

2023 CONSUMPTION AND ACTIVITIES MAIL SURVEY
(CAMS 2023)
Final, Version 1.0
December 2025
Data Description and Usage

Conditions of Use

By registering for access to HRS Public Release data, the User agrees to all of the following:

- Make no attempts to identify study participants.
- Not to transfer HRS Public Release data to any third party other than staff or students for whom you are directly responsible except as indicated below.
- Not to allow others to use your username and password to access this site.
- To certify the destruction of any downloaded Public Release data file as well as any data files derived from the downloaded file when requested to do so by the Health and Retirement Study.
- To include the following citation in any research reports, papers, or publications based on Public Release data:

In text:

"The HRS (Health and Retirement Study) is sponsored by the National Institute on Aging (grant number NIA U01AG009740) and is conducted by the University of Michigan."

In references:

"Health and Retirement Study, ([insert Product Name]) public use dataset. Produced and distributed by the University of Michigan with funding from the National Institute on Aging (grant number NIA U01AG009740). Ann Arbor, MI, (year)."

- To include the following citation in any research reports, papers, or publications based on any Public Release data file tagged as "Early" or "Preliminary":

"This analysis uses Early Release data from the Health and Retirement Study, ([insert Product Name]), sponsored by the National Institute on Aging (grant number NIA U01AG009740) and conducted by the University of Michigan."

These data have not been cleaned and may contain errors that will be corrected in the Final Public Release version of the dataset."

- Please note that although it is necessary to include the above citations to the HRS in any publications, it is not necessary to associate your publications with the HRS grant in [PubMed](#).
- Provide information regarding any research product (dissertation, thesis, journal article, book, book chapter, report, etc.) based on data obtained from the Health and Retirement Study by sending an electronic copy to hrrpublications@umich.edu.
- Report immediately to the Health and Retirement Study at hrrquestions@umich.edu any disclosure of study participant identity as well as any discovery of flaws or errors in the data or documentation files.

Notify the Health and Retirement Study through use of the update function provided at this site or by electronic mail directed to hrrquestions@umich.edu of changes in your electronic mail address, postal address, telephone number, organizational affiliation or organizational status.

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Data Description and Usage

1. Overview

In the fall of 2023, questionnaires assessing individual activities and household patterns of consumption were mailed to a sub sample of the Health and Retirement Study (HRS). The 2023 Consumption and Activities Mail Survey (CAMS), was a continuation of the longitudinal CAMS that started in 2001. For further information about CAMS see the HRS website, documentation, data descriptions and “off-year” studies:

<http://hrsonline.isr.umich.edu>.

The HRS is funded under a cooperative agreement between the National Institute on Aging (NIA) and the Survey Research Center at the University of Michigan. The HRS is designed to study labor force, health, and family transitions of the U.S. population aged 51 and older, and the impact of those transitions on economic resources, claims on structured programs such as Social Security, Medicare, and Medicaid, and informal assistance and transfers to and from family members.

The National Institute on Aging (NIA) provided funding (U01 AG009740) for the 2023 CAMS. The CAMS survey was conducted by the Survey Research Center (SRC), at the Institute for Social Research (ISR), at the University of Michigan.

By receiving the, you agree to use it for dataset research and statistical purposes only and to make no effort to identify respondents. In addition, you agree to send us a copy of publications you produce based on the data. (See [Registration and Downloading the Data](#)) at the end of this document for additional details).

1A. The Sample Interviewed in the 2023 CAMS

In the fall of 2023, CAMS questionnaires were mailed to a sub-sample of HRS respondents (n=6,247). The sample consisted of everyone invited to participate in the 2021 CAMS who was alive in 2021 and who had not been

permanently removed from the HRS or CAMS samples. New spouses of the 2023 CAMS sample members were included (even if they did not participate in the 2021 CAMS).

Of the 6,247 questionnaires mailed out to respondents, 4,585 were “full” and 1,842 were “partial” versions. The 2023 CAMS data file contains 3,656 records.

1B. 2023 CAMS Sections

As indicated earlier, there were two versions of CAMS questionnaires in 2023. The “full” version contained three sections:

Section A Activities

Section B Consumption

Section C Demographics

Section A, Activities, was designed to measure and identify the nature of individual activities, their quantity and their quality. The activities component of the CAMS allows for describing activity patterns and permits the investigation of different types of activities and how specific types of activities are affected by health, family and economic transitions in later life and, in turn, how activities affect health and well-being.

