Harmonized MHAS
End of Life
Documentation

VERSION B (2003-2018), SEPTEMBER 2022

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Preface

The Mexican Health and Aging Study (MHAS) is a longitudinal household survey dataset for the study of health, economic position, and quality of life among the elderly. It was modeled after the Health and Retirement Study (HRS), a similar longitudinal survey dataset in the United States. Part of the reason for the close connection is to allow cross-country comparisons using these data.

In order to make the data more accessible to researchers and to facilitate such comparisons, we, the USC Gateway to Global Aging Data team, have created the Harmonized MHAS End of Life, a user-friendly version of a subset of the MHAS next of kin interviews. The Harmonized MHAS End of Life initiative is part of a larger set of projects. With funding and support from the National Institute on Aging, we have also created the Harmonized MHAS, Harmonized HRS and Harmonized HRS End of Life (USA), Harmonized ELSA and Harmonized ELSA End of Life (England), Harmonized SHARE and Harmonized SHARE End of Life (Europe + Israel), Harmonized CRELES (Costa Rica), Harmonized KLoSA and Harmonized KLoSA End of Life (South Korea), Harmonized JSTAR and Harmonized JSTAR End of Life (Japan), Harmonized TILDA (Ireland), Harmonized CHARLS and Harmonized CHARLS End of Life (China), Harmonized LASI (India), and Harmonized MARS (Malaysia). Further information about these Harmonized datafiles with questionnaires and other metadata is available on our searchable website, https://g2aging.org/.

The Harmonized MHAS End of Life is part of a larger initiative to provide Harmonized End of Life data for the HRS Family of Surveys. The Gateway creates and releases Harmonized End of Life datasets containing easily-merged and comparable research-ready variables. The variables are defined to be as comparable as possible to the core Harmonized dataset and across all Harmonized End of Life datasets. They use a similar intuitive naming convention as the core Harmonized datasets, with some modifications to avoid confusion with the core data. Harmonized End of Life datasets currently include the Harmonized MHAS End of Life, Harmonized HRS End of Life, Harmonized ELSA End of Life, Harmonized SHARE End of Life, Harmonized KLoSA End of Life, Harmonized JSTAR End of Life, and Harmonized CHARLS End of Life with more studies to be added in the future. This document describes these data.

Note, however, that MHAS license agreements do not allow us to disseminate the data directly. Instead, MHAS distributes the Harmonized MHAS End of Life dataset. We also make available a Stata script ("do file") that generates these derived variables from the original MHAS data files. Additional information about MHAS can be obtained from the MHAS website at http://www.mhasweb.org/.

We are grateful for the continuing support of and funding from NIA. In interpreting the MHAS data, we greatly benefited from the help and insights of MHAS staff members. We have greatly benefited from the discussions with and the suggestions from our colleagues at the University of Southern California.

Requested Acknowledgment

MHAS Version and Acknowledgment

Contents

What's New in Version B of the Harmonized MHAS End of Life?

Version B incorporates the latest released version of MHAS data, and incorporates responses from Wave 5. It contains 5,623 observations or rows. It is a Respondent-level file so each row represents a unique deceased respondent.

We have added the following variables to the data and documentation:

Health:
- We have added **RALHEARTE**, indicating whether the respondent ever had heart problems, for Wave 5.

Healthcare Utilization and Insurance:
- We have added **RAXOOPDRUG1Y** and **RAXOOPDRUGF1Y** for Waves 3 and forward to indicate the out-of-pocket expenses for medication using the MHAS imputed costs.

End of Life Planning:
- We have added **RAEOLDCSNM_M** for Waves 3 and forward to indicate who made most of the decisions that were required at the end of the respondent's life.

We have made the following adjustments, improvements, and corrections to the data and documentation:

Demographics:
- **RAXYEAR** and **RAXMONTH** have been adjusted to set any death years or months reported after the year and month of the end of life interview to an invalid value using special missing .i.
- **RAGCOD** has been adjusted to remove special missing values .c and .o, indicating the respondent died not from a health condition or other cause of death, respectively, and assign these responses values of 3, to indicate "other" cause of death.
- RADLOC_M has been renamed to **RADLOCS** for comparison with other Harmonized End of Life datasets.

