsequent Rounds

The OP File is cumulative across rounds. A variable— “opround”—indicates in which round the person was added to the OP file. All prior round variables are retained; new variables and derived variables are added.

- For SPs in Round 2 with an SP interview, all other persons identified in Round 1 are on the OP file, as are new other persons added to the file based on the Round 2 interview. OP file N = 37,944.
- For SP's in Round 3 with an SP interview, all other persons identified in Rounds 1 or 2 are on the OP file, as are new other persons added to the file based on the Round 3 interview. OP file N = 35,745.

Documentation

For each Round, NHATS has available for users five types of documentation: Instruments (with original item numbers and associated variable names and labels), Codebooks, Crosswalks (that map items to file locations and variable names/labels), Data Collection Procedures, and Technical Papers.

The **Instruments** contain the specifications for the computer assisted personal interview application, including original item numbers, and variable names and labels as they appear in the Tracker, SP, and OP files. Derived variables and Flag variables also are shown on instrument sections when appropriate. For the Performance Activity Booklet, the Crosswalk is needed to map the original item numbers to the variable names and labels in the SP file.

The **Codebooks** are available to registered users and are included in the zip file with the Tracker, SP, and OP data files. The codebooks contain variable names, variable labels (that reference the original item number on the instrument), values, value labels, and frequencies. Variables are organized by order of administration in the interview. Flag variables appear in the file in the section where they originate, as do derived variables.

The **Crosswalk File** provides a link between the instruments and the codebooks. The first column shows questionnaire items, followed by columns that indicate location of variables (SP Public file, OP Public file, Tracker file, Sensitive or Restricted file, Not on file), followed by variable names and labels. Starting in Round 2, a column indicating the variable is new in that round and another indicating whether the variable is in the last month of life interview are included. The Crosswalk file is organized by order of administration, but the Excel version can be sorted by the user in different ways. Each combination of instrument item number and codebook variable name forms a unique entry. Thus, if the instrument item generates more than one variable the item will appear more than once and if a variable is created from multiple instrument items, the variable appears more than once.

The **Crosswalk of Changes from Beta Release to Final Release** documents changes made between the Beta and Final data release for that Round. Examples include: new variables added to the final release file, changes to variable names or labels, changes to value labels, and changes to variable coding. The first column in the crosswalk identifies the item where a change occurred; other columns indicate types of changes between the beta and final file.

The **Data Collection Procedures** document contains selected information on data collection procedures relevant for analysts. Currently this document is available for Round 1.

A **Technical Paper Series** covers issues related to study and database design and special topics of interest to analysts. At the time of the Round 3 final data release the following papers were available at www.nhats.org:

- National Health and Aging Trends Study Round 1 Sample Design and Selection (#1)
- National Health and Aging Trends Study Development of Round 1 Survey Weights (#2)
- National Health and Aging Trends Study Round 1 Income Imputation (#3)
- Construction of Performance Based Summary Measures of Physical Capacity in the National Health and Aging Trends Study (#4)

Classification of Persons by Dementia Status in the National Health and Aging Trends Study (#5)
National Health and Aging Trends Study Development of Round 2 Survey Weights (#6)
Hours of Care in the 2011 & 2012 National Health and Aging Trends Study (#7)
Driving and Transportation Measures in the National Health and Aging Trends Study (#8)

III.B. Other Person File

In each Round, an Other Person File is constructed from a roster that is generated from questions in different sections of the SP interview. Each person on the OP file has a unique ID—*opid*—that is a 3-digit (string) variable and can be linked to the relevant SP (using the *spid*, which is also on the OP file). All variables in the OP file begin with the letters “*op*” followed by the round number (1, 2 etc. indicated by # when examples are given).

The OP files are cumulative for SPs in the current Round. That is, in Round 1, all Other Persons for SPs in Round 1 are included. In Round 2, for all Round 2 SPs, all Other Persons from Round 1 are retained and new Other Persons reported in Round 2 are added. The Round 3 OP file retains, for all Round 3 SPs, OPs from prior rounds and adds new OPs. A variable “*opround*” indicates the round when a person was added to the OP file. A unique OP record (identified by “*opid*”) has information from all rounds associated with an individual.

Variables on the OP file provide information about the “other person” and his/her role relative to the SP. For each person in the OP file, one or more flags are set indicating roles relative to the sample person. These include: proxy respondents; spouse/partner; household member; child in household; social network member; child not in household; helper with activity (multiple variables for: mobility activities: getting outside, getting around inside, getting out of bed; household activities: laundry, meals, shopping, banking, money matters; self-care activities: eating, getting cleaned up, using the toilet, getting dressed; medical care activities: handling medications, sitting in on doctor visits, handling insurance matters; transportation: family member, friend or paid helper who drove most, someone else who drove; a person the SP cares for; a person named as a contact to locate SP in the future.

For persons in residential care, a record is generated for the OP file with a relationship indicating “someone/service at the place SP lives” (“*lives/lived*” starting in Round 2 to reflect LML cases) if this type of person was named as helping the SP. Individual staff members are not entered separately in the OP file. In some cases where an individual staff person serves as a proxy or is named as a social network member a record for that individual may be generated; for these OP records relationship code is 37. Flags are set to 1 for each activity for which the category of “someone/service at the place SP lives/lived” provided help. Unlike other helpers, those with a relationship code of 37 are not eligible for the Helper Section and the helper flag, which indicates who is eligible for this section of the SP interview is set to -1 for these OPs.

Categorical age is based on date of birth for spouses, children and household members. If date of birth was not reported, age in years was obtained. In R2 and subsequent rounds, for those with age in years (and missing date of birth), age is based on incrementing age at the previous round by 1 year.

In R1, age was not obtained for proxy respondents who were children living outside of the SP's household (n=118) and proxies who were household members with relationship to SP codes of 3 through 24 (n = 203 children in household; n = 48 other household members). At Round 2, we attempted to fill in this missing information. If the sample person was alive and completed a sample person interview, and the same person was a proxy respondent as in Round 1e, age was obtained for that proxy (children not in the household n = 50; children in the household n = 83; other household members n = 4).

The type of information collected for OPs varies, depending on the reason the person was identified. The table below shows the different types of information collected for different OP file entries. The full set of relationship codes available for different types of persons is listed in *Appendix I. Relationship Codes by Other Person Type*.

Variables	INFORMATION COLLECTED FOR PERSONS LISTED AS:							
	PROXY	SPOUSE/ PARTNER	HOUSEHOLD MEMBER	SOCIAL NETWORK MEMBER	CHILD NOT IN HOUSEHOLD	HELPER	PERSON SP CARES FOR	CONTACT
ID	X	X	X	X	X	X	X	X
Round person added (opround)	X	X	X	X	X	X	X	X
Age		X ¹	X ^{2,3}		X ²			
Month, Year of Birth		X	X ^{2,3}		X ²			
Categorical Age		X	X	X ⁴	X			
Gender	X ¹	X ¹	X	X	X			
Relationship ⁵	X ¹	X ¹	X	X	X	X	X	
Education		X	X ⁶		X			
Marital status			X ⁶		X			
Number of children			X ⁶		X			
Any and number of children < 18			X ⁶		X			
Helps with activity (separate indicators for mobility, self-care, household, medical care and transportation)						X		
Help regular schedule						X ⁷		
Number of days helped per week or month and hours per day						X ⁷		
Whether paid and who paid (SP, government, insurance, program, other)						X ⁷		
Payment unit and amount paid						X ⁷		
Gave SP financial assistance			X ⁶		X			
Received financial assistance from SP			X ⁶		X			
Deceased since prior round ⁸		X	X		X			
Reason not co-resident (if co-resident prior round) ⁸			X					

¹ Also available in SP file.

² In Round 1, if a child or a household member other than a spouse/partner served as a proxy respondent for the SP, date of birth was unintentionally skipped. Date of birth was collected for all proxy respondents starting in Rounds 2.

³ By design, not collected for household members with relationship codes 25-36, 91, or 92.

⁴ Round 1 only.

⁵ See Appendix Table 1 for details on relationship status.

⁶ Only for children in household.

⁷ Collected for helpers if op1ishelper = 1; not collected for helpers that are relationship code 37 (someone/service at the place SP lives/lived).

⁸ Starting in Round 2.

III.C. Definition of Complete Cases

Completed Interviews in Round 1

Cases were considered complete in Round 1 if the:

1. SP was community-resident or lived in a residential care setting other than a nursing home and the SP interview was completed (self or proxy respondent);
2. SP lived in a residential care setting other than a nursing home and the FQ was completed, but the SP interview was not (see *Section IV. NHATS Weights and Their Use* for treatment of these cases in the analytic weight); or
3. SP lived in a nursing home and the FQ interview was completed.

Completed Interviews Round 2 and Subsequent Rounds

Cases were considered complete if the:

1. SP interview or LML interview was completed (self or proxy respondent);
2. SP was eligible for both an SP and FQ interview (group 1 in Round 1), but only the FQ was completed (see *Section IV. NHATS Weights and Their Use* for treatment of these cases in the analytic weight);
3. SP was eligible for only an FQ (groups 2 and 3 in Round 1) and the FQ was completed (see *Section IV. NHATS Weights and Their Use* for treatment of these cases in the analytic weight);

Break offs

In a small number of cases an SP interview was started but not completed. Cases were considered as complete SP interviews if the break-off occurred after the PA section, i.e. all self-report items on functioning had been administered. Based on this criterion, in Round 1, 92 of the 94 break-off cases were retained as complete cases. In Round 2, 21 of 22 cases were retained as complete cases. In Round 3, 86 of 87 cases were retained as complete cases. Variables that identify a break-off case and the interview section and question where the break-off occurred are in the SP file (**r#breakoffst** and **r#breakoffqt**). Missing value codes from the point of break-off follow patterns for DK responses (-8 and -1 combinations).

III.D. Residential Status Indicators

NHATS provides users with a summary indicator of residence. This indicator is constructed from the final interview status codes, information in the FQ, and for those in residential care but missing an FQ, from non-released information on address. Thus, the residence indicators are the best source of information on where the SP lives. A separate indicator is included in Round 2 for decedents.

Round 1 Residential Status

The variable r1dresid has the following values:

- 1 = SP resides in community and an SP interview was completed
- 2 = SP resides in residential care (not nursing home) and an SP interview was completed
- 3 = SP resides in residential care (not nursing home) but only an FQ was completed (SP interview was missing)
- 4 = SP resides in a nursing home and by design has only an FQ interview

A value of 3 corresponds to individuals classified with an interview status of “64” on the variable r1status on the Tracker File. Analytic weights adjust for their missing SP interviews.

Residential Status in Round 2 and Subsequent Rounds

Two variables were created to indicate residential status starting in Round 2: r#dresid and r#dresidlml. The former classifies all complete cases and the latter classifies persons who died.

The variable r#dresid has values of:

- 1 = SP resides in the community and the SP interview was completed
- 2 = SP resides in residential care (not nursing home) and an SP interview was completed
- 3 = SP moved into residential care (not nursing home) and only an FQ was completed
- 4 = SP moved into a nursing home and completed an SP interview
- 5 = SP moved into a nursing home and completed an FQ only
- 6 = SP was deceased (Last Month of Life interview conducted)
- 7 = SP lived in residential care (not a nursing home) in Round 1 and completed only the FQ in Round 1 and Round #
- 8 = SP lived in a nursing home in Round 1 and completed only the FQ in Round 1 and Round #

Values of 3, 5 and 7 (interview status of 64 on r#status on the Tracker file) indicate a missing SP interview; analytic weights in the SP file incorporate a nonresponse adjustment for these cases (see Montaquila, Freedman, Kasper 2013).

The variable r#dresidlml has values that indicate where the SP lived before death:

- 1 = SP lived in the community at time of death
- 2 = SP lived in residential care (including nursing home) at time of death

III.E. Variable Naming and Missing Data Conventions

Variable names

- Variable names do not exceed 13 characters and are lower case. Starting in Round 2, all but 7 are 12 characters (re#dresistrct, r#d2deathage, mo#dinsdsfdf, ha#dmealkot, ia#bnkacccd10, ia#bnkacccd11, ia#bnkacccd12).
- In the SP file, the first 2 characters of the variable name are the interview section letters, e.g. re (Residence), hc (Health Conditions).
- The third character is a number indicating the round of data collection (starting with 1 for Round 1).
- The remaining characters reflect meaning of the variable.

- Variables in the SP file that were created from flags have “fl” as the first 2 characters (see *Section III.E. Flag Variable Conventions in the SP and OP Files*).
- Derived variable names have a “d” following the data collection round number (with a few exceptions).
- All variables in the OP file begin with “op.”
- Variable names are the same from round to round (except for the third character indicating round) if the underlying items and variable being created are identical. In most instances the values of variables that share names across round are also identical, with a few exceptions.

Variable labels

- Variable labels do not exceed 45 characters (with one exception: dmids#dintl).
- Labels begin with the round number (R1, R2, etc.), followed by the instrument section and item number (e.g. IS2A), followed by a description of the item.
- Labels for derived variables have a “d” following the number indicating data collection round.
- Almost all variable labels are the same from round to round (except for the Round number) if the underlying items and variable being created are identical. In a few cases at Round 2 we modified the label to indicate that the variable included information from the prior round and in other cases we modified the label to clarify the variable. These Round 2 changes are retained in subsequent rounds. A complete listing is available in *Appendix VI. Variable Label Changes Between Rounds 1 and 2*.
- Starting in Round 2, two conventions were introduced on the OP file. Variable labels that include “**Update and new**” in the OP file combine information from prior rounds with new information from the current round. For example, current spouse or partner’s age is brought forward and updated and new information included if there is a new spouse or partner since last round. Variable labels in the OP file that include “**When Added**” carry forward information from the round when a person was first added. For example, children’s education is not updated every round but is brought forward from the round when the child was first identified.

Item-level missing data codes

The following codes were used at the item level for missing data of different types:

- 7 = Refusal
- 8 = Don’t Know
- 1 = Inapplicable
- 9 = Not Ascertained

Global missing data codes using residential status

Residential status determined whether SP and FQ interviews were to be administered. Below is a chart summarizing the missing values assigned to all items in the SP or FQ interview when one or the other component was missing. Residential care refers to all residential care settings other than nursing homes.

Round 1: -1 = inapplicable; -9 = not ascertained

Residential status based on r1dresid	Interview assigned	SP interview missing	FQ interview missing
1 community: SP interview complete	SP only	--	-1
2 residential care: SP interview complete	SP and FQ	--	-9 ¹
3 residential care: FQ interview complete	SP and FQ	-9	--
4 nursing home: FQ interview complete	FQ only	-1	--

¹For subset of cases with no FQ interview

Round 2 and Subsequent Rounds: -1 = inapplicable; -9 = not ascertained

Residential status based on r#dresid	Interview assigned	SP interview missing	FQ interview missing	LML interview missing
1 community: SP interview complete	SP only	---	-1	-1
2 residential care: SP interview complete	SP and FQ	---	-9 ¹	-1
3 residential care: FQ interview only	SP and FQ	-9	---	-1
4 nursing home: SP interview complete	SP and FQ	---	-9 ¹	-1
5 nursing home: FQ interview only	SP and FQ	-9	---	-1
6 deceased	LML	-1	-1	---
7 Round 1 residential care: FQ interview only	FQ	-9	---	-1
8 Round 1 nursing home: FQ interview only	FQ	-1	---	-1

¹For subset of cases with no FQ interview.

Missing data in Last Month of Life Interview

For the PD and LM sections, persons who are alive will have values of -1 (inapplicable) for all items since these are administered only to respondents for the Last Month of Life interview.

In Rounds 2 and 3, persons who were never alert in the last month of life (fl3notalert = 1 flag set from PD6) were not administered the following sections in the LML interview: CP, MO, DM, SC, DS, PA. Persons who never got out of bed in the last month of life (fl3notmobile = 1 flag set from PD7) were not administered the following sections in the LML interview: MD, CP, MO, DM.

Missing data for performance activities (AB Section)

The physical activities section of the interview (AB) was administered using the Activities Performance Booklet and is a paper-and-pencil instrument.

Round 1 item-level:

-1 for nursing home residents

-9 for all other missing

Round 2 and subsequent round item-level:

-1 for nursing home residents in Round 1; deceased cases; and persons excluded from doing a test (balance, chair stands, walking, or grip strength) for health reasons or because they were unable to complete a prior test (e.g. missing on repeated chair stands because unable to complete single chair stand)
-9 for all other missing

An item may be coded -9 for several reasons including: ; the SP interview was missing (r#dresid = 3 or 5 or 7) or the interview broke-off prior to the AB Section; an interviewer failed to record information even though the sample person was eligible for the test.

Derived variables for test administration may be used to distinguish types of missing:

1 = eligible and recorded result;

2 = eligible and no recorded result;

3 = not administered because unable to complete prior test;

4 = not eligible due to exclusion for health reasons;

-1 other missing due to no SP interview (r#dresid = 3 or 5 or 7 will be -9 on individual items; r#dresid = 6 or 8 will be -1 on individual items)

Missing data for interviewer-observed conditions of the home and area (IR Section)

Interviewers completed questions in the IR Section about the condition of the SP's home and residential area. In cases where these questions were not answered by the interviewer a "-9" has been assigned. A code of -1 (inapplicable) was used for legitimate skips (e.g. SP interview not assigned; interview was not conducted in SP's home or the interviewer did not enter the SP's home, so questions on conditions inside the home were not answered).

III.F. Flag Variables in the SP and OP files

Some questions in the NHATS interview resulted in the setting of flag variables that prompted both routing and screen displays (e.g. question wording). *Appendix II. Flag Variable Specifications Round 1* and *Appendix III. Flag Variable Specifications Rounds 2 & 3* provide a summary of flag variables in the SP and OP files, including where the flag was set, where the flag was used to route a respondent through questions, and where it was used to determine question wording.

In the SP file, the flag variable names all begin with the "fl" prefix and most, but not all, flag variables in the SP file are dichotomous. That is, response codes are either "1", indicating the flag is turned on or a "-1" indicating it is not (in a small number of cases flags take on values of 2 or 3). Flag variables appear in the file in the section where they are created.

In the OP file the flag variables, like all variables in this file, begin with OP. For flags generated in a specific section, the section is indicated in the variable label. Most flag variables in the OP file are dichotomous ("1" yes or a "-1" missing). The flag variables in the OP file are described in *Section III.B. The Other Person File*.

The flag variables (fl#blind; fl#deaf) were used through Round 3 in the SS and DT sections for routing. These are cumulative (information from current and prior rounds). See *Appendix III Flag Variable Specifications for Rounds 2 & 3* for additional details.

Flag variables that indicate cross-round information was used to correct selected OP file variables (relationship to SP, age, gender) are described in Section III.J. *Derived Variables*.

III.G. “Other specify” Fields in the Instrument

Verbatim text from “other specify” fields are not released in the public use files. These data were used in two ways, starting in Round 1 and in later rounds.

- “Other specify” fields were reviewed and upcoded into pre-coded response categories when appropriate. Upcoding was not done, however, in instances where it would change a routing sequence. For example, no upcoding was done for RE1 since physical structure of an SP’s home was used to route SPs through subsequent questions. Persons who were coded 91 (other) in RE1 and asked to specify the type of structure in RE1a followed the same routing sequence as persons coded as living in a multi-unit building.
- Two derived variables were created from coding FQ6a and FQ10a. These variables, coded from other specify fields in the FQ, were used along with FQ6 and FQ10 to create a variable that indicates where in a facility the SP lived. This variable is used in nonresponse adjustment of the analytic (and replicate) weight(s) on the SP file (see Montaquila, Freedman, Spillman and Kasper, 2012, 2014a, 2014b for details). All variables are included on the SP file.
- In a very limited number of cases in Round 1, “other specify” fields were used to add response codes to variables when a response occurred with enough frequency (and these added response codes are incorporated in later round instruments). In these cases, the variables developed from the “other specify” fields are shown on the instrument. For example, in Round 1 MC15 asks about transportation to SP’s regular doctor. Variables for walking, and home visit, were created from upcoding MC15a, other specify for how got to doctor. These response options were added to the instrument starting in Round 2.

III.H. Data for Proxy Respondents

How Proxy Respondents were selected

A proxy respondent was used when an SP was unable to serve as a respondent. (All Last Month of Life interviews were conducted with a proxy respondent). Interviewers were instructed that the best proxy was someone who lives with the SP and is familiar with their daily routine. In residential care, a facility staff person may serve as a proxy respondent.

Data Collected from Proxy Respondents

In the SP interview, proxy respondents were asked all sections except Social Network and Well Being. The Cognition for Proxies section (CP) was administered to proxy respondents only. Even when a proxy interview was conducted, if the proxy agreed, the SP was asked the Cognition section. Similarly sample persons with a proxy respondent were invited to participate in the performance activities for which he/she was eligible.

Data for Proxy Respondents

The IS section indicates whether a proxy respondent was used and the reasons. A question at the end of this section asks how familiar the proxy respondent is with the SP's daily routine. Variables from these items are on the SP file.

Variables indicating the proxy's gender, relationship to the SP, and whether he/she lives with the SP are on both the SP and the OP file. Starting in Round 2, age was also obtained.

The table below shows for proxy respondents: the information obtained, the variable name on the SP and OP file when applicable, and the item that is the source for the variable.

Type of information	SP file variable	OP file variable	Item
Proxy respondent used	is#resptype	op#proxy	IS2
Reason for proxy respondent	is#reasnprx1 is#reasnprx2 is#reasnprx3 is#reasnprx4 is#reasnprx5 is#reasnprx6 is#reasnprx7 is#reasnprx9	NA NA NA NA NA NA NA NA	IS2A
Proxy relationship to SP	is#prxyrelat	op#relatnshp	IS9
Proxy gender	is#prxygendr	op#gender	IS10
Proxy familiarity with SP's daily routine	is#famrrutin	NA	IS11
Proxy lives with SP	hh#proxlivsp	op#prsninhh	HH13a
ID of person on OP file who was proxy respondent	is#dproxyid	NA	Derived
Age of Proxy (beginning in Round 2)	Sensitive File	op#dage	Derived

The derived variable “is#dproxyid” on the SP file gives the 3 digit ID of the OP record that belongs to the person who served as a proxy respondent (and has a missing value otherwise). For example, for an SP with 2 adult children, there will be an OP record for each child. Child 1 might have an opid = 001 and Child 2 might have opid = 002. If Child 2 was the proxy respondent, then is1proxyid=002 indicating that the information about the proxy respondent can be found in the OP record with opid = 002 (Child 2).

Last Month of Life Proxies

For respondents who died between rounds, proxy respondents, typically a family member, provide answers to the Last Month of Life interview. For persons in a residential care setting (including nursing homes) a facility staff member may serve as the LML respondent.

III.I. Spouse/Partner Information

Information on the SP’s spouse/partner is provided in both the SP file and the OP file. Some variables are only available on the sensitive files (e.g. month marriage ended, month and year of birth and age in single years). The tables on the following pages summarize key information available for Rounds 1 and 2. Here we provide a brief description.

In Round 1, all information pertains to the current spouse or partner. Users can find marital status, spouse id, gender, age in categories, education, whether the spouse/partner needs personal care, and information about where the spouse/partner lives on the SP public use file. Month and year of birth and age are found on the SP sensitive demographic file. On the OP file, the spouse/partner can be identified by the spouse/partner relationship indicator and the more general variable indicating type of relationship to SP. Spouse/partner’s gender, categorical age, and whether in the SP’s household are on the public file, whereas month and year of birth and age in single years are on the OP sensitive demographic file.

Round 1 Spouse/Partner information	SP file variable	OP file variable	Item(s)
Marital status	hh1martlstat	--	HH1
ID	hh1dspouseid	opid	--
Relationship is Spouse/Partner	--	op1spouprtnr	HH4A1
Relationship to SP	--	op1relatnshp	HH4A1
Gender	hh1spgender	op1gender	HH5
Month of Birth	hh1modob (s)	op1birthmo (s)	HH6A
Year of Birth	hh1yrdob (s)	op1birthyr (s)	HH6C
Age Category	hh1dspouage	op1dage	HH7, HH8
Age in Single Years	hh1dspousage (s)	op1age (s)	HH7, HH8
Education level	hh1spouseduc	op1eduspo ¹	HH9
Needs Personal Care	hh1spoupchlp	--	HH10
SP Lives with Spouse/Partner	hh1livwthspo	op1prsninhh	HH11
Kind of Place Spouse/Partner Lives	hh1placekind	--	HH12
SP Living Arrangement (incl. w, w/o spouse)	hh1dlvngarrg	--	Derived

s=available on sensitive file

¹ op1leveledu also includes information on spouse/partner’s education level

Starting in Round 2, some information pertains only to a new spouse/partner since the prior round; other variables include information on the current spouse (either from a prior round or new this round). For many of the variables, the SP file contains information for just the new spouse whereas the OP file often combines information across rounds so that continuing and new spouses are both represented. If information on the current spouse is updated, the label will read “Update and New” (e.g. age); if the information is simply carried forward it will read “When Added” (e.g. education).

In addition, the SP file has for current spouse/partner variables reflecting age, whether the spouse/partner needs personal care, whether the SP lives with the spouse/partner, and if not the kind of place the spouse/partner lives. An additional derived variable captures the SP’s living arrangement and includes categories that reflect whether the SP lives only with his/her spouse/partner vs. with a spouse/partner and others.

Starting in Round 2, indicators have been added to the OP file if a spouse/partner from the previous round died (op2dspoudec). Alternatively, analysts may use op#relatnshp and select on relationship 41 ‘deceased spouse’. This information is also included in op#ddeceased, which identifies deceased spouses/partners, children, and household members.

The table below shows spouse/partner information, SP and OP file variables, and interview items that are the source for these, using Round 2 as an example. Round 3 is the same, with the substitution of “3” for “2” in the variable names.

Round 2 Spouse/Partner information	SP file variable	OP file variable	Item(s)
Marital status indicators			
Marital status changed	hh2marchange	--	HH1A
Spouse from R1 (R2) deceased in R2 (R3)	--	op2dspoudec ¹	HH1A
Status if changed	hh2martlstat	--	HH1
Month changed	hh2mthendmar (s)	--	HH2A
Year changed	hh2yrendmar	--	HH2C
Current Status	hh2dmarstat	--	HH1, HH1A
New Spouse/Partner Only			
Spouse/partner different	hh2newspoprt	op2nwspouprt	HH4A
Month of birth	hh2modob (s)	--	HH6A
Year of birth	hh2yrdob (s)	--	HH6C
Age in Single Years	hh2dspousage (s)	--	HH7, HH8
Age Category	hh2dspouage	--	HH7, HH8
Gender	hh2spgender	--	HH5
Education	hh2spouseduc	--	HH9
Current Spouse/Partner (including “Update and New” or “When Added” variables)			
ID	hh2dspouseid	opid	--
Relationship is Spouse/Partner	--	op2spouptrnr	HH4A1
Relations to SP	--	op2relatnshp	HH4A1
Gender	--	op2dgender	HH5

Month of Birth	--	op2birthmo (s)	HH6A
Year of Birth	--	op2birthyr (s)	HH6C
Age in Single Years	--	op2age (s)	HH7, HH8
Age Category	hh2dspageall	op2dage	HH7, HH8
Education Level	--	op2eduspo ²	HH9
Needs Personal Care	hh2spoupchlp	--	HH10
SP Lives with Spouse/Partner	hh2livwthspo	op2prsninh	HH11
Kind of Place Spouse/Partner Lives	hh2placekind	--	HH12
SP Living Arrangement	hh2dlvngarrg	--	Derived
Reason R1 Spouse/Partner Gone	--	op2reasgone	HH13E

¹op2relatnshp =41 spouse from prior round deceased and op2ddeceased also include this information.