Section B, Consumption, was designed to obtain information about the level and pattern of expenditures of sampled households. The consumption questions of the CAMS, coupled with the panel data of the HRS, allows for assessing a variety of important practical and theoretical issues, including how consumption patterns are affected by health, wealth, retirement and public and private supports.

The “partial” version of the 2023 questionnaire contained Section A, only.

1C. Changes to the 2023 CAMS Questionnaire

Questions that were in 2021 CAMS but have been deleted from 2023 CAMS.

2021 Variable Names	2021 Variable Description
B47	POSITIVE EVENT SURPRISE
B48	NEGATIVE EVENT SURPRISE
*The jump after B48	(deleted)
B49	SPEND/SAVE HABITS
B49a	SPEND LESS HOW STRONGLY
B50a	WHICH CATEGORY COULD HAVE SPENT LESS
B49b	SPEND MORE HOW STRONGLY
B50b	WHICH CATEGORY WISH COULD REDO SPEND ON
B54	WHO ANSWERED QUESTIONNAIRE
B55	SECTION B TIME

Questions that were added in 2023 CAMS.

2023 Variable Names	2023 Variable Description	Nature of Change Relative to 2021 CAMS
B47	MORE INCOME THAN NORMAL	Newly Added, Reused 2021 Varname
B48	HOW SPENT EXTRA INCOME	Newly Added, Reused 2021 Varname
B49	LESS INCOME THAN NORMAL	Newly Added, Reused 2021 Varname
B50	WHAT SPEND LESS ON	Newly Added
B54	PURCHASE GOODS/SERVICES ONLINE	Newly Added, Reused 2021 Varname
B54a	HOW OFTEN PURCHASE ONLINE	Follow-up to 2023 B54
B54b	ALREADY INCLUDED ONLINE PURCHASE IN SPENDING	Follow-up to 2023 B55
B55	ENROLLED IN MEDICARE	Newly Added, Reused 2021 Varname
B55a	HH MEDICARE COST LAST MONTH	Newly Added, Reused 2021 Varname

B55b	ALREADY INCLUDED MEDICARE COST IN SPENDING	Newly Added, Reused V2021 Varname
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Questions that were moved and renamed in 2023 CAMS.

2023 Variable Names	Variable Description	2021 Variable Name
B57	WHO ANSWERED QUESTIONNAIRE	B54
B58	SECTION B TIME	B55

1D. File Structure

The 2023 CAMS Final Release (Version 1.0) data are at the respondent level. Respondent-level files contain questions that were asked of all respondents about themselves or their household (or were answered by a proxy for the respondent if the respondent was not able to fill out the questionnaire). The data file contains one record for each respondent or proxy who filled out and returned a 2023 Consumption and Mail Activities questionnaire.

Each section of 2023 CAMS contains a question asking who answered the survey questions (A44, B57, and C4). Therefore, analysts can determine if the respondent to whom the questionnaire was sent completed the questionnaire, or if the spouse or partner of the respondent, or some other proxy completed the questionnaire.

The data file is called CAMS23_R, loosely translated as: Consumption and Activities Mail Survey 2023, with the “_R” designating the file is at the respondent level.

The CAMS23_R data file contains 3,656 cases (including those who answered the “full” questionnaire and those who answered the “partial” questionnaire) and 226 variables.

The primary Identification variables (IDs) are:

HHID HOUSEHOLD IDENTIFIER
PN PERSON NUMBER

Secondary Identification variables are:

SSUBHH 2022 SUB HOUSEHOLD IDENTIFICATION NUMBER
SPN_SP 2022 SPOUSE/PARTNER PERSON NUMBER

Records in the data files are sorted in order by HHID and PN. The variable PN refers to the respondent to whom the questionnaire was mailed. The variable SPN_SP is the person number of the respondent's spouse/partner from the HRS 2022 core data. Identification variables in the HRS 2023 CAMS Final Release (Version 1.0) are stored in character format. For further information about HRS identification variables and merging data, see the [Data Description for the HRS 2002 Core](#).

1E. Data Quality

Recoded or Constructed variables

Most of the variables in the 2023 CAMS data mirror the questions in the CAMS questionnaire. However, questions that allowed for multiple mentions have been recoded. In situations where a respondent was allowed to check more than one answer to the root question, (A36A, B42A, B42B, B48, B50 and C1), each answer category checked spawned a new variable in the output data set. For example, a respondent who chose 3 answers in question A36A has those responses represented individually in three of the output data set variables -- A36AM1, A36AM2, and A36AM3.

