

If you experience problems accessing any portion of our files,  
please contact CMS at [HOS@cms.hhs.gov](mailto:HOS@cms.hhs.gov).



# **MEDICARE HEALTH OUTCOMES SURVEY**

**2015-2017**

## ***Cohort 18 Analytic Public Use File*** **Data Users Guide**

**PREPARED BY HEALTH SERVICES ADVISORY GROUP**



# Table of Contents

<b>Preface</b> .....	<b>1</b>
Public Use File.....	1
Other Research Data Files Available.....	1
Statutory Authority.....	2
Technical Assistance.....	3
Resources.....	3
<b>Program Background</b> .....	<b>4</b>
Introduction to the Medicare Health Outcomes Survey.....	4
Sampling Methodology.....	5
Survey Administration.....	6
Survey Instrument.....	6
Data Field Utilization Notes.....	9
<b>Characteristics of the Public Use File</b> .....	<b>11</b>
Derivation of the File.....	11
Field Overview.....	12
Field Description.....	13
<b>Limitations of the Data</b> .....	<b>16</b>
Categorization of Selected Fields.....	16
<b>Field Index with Field Descriptions</b> .....	<b>17</b>
Identification and <i>Cohort 18</i> Baseline Demographics.....	18
<i>Cohort 18 Baseline</i> Survey Questions.....	19
<i>Cohort 18 Baseline</i> Survey Administration.....	29
<i>Cohort 18 Follow Up</i> Survey Questions.....	30
<i>Cohort 18 Follow Up</i> Survey Administration.....	41

# Preface

## Public Use File

The Centers for Medicare & Medicaid Services (CMS) is committed to monitoring the quality of care provided by Medicare Advantage Organizations (MAOs). The Medicare Health Outcomes Survey (HOS) is the first patient-reported health outcomes measure for the Medicare population in managed care settings. The HOS design is based on a randomly selected sample of individuals from each participating MAO, and measures physical and mental health over a two-year period. General information about the HOS Program is available on the CMS website at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HOS/index.html>, and a full description of the program is available on the HOS website at <https://www.hosonline.org/>.

This *2015-2017 Cohort 18 Analytic Public Use File (PUF) Data Users Guide (DUG)* is designed to assist users with the *2015-2017 Cohort 18 Analytic* public use data. The DUG includes an overview of the file organization, an explanation of derived fields, and a table defining the attributes of all fields in the file. HOS PUFs contain the majority of the survey items collected on the HOS instrument (excluding beneficiary identifying information) as well as selected additional administrative variables. HOS PUFs are constructed to prevent the identification of any single beneficiary or MAO and only respondents to the survey are included in the files. For instance, selected questions that appear in the HOS questionnaires, including homeownership, annual household income, Hispanic ethnicity, beneficiary's weight and height, the specific language spoken at home, and the name of the person who completed the survey, are not available in the PUF. Selected beneficiary-level demographic fields such as race, marital status, education, and Body Mass Index (BMI) are collapsed into fewer categories to maintain beneficiary confidentiality. The HOS PUF is available at no cost and can be downloaded from <https://www.hosonline.org/en/data-dissemination/research-data-files/>.

## Other Research Data Files Available

In addition to the PUFs, the Medicare HOS data are also available by request as a limited data set (LDS) and a research identifiable file (RIF). Both the LDS and RIF include the entire national sample for a given cohort (including both respondents and non-respondents), and contain all of the HOS survey items.

### Limited Data Set

The HOS *2015-2017 Cohort 18 Merged Baseline and Follow Up* LDS contains all records in the complete RIF as well as most of the same fields. It contains protected beneficiary level health information such as date of birth, sex, race/ethnicity, and county of residence; however, specific direct person identifiers are removed, as outlined in the Health Insurance Portability and Accountability Act of 1996 (HIPAA). Removed fields include the Medicare Health Insurance Claim (HIC) number, Social Security Number (SSN), CMS beneficiary link key, beneficiary name, phone number, mailing address, and the name of the person who completed the survey. Additionally, the MAO contract number is blinded in the LDS, and certain fields describing MAOs have been modified (e.g., categorical enrollment) or excluded (e.g., plan name) to prevent identification of specific MAO contracts. Despite these limitations, the LDS is adequate to

address most research aims and is the file most often requested by researchers. Since the information is still potentially identifiable, it is subject to the provisions of the Privacy Act of 1974, although LDS requests do not require approval from the CMS Privacy Board. To qualify for an LDS, data requestors must show that their proposed use of the data meets the disclosure provisions for research purposes as defined in the HIPAA and Privacy Acts. The research purpose must relate to projects that could ultimately improve the care provided to Medicare and Medicaid beneficiaries and policies that govern their care.

### Research Identifiable File

The comprehensive HOS *2015-2017 Cohort 18 Merged Baseline and Follow Up* RIF data file contains all fields, including direct person identifiers, and records for all beneficiaries in the baseline and follow up samples. The RIF contains direct person identifiers (i.e., HIC number, SSN, and the CMS beneficiary link key, etc.) that allow identification of the same individuals across multiple cohorts. The RIF also includes plan identifiers and plan characteristics for the participating MAOs, such as MAO contract number, enrollment at sampling, and plan name. The scope and subject matter of studies requiring a RIF must help CMS monitor, manage, and improve the Medicare and Medicaid program and the services provided to beneficiaries. Requests for a RIF data file must be reviewed by the CMS Privacy Board to ensure that the need for identifiable data is justified and that beneficiaries' privacy is protected. CMS must balance the potential risk to beneficiary confidentiality with the probable benefits to be gained from the completed research. Requestors must also demonstrate the expertise and experience to conduct and complete the proposed study using information in a RIF.

### Obtaining Research Files

A signed Data Use Agreement with CMS and a fee for the use of the cohort data are required to obtain either LDS or RIF data files.

For additional information and assistance with obtaining Medicare HOS RIF files, please visit the HOS page at the University of Minnesota's Research Data Assistance Center (ResDAC) at the University of Minnesota HOS page at <http://www.resdac.org/cms-data/request/research-identifiable-files>. ResDAC may also be contacted by calling 1-888-9RESDAC (1-888-973-7322) or by e-mailing [resdac@umn.edu](mailto:resdac@umn.edu).

Medicare HOS LDS files can be obtained directly through CMS. For more information, please visit the HOS LDS page: <https://www.cms.gov/Research-Statistics-Data-and-Systems/Files-for-Order/LimitedDataSets/HOS.html>.

## **Statutory Authority**

Section 722 of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) mandates collecting, analyzing, and reporting health outcomes information. This legislation also specifies that data collected on quality, outcomes, and beneficiary satisfaction to facilitate consumer choice and program administration must use the same types of data collected before November 1, 2003. Collected since 1998, the Medicare HOS is the first patient-reported outcomes measure in Medicare managed care, and therefore remains a critical part of assessing MAO quality. In addition, CMS includes the HOS results as a component of the Medicare Plan

Finder ([www.medicare.gov/find-a-plan](http://www.medicare.gov/find-a-plan)), a web-based tool that helps inform beneficiaries about Medicare enrollment choices. CMS incorporates new survey components in HOS, as appropriate, in order to provide outcome measures that MAOs can use in quality improvement initiatives.

## Technical Assistance

The Medicare HOS Information and Technical Support Telephone Line (1-888-880-0077) and Email Address ([hos@hcqis.org](mailto:hos@hcqis.org)) are available for assistance with questions about the data file. Additionally, the CMS HOS website provides information on the HOS Program (<https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/HOS/index.html>). For program timelines, survey results, and HOS publications, please refer to the HOS website at <https://www.hosonline.org/>.

## Resources

For more detailed discussions on the sampling, survey administration, data collection, and HOS instruments, please refer to the Healthcare Effectiveness Data and Information Set (HEDIS<sup>®</sup>)<sup>1</sup> 2015 and 2017 Volume 6: Specifications for the Medicare Health Outcomes Survey manuals,<sup>2,3</sup> which can be downloaded from the HOS website or purchased by calling the National Committee for Quality Assurance (NCQA) Customer Support Telephone Line at 1-888-275-7585 or via NCQA's Publications Center (<http://www.ncqa.org/publications-products>).

The 2015 and 2017 HOS 3.0 questionnaires can be obtained from the Survey page of the Medicare HOS website at <https://www.hosonline.org/>. Additionally, a glossary of terms related to the survey can be accessed from the Glossary link at the bottom of all site webpages.

---

<sup>1</sup> HEDIS<sup>®</sup> is a registered trademark of the National Committee for Quality Assurance.

<sup>2</sup> National Committee for Quality Assurance. *HEDIS<sup>®</sup> 2015, Volume 6: Specifications for the Medicare Health Outcomes Survey*. Washington DC: NCQA Publication, 2015. Available at: [https://hosonline.org/globalassets/hos-online/survey-administration/hos\\_hedis\\_volume6\\_2015.pdf](https://hosonline.org/globalassets/hos-online/survey-administration/hos_hedis_volume6_2015.pdf). Accessed on: October 23, 2018.

<sup>3</sup> National Committee for Quality Assurance. *HEDIS<sup>®</sup> 2017, Volume 6: Specifications for the Medicare Health Outcomes Survey*. Washington DC: NCQA Publication, 2017. Available at: [https://hosonline.org/globalassets/hos-online/survey-administration/hos\\_hedis\\_volume6\\_2017.pdf](https://hosonline.org/globalassets/hos-online/survey-administration/hos_hedis_volume6_2017.pdf). Accessed on: October 23, 2018.

# Program Background

This section provides a general description of the HOS background and methodology, including the sampling methodology, survey administration, and the survey instrument. In addition, information is provided about case-mix adjustment, additional survey questions, and field changes. For a more detailed discussion of these items, please refer to the HEDIS 2015 and 2017, Volume 6, Specifications for the Medicare Health Outcomes Survey manuals.<sup>2,3</sup>

## Introduction to the Medicare Health Outcomes Survey

In 1998, outcomes measures were developed with the desire to capture performance across multiple aspects of care, in addition to the traditional HEDIS process measures that assess interventions. CMS, NCQA, Health Assessment Lab (HAL), and performance measurement experts developed an instrument that would assess the physical functioning and mental well-being of Medicare beneficiaries over time. The HOS 1.0 included a 36-item health survey to measure physical and mental health outcomes. Additional items included in the HOS 1.0 instrument permitted case-mix adjustment, to enhance meaningful and valid plan-to-plan comparisons of health outcomes. In 2003, Healthy Days Measures questions were added from the Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factor Surveillance System (BRFSS), and questions were added that comprise the NCQA HEDIS measure for *Management of Urinary Incontinence in Older Adults*. In 2005, questions were included that comprise the NCQA HEDIS measure for *Physical Activity in Older Adults*. In 2006, the HOS Version 2.0 was implemented using the Veterans RAND 12-Item Health Survey (VR-12)<sup>4</sup> with additional case-mix and health questions.