² op2leveledu also include information on spouse/partner's education level.

s=available on sensitive file

III.J. Derived Variables

Overview

Over one hundred derived variables have been created to facilitate analyses of NHATS data. Principles for creating derived variables included:

- complex skip patterns
- calculation of scores
- SP file variables that combine information from prior and current round (if, for example, the SP moved or had a change in marital status)
- OP file variables that reflect earlier information (such as education, denoted by “when added” in the label) or combine information from prior and current round (such as selected spouse characteristics, denoted by “updated and new” in the label)

The table below provides a brief description of derived variables that appear in all Rounds, and derived variables introduced in Round 2. For a complete list of all derived variables, including variable names, labels, items used in development, and values see *Appendix IV. Derived Variable Specifications Round 1* and *Appendix V: Derived Variable Specifications Rounds 2 & 3*. Following the table, we include more detailed information about selected derived variables.

Section	Rounds 1, 2 & 3 Derived Variables	In Rounds 2 & 3
Residence (RE) and Housing Type (HT)	residential status; location of SP who is in residential care; age category at interview; census division	whether LML interview conducted; residence prior to death; Round 2 corrected move indicator ¹ ; current physical structure of residence; current building has more than one floor
Place of Death (PD)	--	categorical age at death
Household (HH)	living arrangement (alone, with spouse only, with others); counts of people and children in the household; categorical age of current spouse/partner ² ; categorical age of other persons (spouse/hh/child)	current marital status; categorical age of new spouse/partner
Children and Siblings (CS)	counts of children, step children, daughters and sons; reconciliation of CS1 and child records on OP file (Round 1 only)	

Social Network (SN)	count of the number in the social network; indicator of likely social network member ³ ; categorical age for social network member (Round 1 only) ⁴	
Home Environment (HO)		combines prior and current round information on building features (elevator, stair lift, common space for meals, common space for social events), residential care features (private bath private, private kitchen, common kitchen).
Cognition (CG)	random word list assignment; immediate and delayed recall scores, none, refused; indicators of whether each word remembered (immediate and delayed); score for the clock drawing test	Indicator of dementia reported in any prior round; computerized Stroop test variables: mean Stroop effect, ratio Stroop effect, and accuracy category (Round 2 only for Stroop variables)
Mobility (MO)	for each mobility activity (going outside, getting around inside, and getting out of bed): difficulty doing the activity by self, whether devices used, whether help received	
Duration of Mobility Accommodations (DM)	mobility help and device use in last year, months since mobility help and device use started and/or ended, help and device use in the last year (Round 1 only);	no. months between last interview and current interview or date of death; months of mobility help and device use between last interview and current interview or date of death; variable indicating whether started, stopped, between or gap; variable indicating special routing through DM(Round 2; Round 3 final)
Household Activities (HA)	for each activity (laundry, shopping, preparing hot meals, and handling bills and banking): level of difficulty by oneself and reason help is received (health/functioning reason, other reason, both); indicators of meals on wheels and takeout	
Self Care (SC)	for each activity (eating, washing up, dressing, toileting): whether devices used, whether help received, difficulty doing the activity by self	
Duration of Self Care Accommodations (SC)	Self-care help in last year, months since self-care started and/or ended, help in the last year (Round 1 only);	months of self-care help between last interview and current interview or date of death; variable indicating whether started, stopped, between or gap; variable indicating special routing through DS (Round 2; Round 3 final)
Medical Care Activities (MC)	for managing medications: level of difficulty by oneself and reason help is received (health/functioning reason, other reason, both)	
Participation (PA)	favorite activity ⁴	
Early Life (EL)	if immigrated, age came to US; whether lives in same city and state as when age 15 (Round 1 only)	
Race, Ethnicity, Language (RL)	race and Hispanic ethnicity (Round 1 only)	
Labor Force (LF)	longest occupation (Round 1 only)	current occupation
Helpers (HL)	hours of help per month ⁵	
Physical Activities Booklet (AB)	indicators of administration status (eligible and recorded result, eligible and no recorded result, not administered because did not complete prior test, not eligible) for each of the activities; summary scores for each activity; NHATS Expanded and Original SPPB; average and best scores for walking speed, grip strength and peak air flow ⁶	
Facility Questionnaire (FQ)	variables from other specify fields for type of place and SP's level of care; variable used in nonresponse adjustment for analytic weight	

Additional OP Variables	Indicators of potential problem cases: no flags set, section where person added, probable duplicate and duplicate id	Indicators of edits that correct relationship to SP, gender, and age group
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¹In Round 2, 44 cases that moved but who were not flagged on fl2resnew as having a new address (and therefore not routed correctly) are corrected in re2dadrscorr (R2 Derived Variable); note these cases are incorrectly coded in re2spadrsnew.

²In Round 1 this variable is called hh1dspouage and starting in Round 2 hh2dspageall.

³Individuals added at SN but who did not have the social network flag checked are designated as likely social network members.

⁴An additional code was added to the Round 2 variable to separate out other physical activities from other leisure activities; see Round 1 derived variable table for guidance on making Rounds 1 and later rounds comparable.

⁵See Freedman, Spillman, and Kasper (2014) for guidance on how to make missing value indicators comparable for Rounds 1 and later rounds.

⁶See Kasper, Freedman, and Niefeld (2012) for details.

Derived Variables on the SP File that Address Minor Corrections and Cross-Round Issues

Corrected Residence Change. A small number of cases in Round 2 (n=44) should have been coded as having changed residence but were not. The variables re2spadrsnew reflects how the variable was coded in the interview, as does the flag variable fl2resnew, which was used when residence change affected skip patterns. A corrected variable re2dadrscorr also has been created, which uses corrected values for these 44 cases (indicating they changed residence) and retains original values for all others.

Duration of Mobility Help, Device Use (DM) and Duration of Self Care Help (DS). Derived variables were developed in Round 1 from these sections (*see Appendix IV. Derived Variable Specifications for Round 1*) to reflect any help/use in the last year, months if started in the last year, months if ended in the last year, and years if longer than 1 year. (One recommended change to coding for the “months if ended” variable is provided).

Starting in Round 2, two variables are created that reflect: 1) whether since the last interview help/use started, ended, was in place at both interviews with a gap in between, was in place at both interviews with no gaps, was not in place at either interview but occurred in between, and a small number of cases with varying missing information, 2) months of help/use. The interval between interviews (or last interview and death) is reflected in dm#dintvl. Cases that routed through these sections in nonstandard ways (e.g. those who died and were not alert or awake in the last month of life) are identified in dm#flag and ds#flag.

Favorite Activity Correction. Starting in Round 2, the SP file has a recoded version of favorite activity (pa1dv2favact), which brings forward information collected in Round 1. A new value of 715 “other physical activity (exercise, yoga, working out, swimming, dancing)” was added at Round 2. For guidance on how to code consistently across Rounds, see pa1dfavact in *Appendix IV. Derived Variable Specifications Round 1*.

Changes in Missing Values for Hours of Care. Missing data codes for the derived hours variable differ in Round 1 and later rounds. In Round 1, NHATS provided 3 missing value codes (-11, -10, and -9). A value of -11 indicated valid days but missing hours; -10 valid hours but missing days; and -9 missing both days and hours. A value of 9999 (not coded because < 1 hour/day),

indicated that the number of hours per day reported was 0, a value used to indicate that the helper provided less than 1 hour of care. Starting in Round 2, two new missing value codes were introduced: -13 is assigned to OP records in cases where the SP was deceased and the Helper section was not administered, and -12 indicates that the SP reported zero days (per week or per month) for a given helper. Missing codes -9 (missing both days and hours) and -11 (valid days but missing hours) continue to be available, but -10 is no longer a valid code because if days are missing, hours are not asked. See Freedman, Spillman, and Kasper (2014) for guidance on how to make missing value indicators comparable for Rounds 1 and later rounds.

Physical structure of residence and building amenities. Physical Structure of a person's residence is obtained in RE8 and creates a STRUCTURE flag (1=free standing or attached house; 2 = multi-unit building; 3 = other (including mobile home)) that is used in routing in HT and HO (see Appendix II Flag Variable Specifications). In all Rounds, interviewers were instructed to code physical structure based on observation. In Rounds 2 and forward, however, interviewers were explicitly instructed to ask the respondent about the structure of SP's home if the interview did not take place at the SP's residence. In Rounds 2 and forward, structure was updated if the SP had moved since the last interview. Otherwise the last interview values for physical structure and the STRUCTURE flag were retained.⁵

Derived Variables on the OP File that Address Minor Corrections

Child added after Round 1: SPs were asked to provide information on all children at Round 1. Rarely in subsequent rounds, interviewers identified children not originally listed in Round 1. In these cases, children were considered added after Round 1 and therefore detailed information was not collected for them. The round a child was added is identified by op3childedit.

OP records identifying possible social network members: Persons who were entered on the roster at the SN section but were not flagged as social network members are identified by op#dsocwrkfl.

OP records with no flags set: op#dfmiss identifies records on the OP file that have no flags set (including no flag at op1dsocwrkfl). op#missadd indicates the section where the person identified in op1dfmiss was added. The largest number of records that have no flag were added at the Driving and Transportation section (DT) and the Closing (CL) section of the interview. In the DT section, interviewers were allowed to select only 2 persons who drove the SP but may have entered more than two. These extra persons could not be selected, and as a result have no flag for helping with driving, but generated an OP record nonetheless. Some persons with no flags were entered in the Closing section as a contact who would know the location of the SP in the future but had no other role.

⁵ In addition, in Rounds 2-4 if the SP had not moved but the last interview was not at his/her place of residence, structure was updated. In Round 2, the structure flag value changed for 71 people in this situation. However, for these 71 cases, the derived variable re2dresistrct was incorrectly coded and for a small subset of cases derived variables re2dbldg and ho2dbldg1-ho2dbldg4 (building amenities) were not correctly coded. See Appendix V: *Derived Variable Specifications Rounds 2 & 3* for details. These errors were corrected in Round 3.

OP records that are likely duplicates or are not the same person: Records that are likely duplicates are identified by op#dprobdup. Values of the variable op#ddupeid identify duplicates; e.g. if case 100 and 103 are duplicates case 100 will have a value of 103, and case 103 will have a value of 100. All other cases are assigned -1. In a small number of cases, a R1 and R2 (or R1 and R3) person with the same opid are likely not the same person, these are identified by op#ddiffop.

OP records that have been corrected: Relationship to SP, gender, and age group have been corrected from round to round in a few cases using information from across rounds. Three flags identifying corrections (1 = corrected; -1= not applicable) have been created: op#drelatfl, op#dgenderfl, and op#dagefl. For corrected cases, the Round 1 and later round information will differ, but the later round variables, which include the corrected information, are recommended.

Derived Variables for Physical Performance and Cognitive Activities

Performance Activities Derived Variables. Measures of administration status (eligible and recorded result, eligible and no recorded result, not administered because did not complete prior test, not eligible) have been constructed for balance stands, walking, single and repeated chair stands, grip strength, peak air flow. Summary scores for each performance activity, and two versions of the SPPB (NHATS Expanded SPPB and Original) also have been constructed for analysts. See Kasper, Freedman, and Niefeld (2012) for more information.

10 item word recall (immediate and delayed). Scores have been created for both the 10 item immediate and delayed word recall batteries: cg#dwrddimrc R# D SCORE IMMEDIATE WORD RECALL and cg#dwrddlyrc R# D SCORE DELAYED WORD RECALL.

Variables from items CG8 (cg#wrdsrca1 through cg#wrdsrca10) and CG15 (cg#wrdsdca1 through cg#wrdsdca10) reflect the number of people who recalled at least 1 word, at least 2 words, etc. up to 10 words by the word recalled (word 1, 2, 3, etc.). For example, cg1wrdsrca9 (variable that reflects results for persons who remembered at least 9 words on immediate word recall) can be interpreted as: among those who recalled 9 words, 2 recalled the 1st word, 4 recalled the 4th word etc.

Word[1]	2
Word[4]	4
Word[5]	7
Word[6]	5
Word[7]	6
Word[8]	2
Word[9]	7
Word[10]	9

A set of derived variables—cg#dwr1rcl through cg#dwr10rcl (immediate word recall) and cg1dwr1dly through cg1dwr10dly (delayed word recall)—reflects the number of people who recalled the 1st word in the list, the number who recalled the 2nd word in the list, etc.

Stroop Test Variables. A computerized version of the Stroop Test was administered in Round 2 to SPs who had a completed SP interview and were able to do the short practice for the Stroop. The computerized Stroop test consisted of two trials: an easy trial which called for identifying the color of the symbol X and a hard trial which required identifying the color of words that named colors. Each condition was shown to the SP 30 times.

Three variables are provided for the Stroop: an accuracy group indicator, an individual-level mean Stroop effect (for those meeting accuracy criteria), and an individual-level ratio Stroop effect (for those meeting accuracy criteria).

Accuracy group - r2stroopgrp - was assigned as follows:

- 1 = did not meet accuracy criteria to calculate Stroop effect variables
- 2 = met accuracy criteria for X condition but not for word color condition
- 3 = met accuracy criteria to calculate Stroop effect variables (average accuracy across X condition \geq .42 and average accuracy across word color condition \geq .42)
- 4 = fewer than 50% of trials were completed for condition 1 or 2
- 999 = did not meet accuracy criteria for X condition but did for word color condition

For SPs who were in accuracy group 3, the two Stroop effect variables are provided: (1) Mean Stroop effect (r2stroopmean) which is calculated as the difference between an individual's mean reaction time for all accurate word color condition trials and the mean reaction time for all accurate X condition trials, expressed in milliseconds (e.g. 1500 = 1.5 seconds). (2) Ratio Stroop effect (r2strooprati) which is the individual's mean Stroop effect divided by the mean reaction time for all accurate X condition trials.

III.K. Scoring Methodology for Clock Drawing Test

Scoring guidelines for the clock drawing test were reproduced for use in NHATS by special permission of the Publisher, Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida 33549, from the Calibrated Neuropsychological Normative System, by David J. Schretlen, PhD, S. Marc Test, PhD, and Godfrey D. Pearlson, MD, Copyright 2010 by Psychological Assessment Resources, Inc. Scoring guidelines used by coders consisted of both verbal instructions and illustrative images of clocks.

Clocks were scored on a scale from 0, not recognizable as a clock, to 5, an accurate depiction of a clock. Criteria for scores included:

- 5 (accurate depiction)—numbers in correct quadrants; hands pointing to the numbers 11 and 2; minute hand longer than the hour hand.
- 4 (reasonably accurate depiction)—numbers in roughly correct quadrants; hands reasonably close to the numbers 11 and 2; hands could be of equal length or the minute

hand could be shorter than the hour hand; numbers may be outside the perimeter of the clock face.

- 3 (mildly distorted depiction)—some numbers may be missing or disoriented; there may be a few extra numbers. Hands may be incorrectly drawn or pointing to wrong number combinations; a hand may be missing.
- 2 (moderately distorted depiction)—several numbers are missing, repeated, or drawn in reverse order; there were more than two hands or no hands.
- 1 (severely distorted depiction)—viewer might be able to tell that the drawing was a clock but could not tell the time shown.
- 0 (not recognizable as a clock)—viewer would not be able to tell drawing was supposed to be a clock.

Clocks were scanned into an online database for coding. If a participant drew more than one clock, coders were instructed to score the best of the clocks drawn. If participants clearly marked out something they had drawn, like an extra hand, coders were instructed to score as if two hands had been drawn not three. Clocks that were difficult to read such as clocks missing a part of the outside or a clock that was too small to see were scored by what could be read by the coder. Coders scored the clarity of the clock image (variable name=cg#dclkingcl) in addition to scoring the clock (variable name=cg#dclkdraw).

Clock Coder Training and Selection of Coders

Training

Training consisted of a presentation that covered: how the clock drawing test was administered in NHATS, review of the 3-page scoring guide which provided both verbal descriptions of coding criteria and clock images corresponding to each score, and a review of 20-25 clocks and discussion of coding. A neuropsychologist was consulted in the development of the training.

Assessing reliability of lay coders against clinically trained coders

Two neuropsychology fellows and 2 lay coders were trained for purposes of evaluating the use of lay coders to code the NHATS sample participant clocks. Following training, each coder was given 220 clock drawings from the NHATS Validation Study conducted in the Spring of 2010. The sample consisted of persons in the community and residential care other than nursing homes; it also included persons receiving help with activities of daily living (see Freedman et al. 2011 for a description of the sample). Clocks from both an initial interview and a re-interview for 111 people were used in training (220 in all; one person had only 1 clock).

The neuropsychology coders were considered the gold standard given their clinical background in cognitive assessment including administering and evaluating clock drawings. The weighted Kappa to assess inter-rater reliability between the two neuropsychology coders was .81. A Kappa for scores of 4 or 5 versus scores of 0 to 3 for the two neuropsychology coders was .93. Weighted kappas between each of the two lay coders against each neuropsychology coder (4 comparisons) ranged from .78 to .80; the kappa for scores of 4 or 5 versus scores of 0 to 3 ranged from .85 to .93. The high level of agreement between the lay and neuropsychology

coders indicated that with training lay coders could accurately implement the scoring system used for NHATS.

Criteria for selecting coders and inter-rater reliability

Prior to Round 1 coding, 6 persons were trained and completed coding of the 220 NHATS validation study clocks. Inter-rater reliability for each coder was assessed against the two neuropsychology coders and only those with a kappa of .77 or higher were selected to code Round 1 clocks, 3 persons in all. In Round 2, 4 persons (3 of whom coded in Round 1) received a refreshment training and coded clocks. They again coded the validation study clocks and inter-rater reliability for each coder was assessed against the neuropsychology coders. All 4 coders achieved kappa of .70 or higher in Round 2. Three coders participated in Round 3, and all had kappas of .75 or higher.

III.L. Income Imputations

On the Round 1 SP file, five imputed values of total annual income are provided (ia1toincim1 - 5). The values reflect either individual income or income for couples for those currently married or living with a partner. The imputed values for these two situations are provided as well.

The imputations were created using a hot-deck imputation process that preserved the joint distribution of the full set of income components (including source indicators (yes/no) and source amounts for respondent and spouse/partner). A cyclical n-partition hot deck was used (see Judkins 1997). The program samples donors (within hot deck cells) without replacement (with a limit on each donor being used no more than 3 times).

The total income range variable was imputed for 31% of the sample and was used to bound the imputation of the total income amount (imputed for 44%; 13% within reported bracketed value and 31% within imputed bracketed value), so that the imputed value would be consistent with the range. Data users who wish to distinguish actual (reported) values from imputed values, may use the appropriate imputation flag (indicated with `_f` at the end of the imputation variable), which is set to 1 for imputed values and 0 otherwise.

Although income sources and component amounts were included in the imputation for total income, we did not attempt to reconcile the total amounts with the component amounts reported from separate sources.

For further details on the Round 1 income imputation see Montaquila, Freedman, and Kasper (2012).

Income information was not collected in Round 2. In Round 3, sources of income and total annual income were collected (as in Round 1) and imputed values of total income are provided. For details on Round 3 income imputations see Montaquila, Freedman, and Kasper (2015).

IV. NHATS Weights and Their Use

For each round of NHATS, two types of sampling weights have been produced: a tracker weight (on the Tracker file with the variable name w#trfinwgt0) and an analytic weight (on the Sample Person file with the variable name w#anfinwgt0). NHATS has also included replicate weights (w#trfinwgt1-w#trfinwgt56 on the tracker file and w#anfinwgt1- w#anfinwgt56 on the SP file). These survey weights account for differential probabilities of selection and adjust for potential bias related to unit nonresponse. Base weights that reflect only probabilities of selection at baseline (Round 1) also are provided on the tracker file.

Weights	Round 1 SP File	Round 1 Tracker File	Rounds 2 & 3 SP File	Rounds 2 & 3 Tracker file
Round 1:				
Analytic	√			
Tracker		√		√
Replicate	√	√		√
Base		√		√
Round 2 & 3:				
Analytic			√	
Tracker				√
Replicate			√	√

The methodology to develop these weights is described in Montaquila, Freedman, Spillman, and Kasper (2012 for Round 1; 2014a and b for Rounds 2 & 3). The remainder of this section provides guidance on the use of each of these weights.

Difference between Tracker and Analytic Weights. When using the tracker weight, respondents are weighted up to represent all Medicare beneficiaries ages 65 and older who were alive on September 30, 2010 and residing in the contiguous United States. In contrast, the analytic weight reproduces only those alive and eligible for NHATS during the fieldwork period, which began May 2011.

The only other difference between the two sets of weights is the treatment of respondents who are eligible for both an SP and FQ interview. Among this group, cases missing an SP interview (in Round 1 if r1dresid = 3; starting in Round 2 if r2dresid = 3, 5, or 7) have a positive tracker weight but an analytic weight of zero. The analytic weights of individuals who completed both an SP and FQ interview are adjusted to represent these cases (for details see Montaquila, Freedman, Spillman and Kasper 2012; 2014a; 2014b). For all other respondents the analytic and tracker weights are equal.

Most often analyses will use the analytic weight. The tracker weight is appropriate for making national estimates using the Facility Questionnaire information (e.g. for services available to older adults living in residential care settings) and for investigating the role of mortality on Round 1 disability estimates and successive cross-sections.

Another important consideration is whether to use a Round 1 or later Round weight. A useful rule of thumb is to always consider the population to which an estimate is being generalized. To estimate, for example, the proportion of the population in Round 1 who has a particular characteristic in Round 2 or later (measured in the SP interview) or who were in a particular type of residential care in Round 2 or later (measured in the FQ interview), a Round 1 weight should be used. The former would use the Round 1 analytic weight and the latter the Round 1 tracker weight. To estimate characteristics of people 66 and older in 2012 (or 67 and older in 2013), or the characteristics of those living in residential care settings at a given round as measured in the FQ interview, the weight for that round should be used. The former estimate would use the analytic weight for that round and the latter the tracker weight for that round.

Modules. Since sample persons are assigned to a module at random, all approaches to using weights are the same for the subset of individuals with a given module. Weighted estimates (e.g. percentages) are applicable to the total population although weighted N's will no longer reflect the total population.

Computation of sampling errors. The NHATS public use files also include variables to allow proper computation of standard errors. Analysts may choose from Taylor series linearization and replication methods.

Analysts using Taylor series linearization should use the stratum and cluster variables (`w#varstrat` and `w#varunit`) provided on both the Tracker and SP files. We also recommend that analysts conducting subgroup analysis and adjusting for complex sample design use the `subpop` statement in Stata or the `DOMAIN` statement in SAS to subset.

For analysts using replication methods, we have included replicate tracker and analytic weights (`w#trfinwgt1-56` on the Tracker file and `w#anfinwgt1-56` on the SP file, respectively). The replicates were constructed using the modified balanced repeated replication (BRR) method suggested by Fay (Judkins 1990).

Nonresponse Adjustment variables. Variables created for nonresponse adjustment to weights are available as derived variables. For details see Montaquila, Freedman, Spillman, and Kasper, 2012 and 2014 (a and b).

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Appendix I. Relationship Codes by Other Person Type

RELATIONSHIP CODES		CODES AVAILABLE FOR PERSONS LISTED AS:						
		PROXY	HOUSEHOLD MEMBER	SOCIAL NETWORK MEMBER	CHILD NOT IN HOUSEHOLD	HELPER	PERSON SP CARES FOR	PERSON NAMED AS CONTACT FOR SP
2	SPOUSE/PARTNER	X	X	X		X	X	X
3	DAUGHTER	X	X	X	X	X	X	X
4	SON	X	X	X	X	X	X	X
5	DAUGHTER-IN-LAW	X	X	X		X	X	X
6	SON-IN-LAW	X	X	X		X	X	X
7	STEPDAUGHTER	X	X	X	X	X	X	X
8	STEPSON	X	X	X	X	X	X	X
9	SISTER	X	X	X		X	X	X
10	BROTHER	X	X	X		X	X	X
11	SISTER-IN-LAW	X	X	X		X	X	X
12	BROTHER-IN-LAW	X	X	X		X	X	X
13	MOTHER	X	X	X		X	X	X
14	STEPMOTHER	X	X	X		X	X	X
15	MOTHER-IN-LAW	X	X	X		X	X	X
16	FATHER	X	X	X		X	X	X
17	STEPFATHER	X	X	X		X	X	X
18	FATHER-IN-LAW	X	X	X		X	X	X
19	GRANDAUGHTER	X	X	X		X	X	X
20	GRANDSON	X	X	X		X	X	X
21	NIECE	X	X	X		X	X	X
22	NEPHEW	X	X	X		X	X	X
23	AUNT	X	X	X		X	X	X
24	UNCLE	X	X	X		X	X	X
25	COUSIN	X	X	X		X	X	X
26	STEPDAUGHTER'S SON/DAUGHTER	X	X	X		X	X	X
27	STEPSON'S SON/DAUGHTER	X	X	X		X	X	X
28	DAUGHTER-IN-LAW'S SON/DAUGHTER	X	X	X		X	X	X
29	SON-IN-LAWS SON/DAUGHER	X	X	X		X	X	X
30	BOARDER/RENTER	X	X	X		X	X	X
31	PAID AIDE/HOUSEKEEPER/EMPLOYEE	X	X	X		X		
32	ROOMMATE	X	X	X		X	X	X
33	EX-WIFE/EX-HUSBAND	X	X	X		X	X	X
34	BOYFRIEND/GIRLFRIEND	X	X	X		X	X	X
35	NEIGHBOR	X	X	X		X	X	X
36	FRIEND	X	X	X		X	X	X
37	SERVICE/SOMEONE FROM THE PLACE SP LIVES*	X		X				
38	CO-WORKER			X				
39	MINISTER, PRIEST, OR OTHER CLERGY			X				
40	PSYCHIATRIST, PSYCHOLOGIST, COUNSELOR, OR THERAPIST			X				
41	DECEASED SPOUSE/PARTNER**	X	X	X		X	X	
91	OTHER RELATIVE	X	X	X		X	X	X
92	OTHER NONRELATIVE	X	X	X		X	X	X

*If someone on the staff is named as a social network member that person is listed by name but will have a relationship code of 37.