Several new variables appeared in the 2023 CAMS data collection. Variables B47, B48, B49, and B50 were designed to determine how people would accommodate increases or decreases to their incomes. B54 and B54a added online spending data to the household spending battery and includes a flag variable (B54b) to indicate whether R had reported that spending elsewhere, as do the new B55 and B55a questions about Medicare coverage (B55b). It is important to note that in cases where the Medicare flag (B55=1) indicates

the respondent has already included Medicare costs in B11, the dollar amount reported in B55B has been left blank.

Consistency

The data will have some inconsistency. Respondents did not always follow the correct skip patterns and in most instances, their "incorrect" answers were preserved. Likewise, there were times when respondents interpreted questions involving percentages in different ways.

Extreme values and missing data

While cleaning the data, when extreme or unlikely values were encountered, the hard copies of the questionnaires were checked to determine if errors were introduced during the data entry process. If the respondent reported the extreme value, the extreme value appears unchanged in the data. For example, at question A45, if a respondent reported that it took 0 minutes to complete Section A, a zero will appear in the data; conversely, if a respondent reported that it took three hours (i.e., 180 minutes) to complete the section, then 180 minutes will appear in the data. Likewise, at questions like A5 ("sleeping and napping last week"), respondents might report 0 hours, while others might report doing so for 163 hours. The exception to the rules above is that we top-coded the following variables:

A1-A20, A34, A35a, A36b, A37a (hours per week):

if xxx > 168 then xxx = 168

A21-A33, A36c, A37b (hours per month):

if xxx > 730 then xxx = 730

A35c, A37c (hours in the last year):

if xxx > 8760 then A35c = 8760

if xxx > 8760 then A37c = 8760

A38, A39 (days in the last 12 months):

if A38 > 365 then A38 = 365

if A39 > 365 then A39 = 365

When respondents did not provide an answer to a question, their answers were treated as missing. There are no codes for “don’t know” or “refused”. Instead, codes of “9” (or “99”, etc. depending on the variable width) have been used to designate “answer not given” when respondents did not answer a lead in question or when a lead-in question was answered, but they did not provide answers to the follow-up question(s). An example would be (B1) “PURCHASE/LEASE AUTO”, where respondents do not provide the “make” of the car (B1a). In the prior example, responses were coded as “99” or “answer not given.” Respondents, for whom the question was inapplicable, are coded as blank or dot.

2. Distribution Files

The following extensions are used for the different types of distribution files:

- .da for data files,
- .sas for SAS program statements,
- .sas7bdat for “ready-to-use” SAS files,
- .sps for SPSS program statements,
- .sav for “ready-to-use” SPSS files,
- .do for Stata DO statements,
- .dct for Stata dictionary statements,
- .dta for “ready-to-use” Stata files, and
- .txt for codebook files.

For example,

CAMS23_R.da contains ASCII data from Sections A, B, and C.

CAMS23_R.sas contains corresponding SAS program statements,

CAMS23_R.sas7bdat contains “ready-to-use” data in SAS format,

CAMS23_R.sps contains corresponding SPSS program statements,

CAMS23_R.sav contains "ready-to-use" data in SPSS format,
CAMS23_R.do contains corresponding Stata DO statements,
CAMS23_R.dct contains corresponding Stata dictionary statements,
CAMS23_R.dta contains "ready-to-use" data in Stata format, and
CAMS23_R.txt contains the ASCII codebook.

The 2023 CAMS Final Release (Version 1.0) data are provided in ASCII format, with fixed-length records. Use the associated SAS, SPSS or Stata program statements to read the data into the analysis package of your choice. In addition, you are encouraged to download the codebook file (CAMS23_R.txt) and the data description (this document).

3. Program Statements

The data are provided as SAS (.sas7bdat), SPSS (.sav) and Stata (.dta) "ready-to-use" files and in ASCII format. Each ASCII data file comes with associated SPSS, SAS, or STATA program statements to read the data. Files containing SPSS statements are named with a .sps extension, those with SAS statements with a .sas extension, and those with STATA statements with .do and .dct extensions.