Healthcare Utilization and Insurance:
- We have renamed RAXHOSP, RAXHSPNIT, RAXDOCTOR, RAXDOCTIM, RAXOOPHOS, and RAXOOPDOC to **RAXHOSP1Y, RAXHSPNIT1Y, RAXDOCTOR1Y, RAXDOCTIM1Y, RAXOOPHOS1Y,** and **RAXOOPDOC1Y**, respectively, to better reflect the time period that these variables reference.
- We corrected **RAXOOPMD1Y_M** to assign 0 values instead of special missing value .m for those who reported not having any out-of-pocket medical expenses.
- We incorporated MHAS imputed costs for **RAXOOPHOS1Y** and **RAXOOPDOC1Y** for Waves 3 and forward.

Financial and Housing Wealth:
- We have added special missing value .b indicating if both members of a couple died and the question was mistakenly not asked the relevant questions to **RAXAHOWN, RAXHOMEDIS_M**, and **RAXPRSOLD**, whereas special missing value .m was previously assigned.

Assistance and Caregiving:
- For all variables indicating who the respondent received care from, we have adjusted the coding for the identification of spouse helpers, which should result in more spouse helpers rather than non-relative helpers, and particularly impacts the values in Wave 3.

- For all variables in this section, special missing values .c and .n have been changed to special missing values .t and .j, respectively, for comparability with other Harmonized datasets.

End of Life Planning:
- We have corrected **RAWITWILL** to include 0, .d, and .r values from the previous question, whereas these responses previously took a special missing .m value.

1.   Introduction and Overview

This report documents the Harmonized MHAS End of Life data files, a streamlined collection of variables derived from the Mexican Health and Aging Study (MHAS) next of kin interviews. The MHAS is a panel survey of people aged 50 and over and their partners, living in private dwellings in both urban and rural areas in Mexico. The study was designed to prospectively evaluate the impact of disease on the health, function and mortality of adults. The overall goal of the study is to examine the aging process, and the disease and disability burden in a large representative panel of older Mexicans, using a wide socioeconomic perspective. The study protocols and survey instruments are highly comparable to the U.S. Health and Retirement Study (HRS). The data files and documentation are available free of charge at the study website www.MHASweb.org. For more details on the study background and design, see Wong, Michaels-Obregon, and Palloni (2017).

The initial MHAS sample was drawn from the 2000 National Survey of Employment (ENE), carried out by the INEGI (Instituto Nacional de Estadística y Geografía) in Mexico. The first wave of the MHAS was conducted in the summer of 2001. This initial sample included 15,186 respondents aged 50 and over and their spouses, regardless of age, as of the year 2001. The second wave of MHAS followed-up with the Wave 1 respondents and was conducted in the summer of 2003. The second wave of MHAS included follow-ups with 13,431 respondents from the initial sample, 273 new respondents including new spouses, and 546 next-of-kin interviews regarding deceased participants. The third wave was conducted in the fall of 2012, it followed-up the original MHAS sample and included a refreshment sample. This refreshment sample included persons 50 to 60 years old, selected from the 2012 National Occupation and Employment Survey (ENOE). The third wave included 9,634 follow-up respondents and 5,912 new respondents including the refreshment sample and new spouses, and 2,742 next-of-kin interviews. The fourth wave of the MHAS, in 2015, included the follow-up of 16,983 subjects interviewed in the previous waves, 306 new spouses, 697 new subjects selected in 2012 for the refresher sample but without an interview in Wave 3, and 1,209 next-of-kin interviews. The fifth wave of the MHAS, in 2018, included the follow-up of 12,305 subjects interviewed in the previous waves, 5,725 new respondents including the refreshment sample and new spouses, and 1,135 next-of-kin interviews. The MHAS is a collaborative effort among researchers from the University of Texas Medical Branch (UTMB), the Instituto Nacional de Estadística y Geografía (INEGI, Mexico), the University of Wisconsin, the Instituto Nacional de Geriatría (INGER, Mexico) the Instituto Nacional de Salud Pública (INSP, Mexico), and the University of California Los Angeles (UCLA).

The Harmonized End of Life data include any individual interviewed at least once in the core interview, and for whom a proxy completed a next of kin interview. This includes selected subjects, spouses regardless of their age, new spouses of selected subjects, and former spouses of the selected subject, who then subsequently passed away.