### *Medicare Health Outcomes Survey 2.5 and 3.0*

In 2013, CMS implemented the Medicare HOS 2.5. Like the HOS 2.0, the HOS 2.5 uses the VR-12 as the core physical and mental health outcomes measures and the four HEDIS Effectiveness of Care measures. The HOS 2.5 added questions on race, ethnicity, primary language, sex, and disability from Section 4302 of the Affordable Care Act.

In 2015, CMS implemented the Medicare HOS 3.0. The HOS 3.0 was used for the *2015 Cohort 18 Baseline* and *2017 Cohort 18 Follow Up* survey administration. HOS 3.0 continues to use the VR-12 as the core physical and mental health outcomes measure and the four HEDIS Effectiveness of Care measures. Changes from the previous version (HOS 2.5) included question wording and a formatting change to a two-column layout for each page. Specific changes in the HOS are detailed in the Survey Instrument section of this DUG. Copies of all versions of the HOS are available for download on the Survey page of the HOS website (<https://www.hosonline.org/>).

---

<sup>4</sup> Iqbal SU, Rogers W, Selim A, Qian S, Lee A, Ren XS, Rothendler J, Miller D, Kazis L. The Veterans RAND 12 Item Health Survey (VR-12): What it is and How it is used. Accessed October 10, 2018 at [https://www.hosonline.org/globalassets/hos-online/publications/veterans\\_rand\\_12\\_item\\_health\\_survey\\_vr-12\\_2007.pdf](https://www.hosonline.org/globalassets/hos-online/publications/veterans_rand_12_item_health_survey_vr-12_2007.pdf).

## ***Partners and Technical Advisors***

CMS currently contracts with NCQA and Health Services Advisory Group (HSAG) to implement and operationalize all aspects of the HOS.

## ***2015-2017 Medicare Advantage Organization Participation***

MAOs with Medicare contracts in effect on or before January 1, 2014, and with a minimum enrollment of 500 beneficiaries were required by CMS to administer the *Cohort 18 Baseline* survey in 2015:

- All coordinated care contracts, including local and regional preferred provider organizations (PPO), health maintenance organizations (HMO), and contracts with exclusively Special Needs Plan (SNP) benefit packages
- Section 1876 cost contracts even if closed for enrollment
- Private Fee-for-Service (PFFS) contracts
- Medical Savings Account (MSA) contracts
- Employer /union only contracts
- Medicare Medicaid Plans (MMP)

MAOs that administered the *Cohort 18 Baseline* survey in 2015 were required by CMS to administer the *Cohort 18 Follow Up* survey in 2017. Refer to the MAO Performance Measurement Contract List available from the Data page of the HOS website (<https://www.hosonline.org/>).

MAOs sponsoring Fully Integrated Dual Eligible (FIDE) SNPs within Medicare contracts in effect on or before January 1, 2014, and with a minimum enrollment of 30 beneficiaries could elect to report the 2015 HOS at the FIDE SNP level to determine eligibility for a frailty adjustment payment, similar to those payments provided to PACE programs that use HOS-Modified (HOS-M) data. SNPs were permitted to choose whether their frailty assessments would be calculated based on activities of daily living (ADL) items reported in the HOS or on a separate sample of beneficiaries who completed the HOS-M. Voluntary reporting is in addition to standard HOS requirements for quality reporting at the contract level.

## **Sampling Methodology**

### ***2015 Cohort 18 Baseline Sampling***

CMS identified beneficiaries who were eligible for sampling as follows:

- MAOs with fewer than 500 beneficiaries enrolled were not required to report HOS.
- For MAOs with 500 to 1,200 beneficiaries, all eligible beneficiaries were included in the sample.
- For MAOs with more than 1,200 and less than 3,000 beneficiaries, a simple random sample of 1,200 beneficiaries was selected for the baseline survey.
- For MAOs with 3,000 or more beneficiaries, beneficiaries who responded to the previous year's baseline survey were excluded from the random sample of 1,200 for the current year.
- Beneficiaries were defined as eligible if they were 18 years or older on the date the

sample was drawn. The six months enrollment requirement was waived beginning in 2009 and beneficiaries with End Stage Renal Disease (ESRD) were no longer excluded from the sampling beginning in 2010.

### ***2017 Cohort 18 Follow Up Sampling***

CMS identified beneficiaries from the *2015 Cohort 18 Baseline* sample who were eligible for remeasurement as follows:

- Beneficiaries were eligible for remeasurement if they had sufficient data to derive physical health or mental health summary scores at baseline and remained in the same MAO at follow up.
- Beneficiaries were excluded if they disenrolled from their MAO or were deceased subsequent to the baseline survey. Although deceased beneficiaries were excluded from the follow up sample, CMS includes deceased baseline respondents when calculating the HOS performance measurement results.

### **Survey Administration**

- MAOs contracted with a CMS approved survey vendor to administer the surveys following the protocols specified in the HEDIS 2015 and 2017, Volume 6, Specifications for the Medicare Health Outcomes Survey manuals. The manuals detailed the methods for mail, telephone, and mixed methods of data collection.
- The mail component of the surveys uses pre-notification letters, a standardized questionnaire, survey letters, and reminder/thank you postcards. Sample respondents complete the HOS in English, Spanish, or Chinese language versions of the mail survey.
- Survey vendors attempt telephone follow up in English or Spanish (with at least six attempts) in those instances when beneficiaries fail to respond after the second mail survey or return an incomplete mail survey in order to obtain responses for missing items. A standardized version of an Electronic Telephone Interviewing System script is used to collect telephone interview data for the survey.
- Survey vendors perform initial data cleaning and follow up with survey respondents as necessary.

### **Survey Instrument**

The HOS 3.0 was administered for the *2015* and *2017 Cohort 18* surveys. This version of the HOS includes: changes to questions about urine leakage, osteoporosis testing in older women, sleep duration and quality, and primary language spoken in the home. Of note the survey uses a two-column layout for each page. Copies of the HOS survey instruments may be obtained from the Survey Instrument page of the HOS website (<https://www.hosonline.org/>).

### ***Veterans RAND 12-Item Health Survey (VR-12)***

The key component of HOS to assess physical and mental health functioning is the VR-12 Health Survey.<sup>5</sup> The VR-12 consists of 14 items, 12 of which are used in the calculation of the

---

<sup>5</sup> Information about the VR-36, VR-12, and VR-6D instruments is available on the Boston University School of Public Health website. The website offers details on development, applications, and references for the VR-12, which

eight health domains and the two summary measures: the physical component summary (PCS) and mental component summary (MCS) scores. The VR-12 measures the same eight health domains as the previously used 36-item health survey: 1) Physical Functioning, 2) Role-Physical, 3) Role-Emotional, 4) Bodily Pain, 5) Social Functioning, 6) Mental Health, 7) Vitality, and 8) General Health. Each domain aggregates one or two items and all eight domains are used to calculate the two summary measures. Two of the 14 items, which ask about change in physical health and emotional health compared to one year ago, are not used in the calculation of the PCS and MCS scores.

### ***Physical and Mental Component Summary Scores***

PCS and MCS scores are calculated from the VR-12, using the Modified Regression Estimate (MRE) for scoring and imputation of missing data. The MRE is a general method for obtaining scale scores in the context of missing data. The MRE uses complete cases to estimate a regression equation where only those items that are present are used.<sup>6</sup> PCS and MCS scores are standardized using normative values from a 1990 U.S. general population so that scores have a direct interpretation in relation to the distribution of scores in the U.S. population, which have a mean of 50 and a standard deviation of 10. PCS and MCS results are then adjusted for the impact of telephone administration since studies have shown that health status scores tend to be more favorable with interviewer administered surveys. For telephone surveys, 1.9 points are subtracted from the PCS score and 4.5 points are subtracted from the MCS score.

On a scale of 0-100, a higher PCS or MCS score reflects better health status. For the physical health summary measure, very high scores indicate no physical limitations, disabilities, or decline in well-being; high energy level; and a rating of health as “excellent.” For the mental health summary measure, very high scores indicate frequent positive affect, absence of psychological distress, and no limitations in usual social and role activities due to emotional problems.

### ***Case-Mix Adjustment***

Case-mix adjustment may be used by researchers to adjust the survey response data for beneficiary characteristics that are known to be related to systematic biases in the way people respond to survey questions. The HOS instrument includes several items that are available for case-mix adjustment. These items include: demographic and socioeconomic characteristics (e.g., age group, sex, race, education, and marital status); chronic medical conditions; and HOS study design variables (e.g., the CMS region).

Note that the *2015-2017 Cohort 18 Analytic* PUF data do not include any case-mix adjusted scores. However, there are examples of case-mix adjustments with VR-12 scores from the HOS

---

is the core health outcomes measure in the Medicare HOS and HOS-M. For information about the instruments and to request permission to use the documentation and scoring algorithms, go to: <http://www.bu.edu/sph/research/research-landing-page/vr-36-vr-12-and-vr-6d>.

<sup>6</sup> Spiro A, Rogers WH, Qian S, Kazis LE. *Imputing physical and mental summary scores (PCS and MCS) for the Veterans SF-12 Health Survey in the context of missing data*. Technical Report prepared by: The Health Outcomes Technologies Program, Health Services Department, Boston University School of Public Health, Boston, MA and The Institute for Health Outcomes and Policy, Center for Health Quality, Outcomes and Economic Research, Veterans Affairs Medical Center, Bedford, MA. 2004. Available at: [https://www.hosonline.org/globalassets/hos-online/publications/hos\\_veterans\\_12\\_imputation.pdf](https://www.hosonline.org/globalassets/hos-online/publications/hos_veterans_12_imputation.pdf). Accessed on: October 10, 2018.

data in the *Sample Baseline* and the *Sample Performance Measurement Reports*, which are available from the Resources page on the HOS website (<https://www.hosonline.org/>).

### ***Additional Questions***

The HOS instruments also included questions on demographics, chronic medical conditions, Activities of Daily Living (ADLs), depression, smoking, physical health symptoms, height, and weight, as well as other questions.

#### Demographics

Demographics included questions on beneficiary age, sex, race/ethnicity, education, marital status, and annual household income.

#### Chronic Medical Conditions

Fifteen chronic medical conditions are included in the questionnaire. These conditions are: hypertension; angina pectoris or coronary artery disease; congestive heart failure; myocardial infarction or heart attack; other heart conditions, such as heart valve defects or arrhythmias; stroke; emphysema, asthma, or chronic obstructive pulmonary disease (COPD); inflammatory bowel disease, including Crohn's disease and ulcerative colitis; arthritis of the hip or knee; arthritis of the hand or wrist; osteoporosis; sciatica; diabetes, hyperglycemia, or glycosuria; depression; and any cancer (other than skin cancer).

#### Activities of Daily Living

Six ADLs are included in the baseline and follow up HOS surveys to determine self-reported difficulty with performance of daily tasks. ADLs include bathing, dressing, eating, getting in or out of chairs, walking, and using the toilet. Three Instrumental Activities of Daily Living (IADLs) were included to assess independent living skills that are more complex than ADLs. IADL questions asked about preparing meals, managing money, and taking medications.