3A. Using the Files with SAS

To create a SAS system file for a particular dataset, two file types must be present for that dataset -- .SAS program statement files and .DA data files.

To create a SAS system file, load the *.SAS file into the SAS Program Editor.

If the *.SAS file is located in "c:\cams2023\sas" and the data file is located in "c:\cams2023\data", you can run the file as is. A SAS system file (*.SAS7BDAT) will be saved to directory "c:\cams2023\sas".

If the files are not located in the specified directories, you will need to edit the *.SAS file to reflect the proper path names prior to running the file.

3B. Using the Files with SPSS

To create an SPSS system file for a particular dataset, two file types must be present for that dataset -- .SPS program statement files and .DA data files.

To create an SPSS system file, open the *.SPS file in SPSS as an SPSS Syntax File.

If the *.SPS file is located in "c:\cams2023\spss" and the data file is located in "c:\cams2023\DATA", you can run the file as is. An SPSS system file (*.SAV) will be saved to directory "c:\cams2023\spss".

If the files are not located in the specified directories, you will need to edit the *.SPS file to reflect the proper path names prior to running the file.

3C. Using the Files with Stata

To use Stata with a particular dataset, the following three file types must be present for that dataset -- .DCT files, .DO files, and .DA data files.

Files with the suffix .DA contain the raw data for Stata to read. Files with the suffix .DCT are Stata dictionaries used by Stata to describe the data. Files with the suffix .DO are short Stata programs ("do files") which you may use to read in the data. Load the .DO file into Stata and then submit it.

If the *.DO and *.DCT files are located in "c:\cams2023\stata" and the data file is located in "c:\cams2023\data", you can run the .DO file as is.

If the files are not located in these directories, you must edit the *.DO and *.DCT files to reflect the proper path names before you run the files.

Note that the variable names provided in the .DCT files are uppercase. If you prefer lower case variable names, you may wish to convert the .DCT files to lower case prior to use. You may do this by reading the .DCT file into a text or word processing program and changing the case. For instance in Microsoft Word, Edit, Select All, Format, Change Case, lowercase.

4. Linking Respondents across Time

Respondent records in the 2023 CAMS Final Release (Version 1.0) can be linked to respondent records from HRS 2022 and prior waves by HHID and PN.

For SAS examples of how to link CAMS data with the HRS Core, or cross-sectional data, refer Section 4 of the [2009 CAMS Data Description](#).

5. Registration and Downloading the Data

5A. Registration

HRS data are available for free to researchers and analysts at the HRS Web site. In order to obtain public release data, you must first register at our Web site. Once you have completed the registration process, your username and password will be sent to you via e-mail. Your username and password are required to download any data files.

By registering all users, we are able to document for our sponsors the size and diversity of our user community allowing us to continue to collect these important data. Registered users receive user support, information related to errors in the data, future releases, workshops, and publication lists. The information you provide will not be used for any commercial use, and will not be redistributed to third parties.

5B. Conditions of Use

By registering, you agree to the [Conditions of Use](#) governing access to Health and Retirement public release data.

5C. Publications Based on Data

As part of the data registration process, you agree to include specified citations and to inform HRS of any papers, publications, or presentations based on HRS data. Please send a copy of any publications you produce based on HRS data, with a bibliographical reference, if appropriate, to the following address:

Health and Retirement Study
Attn: Papers and Publications
The Institute for Social Research, Room 3410
P.O. Box 1248
Ann Arbor, MI (USA) 48106-1248

Alternately, you may contact us by e-mail at hqsquestions@umich.edu with "Attn: Papers and Publications" in the subject line.

6. If You Need to Know More

This document is intended to serve as a brief overview and to provide guidelines for using the CAMS 2023 Final Release (Version 1.0) data. If you have questions or concerns that are not adequately covered here or on our Web site, please contact us. We will do our best to provide answers.

6A. HRS Internet Site

Health and Retirement Study public release data and additional information about the study are available on the Internet. To access the data and other relevant information, point your Web browser to the HRS Web site.

<http://hrsonline.isr.umich.edu/>

6B. Contact Information

If you need to contact us, you may do so by one of the methods listed below.

Internet: Help Desk at our Web site

E-mail: hqsquestions@umich.edu

Postal service:

Health and Retirement Study
The Institute for Social Research
The University of Michigan
P.O. Box 1248

Ann Arbor, MI 48106-1248

FAX: (734) 647-1186