The MHAS data are contained in several files. The Harmonized MHAS End of Life data file incorporates data from the core interview data, the master follow-up file, household roster data, economic imputations, next-of-kin data, and the Harmonized MHAS. It does not include any data which is not public release.

Documentation of the MHAS methodology can be found in Mexican Health and Aging Study MHAS 2018, Methodological Document (2018).

1.1   Gateway to Global Aging Data

The Health and Retirement Study (HRS) has achieved remarkable scientific success, as demonstrated by an impressive number of users, research studies, and publications using it. Its success has generated substantial interest in collecting similar data as population aging has progressed in every region of the world.

The result has been a number of surveys designed to be comparable with the HRS: the Mexican Health and Aging Survey (MHAS), the English Longitudinal Study of Ageing (ELSA), the Survey of Health, Ageing and Retirement in Europe (SHARE), the Costa Rican Longevity and Healthy Aging Study (CRELES), the Korean Longitudinal Study of Aging (KLoSA), the Japanese Study on Aging and Retirement (JSTAR), the Irish Longitudinal Study on Ageing (TILDA), the China Health and Retirement Longitudinal Study (CHARLS), Health and Aging in Africa: A Longitudinal Study of an INDEPTH Community in South Africa (HAALSI), the Brazilian Longitudinal Study of Ageing (ELSI), Healthy Ageing in Scotland (HAGIS), the Northern Ireland Cohort Longitudinal Study of Ageing (NICOLA), Health, Aging, and Retirement in Thailand (HART), the Malaysia Ageing and Retirement Survey (MARS), and the Longitudinal Aging Study in India (LASI). The overview of this family of surveys, including their research designs, samples, and key domains can be found in Lee, Phillips, and Wilkens (2019).

As these surveys were partly designed with harmonization as a goal, they provide remarkable opportunities for cross-country studies. The value of comparative analyses, especially the opportunities they offer for learning lessons resulting from policies adopted elsewhere, is widely recognized. Yet there are only a limited number of empirical studies exploiting such opportunities. This is partly due to the difficulty associated with learning multiple surveys and the policies and institutions of each country.

Identifying comparable questions across surveys is the first step toward cross-country analyses. The Gateway to Global Aging Data (Gateway) helps users understand and use these large-scale population surveys on health and retirement. The Gateway includes several tools to facilitate cross-national health and retirement research. It includes a digital library of survey questions for all participating surveys. Its search engine enables users to find relevant survey questions. The Gateway also includes a concordance with information comparing measures within and across surveys over time. Using these tools, researchers can identify all questions related to particular key words or within a domain. The Gateway also includes population and sub-population estimates for key harmonized variables and presents them in graphs and tables that can be downloaded.

The Gateway can be accessed at https://g2aging.org. For more information about using the Gateway visit the Help page. For more information about obtaining the Harmonized MHAS End of Life from MHAS or downloading the Stata file used to create the Harmonized MHAS End of Life using the Gateway see "Chapter 4. Distribution and Technical Notes."

1.2   Unit of Observation

The Harmonized MHAS End of Life employs a single unit of observation, the individual. We do not distinguish between respondent and spouse, as is done in the Harmonized MHAS. Rather, all variables are respondent-level and can be merged with the Harmonized MHAS using the id variable UNHHIDNP or with the MHAS study data using the wave-appropriate combination of identifiers explained in Section 1.3. We do not include non-respondents to the core interview or non-respondents to the next of kin interview in our files.

1.3   Data File Structure

The Harmonized MHAS End of Life data are contained in a single file which includes the second, third, fourth, and fifth waves of the MHAS next of kin interview, from 2003 to 2018. The unit of observation is the individual and the data are stored in a "fat format" where each observation represents one respondent.