#### Depression Screening

The HOS 3.0 includes two questions that screen for depression. Each question is assigned points depending on the response given, from 0 ("not at all") to 3 ("nearly every day"). The depression screen is considered positive when a respondent scores 3 points or greater on the combined total points from the two depression questions. Please note, due to the change in questions, estimates of the proportion with positive depression screens using the HOS 3.0 or the HOS 2.5 are not comparable to estimates produced using prior versions of the HOS.

#### Healthy Days Measures

In 2003, three Healthy Days questions from the CDC's BRFSS were added to the HOS. They ask the number of days in the past thirty days that physical health was not good, mental health was not good, and activities were limited due to poor physical or mental health.

#### NCQA HEDIS Measures

The following four measures are a part of the Effectiveness of Care domain of HEDIS and were included in the HOS instruments:

- In 2003, four questions were added to support the *Management of Urinary Incontinence in Older Adults (MUI)* measure.
- In 2005, two questions were added to support the *Physical Activity in Older Adults (PAO)* measure.
- In 2006, four questions were added to support the *Fall Risk Management (FRM)* measure and one question was added to support the *Osteoporosis Testing in Older Women (OTO)* measure.

### ***New and Revised Fields***

The following questions were **new** fields in the **Baseline Survey** in the *2015-2017 Cohort 18 Analytic PUF* compared with the *2014-2016 Cohort 17 Analytic PUF*.

- Average number of hours of sleep during the past month (Question 53)
- Overall sleep quality during the past month (Question 54)
- What language you mainly speak at home (Question 60).

The following questions were **revised** fields in the **Baseline Survey** in the *2015-2017 Cohort 18 Analytic PUF* compared with the *2014-2016 Cohort 17 Analytic PUF*.

- The question which asked how much of a problem, if any, was urine leakage for you was changed to ask how much did leaking of urine change your daily activities or interfere with your sleep (Question 43).

There were no **new** or **revised** fields in the **Follow Up Survey** in the *2015-2017 Cohort 18 Analytic PUF* compared with the *2014-2016 Cohort 17 Analytic PUF*.

### ***Excluded Fields***

There were no **excluded** fields in the **Baseline or Follow Up Surveys** in the *2015-2017 Cohort 18 Analytic PUF* compared with the *2014-2016 Cohort 17 Analytic PUF*.

## **Data Field Utilization Notes**

- The HOS questionnaire contains multiple skip patterns. Exercise caution when interpreting responses from questions that involve skip patterns, as not every beneficiary was asked the question. Please refer to the *Field Index with Field Descriptions* section for additional information.
- When the sampled beneficiary was unable to complete the survey, the HOS protocol allows for the utilization of a proxy respondent. Surveys completed either by the respondents themselves or by proxy respondents are included in this data file and are indicated in Fields #80 and #157.
- For the *Cohort 18 Analytic PUF*, beneficiaries were considered deceased if they died within two years of completing the baseline survey and did not complete a follow up survey. The analytic sample distribution indicator (Field #165) can be used to identify the status of each beneficiary in this file.

- Question numbers from the follow up survey may differ from the baseline survey, as well as from previous analytic data files. Exercise caution when examining the data across multiple cohorts.
- Beginning with the *2012-2014 Cohort 15 Analytic PUF*, the survey responses for the beneficiary's weight and height were obtained from open-ended questions at both baseline and follow up, instead of from categorical responses, as was the case in earlier versions of the survey.

# Characteristics of the Public Use File

This section provides an overview of the Medicare Health Outcomes Survey (HOS) *2015-2017 Cohort 18 Analytic* PUF (C18A\_PUF.TXT), including the general characteristics of the data and descriptions of the fields contained within it. This file contains 264,592 beneficiary records from the merged *2015 Cohort 18 Baseline* and *2017 Cohort 18 Follow Up* data. For a more detailed discussion of these items, please refer to the HEDIS 2015 and 2017, Volume 6 manuals.<sup>2,3</sup>

## Derivation of the File

The *2015 Cohort 18 Baseline* Medicare HOS included a random sample of 583,691 beneficiaries, including both the aged and disabled, from 488 MAOs. Of the 583,691 individuals sampled, 49.0% (286,097) completed at least one question item of the survey. During the two years between the *2015 Cohort 18 Baseline* survey and the *2017 Cohort 18 Follow Up* survey, a number of MAOs discontinued offering managed care to Medicare beneficiaries, or consolidated with other health plans. The *2015-2017 Cohort 18 Analytic* PUF sample is comprised of respondents with a valid survey disposition code at baseline (please refer to Field #81 for a description of the valid baseline survey disposition codes) who remained enrolled in their same MAO at the time of follow up. This resulted in 362 reporting units (MAOs) and 264,592 respondents in the *2015-2017 Cohort 18 Analytic* PUF sample.<sup>7</sup>

Of the 264,592 beneficiaries in the *2015-2017 Cohort 18 Analytic* PUF sample, 17,612 died after baseline and before the two-year follow up survey administration. Another 99,959 beneficiaries voluntarily disenrolled from their MAOs between baseline and the start of the two-year follow up survey administration. This resulted in 147,021 beneficiaries remaining eligible at the time of follow up.

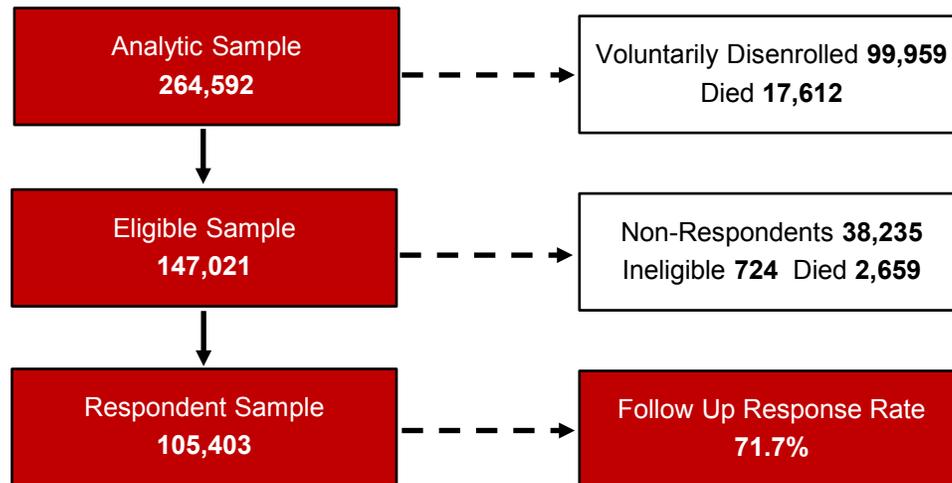
Of the 147,021 individuals sampled at the time of follow up, 71.7% (105,403) completed the follow up survey. For the purposes of this data file, a completed survey at follow up was defined as a survey with at least one question item completed. Of the 41,618 beneficiaries who did not complete a follow up survey, 2,659 were determined to have died after the follow up sample was selected but before the end of the survey administration. Additionally, 724 beneficiaries were determined to be ineligible for the follow up survey sample.<sup>8</sup> The remaining 38,235 beneficiaries who did not complete the follow up survey were classified as non-respondents. Figure 2 below depicts the distribution and response rate for the *2015-2017 Cohort 18 Analytic* PUF sample.

---

<sup>7</sup> The inclusion criteria for the PUF file differ from those used for quality reporting. Therefore, the *2015-2017 Cohort 18 Public Use File* analytic sample differs from the *2015-2017 Cohort 18 Performance Measurement* analytic sample, which is used to derive plan-level HOS Performance Measurement results.

<sup>8</sup> Ineligible beneficiaries at follow up met one of the following criteria: not enrolled in the MAO; had an incorrect address and phone number, or had a language barrier.

**Figure 1. Distribution and Response Rate for 2015-2017 Cohort 18 Analytic PUF Sample**



## Field Overview

The C18A\_PUF.TXT data file is a fixed-width ASCII text file (50.4 megabytes in size). There are a total of 165 fields and 264,592 beneficiary records in the file. Each row in the C18A\_PUF.TXT data file represents an individual's merged baseline and follow up HOS survey responses, also referred to as a beneficiary record.

This public use file has been modified from the original merged *2015 Cohort 18 Baseline* and *2017 Cohort 18 Follow Up* data file in order to preserve confidentiality at the beneficiary and plan levels. Many demographic and plan-level fields have been omitted from this file or have been collapsed into fewer categories (see *Limitations of the Data* section). Health insurance claim (HIC) number, which is a sensitive beneficiary identifying field, has been replaced with a unique nine digit, randomly assigned identifier (Field #1). Other identifying fields, such as Social Security Number, beneficiary's name, etc., have been removed.

The 165 fields in the C18A\_PUF.TXT data file are organized into five different groups in the descriptions which follow:

- Identification and baseline demographics
- Baseline survey questions
- Baseline survey administration
- Follow up survey questions
- Follow up survey administration

## Field Description

The following content provides details for interpreting the specific fields contained within the data file.

### *Identification and Baseline Demographics*

#### Unique Identifier, Field: 1

This is a unique nine character alphanumeric identifier that is randomly assigned for each beneficiary record. Positions 1 through 3 identify the analytic cohort of the public use file. Positions 4 through 9 contain a randomly assigned sequence number. For the baseline PUFs, beneficiaries who were measured in multiple baseline cohorts retained the initially assigned blinded identifier in all subsequent surveys. However, due to confidentiality issues, the identifier assigned to a beneficiary in an analytic PUF does **not** correspond to any identifiers that may be assigned to the same beneficiary in either a baseline PUF or other analytic PUF. The data file is sorted by the unique identifier.

*Example:* A18000021

*Source:* Field created during production of the C18A\_PUF.TXT data file

#### Age Group, Field: 2

Age group of the beneficiary at the time of the baseline survey

*Source:* CMS databases

#### Race, Field: 3

Self-reported race of the beneficiary

*Source:* Q59 from the baseline survey

#### Sex, Field: 4

Self-reported sex of the beneficiary

*Source:* Q57 from the baseline survey

#### Marital Status, Field: 5

Self-reported marital status of the beneficiary

*Source:* Q61 from the baseline survey

#### Education Level, Field: 6

Self-reported educational attainment of the beneficiary

*Source:* Q62 from the baseline survey

#### Body Mass Index Category, Field 7

Calculated from the beneficiary's self-reported weight in pounds and height in feet and inches

*Source:* Q55 and Q56 from the baseline survey

### *Baseline Survey Questions*

#### VR-12 Questions, Fields: 8 through 21

These fields represent the VR-12-item health survey questions, which can be found in Appendix 1 on pages 1-42 through 1-43 of the HEDIS 2015, Volume 6 manual. The VR-12 questions are included in Q1 through Q9 in the HOS questionnaire. Please refer to the

*Program Background* section in this Data Users Guide for a more detailed description of the VR-12.