**New code starting in Round 2.

Appendix II. Flag Variable Specifications Round 1

TABLE OF FLAG VARIABLES IN THE SP FILE			
Variable Name VARIABLE LABEL	WHERE FLAG IS SET	QUESTIONS WHERE FLAG PROMPTS ROUTING	QUESTIONS WHERE FLAG PROMPTS WORDING DISPLAY
RESIDENCE (RE)			
fl1structure R1 F RE STRUCTURE OF SP DWELLING	RE1	BOX HT5, BOX HO2, BOX HO4, BOX HO5, BOX MO11, BOX MO12	HO1PRE, TE8,MO1PRE, MO11PRE, MO13, MO14, MO15, MO16, MO17, MO18, MO19A, MO20, MO21, MO22, MO23, DM1, DM2, HA2
fl1bldgfl R1 F RE BLDG MORE THAN ONE FLOOR	RE2		
HOUSING TYPE (HT)			
fl1facility R1 F ROUTING FLAG FROM HT3 5 6 7	BOX HT3b, BOX HT8, End of FQ	BOX HT5, BOX HT8, BOX HT11, BOX SE1PRE, BOX HH13, BOX HO10, BOX HO12, BOX LF1, BOX LF13, BOX HP1, BOX EW15	HO11, MO6, MO6a, MO11, MO18, MO19A, MO25, MO25a, DT4, HA2, HA3A, HA23, HA25A, HA30B, HA32A, HA42A, HA51A, HA52A, SC3, SC3A, SC11, SC11A, SC17, SC17A, SC23, SC23A, MC5A, MC15, MC16, MC17A, MC22A
fl1hotype R1 F HT TYPE OF HOME	BOX HT11		HO10PRE, HO10
fl1retirecom R1 F HT SP LIVES IN RETIREMT COM	HT4	BOX HT5	MO6a, MO19a, MO25a, DT4, HA3A, HA23, HA25A, HA32A, HA42A, HA52A, SC3A, SC11A, SC17A, SC23A, MC5A, MC15, MC17A, MC22A
SOCIAL NETWORK (SN)			
fl1noonetalk R1 F SN SP HAS NO ONE TO TALK TO	SN2		
HOME ENVIRONMENT (HO)			
fl1onefloor R1 F HO SP LIVES ON ONE FLOOR	HO5		
fl1athgrbbr R1 F HO SPS BATH HAS GRAB BARS	HO11	BOX SC9	

fl1bathseat R1 F HO SPS BATH HAS SEAT	HO11	BOX SC10	
fl1raisedtl R1 F HO SP HAS RAISED TOILET	HO11		SC16
fl1tlgrbbr R1 F HO SP TOILET HAS GRAB BARS	HO11		SC16
MOBILITY DEVICES (MD)			
fl1cane R1 F MD SP USES CANE	MD2	BOX MO2, BOX MO13, BOX MO24, BOX DM4	PC1PRE, PC1, PC2, PC3, PC4, PC5, PC6, MO24, MO27, DM5, PE12
fl1walker R1 F MD SP USES WALKER	MD3	BOX MO3, BOX MO14, BOX MO24, BOX DM4	PC1PRE, PC1, PC2, PC5, PC6, MO24, MO27, DM5, PE12
fl1wheelchr R1 F MD SP USES WHEELCHAIR	MD4	BOX MO4, BOX DM4	DM5, DT4
fl1whlchrhom R1 F MD SP HAS WHEELCHR AT HOME	MD4a	BOX MO15	
fl1scooter R1 F MD SP USES SCOOTER	MD5	BOX MO5, BOX DM4	DM5, DT4
fl1scooterhm R1 F MD SP HAS SCOOTER AT HOME	MD5a	BOX MO16	
MOBILITY (MO)			
fl1didntleav R1 F MO SP DID NOT LEAVE HOME	MO1	BOX DT1, BOX DT3PRE	
fl1ntlvrmslp R1 F MO SP DID NOT LEAVE BEDROOM	MO12		
DRIVING AND TRANSPORTATION (DT)			
fl1drives R1 F DT SP DRIVES CAR	DT1	BOX DT3PRE, BOX PA3, BOX PA7, BOX PA11, BOX PA15	DT4
fl1drvlstyr R1 F DT SP DROVE CAR IN PAST YR	BOX DT3PRE		HA23, MC15
SELF CARE ACTIVITIES (SC)			
fl1showering R1 F SC SP USES SHOWER	SC7, SC8	BOX SC9, BOX SC10	SC9, SC10, SC11, SC11A, SC12, SC13, SC14, SC15
fl1takingbth R1 F SC SP TAKES BATHS	SC7, SC8	BOX SC9, BOX SC10	SC9, SC10, SC11, SC11A, SC12, SC13, SC14, SC15

fl1washingup R1 F SC SP WASHES OTHER WAY	SC7, SC8		SC11, SC11A, SC12, SC13, SC14, SC15
PERFORMANCE ACTIVITIES ELIGIBILITY (PE)			
fl1lefthand R1 F PE CAN SP DO LEFT HAND TEST	PE1		PE14
fl1righthand R1 F PE CAN SP DO RGT HAND TEST	PE1		PE14
fl1eiherhand R1 F PE CAN SP DO EITHR HAND TST	PE1		PE14
fl1lftgrptst R1 F PE CAN SP DO LFT GRIP TST	PE3, PE5, PE7		PE14
fl1rhtgrptst R1 F SC SP WASHES OTHER WAY	PE3, PE5, PE7		PE14
fl1charstnds R1 F PE CAN SP DO CHAIR STANDS	PE3, PE12	BOX PE12	PE14
fl1balstands R1 F PE CAN SP DO BALANCE STANDS	PE11		PE14
fl1wlkingrse R1 F PE CAN SP DO WALKING COURSE	BOX PE13, PE13		PE14
CAREGIVER CONTACT (CC) (NSOC ELIGIBILITY)*			
fl1nsoc* R1 F CC SP IS ELIGIBLE FOR NSOC	*The CC section of the instrument confirms eligibility for the National Study of Caregiving (NSOC), a follow-up telephone survey of family and other unpaid helpers to NHATS participants, and collects contact information for caregivers. Data on the SP are not obtained in this section and it is not included in the NHATS instrument sections provided. The 3 flag variables on the SP file indicate whether the SP was eligible for NSOC, how many helpers were eligible, and how many helpers the SP provided phone information for. In addition to the helpers that SP gave phone contact information for, tracing by other means yielded additional contact information.		
fl1nsoccnt* R1 F CC CNT HLPRS ELG FOR NSOC			
fl1cgphncnt* R1 F CC CNT HPRS SP GAVE PHNE			

TABLE OF FLAGS THAT GENERATE VARIABLES IN THE OP FILE			
Variable Name VARIABLE LABEL	WHERE FLAG IS SET	QUESTIONS WHERE FLAG PROMPTS ROUTING	QUESTIONS WHERE FLAG PROMPTS WORDING DISPLAY
HOUSEHOLD (HH)			
op1prsninhh R1 HH14 IN HOUSEHOLD	HH11, HH13a, HH14		HH13b, HH14
op1childinh R1 HH15 CHILD IN HOUSEHOLD	BOX CS2	BOX CS2	CS9
op1chnotinhh R1 CS2 CHILD NOT IN HOUSEHOLD	CS2PRE		CS9
SOCIAL NETWORK (SN)			
op1soclntwrk R1 SN2 PART OF SP SOCIAL NETWORK	SN2		
MOBILITY (MO)			
op1outhlp R1 MO6A HELPS SP GO OUTSIDE	MO6a	BOX HL1PRE	
op1insdhl R1 MO19A HELPS SP INSIDE HOUSE	MO19a	BOX HL1PRE	
op1bedhelp R1 MO25A HELPS SP OUT OF BED	MO25a	BOX HL1PRE	
DRIVING AND TRANSPORTATION (DT)			
op1tkplhlp1 R1 DT5A TAKES SP PLACES MOST	DT5a	BOX HL1PRE	DT7a
op1tlplhlp2 R1 DT7A TAKES SP PLACES OTH	DT7a	BOX HL1PRE	
HOUSEHOLD ACTIVITIES (HA)			
op1launhlp R1 HA3A HELPS SP WITH LAUNDRY	HA3a	BOX HA4, Box HA7, BOX HL1PRE	
op1shophlp R1 HA25A HELPS SP WITH SHOPPING	HA25a	BOX HA26, BOX HA29, BOX HL1PRE	
op1mealhlp R1 HA32A HELPS SP WITH MEALS	HA32a	BOX HA33, BOX HA36, BOX HL1PRE	
op1bankhlp R1 HA42A HELPS SP WITH BANKING	HA42a	BOX HA43, BOX HA46, BOX HL1PRE	
op1moneyhlp	HA52a	BOX HL1PRE	

R1 HA52A HELPS SP WITH MONEY			
op1eathlp R1 SC3A HELPS SP WITH EATING	SC3a	BOX HL1PRE	
op1bathhlp R1 SC11A HELPS SP WITH BATHING	SC11a	BOX HL1PRE	
op1toihlp R1 SC17A HELPS SP WITH TOILETING	SC17a	BOX HL1PRE	
op1dreshlp R1 SC23A HELPS SP WITH DRESSING	SC23a	BOX HL1PRE	
MEDICAL CARE (MC)			
op1medshlp R1 MC5A HELPS SP WITH MEDICINES	MC5a	BOX MC6, BOX MC9, BOX HL1PRE	
op1dochlp R1 MC17A SITS IN W SP AT DRS	MC17a	BOX HL1PRE	
op1dochlpmst R1 MC18 SITS MOST IF MORE THAN 1	BOX MC18, MC18		MC19
op1insurhlp R1 MC22A HELPS WITH INSUR DECIS	MC22a	BOX HL1PRE	
PARTICIPATION (PA)			
op1spcaredfr R1 PA22D SP CARED FOR PERSON	PA22d		
HELPER (HL)			
op1paidhelpr R1 HL5 HELPER IS PAID	HL5		
op1ishelper R1 BXHL1 HELPS SP	BOX HL1		
CLOSING (CL)			
op1contctflg R1 PERSON IS LISTED AS CONTACT	CL24		

Appendix III. Flag Variable Specifications Rounds 2 & 3

TABLE OF FLAG VARIABLES IN THE SP FILE			
Variable Name VARIABLE LABEL	WHERE FLAG IS SET	QUESTIONS WHERE FLAG PROMPTS ROUTING	QUESTIONS WHERE FLAG PROMPTS WORDING DISPLAY
RESIDENCE (RE)			
fl2structure R2 F RE STRUCTURE OF SP DWELLING fl3structure R3 F RE STRUCTURE OF SP DWELLING	RE1, RE8	BOX HT5, BOX HO2, BOX HO4, BOX HO5, BOX MO11, BOX MO12	HO1PRE, TE8, MO1PRE, MO11PRE, MO13, MO14, MO15, MO16, MO17, MO18, MO19A, MO20, MO21, MO22, MO23, DM1, DM2, HA2
fl2bldgfl R2 F RE BLDG MORE THAN ONE FLOOR Flag dropped in R3 (use RE2 instead)	RE2		
fl2resnew R2 F RE NEW ADDRESS FROM PRIOR ROUND In Round 2, 44 cases that moved but who were not flagged as having a new address on fl2resnew (and therefore not routed correctly) are corrected in re2dadrscorr (R2 Derived Variable); note these cases are incorrectly coded in re2spadrsnew. fl3resnew R3 F RE NEW ADDRESS FROM PRIOR ROUND	RE4F	BOX HO4, BOX HO10, BOX HO12, BOX EM1, BOX RE8, BOX RE10, BOX HT1	RE3, EM2
PLACE OF DEATH (PD)			

fl2spdied R2 F SP DIED PRIOR TO R2 fl3spdied R3 F SP DIED PRIOR TO R3	IS2A	BOX RE4, BOX RE5, BOX RE10, BOX RE11, BOX MD1PRE, BOX MD2,BOX MD4A, BOX MD5A, BOX CP1PRE, BOX CP2, BOX MO2, BOX MO6A, BOX MO12, BOX MO13, BOX MO19A, BOX MO25A, BOX MO26, BOX DM1, BOX DM7, BOX SC2, BOX SC3A, BOX SC7A, BOX SC11A, BOX SC12, BOX SC17A, BOX SC18, BOX SC22, BOX SC23A, BOX SC24, BOX DS1, BOX DS4, BOX PA1PRE, BOX PA26	IS2, RE3, RE4A-F, MD1PRE, MD1, MD2, MD3, MD4, MD5, CP1, MO1PRE, MO1,MO6, MO12, MO13,MO19A, MO25, DM1, DMC3C, DM3D, DM3E, DM4, DM6D, DM6E, SC1PRE, SC1, SC3, SC7PRE, SC7, SC16, SC17, SC21PRE, SC21, SC22, SC23, DS1, DS3C, DS3D, DS3E, PA25A,
fl2notalert R2 F LML NOT ALERT fl3notalert R3 F LML NOT ALERT		BOX CP1PRE, BOX DM1, BOX DM4 (see dm2flag in Appendix V.Derived Variables), BOX DS1 ((see ds2flag in Appendix V.Derived Variables)	
fl2notmobile R2 F LML NOT MOBILE fl3notmobile R3 F LML NOT MOBILE		BOX MD1PRE, BOX DM1, BOX DM4 (see ds2flag in Appendix V. Derived Variables)	
HOUSING TYPE (HT)			
fl2facility R2 F ROUTING FLAG FROM HT3 5 6 7 fl3facility R3 F ROUTING FLAG FROM HT3 5 6 7	RE4F, RE11, BOX HT3b, BOX HT8, BOX SE3, End of FQ	BOX HT1, BOX HT3B, BOX HT5, BOX HT8, BOX HT11, BOX SE1PRE, BOX HH13, BOX HO10, BOX HO12, BOX LF1, BOX LF13, BOX HP1, BOX EW15 Starting in R2, this flag also was set in PD These cases were set to -1 on fl2facility, but starting in R3 are left as fl#facility = 1. A small number of cases have the facility flag set that should not and route as facility (in R3, 5 cases where r3dresid = 1). A small number that should have the facility flag set but do not, route as not facility (in R3, 1 case where r3dresid = 4).	RE3, HO11, MO6, MO6a, MO11, MO18, MO19A, MO25, MO25a, DT4, HA2, HA3A, HA23, HA25A, HA30B, HA32A, HA42A, HA51A, HA52A, SC3, SC3A, SC11, SC11A, SC17, SC17A, SC23, SC23A, MC5A, MC15, MC16, MC17A, MC22A

fl2hotype R2 F HT TYPE OF HOME	RE4F, BOX HT11		HO10PRE, HO10
fl3hotype R3 F HT TYPE OF HOME			
fl2retirecom R2 F HT SP LIVES IN RETIREMT COM	RE4F, HT4	BOX HT5	MO6a, MO19a, MO25a, DT4, HA3A, HA23, HA25A, HA32A, HA42A, HA52A, SC3A, SC11A, SC17A, SC23A, MC5A, MC15, MC17A, MC22A
fl3retirecom R3 F HT SP LIVES IN RETIREMT COM			
SOCIAL NETWORK (SN)			
fl2noonetalk R2 F SN SP HAS NO ONE TO TALK TO	SN2		
fl3noonetalk R3 F SN SP HAS NO ONE TO TALK TO			
HOME ENVIRONMENT (HO)			
fl2onefloor R2 F HO SP LIVES ON ONE FLOOR Flag dropped in R3 (use RE9 instead)	RE9, HO5		
fl2bathgrbbr R2 F HO SPS BATH HAS GRAB BARS	HO11	BOX SC9	
fl3bathgrbbr R3 F HO SPS BATH HAS GRAB BARS			
fl2bathseat R2 F HO SPS BATH HAS SEAT	HO11	BOX SC10	
fl3bathseat R3 F HO SPS BATH HAS SEAT			
fl2raisedtl R2 F HO SP HAS RAISED TOILET	HO11		SC16
fl3raisedtl R3 F HO SP HAS RAISED TOILET			

fl2tlgrbbr R2 F HO SP TOILET HAS GRAB BARS	HO11		SC16
fl3tlgrbbr R3 F HO SP TOILET HAS GRAB BARS			
MOBILITY DEVICES (MD)			
fl2cane R2 F MD SP USES CANE	MD2	BOX MO2, BOX MO13, BOX MO24, BOX DM4	PC1PRE, PC1, PC2, PC3, PC4, PC5, PC6, MO24, MO27, DM5, PE12
fl3cane R3 F MD SP USES CANE			
fl2walker R2 F MD SP USES WALKER	MD3	BOX MO3, BOX MO14, BOX MO24, BOX DM4	PC1PRE, PC1, PC2, PC5, PC6, MO24, MO27, DM5, PE12
fl3walker R3 F MD SP USES WALKER			
fl2wheelchr R2 F MD SP USES WHEELCHAIR	MD4	BOX MO4, BOX DM4	DM5, DT4
fl3wheelchr R3 F MD SP USES WHEELCHAIR			
fl2whlchrhom R2 F MD SP HAS WHEELCHR AT HOME	MD4a	BOX MO15	
fl3whlchrhom R3 F MD SP HAS WHEELCHR AT HOME			
fl2scooter R2 F MD SP USES SCOOTER	MD5	BOX MO5, BOX DM4	DM5, DT4
fl3scooter R3 F MD SP USES SCOOTER			
fl2scooterhm R2 F MD SP HAS SCOOTER AT HOME	MD5a	BOX MO16	
fl3scooterhm R3 F MD SP HAS SCOOTER AT HOME			
SENSORY SYMPTOMS (SS)			

fl2deaf R2 F SS DEAF PRIOR OR CURRENT ROUND	BOX SS4	BOX SS3PRE, BOX SS4	
fl3deaf R3 F SS DEAF PRIOR OR CURRENT ROUND			
fl2blind R2 F SS BLIND PRIOR OR CURRENT ROUND	BOX SS8	BOX SS8, BOX DT1A	
fl3blind R3 F SS BLIND PRIOR OR CURRENT ROUND			
MOBILITY (MO)			
fl2didntleav R2 F MO SP DID NOT LEAVE HOME			
fl3didntleav R3 F MO SP DID NOT LEAVE HOME			
fl2ntlvrmstp R2 F MO SP DID NOT LEAVE BEDROOM			
fl3ntlvrmstp R3 F MO SP DID NOT LEAVE BEDROOM			
DRIVING AND TRANSPORTATION (DT)			
fl2drives R2 F DT SP DRIVES CAR	DT1	BOX DT3PRE, BOX PA3, BOX PA7, BOX PA11, BOX PA15	DT4
fl3drives R3 F DT SP DRIVES CAR			
fl2drvlstyr R2 F DT SP DROVE CAR IN PAST YR	DT1A		HA23, MC15
fl3drvlstyr			

R3 F DT SP DROVE CAR IN PAST YR			
fl1dneverdrv R1 F DT SP NEVER DROVE	RD 1 DT2 (=7)	BOX DT1PRE, BOX DT1A	
SELF CARE ACTIVITIES (SC)			
fl2showering R2 F SC SP USES SHOWER	SC7, SC8	BOX SC9, BOX SC10	SC9, SC10, SC11, SC11A, SC12, SC13, SC14, SC15
fl3showering R3 F SC SP USES SHOWER			
fl2takingbth R2 F SC SP TAKES BATHS	SC7, SC8	BOX SC9, BOX SC10	SC9, SC10, SC11, SC11A, SC12, SC13, SC14, SC15
fl3takingbth R3 F SC SP TAKES BATHS			
fl2washingup R2 F SC SP WASHES OTHER WAY	SC7, SC8		SC11, SC11A, SC12, SC13, SC14, SC15
fl3washingup R3 F SC SP WASHES OTHER WAY			
PERFORMANCE ACTIVITIES ELIGIBILITY (PE)			
fl2lefthand R2 F PE CAN SP DO LEFT HAND TEST	PE1		PE14
fl3lefthand R3 F PE CAN SP DO LEFT HAND TEST			
fl2righthand R2 F PE CAN SP DO RGT HAND TEST	PE1		PE14
fl3righthand R3 F PE CAN SP DO RGT HAND TEST			
fl2eiherhand R2 F PE CAN SP DO EITHR HAND TST	PE1		PE14
fl3eiherhand R3 F PE CAN SP DO EITHR HAND TST			

fl2lftgrptst R2 F PE CAN SP DO LFT GRIP TST	PE3, PE5, PE7		PE14
fl3lftgrptst R3 F PE CAN SP DO LFT GRIP TST			
fl2rhtgrptst R2 F SC SP WASHES OTHER WAY	PE3, PE5, PE7		PE14
fl3rhtgrptst R3 F SC SP WASHES OTHER WAY			
fl2charstnds R2 F PE CAN SP DO CHAIR STANDS	PE3, PE12	BOX PE12	PE14
fl3charstnds R3 F PE CAN SP DO CHAIR STANDS			
fl2balstands R2 F PE CAN SP DO BALANCE STANDS	PE11		PE14
fl3balstands R3 F PE CAN SP DO BALANCE STANDS			
fl2wlkingrse R2 F PE CAN SP DO WALKING COURSE	BOX PE13, PE13		PE14
fl3wlkingrse R3 F PE CAN SP DO WALKING COURSE			

TABLE OF FLAGS THAT GENERATE VARIABLES IN THE OP FILE			
Variable Name VARIABLE LABEL	WHERE FLAG IS SET	QUESTIONS WHERE FLAG PROMPTS ROUTING	QUESTIONS WHERE FLAG PROMPTS WORDING DISPLAY
HOUSEHOLD (HH)			
op2prsninhh R2 OTHER PRSN IN HOUSEHOLD	IS11A, HH11, HH12, HH13a, HH13D, HH14A,	BOX IS12B, BOX HH13D	HH13B, HH13D, HH14
op3prsninhh R3 OTHER PRSN IN HOUSEHOLD			

op2childinh R2 CHILD IN HOUSEHOLD	HH13D, HH15	BOX CS2	CS9
op3childinh R3 CHILD IN HOUSEHOLD			
op2chnotinh R2 D CHILD NOT IN HOUSEHOLD	CS1A, CS1B		CS9
op3chnotinh R3 D CHILD NOT IN HOUSEHOLD			
op2dchilddec R2 D CHILD OF SP DIED SINCE LST INT	CS1B		
op3dchilddec R3 D CHILD OF SP DIED SINCE LST INT			
SOCIAL NETWORK (SN)			
op2soclntrk R2 SN2 PART OF SP SOCIAL NETWORK	SN2		
op3soclntrk R3 SN2 PART OF SP SOCIAL NETWORK			
MOBILITY (MO)			
op2outhlp R2 MO6A HELPS SP GO OUTSIDE	MO6a	BOX HL1PRE	
op3outhlp R3 MO6A HELPS SP GO OUTSIDE			
op2insdhlp R2 MO19A HELPS SP INSIDE HOUSE	MO19a	BOX HL1PRE	
op3insdhlp R3 MO19A HELPS SP INSIDE HOUSE			
op2bedhelp R2 MO25A HELPS SP OUT OF BED	MO25a	BOX HL1PRE	
op3bedhelp R3 MO25A HELPS SP OUT OF BED			

DRIVING AND TRANSPORTATION (DT)			
op2tkplhlp1 R2 DT5A TAKES SP PLACES MOST	DT5a	BOX HL1PRE	DT7a
op3tkplhlp1 R3 DT5A TAKES SP PLACES MOST			
op2tlplhlp2 R2 DT7A TAKES SP PLACES OTH	DT7a	BOX HL1PRE	
op3tlplhlp2 R3 DT7A TAKES SP PLACES OTH			
HOUSEHOLD ACTIVITIES (HA)			
op2launhlp R2 HA3A HELPS SP WITH LAUNDRY	HA3a	BOX HA4, BOX HA7, BOX HL1PRE	
op3launhlp R3 HA3A HELPS SP WITH LAUNDRY			
op2shophlp R2 HA25A HELPS SP WITH SHOPPING	HA25a	BOX HA26, BOX HA29, BOX HL1PRE	
op3shophlp R3 HA25A HELPS SP WITH SHOPPING			
op2mealhlp R2 HA32A HELPS SP WITH MEALS	HA32a	BOX HA33, BOX HA36, BOX HL1PRE	
op3mealhlp R3 HA32A HELPS SP WITH MEALS			
op2bankhlp R2 HA42A HELPS SP WITH BANKING	HA42a	BOX HA43, BOX HA46, BOX HL1PRE	
op3bankhlp R3 HA42A HELPS SP WITH BANKING			
op2moneyhlp R2 HA52A HELPS SP WITH MONEY	HA52a	BOX HL1PRE	
op3moneyhlp R3 HA52A HELPS SP WITH MONEY			

SELF CARE ACTIVITIES (SC)			
op2eathlp R2 SC3A HELPS SP WITH EATING	SC3a	BOX HL1PRE	
op3eathlp R3 SC3A HELPS SP WITH EATING			
op2bathhlp R2 SC11A HELPS SP WITH BATHING	SC11a	BOX HL1PRE	
op3bathhlp R3 SC11A HELPS SP WITH BATHING			
op2toilhlp R2 SC17A HELPS SP WITH TOILETING	SC17a	BOX HL1PRE	
op3toilhlp R3 SC17A HELPS SP WITH TOILETING			
op2dreshlp R2 SC23A HELPS SP WITH DRESSING	SC23a	BOX HL1PRE	
op3dreshlp R3 SC23A HELPS SP WITH DRESSING			
MEDICAL CARE (MC)			
op2medshlp R2 MC5A HELPS SP WITH MEDICINES	MC5a	BOX MC6, BOX MC9, BOX HL1PRE	
op3medshlp R3 MC5A HELPS SP WITH MEDICINES			
op2dochlp R2 MC17A SITS IN W SP AT DRS	MC17a	BOX HL1PRE	
op3dochlp R3 MC17A SITS IN W SP AT DRS			
op2dochlpmst R2 MC18 SITS MOST IF MORE THAN 1	BOX MC18, MC18		MC19
op3dochlpmst R3 MC18 SITS MOST IF MORE THAN 1			

op2insurhlp R2 MC22A HELPS WITH INSUR DECIS	MC22a	BOX HL1PRE	
op3insurhlp R3 MC22A HELPS WITH INSUR DECIS			
PARTICIPATION (PA)			
op2spcaredfr R2 PA22D SP CARED FOR PERSON	PA22d		
op3spcaredfr R3 PA22D SP CARED FOR PERSON			
ECONOMIC WELL-BEING (EW)			
op2chhlpfin R2 EW9 CHILDREN WHO HELP FINANCE	EW9		
op3chhlpfin R3 EW9 CHILDREN WHO HELP FINANCE			
op2hlpchfin R2 EW13 HELPED CHILDREN FINANCE	EW13		
op3hlpchfin R2 EW13 HELPED CHILDREN FINANCE			
HELPER (HL)			
op2ishelper R2 BXHL1 ELIGIBLE HL SECTION	BOX HL1		
op3ishelper R3 BXHL1 ELIGIBLE HL SECTION			
op2paidhelpr R2 HL5 HELPER IS PAID	HL5		
op3paidhelpr R3 HL5 HELPER IS PAID			
CLOSING (CL)			
op2contctflg	CL24		

R2 PERSON IS LISTED AS CONTACT op3contctflg R3 PERSON IS LISTED AS CONTACT			
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Appendix IV: Derived Variable Specifications Round 1