The household and person identification variables changed between different waves of the MHAS and changed in different files of the same wave of MHAS. In Wave 1, households are identified by the unique household identification UNHHID (same as CUNICAH) and persons in the study within the household are identified by CODENT01 (same as PS3). In Wave 2, households are uniquely identified by the combination of UNHHID (or CUNICAH) and ACTHOG – a sub-household id that indicates changes in the household between Waves 1 and 2. Also, individuals are uniquely identified by CODENT03 (same as ENT2). In Wave 3, households are uniquely identified by the combination of UNHHID (or CUNICAH) and SUBHOG_12 – a sub-household id that indicates changes in the household between Waves 2 and 3. In Wave 4, households are uniquely identified by the combination of UNHHID (or CUNICAH) and SUBHOG_15 – a sub-household id that indicates changes in the household between Waves 3 and 4. In Wave 5, households are uniquely identified by the combination of UNHHID (or CUNICAH) and SUBHOG_18 – a sub-household id that indicates changes in the household between Waves 4 and 5. Persons are uniquely identified by NP. This file may be merged with other MHAS data using the combination of survey–specific household and person identification variables available in the MHAS Master Follow-up File, available at www.MHASweb.org, and may be merged with the Harmonized MHAS using the id variable UNHHIDNP.

1.4   Variable Naming Convention

Variable names in the Harmonized MHAS End of Life data follow a consistent pattern. The first character indicates that the variable refers to the reference person ("R").[1] The second character indicates that it pertains to "all" ("A") waves, i.e., the variable is not specific to any single wave because the next of kin interview is only given once for each deceased respondent. The remaining characters describe the concept that the variable captures. For example:

```
RADMARRP
   |  |  └──────── Whether married or partnered
   |  └─────────── All Waves
   └────────────── Respondent
```
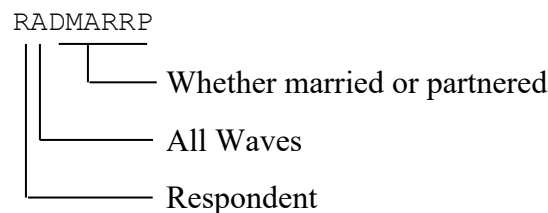
Variable RADMARRP captures whether the respondent was married or partnered at the time of death. Because the respondent is deceased, the MHAS next of kin interview is given exclusively to a proxy respondent. The relationship of the deceased respondent to the proxy is recorded in RAXPRXY in Wave 2 and RAXPRXYSP in all waves.

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[1] The reference person need not be the person who responded to the question. It is the person whose information is central to the data file observation.

Variable labels also follow a consistent pattern. The first characters denote the name of the variable, followed by a colon. Then the remainder of the label describes the concept that the variable captures. For example, the variable label of RADMARRP is:

<div align="center">

`RADMARRP: r married/partnered at death`

</div>

It may seem duplicative to include the name of the variable and the wave in the variable label. However, statistical packages often suppress the variable name and instead uses its label in the presentation of results.

Variable names in the Harmonized MHAS End of Life are generally based on the variable name used in the Harmonized HRS End of Life for the same measure. Measures which are exactly or near-exactly comparable between the Harmonized MHAS End of Life and Harmonized HRS End of Life use the exact same name. For instance, RAXYEAR is the variable name for the respondent's death year in both the Harmonized MHAS End of Life as well as the Harmonized HRS End of Life. If the Harmonized MHAS End of Life measure is deemed only somewhat comparable with the Harmonized HRS End of Life version of that measure, the variable name in the Harmonized MHAS End of Life will often end in "_M." This variable name suffix indicates some MHAS-specific difference with the Harmonized HRS End of Life version of this measure. Other reasons for Harmonized MHAS End of Life-specific variable names include: differences in survey questions, differences in survey routing, and whether both sets of variables use imputed values. Harmonized MHAS End of Life-specific variable names are used to notify the user that there are substantial differences between the Harmonized HRS End of Life and Harmonized MHAS End of Life measures and clean harmonization between these measures is not possible.

The Harmonized MHAS End of Life includes some variables without Harmonized MHAS End of Life-specific variable names even though the Harmonized MHAS End of Life measure is significantly different from the Harmonized HRS End of Life measure of the same name. In particular, out-of-pocket expenditure in the Harmonized MHAS End of Life do not use Harmonized MHAS End of Life-specific variable names even though out-of-pocket expenditure measures in the Harmonized MHAS End of Life are generally expressed in 2010 pesos, while out-of-pocket expenditure measures in the Harmonized HRS End of Life are always expressed in 2010 U.S. dollars. Users should always check the "Differences with Harmonized HRS End of Life" section of each measure before comparing any Harmonized MHAS End of Life measure to the Harmonized HRS End of Life version of the same measures or any other Harmonized Dataset version of the same measure.