Additional Questions, Fields: 22 through 80

These fields comprise the balance of the survey questions found on pages 1-44 through 1-50 of the HEDIS 2015, Volume 6 manual, including most of the remaining questions Q10 through Q68 in the HOS questionnaire. Please refer to the *Program Background* section in this Data Users Guide for a more detailed outline of these questions. Selected demographic questions contained in the survey are not available in this PUF due to confidentiality issues. Please refer to the *Limitations of the Data* section for more details.

***Baseline Survey Administration***

Baseline Survey Disposition, Field: 81

Identifies completion status and mode by which the survey was completed

*Source:* NCQA-Certified HOS Survey Vendor

Baseline Survey Round, Field: 82

Mail or telephone stage in which the survey was completed or when survey completion was last attempted by the vendor

*Source:* NCQA-Certified HOS Survey Vendor

Percent of Baseline Survey Completed, Field: 83

Percentage of the baseline survey completed by the respondent

*Source:* Field created during the processing of the *Cohort 18 Baseline* data file

Baseline Survey Language, Field: 84

Language in which the baseline survey was completed

*Source:* NCQA-Certified HOS Survey Vendor

***Follow Up Survey Questions***

VR-12 Questions, Fields: 85 through 98

These fields represent the VR-12 questions, which can be found in Appendix 1 on pages 1-5 through 1-6 of the HEDIS 2017, Volume 6 manual. The VR-12 questions include Q1 through Q9 in the HOS questionnaire. Please refer to the *Program Background* section in this Data Users Guide for a more detailed description of the VR-12.

Additional Questions, Fields: 99 through 157

These fields comprise the balance of the survey questions found on pages 1-7 through 1-13 of the HEDIS 2017, Volume 6 manual, including most of the remaining questions Q10 through Q68 in the HOS questionnaire. Please refer to the *Program Background* section in this Data Users Guide for a more detailed outline of these questions. Selected demographic questions contained in the survey are not available in this PUF due to confidentiality issues. Please refer to the *Limitations of the Data* section for more details.

***Follow Up Survey Administration***

Follow Up Survey Disposition, Field: 158

Identifies completion status and mode by which the survey was completed

*Source:* CMS approved HOS Survey Vendor

Follow Up Survey Round, Field: 159

Mail or telephone stage in which the survey was completed or when survey completion was last attempted by the survey vendor

*Source:* CMS approved HOS Survey Vendor

Percent of Follow Up Survey Completed, Field: 160

Percentage of the follow up survey completed by the respondent

*Source:* Field created during the processing of the *Cohort 18 Follow Up* data file

Follow Up Survey Language, Field: 161

Language in which the follow up survey was completed

*Source:* CMS approved HOS Survey Vendor

Cohort Identifier, Field: 162

Cohort in which the HOS surveys contained in this data file were submitted

**NOTE:** Value for each record is “A18”.

*Source:* Field created during production of the C18A\_PUF.TXT data file

Analytic CMS Region, Field: 163

CMS Regional Office to which the plan belongs

*Source:* August 2017 HPMS Plan Contract List

Follow Up Sample Indicator, Field: 164

This field indicates if the beneficiary was included in the follow up sample.

*Source:* Field created during the production of the C18A\_PUF.TXT data file

Analytic Sample Indicator, Field: 165

This field indicates the status of the beneficiary in the analytic file. Categories include the following: respondent to the follow up survey, non-respondent to the follow up survey, ineligible as determined at the time of follow up, disenrolled, and dead.

*Source:* Field created during the production of the C18A\_PUF.TXT data file

Further details of the contents of the data file are available in the *Field Index with Field Descriptions* section of this Data Users Guide.

# Limitations of the Data

This section illustrates the limitations of the data, including issues relative to the categorization of selected fields and the identification of Medicare beneficiaries.

Selected questions that appear in the 2015 and 2017 *Health Outcomes Survey Questionnaires* are not available in the C18A\_PUF.TXT data file due to confidentiality issues. Demographic fields that are omitted include the beneficiary's year of birth, homeownership, annual household income, Hispanic ethnicity, height, weight, and the name of the person who completed the survey. Many plan-related fields are also omitted to ensure confidentiality of the plan.

## Categorization of Selected Fields

Selected demographic fields are collapsed into fewer categories to maintain beneficiary confidentiality. Collapsed categories include:

Field	Scale in C18A_PUF.TXT	Scale in HOS Questionnaire <sup>9</sup>
Race of Beneficiary	1 = White 2 = Black or African American 3 = Other	The survey race question allowed one or more response choices from the following categories: 1 = White 2 = Black or African American 3 = American Indian or Alaska Native 4 = Asian Indian 5 = Chinese 6 = Filipino 7 = Japanese 8 = Korean 9 = Vietnamese 10 = Other Asian 11 = Native Hawaiian 12 = Guamanian or Chamorro 13 = Samoan 14 = Other Pacific Islander
Marital Status of Beneficiary	1 = Married 2 = Non-Married	1 = Married 2 = Divorced 3 = Separated 4 = Widowed 5 = Never married
Education Level of Beneficiary	1 = Less than a high school education or GED 2 = High school education or GED 3 = Greater than a high school education or GED	1 = 8 <sup>th</sup> grade or less 2 = Some high school, but did not graduate 3 = High school graduate or GED 4 = Some college or 2 year degree 5 = 4 year college graduate 6 = More than a 4 year college degree
Body Mass Index (BMI) Category	1 = Not obese (BMI < 30) 2 = Obese (BMI ≥ 30)	Beneficiary's body mass index category <sup>10</sup> 1 = BMI < 18.5 (Underweight) 2 = BMI 18.5 – < 25 (Normal) 3 = BMI 25 – < 30 (Overweight) 4 = BMI ≥ 30 (Obese)

<sup>9</sup> Scale as it is represented in the 2015 *HOS Questionnaire* for beneficiary's race, marital status, and education level at baseline.

<sup>10</sup> BMI categories are calculated from the beneficiary's self-reported weight in pounds (Q55) and height in feet and inches (Q56) obtained from the 2015 *HOS Questionnaire* at baseline.

# Field Index with Field Descriptions

This section provides detailed information regarding the structure and fields of the C18A\_PUF.TXT data file. The following tables include the order, position, valid values, and any additional information for each field in the data file. Fields are presented in the same order as they exist in the data file.

The C18A\_PUF.TXT data file:

- Is a fixed-width ASCII text file of 50.4 megabytes
- Consists of merged *Cohort 18 Baseline* HOS surveys completed in 2015 and *Cohort 18 Follow Up* HOS surveys completed in 2017
- Contains a total of 165 fields and 264,592 beneficiary records
- Has a record length of 198 columns
- Contains a blank space for all missing values
- Contains numeric values with the exception of field numbers 1, 81, 82, 158, 159, 162
- Is sorted by the unique identifier (Field #1)

SAS code for importing the PUF text files may be downloaded from the <https://www.hosonline.org/> website. The code is located in the “Research Data Files” page under the “PUF Data Files for Download” heading.

## Identification and *Cohort 18* Baseline Demographics

Field #	Field Description	Field Position	Valid Values and Notes
1	Unique Identifier	1-9	A unique nine digit randomly assigned code for each beneficiary <b>NOTE:</b> This field contains a character string. Example: A1800021
2	<i>Cohort 18 Baseline:</i> Age Group of Beneficiary	10	Beneficiary's age group obtained from the CMS Medicare Enrollment Database 1 = Less than 65 2 = 65 to 74 3 = 75 and older
3	<i>Cohort 18 Baseline Survey:</i> Race of Beneficiary (Q59)	11	<b>Note: The original codes (a-n) have been collapsed into the three groups shown below.</b> <i>How would you describe your race?</i> 1 = White 2 = Black or African American 3 = Other
4	<i>Cohort 18 Baseline Survey:</i> Sex of Beneficiary (Q57)	12	<i>Are you male or female?</i> 1 = Male 2 = Female
5	<i>Cohort 18 Baseline Survey:</i> Marital Status of Beneficiary (Q61)	13	<b>Note: The original codes (1-5) have been collapsed into the two groups shown below.</b> <i>What is your current marital status?</i> 1 = Married 2 = Non-Married
6	<i>Cohort 18 Baseline Survey:</i> Education Level of Beneficiary (Q62)	14	<b>Note: The original codes (1-6) have been collapsed into the three groups shown below.</b> 1 = Less than a high school education or GED 2 = High school education or GED 3 = Greater than a high school education or GED
7	<i>Cohort 18 Baseline Survey:</i> Body Mass Index (BMI) Category	15	Beneficiary's Body Mass Index Category, calculated from self-reported weight and height.  BMI = (weight / height <sup>2</sup> ) * 703 1 = Not obese (BMI < 30) 2 = Obese (BMI ≥ 30)  BMI was then used to calculate the BMI categories.

## Cohort 18 Baseline Survey Questions

Field #	Field Description	Field Position	Valid Values and Notes
8	Cohort 18 Baseline Survey: General Health Question (Q1)	16	<i>In general, would you say your health is:</i> 1 = Excellent 2 = Very good 3 = Good 4 = Fair 5 = Poor
9	Cohort 18 Baseline Survey: Moderate Activities Question (Q2a)	17	<i>The following items are about activities you might do during a typical day. Does <b>your health now limit you</b> in these activities? If so, how much?</i> <b>Moderate activities</b> , such as <u>moving a table, pushing a vacuum cleaner, bowling, or playing golf</u> 1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
10	Cohort 18 Baseline Survey: Climbing Several Flights of Stairs Question (Q2b)	18	<i>The following items are about activities you might do during a typical day. Does <b>your health now limit you</b> in these activities? If so, how much?</i> <u>Climbing several flights of stairs</u> 1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
11	Cohort 18 Baseline Survey: Physical Health Limiting Amount Accomplished Question (Q3a)	19	<i>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of your physical health</b>?</i> <u>Accomplished less than you would like</u> 1 = No, none of the time 2 = Yes, a little of the time 3 = Yes, some of the time 4 = Yes, most of the time 5 = Yes, all of the time
12	Cohort 18 Baseline Survey: Physical Health Limiting the Kind of Activities Question (Q3b)	20	<i>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of your physical health</b>?</i> <u>Were limited in the kind of work or other activities</u> 1. = No, none of the time 2. = Yes, a little of the time 3. = Yes, some of the time 4. = Yes, most of the time 5. = Yes, all of the time