Variable Name VARIABLE LABEL File Location	CODING SPECIFICATIONS	VALUES and VALUE LABELS
RE and HT Sections		
r1dresid R1 D RESIDENTIAL CARE STATUS SP File	1 if SP interview and no FQ interview required 2 if SP and FQ required; both completed or SP only completed 3 if SP and FQ required; FQ only completed 4 if FQ only required and completed	1 Community 2 Residential Care Resident not nursing home (SP interview complete) 3 Residential Care Resident not nursing home (FQ only) 4 Nursing Home Resident
r1dresidr R1 D RESIDENTIAL CARE STATUS RECODE SP File	1 if one of 7 cases with recoded final status -1 all other cases	1 Case status recoded from nursing home resident to residential care resident not nursing home -1 Inapplicable The SP interview for these cases indicated the individual was not a nursing home resident even though the FQ respondent subsequently reported the SP was in a nursing home part of the facility at the time of interview. Fq1dlocsp provides an edited version of FQ 6 6a 10 10a for these cases.
r1dcensdiv R1 D SP CENSUS DIVISION SP File (IS Section)	Categorical version of R1 SP residence at the Census Division level	1 Northeast Region: New England Division (ME, NH, VT, MA, RI, CT) 2 Northeast Region: Middle Atlantic Division (NY, NJ, PA) 3 Midwest Region: East North Central Division (OH, IN, IL, MI,WI) 4 Midwest Region: West North Central Division (MN, IA, MO, ND, SD, NE, KS) 5 South Region: South Atlantic Division (DE, MD, DC, VA, WV, NC, SC, GA, FL) 6 South Region: East South Central Division (KY, TN, AL, MS) 7 South Region: West South Central Division (AR, LA,

		OK, TX) 8 West Region: Mountain Division (MT, ID, WY, CO, NM, AZ, UT, NV) 9 West Region: Pacific Division (WA, OR, CA)
r1d2intvrage R1 D SP CAT AGE AT INTVW SP File (IS Section)	Categorical version of R1 age at interview	1 65-69 2 70-74 3 75-79 4 80-84 5 85-89 6 90+
HH Section		
hh1dlvngarr R1 D LIVING ARRANGEMENT SP File (HH Section)	1 if SP is only person with INHOUSEHOLD flag = 1 2 if SP and spouse/partner with INHOUSEHOLD flag = 1 and no other persons with INHOUSEHOLD flag = 1) 3 if spouse/partner with INHOUSEHOLD flag = 1 and 1 or more other persons with INHOUSEHOLD flag = 1 4 if spouse/partner with INHOUSEHOLD flag NE 1 and 1 or more other persons with INHOUSEHOLD flag = 1 -1 if r1dresid = 3 or 4	1 Alone 2 With Spouse/partner only [spouse/partner in household] 3 With spouse/partner and with others 4 With others only -1 Inapplicable Note: For 26 SPs, where the spouse was not in the household (hh1livwthspo=2) , this variable was incorrectly coded. To correct this problem, recode this variable from 2 to 1 and from 3 to 4 if hh1livwthspo=2. This inconsistency has been corrected in future rounds.
hh1dhshldnum R1 D TOTAL NUMBER IN HOUSEHOLD SP File (HH Section)	Count of persons on roster with INHOUSEHOLD flag = 1 -1 if r1dresid = 3 or 4	1-N Number of persons -1 Inapplicable Note: For 26 SPs, where the spouse was not in the household (hh1livwthspo=2), this variable was incorrectly coded. To correct this problem, recode this variable from 2 to 1 and from 3 to 4 if hh1livwthspo=2. This inconsistency has been corrected in future rounds.
hh1dhshldchd R1 D TOTAL CHILDREN IN HOUSEHOLD SP File (HH Section)	Count of persons with CHILDIRHH flag = 1 0 if no flags = 1 -1 if r1dresid = 3 or 4	0 1-N Number of persons -1 Inapplicable

hh1d2spouage R1 D SPOUSE CAT AGE AT INTVW SP File (HH Section)	Categorical version of age for spouse/partner	1 <50 2 50-54 3 55-59 4 60-64 5 65-69 6 70-74 7 75-79 8 80-84 9 85-89 10 90+ -1 Inapplicable -7 RF -8 DK
op1dage R1 D OTH PERSN CAT AGE AT INTVW OP File (HH Section)	Categorical version of age for other persons where date of birth obtained (spouse/partner, household member, children of sample person)	1 <20 2 20-24 3 25-29 4 30-34 5 35-39 6 40-44 7 45-49 8 50-54 9 55-59 10 60-64 11 65-69 12 70-74 13 75-79 14 80-84 15 85-90 16 90+ -1 Inapplicable -7 RF -8 DK
CS Section		
cs1dnumchild R1 D NUMBER OF CHILDREN SP File (CS Section)	Count of persons with CHILDINHH flag = 1 and CHILDNOTINHH flag = 1 0 if no flags = 1 -1 if r1dresid = 3 or 4	0 1-N Number of persons -1 Inapplicable

cs1dnmstpchd R1 D NUMBER OF STEP CHILDREN SP File (CS Section)	Count of persons with [CHILDINHH flag = 1 and CHILDNOTINHH flag = 1] and relationship = 7 or 8 0 if no flags = 1 -1 if r1dresid = 3 or 4	0 1-N Number of persons -1 Inapplicable
cs1dnumdaugh R1 D NUMBER OF DAUGHTERS SP File (CS Section)	Count of persons with [CHILDINHH flag = 1 and CHILDNOTINHH flag = 1] and relationship = 3 or 7 (step & bio & adopted) 0 if no flags = 1 -1 if r1dresid = 3 or 4	0 1-N Number of persons -1 Inapplicable
cs1dnumson R1 D NUMBER OF SONS SP File (CS Section)	Count of persons with [CHILDINHH flag = 1 and CHILDNOTINHH flag = 1] and relationship = 4 or 8 (step & bio & adopted) 0 if no flags = 1 -1 if r1dresid = 3 or 4	0 1-N Number of persons -1 Inapplicable
cs1dreconcil R1 D DS1 OP RECORD RECONCILE SP File (CS Section)	1 = yes to CS1 and at least one OP record with op1chnnotinhh = 1 2 = no to CS1 and at least one OP record with op1chnnotinhh = 1 3 = no to CS1 and no OP records with op1chnnotinhh = 1 4 = yes to CS1 and no OP records or no OP records with op1chnnotinhh = 1 -7 if CS1 = RF -8 if CS1 = DK -9 if r1dresid = 3 -1 if r1dresid = 4	1 Yes 2 Yes corrected by NHATS 3 No 4 Yes but missing OP records for child outside household -1 Inapplicable -7 RF -8 DK -9 Missing
SN Section		
sn1dnumsn R1 D NUMBER IN SOCIAL NETWORK SP File (SN Section)	Count number of persons with SOCIALNETWORK flag = 1 0 if NOONETOTALKTO flag = 1 -1 if r1dresid = 3 or 4 or proxy respondent	0 1-N Number of persons -1 Inapplicable
op1dcatgryag R1 D OTH PERSN SN CAT AGE OP File (SN Section)	Categorical age for social network member	1 <30 2 30-39 3 40-49 4 50-59 5 60-69 6 70-79 7 80-89 8 90+

		-1 Inapplicable -7 RF -8 DK
op1dsocwrkfl R1 D LIKELY SOCIAL NETWRK MEMBER OP File (SN Section)	Person entered on roster at SN Section but not checked as SN member.	1 Yes -1 Inapplicable
CG Section		
cg1dwrldstnm R1 D WHICH WORD LIST WAS ASSIGNED SP File (CG Section)	1 = list 1 2 = list 2 3 = list 3 -1 if r1dresid = 3 or 4	1-3 Number of 10-word list -1 Inapplicable
cg1dwrddimmrc R1 D SCORE IMMEDIATE WORD RECALL SP File (CG Section)	0 if CG8 = 91 (no words remembered) 1 to 10 for number of correct words -1 if r1dresid = 3 or 4 -2 if cg1speaktosp = 2 -3 if cg1speaktosp = 1 and ((CG 6a and 6b and 6c and 6d and 6e = no or -7 or -8) or (CG1c = 2 or -7 or -8)) -7 if CG7PRE = 2 (refuses activity) or CG8 = 92 (refused)	0-10 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP cognitive items but SP unable to answer -7 SP refused activity
cg1dwrddinone R1 D IMMEDIATE RECALL NONE	1 if no words remembered 2 otherwise	1 No words remembered 2 No
cg1dwrddirref R1 D IMMEDIATE RECALL REFUSED	1 if refused immediate word recall task 2 otherwise	1 Refused word recall task 2 No
cg1dwrddlyrc R1 D SCORE DELAYED WORD RECALL SP File (CG Section)	0 if CG15 = 91 (no words remembered) 1 to 10 for number of correct words -1 if r1dresid = 3 or 4 -2 if cg1speaktosp = 2 -3 if cg1speaktosp = 1 and ((CG 6a and 6b and 6c and 6d and 6e = no or -7 or -8) or (CG1c = 2 or -7 or -8)) -7 if CG7PRE = 2 (refused immediate word recall activity) or CG15 = 92 (refused)	0-10 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP but SP unable to answer -7 SP refused activity
cg1dwrddnone R1 D DELAYED RECALL NONE	1 if no words remembered 2 otherwise	1 No words remembered 2 No
cg1dwrddrref R1 D DELAYED RECALL REFUSED	1 if refused delayed word recall task 2 otherwise	1 Refused delayed word recall task 2 No

cg1dwr1rcl – cg1dwr10rcl R1 D WORD1 IMMEDIATE RECALL – R1 D WOR10 IMMEDIATE RECALL SP File (CG Section)	1 if correctly identified word 1 (word 2 etc.) 2 if word not correctly identified -1 otherwise	1 Yes 2 No -1 Inapplicable
cg1dwr1dly – cg1dwr10dly R1 D WORD1 DELAYED RECALL – R1 D WOR10 DELAYED RECALL SP File (CG Section)	1 if correctly identified word 1 (word 2 etc.) 2 if word not correctly identified -1 otherwise	1 Yes 2 No -1 Inapplicable
cg1dcldraw R1 D SCORE OF CLOCK DRAWING TEST SP File (CG Section)	0 = worst score; 5 = best score -1 if r1dresid = 3 or 4 -2 if CG1A = 2 -3 if CG1A = 1 and ((CG 6a and 6b and 6c and 6d and 6e = no or -7 or -8) or (CG1c = 2 or -7 or -8)) -4 if CG10A = 2 -7 if CG10A = 97 -9 missing	0-5 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP but SP unable to answer -4 SP did not attempt to draw clock -7 SP refused to draw clock -9 Missing
cg1dclkingcl R1 D IMAGE CLARITY CLOCK DRAWING SP File (CG Section)	Image clarity of clock drawings used for scoring	1 Blank 2 Very Clear 3 Somewhat Clear 4 Somewhat Unclear 5 Very Unclear -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP but SP unable to answer -4 SP did not attempt to draw clock -7 SP refused to draw clock -9 Missing
MO Section		
mo1doutsdf R1 D GO OUTSIDE SELF SP File (MO Section)	1 if MO7 = 4 2 if (MO6 = 2 or MO7 = 1 to 3) and MO8 = 1 3 if (MO6 = 2 or MO7 = 1 to 3) and MO8 = 2 to 4 4 if ((MO6 = -7 or -8) or (MO7 = -7 or -8)) and MO8 = 1 5 if ((MO6 = -7 or -8) or (MO7 = -7 or -8)) and MO8 = 2 to 4 6 if MO7 = 1 to 3 and MO8 = -7 or -8 7 if ((MO6 = -7 or -8) or (MO7 = -7 or -8)) and MO8 = -7 or -8	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable

	8 if MO1 = 5 -1 if r1dresid = 3 or 4	
mo1doutdevi R1 D GO OUTSIDE USING DEVICES SP File (MO Section)	1 if (MO2 = 5 and MO3 = 5 or -1 and MO4 = 5 or -1 and MO5=5 or -1) or (MO2 = 5 or -1 and MO3 = 5 and MO4 = 5 or -1 and MO5=5 or -1) or (MO2 = 5 or -1 and MO3 = 5 or -1 and MO4 = 5 and MO5=5 or -1) or (MO2 = 5 or -1 and MO3 = 5 or -1 and MO4 = 5 or -1 and MO5=5) or MD1 = 2 2 if (MO2 = 1 to 4) or (MO3 = 1 to 4) or (MO4 = 1 to 4) or (MO5=1 to 4) 3 if MD1 =1 and (MO2 = -7 or -8 or -1) and (MO3 = -7 or -8 or -1) and (MO4=-7 or -8 or -1) and (MO5=-7 or -8 or -1) 4 if MD1 = -7 or -8 8 if MO1=5 -1 if r1dresid = 3 or 4	1 No use of devices to go outside in last month 2 Use of devices to go outside in last month 3 DKRF if used devices to go outside in last month 4 DKRF if used devices in last month 8 Not done in last month -1 Inapplicable
mo1douthelp R1 D GO OUTSIDE USING HELP SP File (MO Section)	1 if MO6 = 2 2 if MO6 = 1 3 if MO6 = -7 or -8 8 if MO1 = 5 -1 if r1dresid = 3 or 4	1 No help to go outside in last month 2 Had help to go outside in last month 3 DKRF if had help to go outside in last month 8 Not done in last month -1 Inapplicable
mo1dinsdsfdf R1 D MOVE INSIDE SELF SP File (MO Section)	1 if MO20 = 4 2 if (MO18 = 2 or MO20 = 1 to 3) and MO21 = 1 3 if (MO18 = 2 or MO20 = 1 to 3) and MO21 = 2-4 4 if ((MO 18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 =1 5 if ((MO 18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 =2-4 6 if ((MO18 = 2) or (MO20 = 1 to 3)) and MO21 = -7 or -8 7 if ((MO 18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 = -7 or -8 8 if MO12 = 5 -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
mo1dinsddevi R1 D MOVE INSIDE WITH DEVICES SP File (MO Section)	1 if (MO13 = 5 and MO14 = 5 or -1 and MO15 = 5 or -1 and MO16 =5 or -1) or (MO13 = 5 or -1 and MO14 = 5 and MO15 = 5 or -1 and MO16=5 or -1) or (MO13 = 5 or -1 and MO14 = 5 or -1 and MO15 = 5 and MO16=5	1 No use of devices inside in last month 2 Use of devices inside in last month 3 DKRF if used devices inside in last month 4 DKRF on use of devices

	<p>or -1) or (MO13 = 5 or -1 and MO14 = 5 or -1 and MO15 = 5 or -1 and MO16= 5) or MD1 = 2</p> <p>2 if (MO13 = 1 to 4) or (MO14 = 1 to 4) or (MO15 = 1 to 4) or (MO16 =1 to 4)</p> <p>3 if MD1 =1 and (MO13 = -7 or -8 or -1) and (MO14 = -7 or -8 or -1) and (MO15 = -7 or -8 or -1) and (M16 =-7 or -8 or -1)</p> <p>4 if MD1 = -7 or -8</p> <p>8 if MO12 = 5</p> <p>-1 if r1dresid = 3 or 4</p>	<p>8 Not done in last month</p> <p>-1 Inapplicable</p>
<p>mo1dinsdhelp R1 D MOVE INSIDE W HELP SP File (MO Section)</p>	<p>1 if MO18 = 2</p> <p>2 if MO18 = 1</p> <p>3 if MO18 = -7 or -8</p> <p>8 if MO12 = 5</p> <p>-1 if r1dresid = 3 or 4</p>	<p>1 No help to go around inside in last month</p> <p>2 Had help to go around inside in last month</p> <p>3 DKRF if had help to go around inside in last month</p> <p>8 Not done in last month</p> <p>-1 Inapplicable</p>
<p>mo1dbedsfdf R1 D GET OUT OF BED SP File (MO Section)</p>	<p>1 if MO26=4</p> <p>2 if (MO25 = 2 or MO26 = 1 to 3) and MO27 = 1</p> <p>3 if (MO25 = 2 or MO26 = 1 to 3) and MO27 = 2-4</p> <p>4 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = 1</p> <p>5 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = 2-4</p> <p>6 if ((MO25 = 2) or (MO26 = 1 to 3)) and MO27 = -7 or -8</p> <p>7 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = -7 or -8</p> <p>-1 if r1dresid = 3 or 4</p>	<p>1 Did not do by self in last month</p> <p>2 Did by self in last month/no difficulty</p> <p>3 Did by self in last month/difficulty</p> <p>4 DKRF did by self in last month/no difficulty</p> <p>5 DKRF did by self in last month/difficulty</p> <p>6 Did by self in last month/DKRF difficulty</p> <p>7 DKRF did by self in last month/DKRF difficulty</p> <p>-1 Inapplicable</p>
<p>mo1dbeddevi R1 D DEVICE USE 2 GET OUT OF BED SP File (MO Section)</p>	<p>1 if MD1 = 2 or MO24 = 5 or (MD2 = 2 and MD3=2) or (MD2 = 2 and MD3 = -7 or -8) or (MD3 = 2 and MD2 = -7 or -8)</p> <p>2 if MO24 = 1-4</p> <p>3 if MO24 = -7 or -8</p> <p>4 if (MD1 = -7 or -8) or (MD1 = 1 and (MD2 = -7 or -8) and (MD3 = -7 or -8))</p> <p>-1 if r1dresid = 3 or 4</p>	<p>1 No use of cane or walker to get out of bed in last month</p> <p>2 Use of cane or walker to get out of bed in last month</p> <p>3 DKRF if used cane or walker to get out of bed in last month</p> <p>4 DKRF if used cane or walker in last month</p> <p>-1 Inapplicable</p>
<p>mo1dbedhelp R1 D HELP TO GET OUT OF BED SP File (MO Section)</p>	<p>1 if MO25 = 2</p> <p>2 if MO25 = 1</p> <p>3 if MO25 = -7 or -8</p>	<p>1 No help to get out of bed in last month</p> <p>2 Had help to get out of bed in last month</p> <p>3 DKRF if had help to get out of bed in last month</p>

	-1 if r1dresid = 3 or 4	-1 Inapplicable
DM Section		
dm1dhlpyr R1 D ANY MOBILITY HELP LAST YEAR SP File (DM Section)	1 if DM1 = 1 or DM2 = 1 or 2 or MO6 = 1 or MO18 = 1 or MO25 = 1 2 if DM1 = 2 -7 if DM1 = -7 or DM2 = -7 -8 if DM1 = -8 or DM2 = -8 -1 otherwise	1 Mobility help in last year 2 No mobility help in last year -1 Inapplicable -7 RF -8 DK
dm1dhlpst R1 D MTHS MOBILITY HELP STARTED SP File (DM Section)	0 if DM2 = 2 and interview month = month in DM3B 1 if DM2 = 2 and month in DM3B is 1 month prior to interview month (e.g. DM3B = April and interview month = May) 2 if DM2 = 2 and month in DM3B is 2 months prior to interview month (e.g. DM3B = March and interview month = May) Etc. 11 if DM2 = 2 and month in DM3B is 11 months prior to interview month (e.g. DM3B = June and interview month = May) -7 if DM2 = 2 and DM3B = -7 -8 if DM2 = 2 and DM3B = -8 -1 otherwise	0 Less than 1 month of help 1-11 Number of months of help -1 Inapplicable -7 Help last month but RF number of months of help in year -8 Help last month but DK number of months of help in year
dm1dhlpend R1 D MONTHS MOBILITY HELP ENDED SP File (DM Section)	1 if DM1 = 1 and month in DM3B is 1 month prior to interview month (e.g. DM3B = April and interview month = May) 2 if DM1 = 1 and month in DM3B is 2 months prior to interview month (e.g. DM3B = March and interview month = May) Etc. 11 if DM1 = 1 and month in DM3B is 11 months prior to interview month (e.g. DM3B = June and interview month = May) -7 if DM1 = 1 and DM3B = -7 -8 if DM1 = 1 and DM3B = -8 -1 otherwise	0 Between 11 and 12 months since help ended (Note label in data file—less than 1 month since help ended—is INCORRECT) 1 1 month since help ended 2-11 Number of months since help needed -1 Inapplicable -7 No help last month but RF number of months since help ended -8 No help last month but DK number of months since help ended
dm1dhlpyrs R1 D YEARS OF MOBILITY HELP	0 if DM1 = 2 (no help last year) or DM2 = 2 (less than a year)	0 None or less than 1 year of help 1-N Years of help

SP File (DM Section)	997 if DM3A = 997 or number in DM3A > age 90 if number in DM3A ≥ 90 Else = number in DM3A; -7 if DM2 = 1 and DM3A = -7 -8 if DM2 = 1 and DM3A = -8 -1 otherwise	997 Help since birth -1 Inapplicable -7 RF -8 DK
dm1ddeviyr R1 D MOB DEVICE USE LAST YR SP File (DM Section)	1 if DM4 = 1 or DM5 = 1 or 2 or CANEflag= 1 or WALKER flag = 1 or WHEELCHAIRflag = 1 or SCOOTERflag = 1 2 if DM4 = 2 -7 if DM4 = -7 or DM5 = -7 -8 if DM4 = -8 or DM5 = -8 -1 otherwise	1 Mobility device use in last year 2 No Mobility device use in last year -1 Inapplicable -7 RF -8 DK
dm1ddevis R1 D MTHS DEVICE USE SINCE START SP File (DM Section)	0 if DM5 = 2 and interview month = month in DM6B 1 if DM5 = 2 and month in DM6B is 1 month prior to interview month (e.g. DM6B = April and interview month = May) 2 if DM5 = 2 and month in DM6B is 2 months prior to interview month (e.g. DM6B = March and interview month = May) Etc. 11 if DM5 = 2 and month in DM6B is 11 months prior to interview month (e.g. DM6B = June and interview month = May) -7 if DM5 = 1 and DM6B = -7 -8 if DM5 = 2 and DM6B = -8 -1 otherwise	0 Less than 1 month of mobility device use 1-11 Number of months of mobility device use -1 Inapplicable -7 Used last month but RF number of months of use in year -8 Used last month but DK number of months of use in year
dm1ddeviend R1 D MONTHS DEVICE USE SINCE END SP File (DM Section)	1 if DM4 = 1 and month in DM6B is 1 month prior to interview month (e.g. DM6B = April and interview month = May) 2 if DM4 = 1 and month in DM6B is 2 months prior to interview month (e.g. DM6B = March and interview month = May) Etc. 11 if DM4 = 1 and month in DM6B is 11 months prior to interview month (e.g. DM6B = June and interview month = May) -7 if DM4 = 1 and DM6B = -7 -8 if DM4 = 1 and DM6B = -8	0 Between 11 and 12 months since device use ended (Note label in data file—less than 1 month since device use ended— is INCORRECT) 1-11 Number of months since mobility device use ended -1 Inapplicable -7 No use last month but RF number of months since device use ended -8 No use last month but DK number of months since device use ended

	-1 otherwise	
dm1ddeviyrs R1 D YEARS OF DEVICE USE SP File (DM Section)	0 if DM4 = 2 (no device use last year) or DM5 = 2 (less than a year) 997 if DM6A = 997 or DM6A > age 90 if number in DM6A ≥ 90 Else = number in DM6A -7 if DM5 = 1 and DM6A = -7 -8 if DM5 = 1 and DM6A = -8 -1 otherwise	0 None or less than 1 year of mobility device use 1- N Years of use 997 Since birth/entire life -7 RF -8 DK -1 Inapplicable
HA Section		
ha1dlaunsfdf R1 D LAUNDRY SELF AND DIFF LEVEL SP File (HA Section)	1 if (HA1 = 2 or 3) or HA1A = 2 2 if (HA1 = 1 or HA1A = 1) and HA5 = 1 3 if (HA1 = 1 or HA1A = 1) and HA5 = 2-4 4 if HA1 = -7 or -8 and HA5 = 1 5 if HA1 = -7 or -8 and HA5 = 2-4 6 if (HA1 = 1 or HA1A = 1) and HA5 = -7 or -8 7 if (HA1 = -7 or -8 and HA5 = -7 or -8) or (HA1A = -7 or -8 and HA5 = -1) 8 if HA1 = 5 -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha1dlaunreas R1 D LAUNDRY REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA4 is health/functioning only 2 if reason given in HA4 is other only 3 if both health/functioning and other reason given in HA4 4 if BOXHA4 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA1 = -7 -8 if refused reason or HA1 = -8 -1 if r1dresid = 3 or 4 or HA1 = 1	1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other reason 4 Service/someone from the place SP lives -1 Inapplicable -7 RF -8 DK
ha1dshopsfdf R1 D SLF SHOPPING AND DIFF LEVEL SP File (HA Section)	1 if (HA20 = 2 or 3) or HA20A = 2 2 if (HA20 = 1 or HA20A = 1) and HA27 = 1 3 if (HA20 = 1 or HA20A = 1) and HA27 = 2-4 4 if HA20 = -7 or -8 and HA27 = 1 5 if HA20 = -7 or -8 and HA27 = 2-4 6 if (HA20 = 1 or HA20A = 1) and HA27 = -7 or -8 7 if (HA20 = -7 or -8 and HA27 = -7 or -8) or (HA20A = -7 or -8)	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month

	8 if HA20 = 5 -1 if r1dresid = 3 or 4	-1 Inapplicable
ha1dshopreas R1 D SHOP REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA26 is health/functioning only 2 if reason given in HA26 is other only 3 if both health/functioning and other reason given in HA26 4 if BOXHA26 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA20 = -7 -8 if refused reason or HA20 = -8 -1 if r1dresid = 3 or 4 or HA20 = 1	1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other 4 Service/someone from the place SP lives -1 Inapplicable -7 RF -8 DK
ha1dmealsfdf R1 D SELF MEALS AND DIFF LEVEL SP File (HA Section)	1 if (HA30 = 2 or 3) or HA30A = 2 2 if (HA30 = 1 or HA30A = 1) and HA34 = 1 3 if (HA30 = 1 or HA30A = 1) and HA34 = 2-4 4 if HA30 = -7 or -8 and HA34 = 1 5 if HA30 = -7 or -8 and HA34 = 2-4 6 if (HA30 = 1 or HA30A = 1) and HA34 = -7 or -8 7 if (HA30 = -7 or -8 and HA34 = -7 or -8) or (HA30A = -7 or -8) 8 if HA30 = 5 -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha1dmealreas R1 D MEALS REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA33 is health/functioning only 2 if reason given in HA33 is other only 3 if both health/functioning and other reason given in HA33 4 if BOXHA33 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA30 = -7 -8 if refused reason or HA30 = -8 -1 if (r1dresid = 3 or 4 or HA30 = 1 (always did by self)	1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other 4 Service/someone from the place SP lives -1 Inapplicable -7 RF -8 DK

ha1dbanksfdf R1 D SELF BANKS AND DIFF LEVEL SP File (HA Section)	1 if (HA40 = 2 or 3) or HA40A = 2 2 if (HA40 = 1 or HA40A = 1) and HA44 = 1 3 if (HA40 = 1 or HA40A = 1) and HA44 = 2-4 4 if HA 40 = -7 or -8 and HA44 = 1 5 if HA 40 = -7 or -8 and HA44 = 2-4 6 if (HA40 = 1 or HA40A = 1) and HA44 = -7 or -8 7 if (HA40 = -7 or -8 and HA44 = -7 or -8) or (HA40A = -7 or -8) 8 if HA40A = 5 -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha1dbankreas R1 D BANK BILL REASN WITH BY OTH SP File (HA Section)	1 if reason given in HA43 is health/functioning only 2 if reason given in HA43 is other only 3 if both health/functioning and other reason given in HA43 4 if BOXHA43 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA40 = -7 -8 if refused reason or HA40 = -8 -1 if r1dresid = 3 or 4 or HA40 = 1	1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other 4 Service/someone from the place SP lives -1 Inapplicable -7 RF -8 DK
ha1dmealwhl R1 D HELPER IS MEALS ON WHEELS SP File (HA Section)	1 if meals on wheels reported at HA32a -1 otherwise	1 Yes -1 Inapplicable
ha1dmealtkot R1 D HELPER IS RESTAURNT TAKEOUT SP File (HA Section)	1 if restaurant reported at HA32a -1 otherwise	1 Yes -1 Inapplicable
SC Section		
sc1deatdevi R1 D USES DEVICES WHILE EATING SP File (SC Section)	1 if SC1 = 2 2 if SC1 = 1 3 if SC1 = -7 or -8 8 if SC1 = 7 -1 if r1dresid = 3 or 4	1 No use of adapted utensils in last month 2 Use of adapted utensils in last month 3 DKRF if used adapted utensils in last month 8 Not done in last month -1 Inapplicable
sc1deathelp R1 D HAS HELP EATING SP File (SC Section)	1 if SC3 = 2 2 if SC3 = 1 3 if SC3 = -7 or -8 8 if SC1 = 7 -1 if r1dresid = 3 or 4	1 No help eating in last month 2 Had help eating in last month 3 DKRF if had help eating in last month 8 Not done in last month -1 Inapplicable