1.5   Missing Values, Nonresponse and Imputations

Variables may contain missing values for several reasons. SAS, Stata, and SPSS offer the capability to distinguish multiple types of missing values, and we have attempted to record as much information as possible. Generally, the codes adhere to the classification in Table 1.

<div align="center">

Table 1. Missing Codes

Code	Reason for missing
.d	Don't know
.i	Invalid response
.m	Other missing
.n	Not applicable

</div>

.q	Data not available because question was not asked
.r	Refused
.s	Skipped-spouse ivw
.x	Does not apply

The coding scheme varies across variables. Consult the Data Codebook for details on individual variables.

1.6.   Weighting and Accounting for Survey Design

The Harmonized MHAS End of Life does not include weighting variables to account for non-response because none have been created and released by MHAS.

1.7.   Specifics to the Next of Kin Interview

MHAS next of kin interviews are conducted with a "proxy informant" for panel members who have died. The content of the next of kin interviews is similar to the core interview, but next of kin interviews are conducted to obtain information on the respondent's last few years of life and the circumstances and cause of death. To the extent possible, proxy informants are selected to be an informed respondent or the next of kin. For the majority of waves, it is not possible to determine the exact relationship of the proxy to the respondent, but it is possible to determine whether the proxy is the respondent's spouse. Nearly 30% of all next of kin interviews are completed by the respondent's spouse.

If the deceased respondent's spouse is participating in a core interview following the death of the respondent, then they are asked to complete the Surviving Widow(er) module at the end of the core interview. There are also additional questions pertaining to widowhood at the end of Section K: Pension, Income, and Assets in the core interview. The widow(er) is asked to complete these questions within the core interview, and then continue on to the next of kin interview, in which certain questions are skipped because they were supposed to have been asked in the core interview. In practice, however, there are many cases where a spouse completed the next of kin interview but did not complete the Surviving Widow(er) or widowhood questions at the end of Section K from the core interview. In these cases, information from the deceased respondent's next of kin interview is missing, and a special missing code is assigned to the applicable variables in the Harmonized MHAS End of Life. If the deceased respondent's spouse was not the proxy in the next of kin interview, then the proxy is asked all of the next of kin interview questions.

Next of kin interviews are attempted with a proxy in the first survey period following the death of the respondent and 96% of interviews occur during the survey period following the death of the respondent. Next of kin interviews began in the 2003 survey period (Wave 2) and have been conducted in every survey period since. As of the 2018 survey year (Wave 5), next of kin interviews have been completed for 5,623 MHAS respondents, which represent approximately 97% of all known decedents.

1.8.   **Merging the End of Life Data with the Core Wave Data**

The Harmonized MHAS End of Life dataset can be easily merged with MHAS study data using the wave-appropriate combination of identifers explained in Section 1.3, or with the Harmonized MHAS using the unique MHAS id variable, UNHHIDNP. Here we provide an example of Stata code to correctly merge the Harmonized MHAS dataset with the Harmonized MHAS End of Life dataset.

```
use "filepath\H_MHAS_EOL_b.dta"
merge 1:1 unhhidnp using "filepath\H_MHAS_c.dta"
```

Here we provide an example of Stata code to correctly merge select variables from the Harmonized MHAS dataset with select variables from the Harmonized MHAS End of Life dataset.

```
use variable1 variable2 variable3 using "filepath\H_MHAS_EOL_b.dta"
merge 1:1 unhhidnp using "filepath\H_MHAS_c.dta", keepusing(variable4 variable5
    variable6)
```

In both cases, the same method can be used to merge the original MHAS study data if the name of the dataset is changed and the wave-appropriate combination of identifiers is used.

Because the time from death to the completion of the MHAS next of kin interview varies by individual, care must be taken when merging wave-specific variables from the MHAS study data or Harmonized MHAS. In order to merge wave-specific variables from the last completed core wave, it is necessary to employ the use of RALSTCORE. Here we provide an example of Stata code to correctly assign whether the respondent had ever reported a diagnosis of cancer in his or her last completed core wave, assuming the MHAS end of life interview took place in Wave 5.

```
generate ralcancre = .
forvalues w = 1 / 4 {
    replace ralcancre = r`w'cancre if ralstcore==`w'
}
```

Here, we are generating a new variable called RALCANCRE, with the "R" indicating the respondent, the "A" indicating that it pertains to all waves, the "L" indicating the last completed core wave, and "CANCRE" indicating ever receiving a cancer diagnosis. We employ the use of a forvalues loop, ranging from Waves 1 to 4 using an increase of 1 as it is possible for deceased respondents with a next of kin interview in Wave 5 to have had their last core interview take place anywhere from Wave 1 to Wave 4. Within the loop, we replace RALCANCRE to take the values of RWCANCRE from the Harmonized MHAS if the last completed core wave, RALSTCORE, is equal to "W".