Field #	Field Description	Field Position	Valid Values and Notes
13	Cohort 18 Baseline Survey: Emotional Problems Limiting Amount Accomplished Question (Q4a)	21	<p>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of any emotional problems</b> (such as feeling depressed or anxious)?</p> <p><u>Accomplished less than you would like</u></p> <p>1 = No, none of the time  2 = Yes, a little of the time  3 = Yes, some of the time  4 = Yes, most of the time  5 = Yes, all of the time</p>
14	Cohort 18 Baseline Survey: Emotional Problems Limiting Carefulness Question (Q4b)	22	<p>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of any emotional problems</b> (such as feeling depressed or anxious)?</p> <p><u>Didn't do work or other activities as carefully as usual</u></p> <p>1 = No, none of the time  2 = Yes, a little of the time  3 = Yes, some of the time  4 = Yes, most of the time  5 = Yes, all of the time</p>
15	Cohort 18 Baseline Survey: Pain Interfering with Work Question (Q5)	23	<p>During the <b>past 4 weeks</b>, how much did <b>pain</b> interfere with your normal work (including both work outside the home and housework)?</p> <p>1 = Not at all  2 = A little bit  3 = Moderately  4 = Quite a bit  5 = Extremely</p>
16	Cohort 18 Baseline Survey: Calm and Peaceful Question (Q6a)	24	<p>How much of the time during the <b>past 4 weeks...</b></p> <p><u>Have you felt calm and peaceful?</u></p> <p>1 = All of the time  2 = Most of the time  3 = A good bit of the time  4 = Some of the time  5 = A little of the time  6 = None of the time</p>
17	Cohort 18 Baseline Survey: Lots of Energy Question (Q6b)	25	<p>How much of the time during the <b>past 4 weeks...</b></p> <p><u>Did you have a lot of energy?</u></p> <p>1 = All of the time  2 = Most of the time  3 = A good bit of the time  4 = Some of the time  5 = A little of the time  6 = None of the time</p>

Field #	Field Description	Field Position	Valid Values and Notes
18	Cohort 18 Baseline Survey: Downhearted and Blue Question (Q6c)	26	<p><i>How much of the time during the <b>past 4 weeks...</b></i>  <u>Have you felt downhearted and blue?</u>            1 = All of the time            2 = Most of the time            3 = A good bit of the time            4 = Some of the time            5 = A little of the time            6 = None of the time</p>
19	Cohort 18 Baseline Survey: Amount of Time Health Interfering with Social Activities Question (Q7)	27	<p><i>During the <b>past 4 weeks</b>, how much of the time has your <b>physical health or emotional problems</b> interfered with your social activities (like visiting with friends, relatives, etc.)?</i>            1 = All of the time            2 = Most of the time            3 = Some of the time            4 = A little of the time            5 = None of the time</p>
20	Cohort 18 Baseline Survey: Physical Health Compared to One Year Ago Question (Q8)	28	<p><i><b>Compared to one year ago</b>, how would you rate your <b>physical health</b> in general <b>now</b>?</i>            1 = Much better            2 = Slightly better            3 = About the same            4 = Slightly worse            5 = Much worse</p>
21	Cohort 18 Baseline Survey: Emotional Problems Compared to One Year Ago Question (Q9)	29	<p><i><b>Compared to one year ago</b>, how would you rate your <b>emotional problems</b> (such as feeling anxious, depressed or irritable) in general <b>now</b>?</i>            1 = Much better            2 = Slightly better            3 = About the same            4 = Slightly worse            5 = Much worse</p>
22	Cohort 18 Baseline Survey: Bathing Question (Q10a)	30	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities <b>without special equipment or help from another person</b>?</i>  <u>Bathing</u>            1 = No, I do not have difficulty            2 = Yes, I have difficulty            3 = I am unable to do this activity</p>
23	Cohort 18 Baseline Survey: Dressing Question (Q10b)	31	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities <b>without special equipment or help from another person</b>?</i>  <u>Dressing</u>            1 = No, I do not have difficulty            2 = Yes, I have difficulty            3 = I am unable to do this activity</p>

Field #	Field Description	Field Position	Valid Values and Notes
24	Cohort 18 Baseline Survey: Eating Question (Q10c)	32	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Eating</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
25	Cohort 18 Baseline Survey: Getting In or Out of Chairs Question (Q10d)	33	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Getting in or out of chairs</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
26	Cohort 18 Baseline Survey: Walking Question (Q10e)	34	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Walking</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
27	Cohort 18 Baseline Survey: Using the Toilet Question (Q10f)	35	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Using the toilet</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
28	Cohort 18 Baseline Survey: Difficulty Preparing Meals Question (Q11a)	36	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i></p> <p><u>Preparing Meals</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I don't do this activity</p>
29	Cohort 18 Baseline Survey: Difficulty Managing Money Question (Q11b)	37	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i></p> <p><u>Managing Money</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I don't do this activity</p>
30	Cohort 18 Baseline Survey: Difficulty Taking Medication as Prescribed Question (Q11c)	38	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i></p> <p><u>Taking Medication as prescribed</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I don't do this activity</p>

Field #	Field Description	Field Position	Valid Values and Notes
31	Cohort 18 Baseline Survey: Number of Days Physical Health Not Good Question (Q12)	39-40	Now, thinking about your physical health, which includes physical illness and injury, for how many days during the <b>past 30 days</b> was your physical health <b>not</b> good? Note: A value of “88” indicates $\geq 100$ days.
32	Cohort 18 Baseline Survey: Number of Days Mental Health Not Good Question (Q13)	41-42	Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the <b>past 30 days</b> was your mental health <b>not</b> good? Note: A value of “88” indicates $\geq 100$ days.
33	Cohort 18 Baseline Survey: Number of Days Health Interfered with Daily Activities Question (Q14)	43-44	During the <b>past 30 days</b> , for about how many days did <b>poor</b> physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? Note: A value of “88” indicates $\geq 100$ days.
34	Cohort 18 Baseline Survey: Blind or Serious Difficulty Seeing Question (Q15)	45	Are you blind or do you have serious difficulty seeing, even when wearing glasses? 1 = Yes 2 = No
35	Cohort 18 Baseline Survey: Deaf or Serious Difficulty Hearing Question (Q16)	46	Are you deaf or do you have serious difficulty hearing, even with a hearing aid? 1 = Yes 2 = No
36	Cohort 18 Baseline Survey: Difficulty Concentrating, Remembering, or Making Decisions Question (Q17)	47	<b>Because of a physical, mental, or emotional condition</b> , do you have <b>serious</b> difficulty concentrating, remembering, or making decisions? 1 = Yes 2 = No
37	Cohort 18 Baseline Survey: Difficulty Doing Errands Question (Q18)	48	<b>Because of a physical, mental, or emotional condition</b> , do you have difficulty doing errands alone such as visiting a doctor’s office or shopping? 1 = Yes 2 = No
38	Cohort 18 Baseline Survey: Memory Problems Interfered with Activities in Past Month Question (Q19)	49	In the past month, how often did memory problems interfere with your daily activities? 1 = Every day (7 days a week) 2 = Most days (5-6 days a week) 3 = Some days (2-4 days a week) 4 = Rarely (once a week or less) 5 = Never
39	Cohort 18 Baseline Survey: Hypertension Question (Q20)	50	<b>Has a doctor ever told you that you had:</b> <u>Hypertension or high blood pressure</u> 1 = Yes 2 = No
40	Cohort 18 Baseline Survey: Angina or Coronary Artery Disease Question (Q21)	51	<b>Has a doctor ever told you that you had:</b> <u>Angina pectoris or coronary artery disease</u> 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
41	Cohort 18 Baseline Survey: Congestive Heart Failure Question (Q22)	52	<b>Has a doctor ever told you that you had:</b> <u>Congestive heart failure</u> 1 = Yes 2 = No
42	Cohort 18 Baseline Survey: Myocardial Infarction Question (Q23)	53	<b>Has a doctor ever told you that you had:</b> <u>A myocardial infarction or heart attack</u> 1 = Yes 2 = No
43	Cohort 18 Baseline Survey: Other Heart Conditions Question (Q24)	54	<b>Has a doctor ever told you that you had:</b> <u>Other heart conditions, such as problems with heart valves or the rhythm of your heartbeat</u> 1 = Yes 2 = No
44	Cohort 18 Baseline Survey: Stroke Question (Q25)	55	<b>Has a doctor ever told you that you had:</b> <u>A stroke</u> 1 = Yes 2 = No
45	Cohort 18 Baseline Survey: COPD Question (Q26)	56	<b>Has a doctor ever told you that you had:</b> <u>Emphysema, or asthma, or COPD (chronic obstructive pulmonary disease)</u> 1 = Yes 2 = No
46	Cohort 18 Baseline Survey: Inflammatory Bowel Disease Question (Q27)	57	<b>Has a doctor ever told you that you had:</b> <u>Crohn's disease, ulcerative colitis, or inflammatory bowel disease</u> 1 = Yes 2 = No
47	Cohort 18 Baseline Survey: Arthritis of Hip or Knee Question (Q28)	58	<b>Has a doctor ever told you that you had:</b> <u>Arthritis of the hip or knee</u> 1 = Yes 2 = No
48	Cohort 18 Baseline Survey: Arthritis of Hand or Wrist Question (Q29)	59	<b>Has a doctor ever told you that you had:</b> <u>Arthritis of the hand or wrist</u> 1 = Yes 2 = No
49	Cohort 18 Baseline Survey: Osteoporosis Question (Q30)	60	<b>Has a doctor ever told you that you had:</b> <u>Osteoporosis, sometimes called thin or brittle bones</u> 1 = Yes 2 = No
50	Cohort 18 Baseline Survey: Sciatica Question (Q31)	61	<b>Has a doctor ever told you that you had:</b> <u>Sciatica (pain or numbness that travels down your leg to below your knee)</u> 1 = Yes 2 = No
51	Cohort 18 Baseline Survey: Diabetes Question (Q32)	62	<b>Has a doctor ever told you that you had:</b> <u>Diabetes, high blood sugar, or sugar in the urine</u> 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
52	Cohort 18 Baseline Survey: Depression Question (Q33)	63	<b>Has a doctor ever told you that you had:</b> <u>Depression</u> 1 = Yes 2 = No
53	Cohort 18 Baseline Survey: Any Cancer Question (Q34)	64	<b>Has a doctor ever told you that you had:</b> <u>Any cancer (other than skin cancer)</u> 1 = Yes 2 = No
54	Cohort 18 Baseline Survey: Colorectal Cancer Treatment Question (Q35a)	65	<b>If you answered “yes” to question 34 above (that you have had cancer),</b> Are you currently under treatment for: <u>Colon or rectal cancer</u> 1 = Yes 2 = No
55	Cohort 18 Baseline Survey: Lung Cancer Treatment Question (Q35b)	66	<b>If you answered “yes” to question 34 above (that you have had cancer),</b> Are you currently under treatment for: <u>Lung cancer</u> 1 = Yes 2 = No
56	Cohort 18 Baseline Survey: Breast Cancer Treatment Question (Q35c)	67	<b>If you answered “yes” to question 34 above (that you have had cancer),</b> Are you currently under treatment for: <u>Breast cancer</u> 1 = Yes 2 = No
57	Cohort 18 Baseline Survey: Prostate Cancer Treatment Question (Q35d)	68	<b>If you answered “yes” to question 34 above (that you have had cancer),</b> Are you currently under treatment for: <u>Prostate cancer</u> 1 = Yes 2 = No
58	Cohort 18 Baseline Survey: Other Cancer Treatment Question (Q35e)	69	<b>If you answered “yes” to question 34 above (that you have had cancer),</b> Are you currently under treatment for: <u>Other cancer (other than skin cancer)</u> 1 = Yes 2 = No
59	Cohort 18 Baseline Survey: Pain Interfered with Activities Question (Q36)	70	<b>In the <i>past 7 days</i>, how much did pain interfere with your day to day activities?</b> 1 = Not at all 2 = A little bit 3 = Somewhat 4 = Quite a bit 5 = Very much
60	Cohort 18 Baseline Survey: Pain Interfered with Socializing Question (Q37)	71	<b>In the <i>past 7 days</i>, how often did pain keep you from socializing with others?</b> 1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Always