<p>sc1deatsfdf R1 D DIFF EATING BY SELF WO HELP SP File (SC Section)</p>	<p>1 if SC4 = 4 2 if SC5 = 1 3 if SC5 = 2 or 3 or 4 6 if (SC3 = 1 and (SC4 = -7 or -8 or SC5 = -7 or -8)) or ((SC3 = 2) and (SC5 = -7 or -8)) 7 if (SC3 = -7 or -8 and SC5 = -7 or -8) 8 if SC1 = 7 -1 if r1dresid = 3 or 4</p>	<p>1 Did not do by self in last month 2 No difficulty by self (and when using utensils) 3 Difficulty by self (and when using utensils) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable</p>
<p>sc1dbathdevi R1 D USES DEVICES WHILE BATHING SP File (SC Section)</p>	<p>1 if [(fl1bathgrbbr = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC9 =5) and (fl1bathseat = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC10 = 5)] or [(fl1bathgrbbr = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC9 =5) and (fl1bathseat NE 1)] or [(fl1bathseat = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC10 =5) and (fl1bathgrbbr NE 1)]</p> <p>2 if SC9 =1 to 4 or SC10 = 1 to 4</p> <p>3 if [(fl1bathgrbbr= 1 or flbathseat = 1) and (sc1showrbat1 = -7 or -8 and sc1showrbat2 = -7 or -8 and sc1showrbat3= -7 or -8)]or [(fl1bathgrbbr = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC9 = -7 or -8) and (fl1bathseat = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC10 = -7 or -8)] or [(fl1bathgrbbr = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC9 =-7 or -8) and fl1bathseat NE 1)] or [(fl1bathseat = 1 and (fl1showering = 1 or fl1takingbth = 1) and SC10 =-7 or -8) and fl1bathgrbbr NE 1]</p> <p>4 if (ho1bathamen3 = -7 or -8 and ho1bathamen4 = -7 or -8) or (ho1bathamen3 = -7 or -8 and ho1bathamen4 = 2) or (ho1bathamen3 = 2 and ho1bathamen4 = -7 or -8)</p> <p>9 if (sc1showrbat1 = NE 1 and sc1showrbat2 = NE 1 and sc1showrbat3 = 1) or (SC8 = 3) or (ho1bathamen1 = 2 and ho1bathamen2 = 2) or (ho1bathamen3 = 2 and ho1bathamen4 = 2)</p>	<p>1 No use of grab bars or bath seats in last month 2 Use of grab bars or bath seats in last month 3 DKRF use of grab bars or bath seat in last month 4 DKRF if had grab bars or bath seats in last month 9 No grab bars or bath seats or washes up (does not shower or bathe) or has no shower or bathtub -1 Inapplicable</p>

	-1 if r1dresid = 3 or 4	
sc1dbathhelp R1 D HAS HELP WHILE BATHING SP File (SC Section)	1 if SC11=2 2 if SC11 = 1 3 if (SC7 = -7 or -8) or (SC11 = -7 or -8) -1 if r1dresid = 3 or 4	1 No help bathing in last month 2 Had help bathing in last month 3 DKRF if had help bathing in last month -1 Inapplicable
sc1dbathsdf R1 D DIFF BATHING SELF NO HELP SP File (SC Section)	1 if SC12 = 4 2 if SC13 = 1 3 if SC13 = 2 or 3 or 4 6 if (SC11 = 1 and (SC12 = -7 or -8 or SC13 = -7 or -8)) or (SC11 = 2 and (SC13 = -7 or -8)) 7 if (sc1showrbat1 = -7 or -8 and sc1showrbat2 = -7 or -8 and sc1showrbat3 = -7 or -8) or (SC11 = -7 or -8 and SC13 = -7 or -8) -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 No difficulty by self (and when using grab bars or tub seat) 3 Difficulty by self (and when using grab bars or tub seat) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty -1 Inapplicable
sc1dtoildevi R1 D USES DEVICE WHILE TOILETING SP File (SC Section)	1 if (SC16a = 2 and SC16b = 2 and ho1bathamen5 = 2 and ho1bathamen6 = 2) or (SC16a = 2 and SC16b = 2 and (fl1raisedtlt = 1 and SC16d = 2) and ho1bathamen6 = 2) or (SC16a = 2 and SC16b = 2 and ho1bathamen5 = 2 and (fl1tlgrbbr=1 and SC16c=2)) or (SC16a = 2 and SC16b = 2 and (fl1raisedtlt = 1 and SC16d = 2) and (fl1tlgrbbr=1 and SC16c=2)) 2 if SC16a = 1 or SC16b = 1 or SC16c = 1 or SC16d = 1 3 otherwise -1 if r1dresid = 3 or 4	1 No use of toileting devices in last month 2 Use of toileting devices in last month 3 DKRF of some and no use of other toileting devices in last month -1 Inapplicable
sc1dtoilhelp R1 D HAS HELP WHILE TOILETING SP File (SC Section)	1 if SC17=2 2 if SC17 = 1 3 if SC17 = -7 or -8 -1 if r1dresid = 3 or 4	1 No help toileting in last month 2 Had help toileting in last month 3 DKRF if had help toileting in last month -1 Inapplicable
sc1dtoilsdf R1 D DIFF LEVEL TOILETING SELF SP File (SC Section)	1 if SC18 = 4 2 if SC19 = 1 3 if SC19 = 2 or 3 or 4 6 if (SC17 = 1 and (SC18 = -7 or -8 or SC19 = -7 or -8)) or (SC17 = 2 and (SC19 = -7 or -8)) 7 if (SC17 = -7 or -8) and (SC18 = -7 or -8) and (SC19 = -7 or -8)	1 Did not do by self in last month 2 No difficulty by self (and when using toileting devices) 3 Difficulty by self (and when using toileting devices) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty -1 Inapplicable

	-1 if r1dresid = 3 or 4	
sc1ddresdevi R1 D USES DEVICES WHILE DRESSING SP File (SC Section)	1 if SC22 = 2 2 if SC22 = 1 3 if SC22 = -7 or -8 8 if SC21 = 5 9 if SC21 = -7 or -8 -1 if r1dresid = 3 or 4	1 No use of dressing devices in last month 2 Use of dressing devices in last month 3 DKRF if use of dressing devices in last month 8 Not done in last month 9 DKRF if dressed in last month -1 Inapplicable
sc1ddreshelp R1 D HAS HELP WHILE DRESSING SP File (SC Section)	1 if SC23 = 2 2 if SC23 = 1 3 if SC23 = -7 or -8 -1 if r1dresid = 3 or 4	1 No help dressing in last month 2 Had help dressing in last month 3 DKRF if had help dressing in last month -1 Inapplicable
sc1ddressfdf R1 D DIFF LEVEL DRESSING SELF SP File (SC Section)	1 if SC24 = 4 2 if SC25 = 1 3 if SC25 = 2 or 3 or 4 6 if (SC23 = 1 and (SC24 = -7 or -8 or SC25 = -7 or -8)) or (SC23 = 2 and (SC25 = -7 or -8)) 7 if (SC21 = -7 or -8) or (SC23 = -7 or -8 and SC25 = -7 or -8) 8 if SC21 = 5 -1 if r1dresid = 3 or 4	1 Did not do by self in last month 2 No difficulty by self (and when using dressing devices) 3 Difficulty by self (and when using dressing devices) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
DS Section		
ds1dhlpyr R1 D ANY SELF CARE HELP LAST YEAR SP File (DS Section)	1 if DS1 = 2 2 if DS1 = 1 or DS2 = 1 or 2 or SC3 = 1 or SC11 = 1 or SC17 = 1 or SC23 = 1 -7 if DS1 = -7 or DS2 = -7 -8 if DS1 = -8 or DS2 = -8 -1 otherwise	1 No self care help in last year 2 Self care help in last year -1 Inapplicable -7 RF -8 DK
ds1dhlpst R1 D MTHS SINCE SLF CARE HELP ST SP File (DS Section)	0 if DS2 = 2 and interview month = month in DS3B 1 if DS2 = 2 and month in DS3B is 1 month prior to interview month (e.g. DS3B = April and interview month = May) 2 if DS2 = 2 and month in DS3B is 2 months prior to interview month (e.g. DS3B = March and interview month = May) Etc. 11 if DS2 = 2 and month in DS3B is 11 months prior to	0 Less than 1 month of self care help 1- 11 Number of months of self care help -1 Inapplicable -7 Help in last month but RF number of months of help in last year -8 Help in last month but DK number of months of help in last year

	<p>interview month (e.g. DS3B = June and interview month = May) -7 if DS2 = 2 and DS3B = RF -8 if DS2 = 2 and DS3B = DK Else -1</p>	
<p>ds1dhlpend R1 D MTHS SINCE SLF CARE HLP END SP File (DS Section)</p>	<p>1 if DS1 = 1 and month in DS3B is 1 month prior to interview month (e.g. DS3B = April and interview month = May) 2 if DS1 = 1 and month in DS3B is 2 months prior to interview month (e.g. DS3B = March and interview month = May) Etc. 11 if DS1 = 1 and month in DS3B is 11 months prior to interview month (e.g. DS3B = June and interview month = May) -7 if DS1 = 1 and DS3B = -7 -8 if DS1 = 1 and DS3B = -8 -1 otherwise</p>	<p>0 Between 11 and 12 months since self care help ended (Note the label in the data file—0 months since help ended—is INCORRECT) 1 1 month since self care help ended 2-11 Number of months since self care help ended -1 Inapplicable -7 No help last month but RF number of months since help ended -8 No help last month but DK number of months since help ended</p>
<p>ds1dhlpyrs R1 D YEARS HELP IN CARING 4 SELF SP File (DS Section)</p>	<p>0 if DS1 = 2 or DS2 = 2 997 if DS3A = 997 or DS3A > age 90 if number in DM3A ≥ 90 Else = number in DS3A -7 if DS2 = 1 and DS3A = -7 -8 if DS2 = 1 and DS3A = -8 -1 otherwise</p>	<p>0 None or less than 1 year 1- N Numbers of years 997 Since birth/entire life -1 Inapplicable -7 RF -8 DK</p>
MC Section		
<p>mc1dmedssfdf R1 D DIFF LEVEL MEDICATIONS SELF SP File (MC Section)</p>	<p>1 if (MC2 =2 or 3) or MC2A = 2 2 if (MC2 = 1 or MC2A = 1) and MC7 = 1 3 if (MC2 = 1 or MC2A = 1) and MC7 = 2-4 4 if (MC2 = -7 or -8) and MC7 = 1 5 if MC2 = -7 or -8) and MC7 = 2-4 6 if (MC2 = 1 or MC2A = 1) and MC7 = -7 or -8 7 if (MC2 = -7 or -8) and (MC7 = -7 or -8) 8 if MC2 = 5 9 if MC1 = 2 or -7 or -8 -1 if r1dresid = 3 or 4</p>	<p>1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month 9 No or DKRF if medications taken in last month -1 Inapplicable</p>

<p>mc1dmedsreas R1 D MEDS REASN BY WITH OTHERS SP File (MC section)</p>	<p>1 if reason given in MC6 is health/functioning only 2 if reason given in M6 is other only 3 if both health/functioning and other reason given in MC6 4 if BOXMC6 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or MC2 = -7 -8 if refused reason or MC2 = -8 -1 if (r1dresid = 3 or 4 or MC1 = 2 (no medications) or MC2 = 1</p>	<p>1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other reason 4 Service/someone from the place SP lives -1 Inapplicable -7 RF -8 DK</p> <p>*KNOWN DATA ISSUE: In the MC section, interviewers were unable to select “both health/functioning and other reason” in response to question MC6 “what is the reason someone else kept track of SP’s medicines with/for him/her.” As a result there are no cases in value = 3 for mc1dmdreasn. Validation study data suggest that selection of both for this activity was extremely rare.</p>
<p>PA Section</p>		
<p>pa1dfavact R1 D FAVORITE ACTIVITY SP File (PA Section)</p>	<p>These codes were developed based on review of verbatim responses obtained during interviews.</p> <p>Note: The R2 SP file has a recoded version of pa1dv2favact R1 D VERSION 2 FAVORITE ACTIVITY A new value of 715 “other physical activity (exercise, yoga, working out, swimming, dancing)” was added at Round 2. To make Rounds 1 and 2 consistent, all cases with code 799 in Round 1 should be recoded to 715 value except for the following SPIDs (which should remain 799): 10006873, 10003102, 10005733, 10012026, 10012352, 10002233, 10004137, 10006817, 10009006, 10010986, 10007270, 10010481, 10006759</p>	<p>Self-care activities 111 Sleeping; Napping 131 Eating 132 Going out to eat 199 Other self-care activities Productive activities 211 Work and work-related activities 221 Other income generating activities 241 Volunteering 299 Other productive activities Shopping 321 Shopping for non-durable goods 399 Other shopping Household activities 411 Food and drink preparation 434 Outdoor Maintenance 439 Household chores (indoor/outdoor) 441 Animal and pet care 442 Walking and exercising pets 449 Other animal and pet care 451 Vehicle maintenance and repair</p>

471 Financial management
499 Other household activities
 Care of others
511 Physical care and assistance to others
599 Other physical care
 Socializing
611 Socializing with others in person
612 Socializing with others on the phone
616 Socializing and communicating on the computer

 Non active leisure
621 Watching TV and movies
631 Doing puzzles or games not on computer or online
632 Gambling not online or at a casino
636 Doing puzzles or games on a computer or online
641 Arts and crafts or hobbies
642 Reading
643 Writing
644 Listening to music
646 Computer or online leisure activities
651 Smoking or other tobacco use
652 Drinking alcohol
661 Doing nothing/relaxing
669 No activity
699 Other non active leisure
 Active leisure
711 Playing sports
712 Walking or jogging
713 Other outdoor recreating activities
714 Attending sporting events
718 Watching sporting events
721 Attending arts including plays and concerts
723 Attending movies
724 Attending casinos
737 Travel for leisure
799 Other active leisure
 Religious and organizational activities
811 Attending religious activities

		812 Other religious and spiritual activities 821 Attending meetings or events 899 Other organizational activity 991 Other miscellaneous 992 No favorite activity 997 RF 998 DK 999 Not Codeable
EL Section		
el1dage2us R1 D AGE CAME TO US SP File (EL Section)	997 if EL1 = 1 0 If EL4 year = SP birth year or EL4b = 0 1 to XXX (EL4 year minus SP birth year or age in EL4b) -7 if EL4A = -7 -8 if EL4A = -8 -1 if r1dresid = 3 or 4	0 Less than age 1 1-N Age 997 Born in US -1 Inapplicable -7 DK -8 RF
el1dsameres R1 D CITY STATE NOW AND AGE 15 SP File (EL Section)	1 if EL9A city and EL9B state match RE address city and state 2 if (EL9A city does not match RE address city or EL9A = -7 or -8) and EL9B state does match RE address state 3 if EL9A city does not match and EL9B state does match RE address city and state -1 if r1dresid = 3 or 4 or ((EL1 = 2 or DK or RF) and (EL4b >15 or EL4a minus SP's BIRTH YEAR >15))	1 Lives in same City and State as at age 15 2 Lives in same state but different City (or DKRF city) as age 15 3 Does not live in same State as age 15 -1 Inapplicable
RL Section		
r11dracehisp R1 D RACE AND HISPANIC ETHNICITY SP File (RL Section)	1 if (r1dresid = 3 or 4 and FQ confirmed = White) or (r1dresid = 1 or 2 and r11primarace = 1 and r11hisplatno = 2 or -7 or -8) or (r1dresid = 1 or 2 and r11yourrace1 = 1 and r11primarace = -1 [not applicable] and r11hisplatno = 2 or -7 or -8) 2 if (r1dresid = 3 or 4 and FQ confirmed = Black) or (r1dresid = 1 or 2 and RL2 = 2 and RL3 = 2 or -7 or -8) or (r1dresid = 1 or 2 and RL1 = 2 and RL2 = -1 [not applicable] and RL3 = 2 or -7 or -8) 3 if (r1dresid = 3 or 4 and FQ confirmed not White or Black) or (r1dresid = 1 or 2 and RL2 = 3 or 4 or 5 or 6 or 7	1 White, non-Hispanic 2 Black, non-Hispanic 3 Other (Am Indian/Asian/Native Hawaiian/Pacific Islander/other specify), non-Hispanic 4 Hispanic 5 DKRF

	<p>or 8 and RL3 = 2 or -7 or -8) or (r1dresid = 1 or 2 and RL1 = 3 or 4 or 5 or 6 or 7 or 8 and RL2 = - 1 and RL3 = 2 or -7 or -8)</p> <p>4 if (r1dresid = 3 or 4 and FQ confirmed Hispanic) or (r1dresid = 1 or 2 and RL3 = 1)</p> <p>5 if (r1dresid = 1 or 2 and RL1 = -7 or -8 and RL3= 2 or -7 or -8) or FQ could not confirm race</p>	
AB Section		
<p>ba1dblssadm R1 D BALANCE SIDE BY SIDE ADMIN SP File (AB Section)</p>	<p>1 if BA3 = 1 or 2 or 3 2 if BA3 NE 1 and BA3 NE 2 and BA3 NE 3 4 if BALANCESTANDS flag = 2; -1 if r1dresid = 3 or 4</p>	<p>1 Eligible and recorded result for side by side balance 2 Eligible and no recorded result for side by side balance 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba1dblstadm R1 D BALANCE SEMI TANDEM ADMIN SP File (AB Section)</p>	<p>1 if BA7 = 1 or 2 or 3 2 if BA7 NE 1 and BA7 NE 2 and BA7 NE 3 3 if BA3 = 2 or 3 4 if BALANCESTANDS flag = 2 -1 if r1dresid = 3 or 4</p>	<p>1 Eligible and recorded result for semi tandem balance 2 Eligible and no recorded result for semi tandem balance 3 Not administered because did not complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba1dblftadm R1 D BALANCE FULL TANDEM ADMIN SP File (AB Section)</p>	<p>1 if BA11 = 1 or 2 or 3 2 if BA11 NE 1 and BA11 NE 2 and BA11 NE 3 3 if BA3 = 2 or 3 or BA7 = 2 or 3 4 if BALANCESTANDS flag = 2 -1 if r1dresid = 3 or 4</p>	<p>1 Eligible and recorded result for full tandem balance 2 Eligible and no recorded result for full tandem balance 3 Not administered because did not complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba1dblopadm R1 D BALANCE 1 LEG OP EYE ADMIN SP File (AB Section)</p>	<p>1 if BA15 = 1 or 2 or 3 2 if BA15 NE 1 and BA15 NE 2 and BA15 NE 3 3 if BA3 = 2 or 3 or BA7 = 2 or 3 or BA11 = 2 or 3 4 if BALANCESTANDS flag = 2 -1 if r1dresid = 3 or 4</p>	<p>1 Eligible and recorded result for one leg eyes open balance 2 Eligible and no recorded result for one leg eyes open balance 3 Not administered because did not complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>

ba1dblcladm R1 D BALANCE 1 LEG CLS EYE ADMIN SP File (AB Section)	1 if BA19 = 1 or 2 or 3 2 if BA19 NE 1 and BA19 NE 2 and BA19 NE 3 3 if BA3 = 2 or 3 or BA7 = 2 or 3 or BA11 = 2 or 3 or BA15 = 2 or 3 4 if BALANCESTANDS flag = 2 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for one leg eyes closed balance 2 Eligible and no recorded result for one leg eyes closed balance 3 Not administered because did not complete prior balance tests 4 Not eligible due to exclusion criteria -1 Inapplicable
wa1dwlkadm R1 D WALKING COURSE ADMIN SP File (AB Section)	1 if (WA5 = 1 or 2 or 3 and WALKINGCOURSE flag NE 2) or WA2 =2 5 if WA5 = 1 or 2 or 3 and WALKINGCOURSE flag = 2 Else 4 if WALKINGCOURSE flag = 2 2 if WA5 NE 1 and WA5 NE 2 and WA5 NE 3 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for walking course 2 Eligible and no recorded result for walking course 4 Not eligible on exclusion criteria and no recorded result 5 Not eligible on exclusion criteria but recorded result (SP changed mind) -1 Inapplicable
ch1dschradm R1 D SINGLE CHAIR ADMIN SP File (AB Section)	1 if CH2 = 2 or CH4 =2 or (CH7 = 1 or 2 or 3) or (CH4=1 and CH7 = -1 or -9) 2 if CH7 NE 1 and CH7 NE 2 and CH7 NE 3 4 if CHAIRSTANDS flag = 2 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for single chair stand 2 Eligible and no recorded result for single chair stand 4 Not eligible due to exclusion criteria -1 Inapplicable
ch1drchradm R1 D REPEAT CHAIR ADMIN SP File (AB Section)	1 if CH12 = 1 or 2 or 3 or CH2 = 2 2 if CH12 NE 1 and CH12 NE 2 and CH12 NE 3 3 if CH7 = 2 or 3 or CH8 = 1 or (CH7 = 1 and CH8 = -1 or -9) or (CH4 = 1 and CH7 = -1 or -9) 4 if CHAIRSTANDS flag = 2 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for repeated chair stand 2 Eligible and no recorded result for repeated chair stand 3 Not administered because did not complete single chair stand w/o arms 4 Not eligible due to exclusion criteria -1 Inapplicable
gr1dgripadm R1 D GRIP STRENGTH ADMIN SP File (AB Section)	1 if GR5 = 1 or 2 or 3 2 if GR5 NE 1 and GR5 NE 2 and GR5 NE 3 4 if LEFTGRIPTEST = 2 and RIGHTGRIPTEST = 2 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for grip strength 2 Eligible and no recorded result for grip strength 4 Not eligible due to exclusion criteria -1 Inapplicable
wc1dwaistadm R1 D WAIST CIRCUMFERENCE ADMIN SP File (AB Section)	1 if WC3 = 1 or 2 or 3 2 if WC3 NE 1 and WC3 NE 2 and WC3 NE 3 -1 if r1dresid = 3 or 4	1 Eligible and recorded result for waist circumference 2 Eligible and no recorded result for waist circumference -1 Inapplicable
pk1dpeakadm R1 D PEAK AIR FLOW ADMIN	1 if PK4 = 1 or 2 or 3 2 if PK4 NE 1 and PK4 NE 2 and PK4 NE 3	1 Eligible and recorded result for peak air flow 2 Eligible and no recorded result for peak air flow

SP File (AB Section)	-1 if r1dresid = 3 or 4	-1 Inapplicable
r1dnhatssppb R1 D SPPB SCORE NHATS SP File (AB Section)	0 = worst score; 12 = best score -1 if r1dresid = 3 or 4 -9 missing	0-12 Score -1 Inapplicable -9 Missing
r1dnhatsbasc R1 D BALANCE STAND SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatswksc R1 D WALK SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatschsc R1 D REPEAT CHR STND SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatsgrb R1 D BEST GRIP STRENGTH SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatsgrav R1 D AVG GRIP STRENGTH SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatspkb R1 D BEST PEAK AIR FLOW SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dnhatspkav R1 D AVG PEAK AIR FLOW SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dspbmiss R1 D REASON MISSING SPPB SP File (AB Section)	Categorical variable for persons treated as missing in SPPB scores and reasons. See Kasper, Freedman, Niefeld 2012 for details.	1 Proxy interview 2 Missing walk and repeat chair and balance 3 Missing walk and repeat chair 4 Missing walk and balance 5 Missing repeat chair and balance 6 Missing walk 7 Missing repeat chair 8 Missing balance 9 No space

		10 No chair 11 No space walk and no chair 12 No space walk and non-safety missing 13 No chair and non-safety missing 14 Non-safety walk 15 Non-safety chair 16 Non-safety balance 17 Non-safety walk and chair 18 Non-safety walk and balance 19 Non-safety chair and balance 20 Non-safety walk and chair and balance -1 Inapplicable
r1dorigspb R1 D SPPB SCORE ORIGINAL SP File (AB Section)	0 = worst score; 12 = best score -1 if r1dresid = 3 or 4 -9 missing	0-12 Score -1 Inapplicable -9 Missing
r1dorigbasc R1 D BALANCE STND SCORE ORIGINAL SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dorigwksc R1 D WALK SCORE ORIGINAL SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r1dorigchsc R1 D REPEAT CHR STAND SCORE ORIG SP File (AB Section)	0 = worst score; 4 = best score -1 if r1dresid = 3 or 4 -9 missing	0-4 Score -1 Inapplicable -9 Missing
LF Section		
lf1doccptgy R1 D LONGEST OCCUPATION CATEGORY SP File (LF Section)	Developed from LF11 and LF11a based on the 2010 Census Occupational Classification (see http://www.bls.gov/cps/cenocc.pdf)	1 Management Occupations: 0010-0430 2 Business and Financial Operations Occupations: 0500-0950 3 Computer and mathematical Occupations: 1000-1240 4 Architecture and Engineering Occupations: 1300-1560 5 Life, Physical and Social Science Occupations: 1600-1965 6 Community and Social Service Occupations: 2000-2060 7 Legal Occupations: 2100-2160

		<ul style="list-style-type: none"> 8 Education, Training, and Library Occupations: 2200-2550 9 Arts, Design, Entertainment, Sports, and Media Occupations: 2600-2960 10 Healthcare Practitioners and Technical Occupations: 3000-3540 11 Healthcare support Occupations: 3600-3655 12 Protective Service Occupations: 3700-3955 13 Food Preparation and Serving Related Occupations: 4000-4160 14 Building and Grounds Cleaning and Maintenance Occupations: 4200-4250 15 Personal Care and Service Occupations: 4300-4650 16 Sales and Related Occupations: 4700-4965 17 Office and Administrative support Occupations: 5000-5940 18 Farming, Fishing, and Forestry Occupations: 6000-6130 19 Construction and Extraction Occupations: 6200-6940 20 Installation, Maintenance, and Repair Occupations: 7000-7630 21 Production Occupations: 7700-8965 22 Transportations and Material Moving Occupations: 9000-9750 23 Military specific Occupations: 9800-9830 94 Not codeable 95 Never worked entire life 96 Homemaker/raised children -7 RF -8 DK -9 Missing -1 Inapplicable
HL Section		
op1dhrsmth R1 D HL2 HL3 HL4 HRS HELP MONTH SP File (HL Section)	Developed from HL2, HL3, and HL4 9999=cases reporting less than 1 hour per day and number of days helping is missing	<ul style="list-style-type: none"> -11 Hours missing -10 Days missing -9 Hours and days missing -1 Inapplicable