1.9.   **Differences between Harmonized MHAS End of Life and Harmonized HRS End of Life**

The Harmonized MHAS End of Life is intended to be as comparable to the Harmonized HRS End of Life as possible. See Wilkens et al. (2022) for the documentation of the Harmonized HRS End of Life. However, there inevitably remain some differences between the two data sets. In the codebook, notable differences in

definition, construction, or question text between the variables in the Harmonized MHAS End of Life and the corresponding variables in the Harmonized HRS End of Life are indicated on a per variable basis.

2. Imputations

2.1. Currency

MHAS financial variables are expressed in 2010 pesos for the majority of variables, with a select few presented in nominal pesos.

2.2. Imputations Background

Many MHAS next of kin questions which ask about financial values follow a similar pattern. In the case of expenses, the proxy is asked the amount of the expense. If the proxy does not provide an exact value for the respondent's asset or expense, the MHAS next of kin surveys the value using unfolding brackets, asking the proxy to identify ranges in which the value of the expense lies. The MHAS next of kin interview starts the unfolding bracket sequence by asking the proxy whether the value is more than a pre-specified amount. Based on this response, the next of kin interview asks once more whether the value is more than another threshold in an attempt to narrow the possible range of values. The result for some respondents is a closed bracket where the proxy identified a number lower than the value and one higher than the value. Another result for other respondents is an open bracket where the proxy only identified one number lower or higher than the value. A final result for other respondents can be that the proxy was not able to identify any amount which was less than, or more than the requested value.

As a result, the MHAS next of kin data contains no-ownership/zero-value responses, exact amount reports, closed bracket responses, open bracket responses, cases where no bracket information was provided, and cases where ownership is unknown. A no-ownership/zero-value response results if the proxy reports the respondent not having the expense. An exact amount report results if the proxy reports the respondent having the expense and is able to identify the value. A closed bracket response results if the proxy reports the respondent having the expense and provides an approximate value or an upper and lower bound in which the value lies. An open bracket results if the proxy reports the respondent having the expense and provides some information but only a lower bound or upper bound is identified. Cases where we have no bracket information result if the proxy indicates the respondent having the expense, but neither a lower nor upper bound are identified. Finally, there may be proxies who refused to answer or did not know whether the respondent had the expense. These proxies were not asked to identify the value or taken into an unfolding bracket sequence, and their response is classified as "DK whether has expense".

In summary, the data contain valid responses (exact values and cases where we know the individual did not have this type of expense) and several types of responses that require imputations. In decreasing order of the available information, those cases which require imputation:
Case 1: We may know a number that the value is less than and a number that the value is more than, this is a closed bracket.
Case 2: We may know only one number that the value is more than or less than, this is an open bracket.
Case 3: We may know that the individual had the expense, but have no information on its value.
Case 4: We may not even know whether the individual had the expense.

For all variables which include imputed values, the Harmonized MHAS End of Life provides and flags imputed values in separate variables.

2.3. Imputation Process

In principle, imputations should use the conditional distribution of the variable to be imputed conditional on all observed variables. In practice, however, this is impractical, undesirable, and often impossible, especially if the data set has large numbers of variables, as does the MHAS, which would lead to overfitting and inability to estimate all the coefficients in the models. On the other hand, using a very simplified imputation procedure like a hot deck imputation which does not take into account any observed variables or only a few observed variables (in a conditional hot deck) can lead to a match bias, where the imputation method tends to impute too many values in the middle of the distribution (Hirsch & Schumacher 2004 and Bollinger & Hirsch 2006). Taking into consideration the advantages and disadvantages of different imputation procedures, the Harmonized MHAS End of Life provides imputed values using a predictive mean matching imputation method (PMM; Little 1988) with a small number of covariates.