Field #	Field Description	Field Position	Valid Values and Notes
61	Cohort 18 Baseline Survey: Average Pain Rating Question (Q38)	72-73	<i>In the <b>past 7 days</b>, how would you rate your pain on average?</i> 1 = 1 (No pain) 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8 9 = 9 10 = 10 (Worst imaginable pain)
62	Cohort 18 Baseline Survey: Little Interest or Pleasure in Doing Things Question (Q39a)	74	<i>Over the <b>past 2 weeks</b>, how often have you been bothered by any of the following problems?</i> <u>Little interest or pleasure in doing things</u> 1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day
63	Cohort 18 Baseline Survey: Feeling Down, Depressed, or Hopeless Question (Q39b)	75	<i>Over the <b>past 2 weeks</b>, how often have you been bothered by any of the following problems?</i> <u>Feeling down, depressed, or hopeless</u> 1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day
64	Cohort 18 Baseline Survey: Comparative Health Question (Q40)	76	<i>In general, compared to other people your age, would you say that your health is:</i> 1 = Excellent 2 = Very good 3 = Good 4 = Fair 5 = Poor
65	Cohort 18 Baseline Survey: Current Smoker Question (Q41)	77	<i>Do you <b>now</b> smoke every day, some days, or not at all?</i> 1 = Every day 2 = Some days 3 = Not at all 4 = Don't know
66	Cohort 18 Baseline Survey: Urine Leakage Question (Q42)	78	<i>Many people experience leakage of urine, also called urinary incontinence. In the <b>past 6 months</b>, have you experienced leaking of urine?</i> 1 = Yes <b>(Go to Q43)</b> 2 = No <b>(Go to Q46)</b>
67	Cohort 18 Baseline Survey: Leaking of Urine Interfering With Daily Activities Question (Q43)	79	<i>During the <b>past six months</b>, how much did leaking of urine make you change your daily activities or interfere with your sleep?</i> 1 = A lot 2 = Somewhat 3 = Not at all

Field #	Field Description	Field Position	Valid Values and Notes
68	Cohort 18 Baseline Survey Talked with Doctor about Urine Leakage Question (Q44)	80	Have you ever talked with a doctor, nurse, or other health care provider about leaking of urine? 1 = Yes 2 = No
69	Cohort 18 Baseline Survey: Talked About Treatment for Urine Leakage Question (Q45)	81	There are many ways to control or manage the leaking of urine, including bladder training exercises, medication and surgery. Have you ever talked with a doctor, nurse, or other health care provider about any of these approaches? 1 = Yes 2 = No
70	Cohort 18 Baseline Survey: Talked with Doctor about Physical Activities Question (Q46)	82	In the <b>past 12 months</b> , did you talk with a doctor or other health provider about your level of exercise or physical activity? For example, a doctor or other health provider may ask if you exercise regularly or take part in physical exercise. 1 = Yes (Go to Q47) 2 = No (Go to Q47) 3 = I had no visits in the past 12 months (Go to Q48)
71	Cohort 18 Baseline Survey: Advised to Increase or Maintain Activities Question (Q47)	83	In the <b>past 12 months</b> , did a doctor or other health provider advise you to start, increase or maintain your level of exercise or physical activity? For example, in order to improve your health, your doctor or other health provider may advise you to start taking the stairs, increase walking from 10 to 20 minutes every day or to maintain your current exercise program. 1 = Yes 2 = No
72	Cohort 18 Baseline Survey: Talked to Doctor about Falling or Balance Problem Question (Q48)	84	A fall is when your body goes to the ground without being pushed. In the <b>past 12 months</b> , did you talk with your doctor or other health provider about falling or problems with balance or walking? 1 = Yes 2 = No 3 = I had no visits in the past 12 months
73	Cohort 18 Baseline Survey: Fell in Past 12 Months Question (Q49)	85	Did you fall in the <b>past 12 months</b> ? 1 = Yes 2 = No
74	Cohort 18 Baseline Survey: Problem with Walking or Balance in Past 12 Months Question (Q50)	86	In the <b>past 12 months</b> , have you had a problem with balance or walking? 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
75	Cohort 18 Baseline Survey: Talked to Doctor about How to Prevent Falls Question (Q51)	87	<p>Has your doctor or other health provider done anything to help prevent falls or treat problems with balance or walking? Some things they might do include:</p> <ul style="list-style-type: none"> <li>• Suggest that you use a cane or walker</li> <li>• Check your blood pressure lying or standing</li> <li>• Suggest that you do an exercise or physical therapy program</li> <li>• Suggest a vision or hearing testing</li> </ul> <p>1 = Yes 2 = No 3 = I had no visits in the past 12 months</p>
76	Cohort 18 Baseline Survey: Osteoporosis Testing Question (Q52)	88	<p>Have you ever had a <b>bone density test</b> to check for <b>osteoporosis</b>, sometimes thought of as “brittle bones”? This test may have been done to your back, hip, wrist, heel or finger.</p> <p>1 = Yes 2 = No</p>
77	Cohort 18 Baseline Survey: Hours of Sleep Question (Q53)	89	<p>During the <b>past month</b>, on average, how many hours of actual sleep did you get at night? (This may be different from the number of hours you spent in bed.)</p> <p>1 = Less than 5 hours 2 = 5-6 hours 3 = 7-8 hours 4 = 9 or more hours</p>
78	Cohort 18 Baseline Survey: Sleep Quality Question (Q54)	90	<p>During the <b>past month</b>, how would rate your overall sleep quality?</p> <p>1 = Very Good 2 = Fairly Good 3 = Fairly Bad 4 = Very Bad</p>
79	Cohort 18 Baseline Survey: Language Spoken at Home Question (Q60)	91	<p>What language do you <b>mainly</b> speak at home?</p> <p>1 = English 2 = Spanish 3 = Chinese 4 = Some other language (please specify)</p> <p>Note: The language under option 4 is not specified in the PUF</p>
80	Cohort 18 Baseline Survey: Who Completed this Survey Question (Q66)	92	<p>Who completed this survey form?</p> <p>1 = Person to whom survey was addressed <b>(Go to Q68)</b> 2 = Family member or relative of person to whom the survey was addressed 3 = Friend of person to whom the survey was addressed 4 = Professional caregiver of person to whom the survey was addressed</p>

## Cohort 18 Baseline Survey Administration

Field #	Field Description	Field Position	Valid Values and Notes
81	<i>Cohort 18 Baseline:</i> Baseline Survey Disposition	93-95	<p><b>NOTE:</b> This field contains a character string. <i>Cohort 18 Baseline</i> Survey disposition code:</p> <p>M10/T10 = completed survey (79.5-100% complete and all 6 ADLs answered in Q10a-f)</p> <p>M11/T11 = non-response: partial complete (50-79.5% complete, or 79.5-100% complete and &lt;6 ADLs answered)</p> <p>M31/T31 = non-response: break-off (0- 49% complete)</p> <p>Note: For survey disposition codes, M=Mail and T=Telephone</p>
82	<i>Cohort 18 Baseline:</i> Baseline Survey Round	96-97	<p><b>NOTE:</b> This field contains a character string. Survey round code for completed, partially completed, and non-completed surveys by mail or telephone:</p> <p>M1 = 1st mailing M2 = 2nd mailing T1 = 1st telephone T2 = 2nd telephone T3 = 3rd telephone T4 = 4th telephone T5 = 5th telephone T6 = 6<sup>th</sup> telephone T7 = 7<sup>th</sup> telephone T8 = 8<sup>th</sup> telephone T9 = 9<sup>th</sup> telephone</p> <p>MM = Partially completed by mail and converted to complete by mail MT = Partially completed by mail and converted to complete by telephone NC = Not completed</p>
83	<i>Cohort 18 Baseline:</i> Percent of Baseline Survey Completed	98-102	Range: 0 to 100% (value is rounded to the tenths decimal place)
84	<i>Cohort 18 Baseline:</i> Baseline Survey Language	103	<p>1 = English 2 = Spanish 3 = Not Applicable 4 = Chinese</p>

## Cohort 18 Follow Up Survey Questions

Field #	Field Description	Field Position	Valid Values and Notes
85	Cohort 18 Follow Up Survey: General Health Question (Q1)	104	<i>In general, would you say your health is:</i> 1 = Excellent 2 = Very good 3 = Good 4 = Fair 5 = Poor
86	Cohort 18 Follow Up Survey: Moderate Activities Question (Q2a)	105	<i>The following items are about activities you might do during a typical day. Does <b>your health now limit you</b> in these activities? If so, how much?</i> <u>Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf</u> 1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
87	Cohort 18 Follow Up Survey: Climbing Several Flights of Stairs Question (Q2b)	106	<i>The following items are about activities you might do during a typical day. Does <b>your health now limit you</b> in these activities? If so, how much?</i> <u>Climbing several flights of stairs</u> 1 = Yes, limited a lot 2 = Yes, limited a little 3 = No, not limited at all
88	Cohort 18 Follow Up Survey: Physical Health Limiting Amount Accomplished Question (Q3a)	107	<i>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of your physical health</b>?</i> <u>Accomplished less than you would like as a result of your physical health?</u> 1 = No, none of the time 2 = Yes, a little of the time 3 = Yes, some of the time 4 = Yes, most of the time 5 = Yes, all of the time
89	Cohort 18 Follow Up Survey: Physical Health Limiting the Kind of Activities Question (Q3b)	108	<i>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of your physical health</b>?</i> <u>Were limited in the <b>kind</b> of work or other activities as a result of your physical health?</u> 1 = No, none of the time 2 = Yes, a little of the time 3 = Yes, some of the time 4 = Yes, most of the time 5 = Yes, all of the time

Field #	Field Description	Field Position	Valid Values and Notes
90	Cohort 18 Follow Up Survey: Emotional Problems Limiting Amount Accomplished Question (Q4a)	109	<p>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of any emotional problems</b> (such as feeling depressed or anxious)?</p> <p><b><u>Accomplished less than you would like as a result of any emotional problems</u></b></p> <p>1 = No, none of the time  2 = Yes, a little of the time  3 = Yes, some of the time  4 = Yes, most of the time  5 = Yes, all of the time</p>
91	Cohort 18 Follow Up Survey: Emotional Problems Limiting Carefulness Question (Q4b)	110	<p>During the <b>past 4 weeks</b>, have you had any of the following problems with your work or other regular daily activities <b>as a result of any emotional problems</b> (such as feeling depressed or anxious)?</p> <p><b><u>Didn't do work or other activities as carefully as usual as a result of any emotional problems</u></b></p> <p>1 = No, none of the time  2 = Yes, a little of the time  3 = Yes, some of the time  4 = Yes, most of the time  5 = Yes, all of the time</p>
92	Cohort 18 Follow Up Survey: Pain Interfering with Work Question (Q5)	111	<p>During the <b>past 4 weeks</b>, how much did <b>pain</b> interfere with your normal work (including both work outside the home and housework)?</p> <p>1 = Not at all  2 = A little bit  3 = Moderately  4 = Quite a bit  5 = Extremely</p>
93	Cohort 18 Follow Up Survey: Calm and Peaceful Question (Q6a)	112	<p>These questions are about how you feel and how things have been with you during the <b>past 4 weeks</b>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <b>past 4 weeks</b>...</p> <p><b><u>Have you felt calm and peaceful?</u></b></p> <p>1 = All of the time  2 = Most of the time  3 = A good bit of the time  4 = Some of the time  5 = A little of the time  6 = None of the time</p>