		1-744 Hours per month 9999 Not codeable, <1 hour/day
FQ Section		
fq1dosfacd R1 D FQ6A OTHER SPECIFY FAC TYPE	Coded from FQ6a Other Specify	<ul style="list-style-type: none"> 1 Free standing nursing home 2 Free standing assisted living facility/residential care facility 3 Nursing home and assisted living facility 4 Continuing care retirement community (CCRC) 5 Adult family care home 6 Group home 7 Board and care home/ personal care home 8 Retirement community or senior housing (not CCRC) 9 Independent living 10 Assisted and independent (no nursing home) 11 Housing (Apartment, Condo, etc.) -8 DK -9 Missing -1 Inapplicable
fq1dosfaca R1 D FQ10A OTHER SPECIFY FAC AREA	Coded from FQ10a Other Specify	<ul style="list-style-type: none"> 1 Independent living/housing/retirement 2 Assisted living/personal care 3 Special care, memory, or Alzheimer's unit 4 Nursing home -8 DK -9 Missing -1 Inapplicable
fq1dlocsp R1 D FQ6 6A 10 10A FOR SAMP WGT	Variable that identifies type of residential care place SP lives in (other than nursing home). Coded from FQ6, FQ6a, FQ10, FQ10a.	<ul style="list-style-type: none"> 1 Independent living/housing/retirement 2 Assisted living/personal care 3 Special care, memory, or Alzheimer's unit 4 Nursing home 8 Not reported -1 Inapplicable
OP File		
op1dfmiss R1 D NO FLAGS SET FOR PERSON OP file	1 if OP record and no flags are set -1 otherwise	<ul style="list-style-type: none"> 1 Yes -1 Inapplicable

op1dmissadd R1 D WHERE NO FLAGS PERSN ADDED OP file	If op1dfmiss = 1 then 1 to 13 = section where person was added to person roster -1 otherwise	1 added at CL 2 added at DT 3 added at EW 4 added at HA 5 added at HO 6 added at MC 7 added at MO 8 added at PA 9 added at PE 10 added at SC 12 added at CS 13 added at HH 14 added at IS -1 Inapplicable
op1dprobdup R1 D OTH PERSN PROBABLE DUPLICAT OP file	For each OPID that is a probable duplicate, the OPID of the probable duplicate. Example: 001 and 005 are probable duplicates. op1dprobdup = 001 for case 005 op1dprobdup = 005 for case 001 -1 otherwise	OPID of duplicate -1 Inapplicable
op1ddupeid R1 D POSSIBLE DUPLICATE OF ID	OPID of op record that is a probable duplicate	

Appendix V: Derived Variable Specifications Rounds 2 & 3

Variable Name VARIABLE LABEL File Location	CODING SPECIFICATIONS	VALUES and VALUE LABELS
RE and HT Sections		
r2dlmlint R2 D LAST MTH LIFE INTVW DONE SP File	1 if Last Month of Life interview conducted (r#dresid = 6) -1 inapplicable if r#dresid = 1, 2, 3, 4, 5, 7 or 8	1 Last month of life interview -1 Inapplicable
r3dlmlint R3 D LAST MTH LIFE INTVW DONE SP File		
r2dresid R2 D RESIDENTIAL STATUS SP File r3dresid R3 D RESIDENTIAL STATUS SP File	1 if SP interview and no FQ interview required 2 if SP and FQ required; both completed or SP only completed 3 if SP and FQ required; FQ only completed 4 if nursing home resident; SP and FQ required, both completed or SP only completed 5 if nursing home resident; FQ only completed 6 if deceased 7 if residential care not nursing home in R1 and R#; FQ only completed 8 if nursing home resident in R1 and R#; FQ only completed	1 Community 2 Residential care not nursing home (SP interview) 3 Residential care not nursing home (FQ only) 4 Nursing home (SP interview) 5 Nursing home (FQ only) 6 Deceased 7 Residential care not nursing home in R1 and R# (FQ only) 8 Nursing home in R1 and R# (FQ only)
r2dresidlml R2 D RESIDENTIAL CARE LAST MTH SP File r3dresidlml R3 D RESIDENTIAL CARE LAST MTH SP File	1 if living in community at time of death 2 if living in residential care at time of death -1 inapplicable if r#dresid = 1, 2, 3, 4, 5, 7 or 8	1 Community 2 Residential Care -1 Inapplicable

r2d2intvrage R2 D SP CAT AGE AT INTVW SP File (IS Section)	Categorical version of age at interview -1 if r#dresid=6	1 65-69 2 70-74 3 75-79 4 80-84 5 85-89 6 90+ -1 Inapplicable
r3d2intvrage R3 D SP CAT AGE AT INTVW SP File (IS Section)		
re2dadrscorr R2 D ADDRESS SAME DIFF CORRECTED SP File (RE Section)	In Round 2, incorporates corrected values for 44 cases based on review; these cases routed as if they did not move but they did have a different address in Round 2 than in Round2; for other cases re2dadrscorr = RE4f -1 if r2dresid = 6 or 8 -9 if r2dresid = 3 or 5 or 7	1 Same address as R1 2 Different address at R2 3 Same with minor changes -1 Inapplicable -9 Missing
re2dresistrct R2 D RESIDNCE PHYSICAL STRUCTUR SP File (RE Section)	RE8 if RE4f = 2 (new residence in round)* Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Free-standing (detached) single house 2 Single house but attached to others (row house, townhouse, duplex, triplex, or triple decker) 3 Mobile home or trailer 4 Multi-unit (2+) building 91 Other (specify) -1 Inapplicable
re3dresistrct R3 D RESIDNCE PHYSICAL STRUCTUR SP File (RE Section)	* In R2, this derived variable was incorrectly coded for 71 cases that did not move but for whom structure was updated. The following logic can be used to correct re2dresistrct: replace with re2newstrct if re2spadrsnew = 1 or 3 (not new residence in R2) and re2newstrct = 1 or 2 or 3 or 4 or 91	
re2dbldg R2 D SP BLDG MORE THAN ONE FLOOR SP File (RE Section)	RE9 if RE4f = 2 (new residence in round) and RE8 = 4 or 91* Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Building has one floor 2 Building has multiple floors -1 Inapplicable
re3dbldg R3 D SP BLDG MORE THAN ONE FLOOR SP File (RE Section)	* In R2 and R3, new residences where RE8 = 1 (free-standing detached single house) also routed incorrectly to RE9. re3dbldg has been corrected so that only multi-unit buildings or other structures are included, but re2dbldg has not. ho#levelsflr (from HO5) should be used for number of floors in free-standing houses in all rounds.	

	* In R2, this derived variable was incorrectly coded for 16 cases that did not move but for whom structure was updated. The following logic can be used to correct re2dbldg: replace with re2newblgfl if re2spadrsnew = 1 or 3 (not new residence in R2) and re2newstrct = 1 or 2 or 3 or 4 or 91.	
re2dcensdiv R2 D SP CENSUS DIVISION SP File (RE Section)	Categorical version of SP residence at the Census Division level	1 Northeast Region: New England Division (ME, NH, VT, MA, RI, CT) 2 Northeast Region: Middle Atlantic Division (NY, NJ, PA) 3 Midwest Region: East North Central Division (OH, IN, IL, MI, WI) 4 Midwest Region: West North Central Division (MN, IA, MO, ND, SD, NE, KS) 5 South Region: South Atlantic Division (DE, MD, DC, VA, WV, NC, SC, GA, FL) 6 South Region: East South Central Division (KY, TN, AL, MS) 7 South Region: West South Central Division (AR, LA, OK, TX) 8 West Region: Mountain Division (MT, ID, WY, CO, NM, AZ, UT, NV) 9 West Region: Pacific Division (WA, OR, CA) -9 Missing
re3dcensdiv R3 D SP CENSUS DIVISION SP File (RE Section)	Missing value added at R2 (person moved to address unknown and died)	
PD Section		
r2d2deathage R2 D SP CAT AGE AT DEATH SP file (PD Section)	Categorical version of age at death -1 if r#dresid NE 6	1 65-69 2 70-74 3 75-79 4 80-84 5 85-89 6 90+ -1 Inapplicable
r3d2deathage R3 D SP CAT AGE AT DEATH SP file (PD Section)		
HH Section		

<p>hh2dmarstat R2 D MARITAL STATUS AT R2 SP File (HH Section)</p> <p>hh3dmarstat R3 D MARITAL STATUS AT R3 SP File (HH Section)</p>	<p>1 if (married in prior round and HH1A = 2) or HH1 = 1 2 if (living with partner in prior round and HH1A = 2) or HH1 = 2 3 if (separated and HH1A = 2) or HH1 = 3 4 if (divorced and HH1A = 2) or HH1 = 4 5 if (widowed and HH1A = 2) or HH1 = 5 6 if (never married and HH1A = 2) or HH1 = 6 -7 if HH1A = refused or HH1 = refused -8 if HH1A = don't know or HH1 = don't know -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Married 2 Living with a partner 3 Separated 4 Divorced 5 Widowed 6 Never married -7 RF -8 DK -1 Inapplicable</p>
<p>hh2dlvngarrg R2 D LIVING ARRANGEMENT SP File (HH Section)</p> <p>hh3dlvngarrg R3 D LIVING ARRANGEMENT SP File (HH Section)</p>	<p>1 if SP is only person with INHOUSEHOLD flag = 1 2 if SP and spouse/partner with INHOUSEHOLD flag = 1 and no other persons with INHOUSEHOLD flag = 1) 3 if spouse/partner with INHOUSEHOLD flag = 1 and 1 or more other persons with INHOUSEHOLD flag = 1 4 if spouse/partner with INHOUSEHOLD flag NE 1 and 1 or more other persons with INHOUSEHOLD flag = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Alone 2 With Spouse/partner only [spouse/partner in household] 3 With spouse/partner and with others 4 With others only -1 Inapplicable</p>
<p>hh2dhshldnum R2 D TOTAL NUMBER IN HOUSEHOLD SP File (HH Section)</p> <p>hh3dhshldnum R3 D TOTAL NUMBER IN HOUSEHOLD SP File (HH Section)</p>	<p>Count of persons on roster with INHOUSEHOLD flag = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1-N Number of persons -1 Inapplicable</p>
<p>hh2dhshldchd R2 D TOTAL CHILDREN IN HOUSEHOLD SP File (HH Section)</p> <p>hh3dhshldchd R3 D TOTAL CHILDREN IN HOUSEHOLD SP File (HH Section)</p>	<p>Count of persons with CHILDIRHH flag = 1 0 if no flags = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>0 1-N Number of persons -1 Inapplicable</p>

<p>hh2dspouage R2 D NEW R2 SPOU PART CAT AGE SP File (HH Section) (R1 variable for spouse age = hh1d2spouage)</p> <p>hh3dspouage R3 D NEW R3 SPOU PART CAT AGE SP File (HH Section)</p>	<p>Categorical version of age for new spouse/partner</p> <p>If HH1 = 1 Based on HH6A and HH6C -7 if RF -8 if DK -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 <50 2 50-54 3 55-59 4 60-64 5 65-69 6 70-74 7 75-79 8 80-84 9 85-89 10 90+ -7 RF -8 DK -1 Inapplicable</p>
<p>hh2dspageall R2 D SPOU PAR AGE UPDATE AND NEW SP File (HH Section)</p> <p>hh3dspageall R3 D SPOU PAR AGE UPDATE AND NEW SP File (HH Section)</p>	<p>Categorical age for current spouse/partner</p> <p>If (married prior round then based on prior round spouse/partner 's date of birth If married this round but not prior round based on new spouse/partner's date of birth -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 <50 2 50-54 3 55-59 4 60-64 5 65-69 6 70-74 7 75-79 8 80-84 9 85-89 10 90+ -7 RF -8 DK -1 Inapplicable</p>
<p>op2dage R2 D OTH PERSN CAT AGE AT INTVW OP File (HH Section)</p> <p>op3dage R3 D OTH PERSN CAT AGE AT INTVW OP File (HH Section)</p>	<p>Categorical version of age for other persons where birth date (or age in years) obtained: spouse/partner, current household member, children (biological, adopted, step) -7 if RF -8 if DK -1 otherwise</p> <p>Based on date of birth or, if date of birth not provided, reported age incremented by 1 year at each round.</p>	<p>1 <20 2 20-24 3 25-29 4 30-34 5 35-39 6 40-44 7 45-49 8 50-54 9 55-59 10 60-64 11 65-69 12 70-74</p>

		13 75-79 14 80-84 15 85-89 16 90+ -1 Inapplicable -7 RF -8 DK
op2dspoudec R2 D SPOUSE DIED OP File (HH Section)	Spouse from prior round deceased	1 Yes -1 Inapplicable
op3dspoudec R3 D SPOUSE DIED OP File (HH Section)		
CS Section		
cs2dnumchild R2 D NUMBER OF CHILDREN SP File (CS Section)	Count of persons with CHILDIRHH flag = 1 and CHILDNOTIRHH flag = 1 0 if no flags = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	0 1-N Number of persons -1 Inapplicable
cs3dnumchild R3 D NUMBER OF CHILDREN SP File (CS Section)		
cs2dnmstpchd R2 D NUMBER OF STEP CHILDREN SP File (CS Section)	Count of persons who are living with (opround = 1 and op1relatnshp = 7 or 8) or (opround =2 and op2relatnshp = 7 or 8) or (opround = 3 and op3relatnshp = 7 or 8) 0 if no flags = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	0 1-N Number of persons -1 Inapplicable
cs3dnmstpchd R3 D NUMBER OF STEP CHILDREN SP File (CS Section)		
cs2dnumdaugh R2 D NUMBER OF DAUGHTERS SP File (CS Section)	Count of persons who are living with ((opround = 1 and op1relatnshp = 3 or 7) or (opround =2 and op2relatnshp = 3 or 7) or (opround = 3 and op3relatnshp = 3 or 7) 0 if no flags = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	0 1-N Number of persons -1 Inapplicable
cs3dnumdaugh R3 D NUMBER OF DAUGHTERS SP File (CS Section)		

cs2dnumson R2 D NUMBER OF SONS SP File (CS Section)	Count of persons who are living with ((opround = 1 and op1relatnshp =4 or 8) or (opround =2 and op2relatnshp = 4 or 8) or (opround = 3 and op3relatnshp = 4 or 8) 0 if no flags = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	0 1-N Number of persons -1 Inapplicable
cs3dnumson R3 D NUMBER OF SONS SP File (CS Section)		
op2dchilddec R2 CHILD OF SP DIED SINCE LST INT SP File (CS Section)	1 if DECEASED flag = 1 (CS1B is coded 3 to set flag) -1 otherwise	1 Child deceased -1 Inapplicable
op3dchilddec R3 CHILD OF SP DIED SINCE LST INT SP File (CS Section)		
SN Section		
sn2dnumsn R2 D NUMBER IN SOCIAL NETWORK SP File (SN Section)	Count number of persons with SOCIALNETWORK flag = 1 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or proxy respondent 0 otherwise	0 1-N Number of persons -1 Inapplicable
sn3dnumsn R3 D NUMBER IN SOCIAL NETWORK SP File (SN Section)		
op2dsocwrkfl R2 D LIKELY SOCIAL NETWRK MEMBER OP File (SN Section)	Person entered on roster at SN Section but not checked as SN member.	1 Yes -1 Inapplicable
op3dsocwrkfl R3 D LIKELY SOCIAL NETWRK MEMBER OP File (SN Section)		
HO Section		
ho2dbldg1 R2 D BLDG HAS ELEVATOR SP File (HO Section)	HO4A if RE4f = 2 (new residence in round) Otherwise = prior round* -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Yes 2 No -7 RF -8 DK -1 Inapplicable
ho3dbldg1 R3 D BLDG HAS ELEVATOR	*In Round 2, SPs who did not move but had their structure corrected in re2newstrct were assigned values	

<p>SP File (HO Section)</p>	<p>from the prior round in ho2dbldg1-ho2dbldg4 that may no longer apply. To correct these few cases the following logic may be used for ho2dbldg1-ho2dbldg4:</p> <p>ho2bldgamen1 if re2spadrsnew = 2 (new residence in R2) and re2newstrct = 4 (multi-unit) else -9 if re2spadrsnew = 1 or 3 (did not move) and re2newstrct = 4 (multi-unit) else ho1bldgamen1 if re2spadrsnew = 1 or 3 (did not move) and re2newstrct = -1 (not applicable) else -1 if re2spadrsnew = 1 or 3 (did not move) and re2newstrct = 1 or 2 or 3 or 91 (not multi-unit) Otherwise = -1</p>	
<p>ho2dbldg2 R2 D BLDG HAS STAIR LIFT GLIDE SP File (HO Section)</p> <p>ho3dbldg2 R3 D BLDG HAS STAIR LIFT GLIDE SP File (HO Section)</p>	<p>HO4B if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Yes 2 No -7 RF -8 DK -1 Inapplicable</p>
<p>ho2dbldg3 R2 D BLDG HAS COMMN SPACE MEALS SP File (HO Section)</p> <p>ho3dbldg3 R3 D BLDG HAS COMMN SPACE MEALS SP File (HO Section)</p>	<p>HO4C if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Yes 2 No -7 RF -8 DK -1 Inapplicable</p>
<p>ho2dbldg4 R2 D BLDG HAS SPACE SOCIAL EVENT SP File (HO Section)</p> <p>ho3dbldg4 R3 D BLDG HAS SPACE SOCIAL EVENT SP File (HO Section)</p>	<p>HO4D if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Yes 2 No -7 RF -8 DK -1 Inapplicable</p>

ho2dbathprvt R2 D FAC HAS PRIVATE BATH SP File (HO Section)	HO10 if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Yes 2 No -7 RF -8 DK -1 Inapplicable
ho3dbathprvt R3 D FAC HAS PRIVATE BATH SP File (HO Section)		
ho2dkitchnpr R2 D FAC HAS PRIV KITCHEN SP File (HO Section)	HO12 if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Yes 2 No -7 RF -8 DK -1 Inapplicable
ho3dkitchnpr R3 D FAC HAS PRIV KITCHEN SP File (HO Section)		
ho2dkitchnco R2 D FAC HAS COMMON KITCHEN SP File (HO Section)	HO13 if RE4f = 2 (new residence in round) Otherwise = prior round -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Yes 2 No -7 RF -8 DK -1 Inapplicable
ho3dkitchnco R3 D FAC HAS COMMON KITCHEN SP File (HO Section)		
CP & CG Sections		
cp2dad8dem R2 D DEMENTIA REPORTED IN PRIOR AD8 SP File (CP Section)	1 if BOX CP 3 indicates skip based on last interview: all CP3 a through h = 3 -1 otherwise	1 Dementia response to all AD8 items in prior round -1 Inapplicable
cp3dad8dem R3 D DEMENTIA REPORTED IN PRIOR AD8 SP File (CP Section)		
cg2dwrldstnm R2 D WHICH WORD LIST WAS ASSIGNED SP File (CG Section)	1 = list 1 2 = list 2 3 = list 3 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1-3 Word list administered -1 Inapplicable
cg3dwrldstnm R3 D WHICH WORD LIST WAS ASSIGNED		

SP File (CG Section)		
cg2dwrddimrc R2 D SCORE IMMEDIATE WORD RECALL SP File (CG Section)	0 if CG8 = 91 (no words remembered) 1 to 10 for number of correct words -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -2 if CG1A = 2 -3 if CG1A =1 and ((CG 6Aa and 6Ab and 6Ac and 6Ad and 6Ba and 6Bb = no or -7 or -8) -7 if CG7PRE = 2 (refuses activity) or CG8 = 92 (refused)	0-10 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP cognitive items but SP unable to answer -7 SP refused activity
cg3dwrddimrc R3 D SCORE IMMEDIATE WORD RECALL SP File (CG Section)		
cg2dwrddinone R2 D IMMEDIATE RECALL NONE SP File (CG Section)	1 if CG8= 91 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 No words remembered -1 Inapplicable
cg3dwrddinone R3 D IMMEDIATE RECALL NONE SP File (CG Section)		
cg2dwrddirref R2 D IMMEDIATE RECALL REFUSED SP File (CG Section)	1 if CG7PRE = 2 (refuses activity) or CG8= 92 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Refused word recall task -1 Inapplicable
cg3dwrddirref R3 D IMMEDIATE RECALL REFUSED SP File (CG Section)		
cg2dwrddlyrc R2 D SCORE DELAYED WORD RECALL SP File (CG Section)	0 if CG15 = 91 (no words remembered) 1 to 10 for number of correct words -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -2 if CG1A = 2 -3 if CG1A =1 and ((CG 6Aa and 6Ab and 6Ac and 6Ad and 6Ba and 6Bb = no or -7 or -8) or (CG1c=2 or -7 or -8)) -7 if CG7PRE = 2 (refused immediate word recall activity) or CG15 = 92 (refused)	0-10 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP but SP unable to answer -7 SP refused activity
cg3dwrddlyrc R3 D SCORE DELAYED WORD RECALL SP File (CG Section)		
cg2dwrddnone R2 D DELAYED RECALL REFUSED SP File (CG Section)	1 if CG15 = 91 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 No words remembered -1 Inapplicable

cg3dwrddnone R3 D DELAYED RECALL REFUSED SP File (CG Section)		
cg2dwrddrref R2 D DELAYED RECALL REFUSED SP File (CG Section)	1 if CG7PRE = 2 (refuses activity) or CG15= 92 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Refused word recall task -1 Inapplicable
cg3dwrddrref R3 D DELAYED RECALL REFUSED SP File (CG Section)		
cg2dwrdd1rcl – cg2dwrdd10rcl R2 D WORD1 IMMEDIATE RECALL – R2 D WOR10 IMMEDIATE RECALL SP File (CG Section)	1 if correctly identified word 1 (word 2 etc.) 2 if word not correctly identified -1 otherwise	1 Yes 2 No -1 Inapplicable
cg3dwrdd1rcl – cg3dwrdd10rcl R3 D WORD1 IMMEDIATE RECALL – R3 D WOR10 IMMEDIATE RECALL SP File (CG Section)		
cg2dwrdd1dly – cg2dwrdd10dly R2 D WORD1 DELAYED RECALL – R2 D WOR10 DELAYED RECALL SP File (CG Section)	1 if correctly identified word 1 (word 2 etc.) 2 if word not correctly identified -1 otherwise	1 Yes 2 No -1 Inapplicable
cg3dwrdd1dly – cg3dwrdd10dly R3 D WORD1 DELAYED RECALL – R3 D WOR10 DELAYED RECALL SP File (CG Section)		
cg2dclckdraw R2 D SCORE OF CLOCK DRAWING TEST SP File (CG Section)	0 = worst score; 5 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -2 if CG1A = 2 -3 if CG1A = 1 and ((CG 6a and 6b and 6c and 6d and 6e = no or -7 or -8) or (CG1c = 2 or -7 or -8))	0-5 Score -1 Inapplicable -2 Proxy says cannot ask SP -3 Proxy says can ask SP but SP unable to answer -4 SP did not attempt to draw clock -7 SP refused to draw clock -9 Missing
cg3dclckdraw R3 D SCORE OF CLOCK DRAWING TEST SP File (CG Section)	-4 if CG10A = 2 -7 if CG10A = 97	
cg2dclckimgcl R2 D IMAGE CLARITY CLOCK DRAWING	Image clarity of clock drawings used for scoring	1 Very Clear 2 Somewhat Clear

<p>SP File (CG Section)</p> <p>cg3dclkingcl</p> <p>R3 D IMAGE CLARITY CLOCK DRAWING</p> <p>SP File (CG Section)</p>		<p>3 Somewhat Unclear</p> <p>4 Very Unclear</p> <p>-1 Inapplicable</p> <p>-2 Proxy says cannot ask SP</p> <p>-3 Proxy says can ask SP but SP unable to answer</p> <p>-4 SP did not attempt to draw clock</p> <p>-7 SP refused to draw clock</p> <p>-9 Missing</p>
MO Section		
<p>mo2doutsfdf</p> <p>R2 D GO OUTSIDE SELF</p> <p>SP File (MO Section)</p> <p>mo3doutsfdf</p> <p>R3 D GO OUTSIDE SELF</p> <p>SP File (MO Section)</p>	<p>1 if MO7= 4</p> <p>2 if (MO6= 2 or MO7= 1 to 3) and MO8= 1</p> <p>3 if (MO6= 2 or MO7= 1 to 3) and MO8= 2 to 4</p> <p>4 if ((MO6= -7 or -8) or (MO7= -7 or -8)) and MO8= 1</p> <p>5 if ((MO6= -7 or -8) or (MO7= -7 or -8)) and MO8= 2 to 4</p> <p>6 if ((MO6= 2 or (MO7= 1 to 3)) and MO8= -7 or -8</p> <p>7 if ((MO6= -7 or -8) or (MO7= -7 or -8)) and MO8= -7 or -8</p> <p>-1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Did not do by self in last month</p> <p>2 Did by self in last month/no difficulty</p> <p>3 Did by self in last month/difficulty</p> <p>4 DKRF did by self in last month/no difficulty</p> <p>5 DKRF did by self in last month/difficulty</p> <p>6 Did by self in last month/DKRF difficulty</p> <p>7 DKRF did by self in last month/DKRF difficulty</p> <p>8 Not done in last month</p> <p>-1 Inapplicable</p>
<p>mo2doutdevi</p> <p>R2 D GO OUTSIDE USING DEVICES</p> <p>SP File (MO Section)</p> <p>mo3doutdevi</p> <p>R3 D GO OUTSIDE USING DEVICES</p> <p>SP File (MO Section)</p>	<p>1 if (MO2 = 5 and MO3 = 5 or -1 and MO4 = 5 or -1 and MO5 =5 or -1) or (MO2 = 5 or -1 and MO3= 5 and MO4 = 5 or -1 and MO5 = 5 or -1) or (MO2 = 5 or -1 and MO3 = 5 or -1 and MO4 = 5 and MO5 =5 or -1) or (MO2 = 5 or -1 and MO3 = 5 or -1 and MO4 = 5 or -1 and MO5 =5) or MD1 = 2</p> <p>2 if (MO2 = 1 to 4) or (MO3 = 1 to 4) or (MO4 = 1 to 4) or (MO5 =1 to 4);</p> <p>3 if MD1=1 and (MO2 = -7 or -8 or -1) and (MO3 = -7 or -8 or -1) and (MO4 = -7 or -8 or -1) and (MO5 = -7 or -8 or -1)</p> <p>4 if MD1 = -7 or -8</p> <p>8 if MO1=5</p> <p>-1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 No use of devices to go outside in last month</p> <p>2 Use of devices to go outside in last month</p> <p>3 DKRF if used devices to go outside in last month</p> <p>4 DKRF if used devices in last month</p> <p>8 Not done in last month</p> <p>-1 Inapplicable</p>
<p>mo2douthelp</p> <p>R2 D GO OUTSIDE USING HELP</p> <p>SP File (MO Section)</p> <p>mo3douthelp</p>	<p>1 if MO6 = 2</p> <p>2 if MO6 = 1</p> <p>3 if MO6 = -7 or -8</p> <p>8 if MO1= 5</p> <p>-1 if r#dresid = 3 or 5 or 7 or 8 or (in R2: fl2notalert = 1</p>	<p>1 No help to go outside in last month</p> <p>2 Had help to go outside in last month</p> <p>3 DKRF if had help to go outside in last month</p> <p>8 Not done in last month</p> <p>-1 Inapplicable</p>