Field #	Field Description	Field Position	Valid Values and Notes
94	<i>Cohort 18 Follow Up Survey:</i> Lots of Energy Question (Q6b)	113	<p><i>These questions are about how you feel and how things have been with you during the <b>past 4 weeks</b>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <b>past 4 weeks</b>...</i></p> <p><u>Did you have a lot of energy?</u></p> <p>1 = All of the time 2 = Most of the time 3 = A good bit of the time 4 = Some of the time 5 = A little of the time 6 = None of the time</p>
95	<i>Cohort 18 Follow Up Survey:</i> Downhearted and Blue Question (Q6c)	114	<p><i>These questions are about how you feel and how things have been with you during the <b>past 4 weeks</b>. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the <b>past 4 weeks</b>...</i></p> <p><u>Have you felt downhearted and blue?</u></p> <p>1 = All of the time 2 = Most of the time 3 = A good bit of the time 4 = Some of the time 5 = A little of the time 6 = None of the time</p>
96	<i>Cohort 18 Follow Up Survey:</i> Amount of Time Health Interfering with Social Activities Question (Q7)	115	<p><i>During the <b>past 4 weeks</b>, how much of the time has your <b>physical health or emotional problems</b> interfered with your social activities (like visiting with friends, relatives, etc.)?</i></p> <p>1 = All of the time 2 = Most of the time 3 = Some of the time 4 = A little of the time 5 = None of the time</p>
97	<i>Cohort 18 Follow Up Survey:</i> Physical Health Compared to One Year Ago Question (Q8)	116	<p><i><b>Compared to one year ago</b>, how would you rate your <b>physical health</b> in general <b>now</b>?</i></p> <p>1 = Much better 2 = Slightly better 3 = About the same 4 = Slightly worse 5 = Much worse</p>
98	<i>Cohort 18 Follow Up Survey:</i> Emotional Problems Compared to One Year Ago Question (Q9)	117	<p><i><b>Compared to one year ago</b>, how would you rate your <b>emotional problems</b> (such as feeling anxious, depressed or irritable) in general <b>now</b>?</i></p> <p>1 = Much better 2 = Slightly better 3 = About the same 4 = Slightly worse 5 = Much worse</p>

Field #	Field Description	Field Position	Valid Values and Notes
99	Cohort 18 Follow Up Survey: Bathing Question (Q10a)	118	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Bathing</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
100	Cohort 18 Follow Up Survey: Dressing Question (Q10b)	119	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Dressing</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
101	Cohort 18 Follow Up Survey: Eating Question (Q10c)	120	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Eating</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
102	Cohort 18 Follow Up Survey: Getting In or Out of Chairs Question (Q10d)	121	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Getting in or out of chairs</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
103	Cohort 18 Follow Up Survey: Walking Question (Q10e)	122	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Walking</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>
104	Cohort 18 Follow Up Survey: Using the Toilet Question (Q10f)	123	<p><i>Because of a health or physical problem, do you have any difficulty doing the following activities without special equipment or help from another person?</i></p> <p><u>Using the toilet</u>  1 = No, I do not have difficulty  2 = Yes, I have difficulty  3 = I am unable to do this activity</p>

Field #	Field Description	Field Position	Valid Values and Notes
105	<i>Cohort 18 Follow Up Survey:</i> Difficulty Preparing Meals Question (Q11a)	124	<i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i> <u>Preparing meals</u> 1 = No, I do not have difficulty 2 = Yes, I have difficulty 3 = I don't do this activity
106	<i>Cohort 18 Follow Up Survey:</i> Difficulty Managing Money Question (Q11b)	125	<i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i> <u>Managing Money</u> 1 = No, I do not have difficulty 2 = Yes, I have difficulty 3 = I don't do this activity
107	<i>Cohort 18 Follow Up Survey:</i> Difficulty Taking Medication as Prescribed Question (Q11c)	126	<i>Because of a health or physical problem, do you have any difficulty doing the following activities?</i> <u>Taking Medication as prescribed</u> 1 = No, I do not have difficulty 2 = Yes, I have difficulty 3 = I don't do this activity
108	<i>Cohort 18 Follow Up Survey:</i> Number of Days Physical Health Not Good Question (Q12)	127-128	<i>Now, thinking about your physical health, which includes physical illness and injury, for how many days during the <b>past 30 days</b> was your physical health <b>not</b> good? (Please enter a number between "0" and "30" days. If no days, please enter "0" days.)</i>
109	<i>Cohort 18 Follow Up Survey:</i> Number of Days Mental Health Not Good Question (Q13)	129-130	<i>Now, thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the <b>past 30 days</b> was your mental health <b>not</b> good? (Please enter a number between "0" and "30" days. If no days, please enter "0" days.)</i>
110	<i>Cohort 18 Follow Up Survey:</i> Number of Days Health Interfered with Daily Activities Question (Q14)	131-132	<i>During the <b>past 30 days</b>, for about how many days did <b>poor</b> physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? (Please enter a number between "0" and "30" days. If no days, please enter "0" days.)</i>
111	<i>Cohort 18 Follow Up Survey:</i> Blind or Serious Difficulty Seeing Question (Q15)	133	<i>Are you blind or do you have serious difficulty seeing, even when wearing glasses?</i> 1 = Yes 2 = No
112	<i>Cohort 18 Follow Up Survey:</i> Deaf or Serious Difficulty Hearing Question (Q16)	134	<i>Are you deaf or do you have serious difficulty hearing, even with a hearing aid?</i> 1 = Yes 2 = No
113	<i>Cohort 18 Follow Up Survey:</i> Difficulty Concentrating, Remembering, or Making Decisions Question (Q17)	135	<i><b>Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?</b></i> 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
114	Cohort 18 Follow Up Survey: Difficulty Doing Errands Question (Q18)	136	<b><i>Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?</i></b> 1 = Yes 2 = No
115	Cohort 18 Follow Up Survey: Memory Problems Interfered with Activities in Past Month Question (Q19)	137	<b><i>In the past month, how often did memory problems interfere with your daily activities?</i></b> 1 = Every day (7 days a week) 2 = Most days (5-6 days a week) 3 = Some days (2-4 days a week) 4 = Rarely (once a week or less) 5 = Never
116	Cohort 18 Follow Up Survey: Hypertension Question (Q20)	138	<b><i>Has a doctor ever told you that you had: <u>Hypertension or high blood pressure</u></i></b> 1 = Yes 2 = No
117	Cohort 18 Follow Up Survey: Angina or Coronary Artery Disease Question (Q21)	139	<b><i>Has a doctor ever told you that you had: <u>Angina pectoris or coronary artery disease</u></i></b> 1 = Yes 2 = No
118	Cohort 18 Follow Up Survey: Congestive Heart Failure Question (Q22)	140	<b><i>Has a doctor ever told you that you had: <u>Congestive heart failure</u></i></b> 1 = Yes 2 = No
119	Cohort 18 Follow Up Survey: Myocardial Infarction Question (Q23)	141	<b><i>Has a doctor ever told you that you had: <u>A myocardial infarction or heart attack</u></i></b> 1 = Yes 2 = No
120	Cohort 18 Follow Up Survey: Other Heart Conditions Question (Q24)	142	<b><i>Has a doctor ever told you that you had: <u>Other heart conditions, such as problems with heart valves or the rhythm of your heartbeat</u></i></b> 1 = Yes 2 = No
121	Cohort 18 Follow Up Survey: Stroke Question (Q25)	143	<b><i>Has a doctor ever told you that you had: <u>A stroke</u></i></b> 1 = Yes 2 = No
122	Cohort 18 Follow Up Survey: COPD Question (Q26)	144	<b><i>Has a doctor ever told you that you had: <u>Emphysema, or asthma, or COPD (chronic obstructive pulmonary disease)</u></i></b> 1 = Yes 2 = No
123	Cohort 18 Follow Up Survey: Inflammatory Bowel Disease Question (Q27)	145	<b><i>Has a doctor ever told you that you had: <u>Crohn's disease, ulcerative colitis, or inflammatory bowel disease</u></i></b> 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
124	<i>Cohort 18 Follow Up Survey:</i> Arthritis of Hip or Knee Question (Q28)	146	<b><i>Has a doctor ever told you that you had:</i></b> <u>Arthritis of the hip or knee</u> 1 = Yes 2 = No
125	<i>Cohort 18 Follow Up Survey:</i> Arthritis of Hand or Wrist Question (Q29)	147	<b><i>Has a doctor ever told you that you had:</i></b> <u>Arthritis of the hand or wrist</u> 1 = Yes 2 = No
126	<i>Cohort 18 Follow Up Survey:</i> Osteoporosis Question (Q30)	148	<b><i>Has a doctor ever told you that you had:</i></b> <u>Osteoporosis, sometimes called thin or brittle bones</u> 1 = Yes 2 = No
127	<i>Cohort 18 Follow Up Survey:</i> Sciatica Question (Q31)	149	<b><i>Has a doctor ever told you that you had:</i></b> <u>Sciatica (pain or numbness that travels down your leg to below your knee)</u> 1 = Yes 2 = No
128	<i>Cohort 18 Follow Up Survey:</i> Diabetes Question (Q32)	150	<b><i>Has a doctor ever told you that you had:</i></b> <u>Diabetes, high blood sugar, or sugar in the urine</u> 1 = Yes 2 = No
129	<i>Cohort 18 Follow Up Survey:</i> Depression Question (Q33)	151	<b><i>Has a doctor ever told you that you had:</i></b> <u>Depression</u> 1 = Yes 2 = No
130	<i>Cohort 18 Follow Up Survey:</i> Any Cancer Question (Q34)	152	<b><i>Has a doctor ever told you that you had:</i></b> <u>Any cancer (other than skin cancer)</u> 1 = Yes (Go to Q35) 2 = No (Go to Q36)
131	<i>Cohort 18 Follow Up Survey:</i> Colorectal Cancer Treatment Question (Q35a)	153	<b><i>If you answered “yes” to question 34 above (that you have had cancer),</i></b> <i>Are you currently under treatment for:</i> <u>Colon or rectal cancer</u> 1 = Yes 2 = No
132	<i>Cohort 18 Follow Up Survey:</i> Lung Cancer Treatment Question (Q35b)	154	<i>Are you currently under treatment for:</i> <u>Lung cancer</u> 1 = Yes 2 = No
133	<i>Cohort 18 Follow Up Survey:</i> Breast Cancer Treatment Question (Q35c)	155	<i>Are you currently under treatment for:</i> <u>Breast cancer</u> 1 = Yes 2 = No
134	<i>Cohort 18 Follow Up Survey:</i> Prostate Cancer Treatment Question (Q35d)	156	<i>Are you currently under treatment for:</i> <u>Prostate cancer</u> 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
135	<i>Cohort 18 Follow Up Survey: Other Cancer Treatment Question (Q35e)</i>	157	<i>Are you currently under treatment for: <u>Other cancer (other than skin cancer)</u></i> 1 = Yes 2 = No
136	<i>Cohort 18 Follow Up Survey: Pain Interfered with Activities Question (Q36)</i>	158	<i>In the past 7 days, how much did pain interfere with your day to day activities?</i> 1 = Not at all 2 = A little bit 3 = Somewhat 4 = Quite a bit 5 = Very much
137	<i>Cohort 18 Follow Up Survey: Pain Interfered with Socializing Question (Q37)</i>	159	<i>In the past 7 days, how often did pain keep you from socializing with others?</i> 1 = Never 2 = Rarely 3 = Sometimes 4 = Often 5 = Always
138	<i>Cohort 18 Follow Up Survey: Average Pain Rating Question (Q38)</i>	160-161	<i>In the past 7 days, how would you rate your pain on average?</i> 1 = 1 (No pain) 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8 9 = 9 10 = 10 (Worst imaginable pain)
139	<i>Cohort 18 Follow Up Survey: Little Interest or Pleasure in Doing Things Question (Q39a)</i>	162	<i>Over the <b>past 2 weeks</b>, how often have you been bothered by any of the following problems?</i> <u>Little interest or pleasure in doing things</u> 1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day
140	<i>Cohort 18 Follow Up Survey: Feeling Down, Depressed, or Hopeless Question (Q39b)</i>	163	<i>Over the <b>past 2 weeks</b>, how often have you been bothered by any of the following problems?</i> <u>Feeling down, depressed, or hopeless</u> 1 = Not at all 2 = Several days 3 = More than half the days 4 = Nearly every day
141	<i>Cohort 18 Follow Up Survey: Comparative Health Question (Q40)</i>	164	<i>In general, compared to other people your age, would you say that your health is:</i> 1 = Excellent 2 = Very good 3 = Good 4 = Fair 5 = Poor