R3 D GO OUTSIDE USING HELP SP File (MO Section)	or fl2notmobile = 1; in R3: fl3notalert = 1 or fl3notmobile = 1)	
mo2dinsdsfdf R2 D MOVE INSIDE SELF SP File (MO Section) mo3dinsdsfdf R3 D MOVE INSIDE SELF SP File (MO Section)	1 if MO20 = 4 2 if (MO18 = 2 or MO20 = 1 to 3) and MO21 = 1 3 if (MO18 = 2 or MO20 = 1 to 3) and MO21 = 2 to 4 4 if ((MO18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 =1 5 if ((MO18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 =2 to 4 6 if ((MO18 = 2) or (MO20 = 1 to 3)) and MO21 = -7 or -8 7 if ((MO18 18 = -7 or -8) or (MO20 = -7 or -8)) and MO21 = -7 or -8 8 if MO12 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
mo2dinsddevi R2 D MOVE INSIDE WITH DEVICES SP File (MO Section) mo3dinsddevi R3 D MOVE INSIDE WITH DEVICES SP File (MO Section)	1 if (MO13 = 5 and MO14 = 5 or -1 and MO15 = 5 or -1 and MO16 =5 or -1) or (MO13 = 5 or -1 and MO14 = 5 and MO15 = 5 or -1 and MO16 =5 or -1) or (MO13 = 5 or -1 and MO14 = 5 or -1 and MO15 = 5 and MO16 =5 or - 1) or (MO13 = 5 or -1 and MO14 = 5 or -1 and MO15 = 5 or -1 and MO16 = 5)or MD1 = 2 2 if (MO13 = 1 to 4) or (MO14 = 1 to 4) or (MO15 = 1 to 4) or (MO16 =1 to 4) 3 if MD1 =1 and (MO13 = -7 or -8 or -1) and (MO14 = -7 or -8 or -1) and (MO15 = -7 or -8 or -1) and (MO16 =-7 or -8 or -1) 4 if MD1 = -7 or -8 8 if MO12 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 No use of devices inside in last month 2 Use of devices inside in last month 3 DKRF if used devices inside in last month 4 DKRF on use of devices 8 Not done in last month -1 Inapplicable
mo2dinsdhelp R2 D MOVE INSIDE W HELP SP File (MO Section) mo3dinsdhelp R3 D MOVE INSIDE W HELP SP File (MO Section)	1 if MO18 = 2 2 if MO18 = 1 3 if MO18 = -7 or -8 8 if MO12 = 5 -1 if r#dresid = 3 or 5 or 7 or 8 or (in R2: fl2notalert = 1 or fl2notmobile = 1; in R3: fl3notalert = 1 or fl3notmobile = 1)	1 No help to go around inside in last month 2 Had help to go around inside in last month 3 DKRF if had help to go around inside 8 Not done in last month -1 Inapplicable

<p>mo2dbedsfdf R2 D GET OUT OF BED SP File (MO Section)</p> <p>mo3dbedsfdf R3 D GET OUT OF BED SP File (MO Section)</p>	<p>1 if MO26 =4 2 if (MO25 = 2 or MO26 = 1 to 3) and MO27 = 1 3 if (MO25 = 2 or MO26 = 1 to 3) and MO27 = 2 to 4 4 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = 1 5 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = 2 to 4 6 if ((MO25 = 2) or (MO26 = 1 to 3)) and MO27 = -7 or -8 7 if ((MO25 = -7 or -8) or (MO26 = -7 or -8)) and MO27 = -7 or -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty -1 Inapplicable</p>
<p>mo2dbeddevi R2 D DEVICE USE 2 GET OUT OF BED SP File (MO Section)</p> <p>mo3dbeddevi R3 D DEVICE USE 2 GET OUT OF BED SP File (MO Section)</p>	<p>1 if MD1 = 2 or MO24 = 5 or (MD2 = 2 and MD3 =2) or (MD2 = 2 and MD3 = -7 or -8) or (MD3 = 2 and MD2 = -7 or -8) 2 if MO24 = 1 to 4 3 if MO24 = -7 or -8 4 if (MD1 = -7 or -8) or (MD1 = 1 and (MD2 = -7 or -8) and (MD3 = -7 or -8)) -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 No use of cane or walker to get out of bed in last month 2 Use of cane or walker to get out of bed in last month 3 DKRF if used cane or walker to get out of bed in last month 4 DKRF if used cane or walker in last month -1 Inapplicable</p>
<p>mo2dbedhelp R2 D HELP TO GET OUT OF BED SP File (MO Section)</p> <p>mo3dbedhelp R3 D HELP TO GET OUT OF BED SP File (MO Section)</p>	<p>1 if MO25 = 2 2 if MO25 = 1 3 if MO25 = -7 or -8 -1 if r#dresid = 3 or 5 or 7 or 8 or(in R2: fl2notalert = 1 or fl2notmobile = 1; in R3: fl3notalert = 1 or fl3notmobile = 1)</p>	<p>1 No help to get out of bed in last month 2 Had help to get out of bed in last month 3 DKRF if had help to get out of bed in last month -1 Inapplicable</p>
DM Section		
<p>dm2dintvl R2 D MONTHS BETWEEN LAST INT AND EITHER CURRENT INT OR DATE OF DEATH</p> <p>dm3dintvl R3 D MONTHS BETWEEN LAST INT AND EITHER CURRENT INT OR DATE OF</p>	<p>Interval between last and current interview (or date of death) in months</p>	<p>-9 Missing -8 DK -7 RF -1 Inapplicable 0 Less than 1 month 1-17 Months</p>

DEATH		
dm2dmohlp R2 D MONTHS OF MOBILITY HELP SP File (DM Section) dm3dmohlp R3 D MONTHS OF MOBILITY HELP SP File (DM Section)	Coded from items DM1 through DM3F	-13 None -12 Outside of range -10 Not ascertained -9 Missing -8 DK -7 RF -1 Inapplicable 0 Less than 1 month 1-17 Months 90 Last round disputed
dm2dmodev R2 D MONTHS OF MOBILITY DEVICE USE SP File (DM Section) dm3dmodev R3 D MONTHS OF MOBILITY DEVICE USE SP File (DM Section)	Coded from items DM4 through DM6F	-13 None -12 Outside of range -10 Not ascertained -9 Missing -8 DK -7 RF -1 Inapplicable 0 Less than 1 month 1-17 Months 90 Last round disputed

<p>dm2dmohlpgr R2 D MOBILITY HELP USE GROUP SP file (DM Section)</p> <p>dm3dmohlpgr R3 D MOBILITY HELP USE GROUP SP file (DM Section)</p>	<p>Coded from last interview and current interview responses to MO</p> <p>Indicates type of case: help with mobility activities started since last interview, help ended since last interview, help between interviews with a gap, help between interviews with no gaps, cases that have some missing information (see dm2flag for reason information missing)</p> <p>Note: for help between interviews only (dm2dmohlpgr=5/dm3dmohlpgr=5) the month help ended was inadvertently skipped. We plan to collect this information in future rounds.</p>	<p>-9 Missing -1 Inapplicable 1 Help started 2 Help ended 3 Help both interviews with gap 4 Help both interviews with no gap 5 Help between interviews only (month ended missing) 6 No help either interview or between 11 Help started (month started missing) 21 Help ended (month ended missing) 41 Help both interviews (DK whether gap) 61 No help either interview (DK whether help between)</p>
<p>dm2dmodevgr R2 D MOBILITY DEVICE USE GROUP SP File (DM Section)</p> <p>dm3dmodevgr R3 D MOBILITY DEVICE USE GROUP SP File (DM Section)</p>	<p>Coded from last interview and current interview responses to MD</p> <p>Indicates type of case: device use started since last interview, device use ended since last interview, device use between interviews with a gap, device use between interviews with no gaps, cases that have some missing information (see dm2flag for reason information is missing).</p> <p>Note: for use between interviews only (dm2dmodevgr=5) the month use ended was inadvertently skipped. This was corrected in R4.</p>	<p>-9 Missing -1 Inapplicable 1 Use started 2 Use ended 3 Use both interviews with gap 4 Use both interviews with no gap 5 Use between interviews only (month ended missing) 6 No use either interview or between 11 Use started (month started missing) 21 Use ended (month ended missing) 41 Use both interviews (DK whether gap) 61 No use either interview (DK whether use between)</p>
<p>dm2flag R2 D SPECIAL ROUTE THRU/AROUND DM SECTION SP File (DM Section)</p> <p>dm3flag R3 D SPECIAL ROUTE THRU/AROUND DM SECTION SP File (DM Section)</p>	<p>Cases that followed a nonstandard route through the DM Section</p> <p>Cases that followed a standard route or missing a current SP interview are coded -1</p>	<p>-1 Inapplicable 1 No SP interview last round 2 Died and Month death missing 3 Died <=1 month after last interview 5 Died and Not Mobile (fl2notmobile=1/fl3notmobile=1) 6 Died and Not Alert (fl2notalert = 1/fl3notalert=1) 7 Skipped 1 or more help questions</p>

HA Section		
ha2dlaunsfdf R2 D LAUNDRY SELF AND DIFF LEVEL SP File (HA Section)	1 if (HA1 = 2 or 3) or HA1A = 2 2 if (HA1 = 1 or HA1A = 1) and HA5 = 1 3 if (HA1 = 1 or HA1A = 1) and HA5 = 2 to 4 4 if HA1 = -7 or -8 and HA5 = 1 5 if HA1 = -7 or -8 and HA5 = 2 to 4 6 if (HA1 = 1 or HA1A = 1) and HA5 = -7 or -8 7 if (HA1 = -7 or -8 and HA5 = -7 or -8) or (HA1A = -7 or -8 and HA5 = -1) 8 if HA1 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha2dlaunreas R2 D LAUNDRY REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA4 is health/functioning only 2 if reason given in HA4 is other only 3 if both health/functioning and other reason given in HA4 4 if BOX HA4 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA1 = -7 -8 if refused reason or HA1 = -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or if HA1=1 (always did by self)	1 Health/functioning reason only 2 Other reason only 3 Both health/functioning and other reason 4 Service/someone from the place SP lives -7 RF -8 DK -1 Inapplicable
ha2dshopsfdf R2 D SLF SHOPPING AND DIFF LEVEL SP File (HA Section)	1 if (HA20 = 2 or 3) or HA20A = 2 2 if (HA20 = 1 or HA20A = 1) and HA27 = 1 3 if (HA20 = 1 or HA20A = 1) and HA27 = 2-4 4 if HA20 = -7 or -8 and HA27 = 1 5 if HA20 = -7 or -8 and HA27 = 2-4 6 if (HA20 = 1 or HA20A = 1) and HA27 = -7 or -8 7 if (HA20 = -7 or -8 and HA27 = -7 or -8) or (HA20A = -7 or -8) 8 if HA20 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha2dshopreas R2 D SHOP REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA26 is health/functioning only 2 if reason given in HA26 is other only 3 if both health/functioning and other reason given in HA26 4 if BOX HA26 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES	1 Health reason only 2 Other reason only 3 Both health and other 4 Service/someone from the place SP lives -7 Refused -8 DK
ha3dlaunsfdf R3 D LAUNDRY SELF AND DIFF LEVEL SP File (HA Section)		
ha3dlaunreas R3 D LAUNDRY REASN WITH BY OTHERS SP File (HA Section)		
ha3dshopsfdf R3 D SLF SHOPPING AND DIFF LEVEL SP File (HA Section)		
ha3dshopreas R3 D SHOP REASN WITH BY OTHERS		

SP File (HA Section)	-7 if refused reason or HA20 = -7 -8 if refused reason or HA20 = -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or HA20 = 1 (always did by self)	-1 Inapplicable
ha2dmealsfdf R2 D SELF MEALS AND DIFF LEVEL SP File (HA Section)	1 if (HA30 = 2 or 3) or HA30A = 2 2 if (HA30 = 1 or HA30A = 1) and HA34 = 1 3 if (HA30 = 1 or HA30A = 1) and HA34 = 2-4 4 if HA30 = -7 or -8 and HA34 = 1	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty
ha3dmealsfdf R3 D SELF MEALS AND DIFF LEVEL SP File (HA Section)	5 if HA30 = -7 or -8 and HA34 = 2-4 6 if (HA30 = 1 or HA30A = 1) and HA34 = -7 or -8 7 if (HA30 = -7 or -8 and HA34 = -7 or -8) or (HA30A = -7 or -8) 8 if HA30 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha2dmealreas R2 D MEALS REASN WITH BY OTHERS SP File (HA Section)	1 if reason given in HA33 is health/functioning only 2 if reason given in HA33 is other only 3 if both health/functioning and other reason given in HA33	1 Health reason only 2 Other reason only 3 Both health and other 4 Service/someone from the place SP lives
ha3dmealreas R3 D MEALS REASN WITH BY OTHERS SP File (HA Section)	4 if BOX HA33 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA30 = -7 -8 if refused reason or HA30 = -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or HA30 = 1 (always did by self)	-7 RF -8 DK -1 Inapplicable
ha2dbanksfdf R2 D SELF BANKS AND DIFF LEVEL SP File (HA Section)	1 if (HA40 = 2 or 3) or HA40A = 2 2 if (HA40 = 1 or HA40A = 1) and HA44 = 1 3 if (HA40 = 1 or HA40A = 1) and HA44 = 2-4 4 if HA 40 = -7 or -8 and HA44 = 1	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty
ha3dbanksfdf R3 D SELF BANKS AND DIFF LEVEL SP File (HA Section)	5 if HA 40 = -7 or -8 and HA44 = 2-4 6 if (HA40 = 1 or HA40A = 1) and HA44 = -7 or -8 7 if (HA40 = -7 or -8 and HA44 = -7 or -8) or (HA40A = -7 or -8) 8 if HA40A = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable
ha2dbankreas R2 D BANK BILL REASN WITH BY OTH SP File (HA Section)	1 if reason given in HA43 is health/functioning only 2 if reason given in HA43 is other only 3 if both health/functioning and other reason given in	1 Health reason only 2 Other reason only 3 Both health and other

ha3dbankreas R3 D BANK BILL REASN WITH BY OTH SP File (HA Section)	HA43 4 if BOX HA43 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or HA40 = -7 -8 if refused reason or HA40 = -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or HA40 = 1 (always did by self)	4 Service/someone from the place SP lives -7 RF -8 DK -1 Inapplicable
ha2dmealwhl R2 D HELPER IS MEALS ON WHEELS SP File (HA Section)	Created from person roster location for meals on wheels	1 Yes -1 Inapplicable
ha3dmealwhl R3 D HELPER IS MEALS ON WHEELS SP File (HA Section)		
ha2dmealtkot R2 D HELPER IS RESTAURNT TAKEOUT SP File (HA Section)	Created from person roster location for restaurant/take out	1 Yes -1 Inapplicable
ha3dmealtkot R3 D HELPER IS RESTAURNT TAKEOUT SP File (HA Section)		
SC Sections		
sc2deatdevi R2 D USES DEVICES WHILE EATING SP File (SC Section)	1 if SC1 = 2 2 if SC1 = 1 3 if SC1 = -7 or -8 8 if SC1 = 7 -1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)	1 No use of adapted utensils in last month 2 Use of adapted utensils in last month 3 DKRF if used adapted utensils in last month 8 Not done in last month -1 Inapplicable
sc3deatdevi R3 D USES DEVICES WHILE EATING SP File (SC Section)		
sc2deathelp R2 D HAS HELP EATING SP File (SC Section)	1 if SC3 = 2 2 if SC3 = 1 3 if SC13 = -7 or -8 8 if SC1 = 7 -1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)	1 No help eating in last month 2 Help eating in last month 3 DKRF if had help eating in last month 8 Not done in last month -1 Inapplicable
sc3deathelp R3 D HAS HELP EATING SP File (SC Section)		

<p>sc2deatsfdf R2 D DIFF EATING BY SELF WO HELP SP File (SC Section)</p> <p>sc3deatsfdf R3 D DIFF EATING BY SELF WO HELP SP File (SC Section)</p>	<p>1 if SC4 = 4 2 if SC5 = 1 3 if SC5 = 2 or 3 or 4 6 if SC3 = 1 and ((SC4 = -7 or -8) or (SC5 = -7 or -8)) 7 if SC3 = -7 or -8 and SC5 = -7 or -8 8 if SC1 = 7 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Did not do by self in last month 2 No difficulty by self (and when using utensils) 3 Difficulty by self (and when using utensils) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable</p>
<p>sc2dbathdevi R2 D USES DEVICES WHILE BATHING SP File (SC Section)</p> <p>sc3dbathdevi R3 D USES DEVICES WHILE BATHING SP File (SC Section)</p>	<p>1 if [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl1#takingbth = 1) and SC9 =5) and (fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC10 = 5)] OR [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC9 =5) and (fl#bathseat NE 1)] OR [(fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC10 =5) and (fl#bathgrbbr NE 1)] OR SC7A = 2</p> <p>2 if SC9 =1 to 4 OR SC10 = 1 to 4 OR SC7A = 1</p> <p>3 if [(fl#bathgrbbr= 1 or fl#bathseat = 1) and (SC7(1) = -7 or -8 and SC7(2) = -7 or -8 and SC7(3)= -7 or -8)] OR [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC9 = -7 or -8) and (fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC10 = -7 or -8)] OR [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC9 =-7 or -8) and fl#bathseat NE 1)] OR [(fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and SC10 =-7 or -8) and fl#bathgrbbr NE 1] OR [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl2takingbth = 1) and sc#scusgrbrs = -7 or -8) and (fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and sc#shtubseat = 5)] OR [(fl#bathgrbbr = 1 and (fl#showering = 1 or fl#takingbth = 1) and sc#scusgrbrs =5) and (fl#bathseat = 1 and (fl#showering = 1 or fl#takingbth = 1) and sc#shtubseat = -7 or -8) OR (SC7A = -7 or -8) OR [r#dresid = 6 and (fl#showering = -7 or -8 and</p>	<p>1 No use of grab bars or bath seats in last month 2 Use of grab bars or bath seats in last month 3 DKRF if use of grab bars or bath seats in last month 4 DKRF if had grab bars or bath seats in last month 9 No bars/seats/shower/tub or washes up other way -1 Inapplicable</p>

	<p>fl#takingbath= -7 or -8 and fl#washingup = -7 or -8)</p> <p>4 if (HO11C = -7 or -8 and HO11D = -7 or -8) or (HO11C = -7 or -8 and HO11D = 2) or (HO11C = 2 and HO11D = -7 or -8)</p> <p>9 if (SC7(1) = NE 1 and SC7(2) = NE 1 and SC7(3) = 1) or (sc#prfrshbth = 3) or (HO11A = 2 and HO11B = 2) or (HO11C = 2 and HO11D = 2)</p> <p>-1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)</p>	
<p>sc2dbathhelp R2 D HAS HELP WHILE BATHING SP File (SC Section)</p> <p>sc3dbathhelp R3 D HAS HELP WHILE BATHING SP File (SC Section)</p>	<p>1 if SC11=2 2 if SC11 = 1 3 if (SC7(1) = -7 or -8 and SC7(2) = -7 or -8 and SC7(3)= -7 or -8) or (SC11 = -7 or -8) -1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert=1/fl3notalert=1)</p>	<p>1 No help bathing in last month 2 Had help bathing in last month 3 DKRF if had help bathing in last month -1 Inapplicable</p>
<p>sc2dbathsfd R2 D DIFF BATHING SELF NO HELP SP File (SC Section)</p> <p>sc3dbathsfd R3 D DIFF BATHING SELF NO HELP SP File (SC Section)</p>	<p>1 if SC12 = 4 2 if SC13 = 1 3 if SC13 = 2 or 3 or 4 6 if (SC11 = 1 and (SC12 = -7 or -8 or SC13 = -7 or -8)) or (SC11 = 2 and (SC13 = -7 or -8)) 7 if (SC7(1) = -7 or -8 and SC7(2) = -7 or -8 and SC7(3)= -7 or -8) or (SC11 = -7 or -8 and SC13 = -7 or -8) -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Did not do by self in last month 2 No difficulty by self (and when using grab bars or tub seat) 3 Difficulty by self (and when using grab bars or tub seat) 6 Did by self in last month/DKRF difficulty 7 DKRF if did by self in last month/DKRF difficulty -1 Inapplicable</p>
<p>sc2dtoildevi R2 D USES DEVICE WHILE TOILETING SP File (SC Section)</p> <p>sc3dtoildevi R3 D USES DEVICE WHILE TOILETING SP File (SC Section)</p>	<p>1 if (SC16A = 2 and SC16B = 2 and HO11E = 2 and HO11F = 2) or (SC16A = 2 and SC16B = 2 and (fl#raisedtlt = 1 and SC16D = 2) and (HO11F = 2)) or (SC16A = 2 and SC16B = 2 and (HO11E = 2) and (fl#tlgrbbr=1 and SC16C =2)) or (SC16A = 2 and SC16B = 2 and (fl#raisedtlt = 1 and SC16D = 2) and (fl#tlgrbbr=1 and SC16C =2)) 2 if SC16a = 1 or SC16b = 1 or SC16c = 1 or SC16d = 1</p>	<p>1 No use of toileting devices in last month 2 Use of toileting devices in last month 3 DKRF of some and no use of other toileting devices in last month -1 Inapplicable</p>

	<p>3 Otherwise (except for r#dresid = 3 or 5 or 6 or 7 or 8)</p> <p>-1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)</p>	
<p>sc2dtoilhelp R2 D HAS HELP WHILE TOILETING SP File (SC Section)</p> <p>sc3dtoilhelp R3 D HAS HELP WHILE TOILETING SP File (SC Section)</p>	<p>1 if SC17=2 2 if SC17 = 1 3 if SC17 = -7 or -8 -1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)</p>	<p>1 No help toileting in last month 2 Had help toileting in last month 3 DKRF if had help toileting in last month -1 Inapplicable</p>
<p>sc2dtoilsfdf R2 D DIFF LEVEL TOILETING SELF SP File (SC Section)</p> <p>sc3dtoilsfdf R3 D DIFF LEVEL TOILETING SELF SP File (SC Section)</p>	<p>1 if SC18 = 4 2 if SC19 = 1 3 if SC19 = 2 or 3 or 4 6 if (SC17 = 1 and (SC18 = -7 or -8 or SC19 = -7 or -8)) or (SC17 = 2 and (SC19 = -7 or -8)) 7 if ((SC17 = -7 or -8) and (SC18 = -7 or -8)) and SC19 = -7 or -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Did not do by self in last month 2 No difficulty by self (and when using toileting devices) 3 Difficulty by self (and when using toileting devices) 6 Did by self in last month/DKRF difficulty by self 7 DKRF help toileting/DKRF difficulty by self -1 Inapplicable</p>
<p>sc2ddresdevi R2 D USES DEVICES WHILE DRESSING SP File (SC Section)</p> <p>sc3ddresdevi R3 D USES DEVICES WHILE DRESSING SP File (SC Section)</p>	<p>1 if SC22 = 2 2 if SC22 = 1 3 if SC22 = -7 or -8 8 if SC21 = 5 9 if SC21 = -7 or -8 -1 if r2dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)</p>	<p>1 No use of dressing devices in last month 2 Use of dressing devices in last month 3 DKRF if use of dressing devices in last month 8 Not done in last month 9 DKRF if dressed in last month -1 Inapplicable</p>
<p>sc2ddreshelp R2 D HAS HELP WHILE DRESSING SP File (SC Section)</p> <p>sc3ddreshelp R3 D HAS HELP WHILE DRESSING SP File (SC Section)</p>	<p>1 if SC23 =2 2 if SC23 = 1 3 if SC23 = -7 or -8 8 if SC21 = 5 9 if SC21 = -7 or -8 -1 if r#dresid = 3 or 5 or 7 or 8 or (fl2notalert = 1/fl3notalert=1)</p>	<p>1 No help dressing in last month 2 Had help dressing in last month 3 DKRF if had help dressing in last month 8 Not done in last month 9 DKRF if dressed in last month -1 Inapplicable</p>
<p>sc2ddressfdf R2 D DIFF LEVEL DRESSING SELF SP File (SC Section)</p>	<p>1 if SC24 = 4 2 if SC25 = 1 3 if SC25 = 2 or 3 or 4</p>	<p>1 Did not do by self in last month 2 No difficulty by self (and when using dressing devices)</p>

<p>sc3ddressfdf R3 D DIFF LEVEL DRESSING SELF SP File (SC Section)</p>	<p>6 if (SC23 = 1 and (SC24 = -7 or -8 or SC25 = -7 or -8)) or (SC23 = 2 and (SC25 = -7 or -8)) 7 if (SC21 = -7 or -8) or (SC23 = -7 or -8 and SC25 = -7 or -8) 8 if SC21 = 5 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>3 Difficulty by self (and when using dressing devices) 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month -1 Inapplicable</p>
DS Section		
<p>dmds2dintvl R2 D MONTHS BETWEEN LAST INT AND EITHER CURRENT INT OR DATE OF DEATH SP File (DM Section)</p> <p>dmds3dintvl R3 D MONTHS BETWEEN LAST INT AND EITHER CURRENT INT OR DATE OF DEATH SP File (DM Section)</p>	<p>Interval between interviews (or date of death) in months</p>	<p>-9 Missing -8 DK -7 RF -1 Inapplicable 0 Less than 1 month 1-17 Months</p>
<p>ds2dschlp R2 D MONTHS OF SELF CARE HELP SP File (DS Section)</p> <p>ds3dschlp R3 D MONTHS OF SELF CARE HELP SP File (DS Section)</p>	<p>Coded from items DS1 through DS3F</p>	<p>-13 None -12 Outside of range -10 Not ascertained -9 Missing -8 DK -7 RF -1 Inapplicable 0 Less than 1 month 1-17 Months 90 Last round disputed</p>
<p>ds2dschlpr R2 D MOBILITY DEVICE USE GROUP SP file (DM Section)</p> <p>ds3dschlpr R3 D MOBILITY DEVICE USE GROUP SP file (DM Section)</p>	<p>Coded from last interview and current interview responses to SC. Indicates type of case: help with self care activities started since last interview, help ended since last interview, help between interviews with a gap, help between interviews with no gaps, cases that have some missing information (see ds2flag for reason information missing)</p>	<p>-9 Missing -1 Inapplicable 1 Help started 2 Help ended 3 Help both interviews with gap 4 Help both interviews with no gap 5 Help between interviews only 6 No help either interview or between 11 Help started (month started missing)</p>