Field #	Field Description	Field Position	Valid Values and Notes
142	Cohort 18 Follow Up Survey: Current Smoker Question (Q41)	165	Do you now smoke every day, some days, or not at all? 1 = Every day 2 = Some days 3 = Not at all 4 = Don't know
143	Cohort 18 Follow Up Survey: Urine Leakage Question (Q42)	166	Many people experience leakage of urine, also called urinary incontinence. In the <b>past six months</b> , have you experienced leaking of urine? 1 = Yes (Go to Q43) 2 = No (Go to Q46)
144	Cohort 18 Follow Up Survey: Leaking of Urine Interfering With Daily Activities Question (Q43)	167	During the <b>past six months</b> , how much did leaking of urine make you change your daily activities or interfere with your sleep? 1 = A lot 2 = Somewhat 3 = Not at all
145	Cohort 18 Follow Up Survey Talked with Doctor about Urine Leakage Question (Q44)	168	Have you <b>ever</b> talked with a doctor, nurse, or other health care provider about leaking of urine? 1 = Yes 2 = No
146	Cohort 18 Follow Up Survey: Talked About Treatment for Urine Leakage Question (Q45)	169	There are many ways to control or manage the leaking of urine, including bladder training, exercises, medication and surgery. Have you <b>ever</b> talked with a doctor, nurse, or other health care provider about any of these approaches? 1 = Yes 2 = No
147	Cohort 18 Follow Up Survey: Talked with Doctor about Physical Activities Question (Q46)	170	In the <b>past 12 months</b> , did you talk with a doctor or other health provider about your level of exercise or physical activity? For example, a doctor or other health provider may ask if you exercise regularly or take part in physical exercise. 1 = Yes (Go to Q47) 2 = No (Go to Q47) 3 = I had no visits in the last 12 months (Go to Q48)
148	Cohort 18 Follow Up Survey: Advised to Increase or Maintain Activities Question (Q47)	171	In the <b>past 12 months</b> , did a doctor or other health provider advise you to start, increase or maintain your level of exercise or physical activity? For example, in order to improve your health, your doctor or other health provider may advise you to start taking the stairs, increase walking from 10 to 20 minutes every day or to maintain your current exercise program. 1 = Yes 2 = No

Field #	Field Description	Field Position	Valid Values and Notes
149	Cohort 18 Follow Up Survey: Talked to Doctor about Falling or Balance Problem Question (Q48)	172	A fall is when your body goes to the ground without being pushed. In the <b>past 12 months</b> , did you talk with your doctor or other health provider about falling or problems with balance or walking? 1 = Yes 2 = No 3 = I had no visits in the past 12 months
150	Cohort 18 Follow Up Survey: Fell in Past 12 Months Question (Q49)	173	Did you fall in the <b>past 12 months</b> ? 1 = Yes 2 = No
151	Cohort 18 Follow Up Survey: Problem with Walking or Balance in Past 12 Months Question (Q50)	174	In the <b>past 12 months</b> , have you had a problem with balance or walking? 1 = Yes 2 = No
152	Cohort 18 Follow Up Survey: Talked to Doctor about How to Prevent Falls Question (Q51)	175	Has your doctor or other health provider done anything to help prevent falls or treat problems with balance or walking? Some things they might do include: <ul style="list-style-type: none"> <li>Suggest that you use a cane or walker</li> <li>Check your blood pressure lying or standing</li> <li>Suggest that you do an exercise or physical therapy program</li> <li>Suggest a vision or hearing testing</li> </ul> 1 = Yes 2 = No 3 = I had no visits in the past 12 months
153	Cohort 18 Follow Up Survey: Osteoporosis Testing Question (Q52)	176	Have you ever had a <b>bone density test</b> to check for <b>osteoporosis</b> , sometimes thought of as “brittle bones”? This test would have been done to your back or hip. 1 = Yes 2 = No
154	Cohort 18 Follow Up Survey: Hours of Sleep Question (Q53)	177	During the <b>past month</b> , on average, how many hours of actual sleep did you get at night? (This may be different from the number of hours you spent in bed.) 1 = Less than 5 hours 2 = 5-6 hours 3 = 7-8 hours 4 = 9 or more hours
155	Cohort 18 Follow Up Survey: Sleep Quality Question (Q54)	178	During the <b>past month</b> , how would you rate your overall sleep quality? 1 = Very Good 2 = Fairly Good 3 = Fairly Bad 4 = Very Bad

Field #	Field Description	Field Position	Valid Values and Notes
156	<i>Cohort 18 Follow Up Survey:</i> Language Spoken at Home Question (Q60)	179	<i>What language do you <b>mainly</b> speak at home?</i> 1 = English 2 = Spanish 3 = Chinese 4 = Some other language (please specify) Note: The language under option 4 is not specified in the PUF
157	<i>Cohort 18 Follow Up Survey:</i> Who Completed this Survey Form Question (Q66)	180	<i>Who completed this survey form?</i> 1 = Person to whom survey was addressed <b>(Go to Q68)</b> 2 = Family member or relative of person to whom the survey was addressed 3 = Friend of person to whom the survey was addressed 4 = Professional caregiver of person to whom the survey was addressed

## Cohort 18 Follow Up Survey Administration

Field #	Field Description	Field Position	Valid Values and Notes
158	<i>Cohort 18 Follow Up:</i> Follow Up Survey Disposition	181-183	Survey disposition code <b>NOTE:</b> This field contains a character string. M10/T10 = completed survey (79.5-100% complete and all 6 ADLs answered in Q10a-f) M11/T11 = non-response: partial complete (50-79.5% complete, or 79.5-100% complete and <6 ADLs answered) M31/T31 = non-response: break-off (0- 49% complete) Note: For survey disposition codes, M=Mail and T=Telephone
159	<i>Cohort 18 Follow Up:</i> Follow Up Survey Round	184-185	Survey round code for completed, partially completed, and non-completed surveys by mail or telephone <b>NOTE:</b> This field contains a character string. M1 = 1 <sup>st</sup> mailing M2 = 2 <sup>nd</sup> mailing T1 = 1 <sup>st</sup> telephone T2 = 2 <sup>nd</sup> telephone T3 = 3 <sup>rd</sup> telephone T4 = 4 <sup>th</sup> telephone T5 = 5 <sup>th</sup> telephone T6 = 6 <sup>th</sup> telephone T7 = 7 <sup>th</sup> telephone T8 = 8 <sup>th</sup> telephone T9 = 9 <sup>th</sup> telephone MT = Partially completed by mail and converted to complete by telephone NC = Not completed
160	<i>Cohort 18 Follow Up:</i> Percent of Follow Up Survey Completed	186-190	Percent of survey completed. Range: 0 to 100% (value is rounded to the tenths decimal place)
161	<i>Cohort 18 Follow Up:</i> Follow Up Survey Language	191	Survey Language. 1 = English 2 = Spanish 3 = Not Applicable 4 = Chinese
162	<i>Cohort 18 Analytic:</i> Cohort Identifier	192-194	Cohort in which the HOS surveys contained in this data file were submitted <b>NOTE:</b> This field contains a character string. Value for each record = "A18"

Field #	Field Description	Field Position	Valid Values and Notes
163	<i>Cohort 18 Analytic:</i> Analytic CMS Region	195-196	Derived from the August 2017 HPMS Plan Contract List for the <i>Cohort 18 Analytic</i> PUF. 1 = Region 1 - Boston (CT, ME, MA, NH, RI, and VT) 2 = Region 2 - New York (NY, NJ, PR, and the VI) 3 = Region 3 - Philadelphia (DE, DC, MD, PA, VA, and WV) 4 = Region 4 - Atlanta (AL, FL, GA, KY, MS, NC, SC, and TN) 5 = Region 5 - Chicago (IL, IN, MI, MN, OH, and WI) 6 = Region 6 - Dallas (AR, LA, NM, OK, and TX) 7 = Region 7 - Kansas City (IA, KS, MO, and NE) 8 = Region 8 - Denver (CO, MT, ND, SD, UT, and WY) 9 = Region 9 - San Francisco (AZ, CA, Guam, HI, and NV) 10 = Region 10-Seattle (AK, ID, OR, and WA)
164	<i>Cohort 18 Follow Up:</i> Follow Up Sample Indicator	197	Indicates if the record was included in the <i>Cohort 18 Follow Up</i> sample: 1 = Eligible for Follow Up 2 = Not Eligible for Follow Up
165	<i>Cohort 18 Analytic:</i> Analytic Sample Indicator	198	Indicates status of the record in the analytic file: 1 = Respondent 2 = Non-respondent 3 = Ineligible 4 = Disenrolled 5 = Dead