		21 Help ended (month ended missing) 41 Help both times (DK whether gap) 61 No help either interview (DK whether help between)
ds2flag R2 D SPECIAL ROUTE THRU/AROUND DS SECTION ds3flag R3 D SPECIAL ROUTE THRU/AROUND DS SECTION	Cases that followed a nonstandard route through the DS Section Cases that followed a standard route or who did not have a current SP interview are coded -1	-1 Inapplicable 1 No SP interview last round 2 Died and Month death missing 3 Died <=1 month after last interview 4 Died 12-13 months after last interview 6 Died and Not Alert (fl2notalert=1 / fl3notalert=1) 7 Skipped 1 or more help questions
MC Section		
mc2dmedsdfd R2 D DIFF LEVEL MEDICATIONS SELF SP File (MC Section) mc3dmedsdfd R3 D DIFF LEVEL MEDICATIONS SELF SP File (MC Section)	1 if (MC2 =2 or 3) or MC2A = 2 2 if (MC2 = 1 or MC2A = 1) and MC7 = 1 3 if (MC2 = 1 or MC2A = 1) and MC7 = 2 to 4 4 if (MC2 = -7 or -8) and MC7 = 1 5 if MC2 = -7 or -8) and MC7 = 2 to 4 6 if (MC2 = 1 or MC2A = 1) and MC7 = -7 or -8 7 if (MC2 = -7 or -8) and (MC7 = -7 or -8) 8 if MC2 = 5 9 if MC1 = 2 or -7 or -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Did not do by self in last month 2 Did by self in last month/no difficulty 3 Did by self in last month/difficulty 4 DKRF did by self in last month/no difficulty 5 DKRF did by self in last month/difficulty 6 Did by self in last month/DKRF difficulty 7 DKRF did by self in last month/DKRF difficulty 8 Not done in last month 9 No or DKRF if medications taken in last month -1 Inapplicable
mc2dmedsreas R2 D MEDS REASN BY WITH OTHERS SP File (MC section) mc3dmedsreas R3 D MEDS REASN BY WITH OTHERS SP File (MC section)	1 if reason given in MC6 is health/functioning only 2 if reason given in MC6 is other only 3 if both health/functioning and other reason given in MC6 4 if BOX MC6 indicates help is SERVICE/SOMEONE FROM THE PLACE SP LIVES -7 if refused reason or MC2 = -7 -8 if refused reason or MC2 = -8 -1 if r#dresid = 3 or 5 or 6 or 7 or 8 or MC1 = 2 (no medications) or MC2 = 1 (always did by self)	1 Health reason only 2 Other reason only 4 Service/someone from the place SP lives -7 RF -8 DK -1 Inapplicable
PA Section		
pa1dv2favact R1 D VERSION 2 FAVORITE ACTIVITY SP File (PA Section)	These codes were developed based on review of verbatim responses obtained during Round 1 interviews. Note: Code 715 was added in Round 2. To make	Self-care activities 111 Sleeping; Napping 131 Eating 132 Going out to eat 199 Other self-care activities

Round 1 pa1dfavact comparable to later rounds, recode all Round 1 cases initially coded 799 to 715 except for the following 14 SPIDs (which remain 799): 10000723, 10006873, 10003102, 10005733, 10012026, 10012352, 10002233, 10004137, 10006817, 10009006, 10010986, 10007270, 10010481, 10006759

Productive activities

- 211 Work and work-related activities
- 221 Other income generating activities
- 241 Volunteering
- 299 Other productive activities

Shopping

- 321 Shopping for non-durable goods
- 399 Other shopping

Household activities

- 411 Food and drink preparation
- 434 Outdoor Maintenance
- 439 Household chores (indoor/outdoor)
- 441 Animal and pet care
- 442 Walking and exercising pets
- 449 Other animal and pet care
- 451 Vehicle maintenance and repair
- 471 Financial management
- 499 Other household activities

Care of others

- 511 Physical care and assistance to others
- 599 Other physical care

Socializing

- 611 Socializing with others in person
- 612 Socializing with others on the phone
- 616 Socializing and communicating on the computer

Non active leisure

- 621 Watching TV and movies
- 631 Doing puzzles or games not on computer or online
- 632 Gambling not online or at a casino
- 636 Doing puzzles or games on a computer or online
- 641 Arts and crafts or hobbies
- 642 Reading
- 643 Writing
- 644 Listening to music
- 646 Computer or online leisure activities
- 651 Smoking or other tobacco use
- 652 Drinking alcohol

		661 Doing nothing/relaxing 669 No activity 699 Other non active leisure Active leisure 711 Playing sports 712 Walking or jogging 713 Other outdoor recreating activities 714 Attending sporting events 715 Other physical activity (exercise, yoga, working out, swimming, dancing) 718 Watching sporting events 721 Attending arts including plays and concerts 723 Attending movies 724 Attending casinos 737 Travel for leisure 799 Other active leisure Religious and organizational activities 811 Attending religious activities 812 Other religious and spiritual activities 821 Attending meetings or events 899 Other organizational activity 991 Other miscellaneous 992 No favorite activity 997 RF 998 DK 999 Not Codeable
AB Section		
ba2dblssadm R2 D BALANCE SIDE BY SIDE ADMIN SP File (AB Section)	1 if BA2 = 1 or 2 or BA3 = 1 or 2 or 3 2 if (BA2 NE 1 or 2) and (BA3 NE 1 or 2 or 3) 4 if fl#balstands = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Eligible and recorded information for SxS Balance 2 Eligible and no recorded information for SxS Balance 4 Not Eligible due to exclusion criteria -1 Inapplicable
ba3dblssadm R3 D BALANCE SIDE BY SIDE ADMIN SP File (AB Section)		

<p>ba2dblstdm R2 D BALANCE SEMI TANDEM ADMIN SP File (AB Section)</p> <p>ba3dblstdm R3 D BALANCE SEMI TANDEM ADMIN SP File (AB Section)</p>	<p>1 if BA6 = 1 or 2 or BA7 = 1 or 2 or 3 2 if (BA6 NE 1 or 2) or (BA7 NE 1 or 2 or 3) 3 if BA2 = 2 or BA3 = 2 or 3 4 if fl#balstands = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Eligible and recorded information for Semi Tandem Balance 2 Eligible and no recorded information for Semi Tandem Balance 3 Not administered because failed to complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba2dblftadm R2 D BALANCE FULL TANDEM ADMIN SP File (AB Section)</p> <p>ba3dblftadm R3 D BALANCE FULL TANDEM ADMIN SP File (AB Section)</p>	<p>1 if BA10 = 1 or 2 or BA11 = 1 or 2 or 3 2 if (BA10 NE 1 or 2) and (BA11 NE 1 or 2 or 3) 3 if BA2 = 2 or BA3 = 2 or 3 or BA6 = 2 or BA7 = 2 or 3 4 if fl#balstands = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Eligible and recorded information for Full Tandem Balance 2 Eligible and no recorded information for Full Tandem Balance 3 Not administered because failed to complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba2dblopadm R2 D BALANCE 1 LEG OP EYE ADMIN SP File (AB Section)</p> <p>ba3dblopadm R3 D BALANCE 1 LEG OP EYE ADMIN SP File (AB Section)</p>	<p>1 if BA14 = 1 or 2 or BA15 = 1 or 2 or 3 2 if (BA14 NE 1 or 2) and (BA15 NE 1 or 2 or 3) 3 if BA2 = 2 or BA3 = 2 or 3 or BA6 = 2 or BA7 = 2 or 3 or BA10 = 2 or BA11 = 2 or 3 4 if fl#balstands = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Eligible and recorded information for One leg eyes open Balance 2 Eligible and no recorded information for One leg eyes open Balance 3 Not administered because failed to complete prior balance test 4 Not eligible due to exclusion criteria -1 Inapplicable</p>
<p>ba2dblcladm R2 D BALANCE 1 LEG CLS EYE ADMIN SP File (AB Section)</p> <p>ba3dblcladm R3 D BALANCE 1 LEG CLS EYE ADMIN SP File (AB Section)</p>	<p>1 if BA18 = 1 or 2 or BA19 = 1 or 2 or 3 2 if (BA18 NE 1 or 2) and (BA19 NE 1 or 2 or 3) 3 if BA2 = 2 or BA3 = 2 or 3 or BA6 = 2 or BA7 = 2 or 3 or BA10 = 2 or BA11 = 2 or 3 or BA14 = 2 or BA15 = 2 or 3 4 if fl#balstands = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>1 Eligible and recorded information for One leg eyes closed Balance 2 Eligible and no recorded information for One leg eyes closed Balance 3 Not administered because failed to complete prior balance tests 4 Not Eligible due to exclusion criteria -1 Inapplicable</p>
<p>wa2dwlkadm R2 D WALKING COURSE ADMIN SP File (AB Section)</p>	<p>1 if WA3a = 1 or 2 or WA3b = 1 or 2 or WA3c = 1 or 2 or WA5 = 1 or 2 or 3 2 if WA3a NE 1 or 2 and WA3b NE 1 or 2 and WA3c NE 1 or 2 and WA5 = 1 or 2 or 3</p>	<p>1 Eligible and recorded information for walking course 2 Eligible and no recorded information for walking course 4 Not Eligible due to exclusion criteria</p>

wa3dwlkadm R3 D WALKING COURSE ADMIN SP File (AB Section)	4 if fl#wlkingrse = 2 -1 if r#dresid =3 or 5 or 6 or 7 or 8	-1 Inapplicable
ch2dschradm R2 D SINGLE CHAIR ADMIN SP File (AB Section)	1 if CH3 = 1 or 2 or CH4 = 1 (not completed) or 2 (completed) CH7 = 1 or 2 or 3 2 if CH3 NE 1 or 2 and CH4 NE 1 or 2 and CH7 NE 1 or 2 or 3 4 if fl#charstnds = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Eligible and recorded information for single chair stand 2 Eligible and no recorded information for single chair stand 4 Not Eligible due to exclusion criteria -1 Inapplicable
ch3dschradm R3 D SINGLE CHAIR ADMIN SP File (AB Section)	4 if fl#charstnds = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	4 Not Eligible due to exclusion criteria -1 Inapplicable
ch2drchradm R2 D REPEAT CHAIR ADMIN SP File (AB Section)	1 if CH10 = 1 or 2 or CH11 = 1 or 2 or 3 or CH12 = 1 or 2 or 3 2 if CH8 = 2 and (CH10 NE 1 or 2) and (CH11 NE 1 or 2) and (CH12 NE 1 or 2 or 3)	1 Eligible and recorded information for repeated chair stand 2 Eligible and no recorded information for repeated chair stand
ch3drchradm R3 D REPEAT CHAIR ADMIN SP File (AB Section)	3 if CH3 = 2 or CH4 = 1 or (CH7 = 2 or 3) or CH8 = 1 4 if fl#charstnds = 2 --1 if r#dresid = 3 or 5 or 6 or 7 or 8	3 Not administered because failed to complete single chair stand w/o arms 4 Not Eligible due to exclusion criteria -1 Inapplicable
gr2dgripadm R2 D GRIP STRENGTH ADMIN SP File (AB Section)	1 if (GR2 = 1 or 2) or (GR5 = 1 or 2 or 3) 2 if (GR2 NE 1 or 2) and (GR5 NE 1 or 2 or 3) 4 if fl#lefthand = 2 and fl#righthand = 2 -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Eligible and recorded information for grip strength 2 Eligible and no recorded information for grip strength 4 Not Eligible due to exclusion criteria -1 Inapplicable
gr3dgripadm R3 D GRIP STRENGTH ADMIN SP File (AB Section)		
wc2dwaistadm R2 D WAIST CIRCUMFERENCE ADMIN SP File (AB Section)	1 if (WC1 = 1 or 2) or (WC3 = 1 or 2 or 3) 2 if (WC1 NE 1 or 2) and (WC3 NE 1 or 2 or 3) -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Eligible and recorded information for waist circumference 2 Eligible and no recorded information for waist circumference
wc3dwaistadm R3 D WAIST CIRCUMFERENCE ADMIN SP File (AB Section)		-1 Inapplicable
pk2dpeakadm R2 D PEAK AIR FLOW ADMIN SP File (AB Section)	1 if PK1 = 1 or 2 or PK4 = 1 or 2 or 3 2 if PK1 NE 1 or 2) and (PK4 NE 1 or 2 or 3); -1 if r#dresid = 3 or 5 or 6 or 7 or 8	1 Eligible and recorded information for peak air flow 2 Eligible and no recorded information for peak air flow -1 Inapplicable

pk3dpeakadm R3 D PEAK AIR FLOW ADMIN SP File (AB Section)		
r2dnhatssppb R2 D SPPB SCORE NHATS SP File (AB Section)	0 = worst score; 12 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-12 Score -1 Inapplicable -9 Missing
r3dnhatssppb R3 D SPPB SCORE NHATS SP File (AB Section)		
r2dnhatsbasc R2 D BALANCE STAND SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatsbasc R3 D BALANCE STAND SCORE NHATS SP File (AB Section)		
r2dnhatswksc R2 D WALK SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatswksc R3 D WALK SCORE NHATS SP File (AB Section)		
r2dnhatschsc R2 D REPEAT CHR STND SCORE NHATS SP File (AB Section)	0 = worst score; 4 = best score -1 if #2dresid = 3 or 5 or 6 or 7 or 8-9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatschsc R3 D REPEAT CHR STND SCORE NHATS SP File (AB Section)		
r2dnhatsgrb R2 D BEST GRIP STRENGTH SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatsgrb R3 D BEST GRIP STRENGTH SCORE		

SP File (AB Section)		
r2dnhatsgrav R2 D AVG GRIP STRENGTH SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatsgrav R3 D AVG GRIP STRENGTH SCORE SP File (AB Section)		
r2dnhatspkb R2D BEST PEAK AIR FLOW SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatspkb R3 D BEST PEAK AIR FLOW SCORE SP File (AB Section)		
r2dnhatspkav r2 D AVG PEAK AIR FLOW SCORE SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dnhatspkav R3 D AVG PEAK AIR FLOW SCORE SP File (AB Section)		
r2dspbmiss R2 D REASON MISSING SPPB SP File (AB Section)	Categorical variable for persons treated as missing in SPPB scores and reasons. See Kasper, Freedman, Niefeld 2012 for details.	1 Proxy interview 2 Missing walk and repeat chair and balance 3 Missing walk and repeat chair 4 Missing walk and balance 5 Missing repeat chair and balance 6 Missing walk 7 Missing repeat chair 8 Missing balance 9 No space 10 No chair 11 No space walk and no chair 12 No space walk and non-safety missing 13 No chair and non-safety missing 14 Non-safety walk 15 Non-safety chair
r3dspbmiss R3 D REASON MISSING SPPB SP File (AB Section)		

		16 Non-safety balance 17 Non-safety walk and chair 18 Non-safety walk and balance 19 Non-safety chair and balance 20 Non-safety walk and chair and balance -1 Inapplicable
r2dorigsppb R2 D SPPB SCORE ORIGINAL SP File (AB Section)	0 = worst score; 12 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8 -9 missing	0-12 Score -1 Inapplicable -9 Missing
r3dorigsppb R3 D SPPB SCORE ORIGINAL SP File (AB Section)		
r2dorigbasc R2 D BALANCE STND SCORE ORIGINAL SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8-9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dorigbasc R3 D BALANCE STND SCORE ORIGINAL SP File (AB Section)		
r2dorigwksc R2 D WALK SCORE ORIGINAL SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8-9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dorigwksc R3 D WALK SCORE ORIGINAL SP File (AB Section)		
r2dorigchsc R2 D REPEAT CHR STAND SCORE ORIG SP File (AB Section)	0 = worst score; 4 = best score -1 if r#dresid = 3 or 5 or 6 or 7 or 8-9 missing	0-4 Score -1 Inapplicable -9 Missing
r3dorigchsc R3 D REPEAT CHR STAND SCORE ORIG SP File (AB Section)		
LF Section		
lf2doccup R2 D CURRENT OCCUPATION	Developed from LF11 and LF11a based on the 2010 Census Occupational Classification (see	1 Management Occupations: 0010-0430 2 Business and Financial Operations Occupations:

<p>CATEGORY SP File (LF Section)</p> <p>If3doccup R3 D CURRENT OCCUPATION CATEGORY SP File (LF Section)</p>	<p>http://www.bls.gov/cps/cenocc.pdf) -1 if r#dresid = 3 or 5 or 6 or 7 or 8</p>	<p>0500-0950</p> <p>3 Computer and mathematical Occupations: 1000-1240</p> <p>4 Architecture and Engineering Occupations: 1300-1560</p> <p>5 Life, Physical and Social Science Occupations: 1600-1965</p> <p>6 Community and Social Service Occupations: 2000-2060</p> <p>7 Legal Occupations: 2100-2160</p> <p>8 Education, Training, and Library Occupations: 2200-2550</p> <p>9 Arts, Design, Entertainment, Sports, and Media Occupations: 2600-2960</p> <p>10 Healthcare Practitioners and Technical Occupations: 3000-3540</p> <p>11 Healthcare support Occupations: 3600-3655</p> <p>12 Protective Service Occupations: 3700-3955</p> <p>13 Food Preparation and Serving Related Occupations: 4000-4160</p> <p>14 Building and Grounds Cleaning and Maintenance Occupations: 4200-4250</p> <p>15 Personal Care and Service Occupations: 4300-4650</p> <p>16 Sales and Related Occupations: 4700-4965</p> <p>17 Office and Administrative support Occupations: 5000-5940</p> <p>18 Farming, Fishing, and Forestry Occupations: 6000-6130</p> <p>19 Construction and Extraction Occupations: 6200-6940</p> <p>20 Installation, Maintenance, and Repair Occupations: 7000-7630</p> <p>21 Production Occupations: 7700-8965</p> <p>22 Transportations and Material Moving Occupations: 9000-9750</p> <p>24 No current occ (Unemployed, no work in the last 5 years, never worked: 9920</p> <p>94 Uncodeable</p> <p>-9 Missing</p>
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		-1 Inapplicable
HL Section		
op2dhrsmth R2 D HL2 HL3 HL4 HRS HELP MONTH OP File	Categorical hours helped by Other Person	-13 Deceased
op3dhrsmth R3 D HL2 HL3 HL4 HRS HELP MONTH OP File		-12 Zero days/wk or mo -11 Hours missing -10 Days missing -9 Days & hours missing 1-744 Number of hours 9999 Not Codeable, <1 hour/day -1 Inapplicable
FQ Section		
fq2dosfacd R2 D FQ6A OTHER SPECIFY FAC TYPE SP File (FQ section)	Coded from FQ6a Other Specify	1 Free standing nursing home
fq3dosfacd R3 D FQ6A OTHER SPECIFY FAC TYPE SP File (FQ section)		2 Free standing assisted living facility/residential care facility 3 Nursing home and assisted living facility 4 Continuing care retirement community (CCRC) 5 Adult family care home 6 Group home 7 Board and care home/ personal care home 8 Retirement community or senior housing (not CCRC) 9 Independent living 10 Assisted and independent (no nursing home) 11 Housing (Apartment, Condo, etc.) -8 DK -9 Missing -1 Inapplicable
fq2dosfaca R2 D FQ10A OTHER SPECIFY FAC AREA SP File (FQ section)	Coded from FQ10a Other Specify	-8 DK
fq3dosfaca R2 D FQ10A OTHER SPECIFY FAC AREA SP File (FQ section)		1 Independent living/housing/retirement 2 Assisted living/personal care 3 Special care, memory, or Alzheimer's unit 4 Nursing Home -8 DK -9 Missing -1 Inapplicable
fq2dlocsp R2 D FQ6 6A 10 10A FOR SAMP WGT	Variable that identifies type of residential care place SP lives in (other than nursing home). Coded	1 Independent living/housing/retirement 2 Assisted living/personal care

SP File (FQ section) fq3dlocsp R3 D FQ6 6A 10 10A FOR SAMP WGT SP File (FQ section)	from FQ6, FQ6a, FQ10, FQ10a	3 Special care, memory, or Alzheimer's unit 4 Nursing home 8 Not reported -1 Inapplicable
OP File		
op2drelatfl R2 D RELATIONSHIP TO SP CORRECTED R2 OP file	1 if relationship corrected from prior round -1 otherwise	1 Yes -1 Inapplicable
op3drelatfl R3 D RELATIONSHIP TO SP CORRECTED IN R3 OP file		
op3dreiflro R3 D RELATIONSHIP TO SP ROUND LAST CORRECTED OP file	2 if relationship last corrected in round 2 3 if relationship last corrected in round 3 -1 if never corrected	2 Most recent correction in R2 3 Most recent correction in R3 -1 Inapplicable
op2dagefl R2 D OP AGE CORRECTED R2 OP file	1 if age corrected from prior round -1 otherwise	1 Yes -1 Inapplicable
op3dagefl R3 D OP AGE CORRECTED R3 OP file		
op3dageflro R3 D OP AGE ROUND LAST CORRECTED OP file	2 if age last corrected in round 2 3 if age last corrected in round 3 -1 if never corrected	2 Most recent correction in R2 3 Most recent correction in R3 -1 Inapplicable
op2dgenderfl R2 D GENDER CORRECTED OP file	1 if gender corrected from prior round -1 otherwise	1 Yes -1 Inapplicable
op3dgenderfl R3 D GENDER CORRECTED		

OP file		
op3dgenderflro R3 D OP GENDER ROUND LAST CORRECTED OP file	2 if gender last corrected in round 2 3 if gender last corrected in round 3 -1 if never corrected	2 Most recent correction in R2 3 Most recent correction in R3 -1 Inapplicable
op2ddeceased R2 D SPOUSE CHILD HH MEMBER DIED OP file	1 if spouse, child, or household member died between rounds -1 otherwise	1 Yes -1 Inapplicable
op3ddeceased R3 D SPOUSE CHILD HH MEMBER DIED OP file		
op2dfmiss R2 D NO FLAGS SET FOR PERSON OP file	1 if OP record and no flags are set -1 otherwise	1 Yes -1 Inapplicable
op3dfmiss R3 D NO FLAGS SET FOR PERSON OP file		
op2dmissadd R2 D WHERE NO FLAGS PERSN ADDED OP file	If op#dfmiss = 1 then 1 to 13 = section where person was added to person roster -1 if op#dfmiss = -1	1 Added at CL 2 Added at DT 3 Added at EW 4 Added at HA 5 Added at HO 6 Added at MC 7 Added at MO 8 Added at PA 9 Added at PE 10 Added at SC 12 Added at CS 13 Added at HH 14 Added at IS -1 Inapplicable
op3dmissadd R3 D WHERE NO FLAGS PERSN ADDED OP file		
op2dprobdup R2 D OTH PERSN PROBABLE DUPLICAT	For each OPID that is a probable duplicate of another in the current round, the OPID of the probable duplicate.	OPID of duplicate -1 Inapplicable

<p>OP File</p> <p>op3dprobdup</p> <p>R3 D OTH PERSN PROBABLE DUPLICAT</p> <p>OP File</p>	<p>Example: 001 and 005 are probable duplicates.</p> <p>op2dprobdup = 001 for case 005</p> <p>op2dprobdup = 005 for case 001</p> <p>-1 otherwise</p>	
<p>op2ddupeid</p> <p>R2 D POSSIBLE DUPLICATE OF ID</p> <p>OP File</p> <p>op3ddupeid</p> <p>R3 D POSSIBLE DUPLICATE OF ID</p> <p>OP File</p>	<p>OPID of op record that is a probable duplicate in the current round</p>	<p>OPID of duplicate</p> <p>-1 Inapplicable</p>
<p>op2ddiffop</p> <p>R2 D SAME R1 OPID BUT DIFF PRSN</p> <p>op3ddiffop</p> <p>R3 D SAME R2 OPID BUT DIFF PRSN</p>	<p>OPID is the same this round and prior round but person is not the same</p>	<p>OPID of Case</p> <p>-1 Inapplicable</p>

Appendix VI. Variable Label Changes Between Rounds 1 and 2

The following table documents changes in variable labels between rounds 1 and 2. Round 2 labels are used in each round going forward.

Label changes were made to clarify groups to which the variables apply.

Variable	Label Starting in R2	R1 Label
SP FILE CURRENT MARITAL STATUS IN R1 AND UPDATED MARITAL STATUS IN R2:		
hh2marlstat	R2 HH1 MARITAL STATUS IF CHANGED	R1 HH1 MARITAL STATUS
hh2dmarstat	R2 D MARITAL STATUS AT R2	--
SP FILE SPOUSE IN R1 AND NEW SPOUSE IN R2:		
hh2spgender	R2 HH5 NEW R2 SPOU PART GENDER	R1 HH5 GENDER OF SPOUSE
hh2modob	R2 HH6A NEW R2 SPOU PART MO DOB	R1 HH6A MONTH DOB OF SPOUSE
hh2yrdob	R2 HH6C NEW R2 SPOU PART YR DOB	R1 HH6C YEAR DOB OF SPOUSE
hh2dspousage	R2 D NEW R2 SPOU PART AGE	R1 D SPOUSE AGE
hh2dspouage	R2 D NEW R2 SPOU PART CAT AGE	R1 D SPOUSE CAT AGE AT INTVW
hh2spouseduc	R2 HH9 NEW R2 SPOU PART HIGH EDUC	R1 HH9 HIGHEST EDUC OF SPOUSE
SP FILE RESIDENCE IN R1 AND NEW RESIDENCE IN R2:		
ho2bldgamen1	R2 HO4A NEW RES BLDG HAS ELEVATOR	R1 HO4A BUILDING HAS ELEVATOR
ho2bldgamen2	R2 HO4B NEW RES BLDG STAIR LIFT GLIDE	R1 HO4B BUILDNG STAIR LIFT GLIDE
ho2bldgamen3	R2 HO4C NEW RES BLDG COMMN SPACE MEALS	R1 HO4C BUILD COMMN SPACE MEALS
ho2bldgamen4	R2 HO4D NEW RES BLDG SPACE SOCIAL EVT	R1 HO4D BUILD SPACE SOCIAL EVENT
ho2kitchnprv	R2 HO12 NEW FAC RES PRIV KITCHEN	R1 HO12 PRIVATE KITCHEN
ho2kitchncom	R2 H013 NEW FAC RES COMMON KITCHEN	R1 H013 COMMON KITCHEN
OP FILE UPDATED AND NEW OTHER PERSON INFORMATION IN R2:		
op2relatnshp	R2 RELASHIP TO SP UPDATE AND NEW	R1 OTHR PRSN RELATIONSHIP TO SP
op2dgender	R2 D GENDER UPDATE AND NEW	R1 OTHER PERSON GENDER (op1gender)
op2prsninhh	R2 OP IN HOUSEHOLD UPDATE AND NEW	R1 OTHER PRSN IN HOUSEHOLD
op2age	R2 OTH PERSON AGE UPDATE AND NEW	R1 OTHER PERSON AGE
op2dage	R2 D OP CAT AGE UPDATE AND NEW	R1 D OTH PERSN CAT AGE AT INTVW
OP FILE VARIABLES INDICATE WHEN ADDED IN R2:		
op2leveledu	R2 OP HIGHEST ED WHEN ADDED	R1 OP HIGHEST LEVEL EDUCATION

op2martlstat	R2 CHILD MARITL STAT WHEN ADDED	R1 OTHER PERSON MARITAL STATUS
op2numchldrn	R2 CHILD NUM CHILDRN WHEN ADDED	R1 OTHER PRSN NUMBER OF CHILDREN
op2anychdu18	R2 CHILD CHILD U 18 WHEN ADDED	R1 OTH PRS ANY CHILDREN UNDER 18
op2numchdu18	R2 CHILD NUM CHILD U 18 WHEN ADDED	R1 OTH PR NUMBER OF CHILDREN U18
OTHER OP VARIABLE NAME CHANGES FOR CLARITY:		
op2ishelper	R2 BXHL2 ELIGIBLE HL SECTION	R1 BXHL1 HELPS SP