For all of the four cases identified above, Harmonized MHAS End of Life imputes the value using the PMM method. The Harmonized MHAS End of Life PMM method uses all reported values from all waves, treating "no ownership" as a zero value, and estimates a linear regression model for the inverse hyperbolic sine of this value with a small set of covariates including wave dummies. The imputed value is then the reported value of the individual with the closest predicted value, where the donor pool consists of the individuals who reported a value that is consistent with the reported information from the individual that needs imputation. For instance, if a proxy reported the respondent having a value between 10,000 and 25,000 in the unfolding bracket sequence, the donor pool would consist of individuals whose proxy reported a value between 10,000 and 25,000. If the donor pool consists of fewer than 50 individuals, a simple hotdeck imputation is performed instead. In these cases, the imputed value is taken from a randomly selected individual who reported a value that is consistent with the reported information from the individual that needs imputation. The selection of the individual is performed without consideration of the closeness of predicted values resulting from the linear regression model, that is, it is random.

There are also two cases under which missing values are not imputed. The first case occurs when the donor pool consists of fewer than 2 individuals. For instance, a proxy can report that an expense amount was above value X but there are no or only one record with a value above X, and this donor pool would be considered insufficient for imputation. The second case occurs when the individual with a missing value is also missing a value for one of the small set of covariates used by the imputation procedure to predict values. For instance, if age is used as a covariate and an individual with missing age is also missing the value of an expense, the imputation procedure is not able to predict which other individuals would have the closest value. In both these cases, the values are not imputed but instead are assigned a special missing .m.

As part of the imputation process, imputation flag variables are also created, which allow data users to know whether the value was reported, left missing and for what reason, or imputed and, if imputed, what information was known (regarding ownership and bracket values). In addition to the value, ownership is also taken from the donor individual, so both are jointly imputed. (Note that MHAS next of kin allows ownership with a zero value, so the two are not equivalent.) For more information about this PMM model refer to Lee, Meijer, and Phillips (2015).

When imputing individual-level values, the gender and age at death of the individual are used as covariates.

The Harmonized MHAS End of Life provides imputed values for individual medical expenditures and expenses associated with the respondent's death. Most of the financial variables in the Harmonized MHAS End of Life

have already been adjusted by the annual consumer price index (CyyyyCPINDEX) of the peso based on the year of the respondent's death, except where noted in the codebook. For more information on the calculation of the consumer price index see http://stats.oecd.org.

3. Structure of Codebook

The Data Codebook contains the codebook documenting all variables in the Harmonized MHAS End of Life Data. This section explains how to interpret the codebook entries. The figure below shows a typical codebook page; the numbers in circles correspond to comments below.

Relationship Status at Death ← ⑴

```
Wave Variable   Label                                          Type
     RADMARRP   radmarrp: r married/partnered at death         Categ
```
② →
③ →
④

Descriptive Statistics ⑤

```
Variable         N        Mean     Std Dev     Minimum     Maximum

RADMARRP        5619       0.54        0.50        0.00        1.00
```

Categorical Variable Codes ⑥

```
Value-------------------|    RADMARRP
.r:refuse               |           4
0.no                    |        2565
1.yes                   |        3054
```

How Constructed ⑦

```
RADMARRP indicates whether the respondent was married or in a union at the time of their death. RADMARRP
is assigned based on a direct question in the next of kin interview asking if the deceased respondent
was married or in a union at the moment of passing away. RADMARRP is coded as 0 if the proxy reports
that the respondent was not married or in a union at the time of their death. RADMARRP is coded as 1 if
the proxy reports that the respondent was married or in a union at the time of their death. Don't know,
refused, or other missing responses are assigned special missing .d, .r, .m, respectively.
```

Cross-Wave Differences in MHAS ⑧

```
No differences known.
```

Differences with the Harmonized HRS End of Life ⑨

```
The MHAS end of life interview inquires whether the respondent was married or partnered at death in a
single question, whereas the HRS exit interview inquires about the respondent's relationship status at
death in several different questions. Furthermore, the HRS distinguishes between being married and
partnered, while the MHAS does not distinguish between being married and in a union.
```

MHAS Variables Used ⑩

```
Wave 2 Next of Kin:
    SA15       marital status
Wave 3 Next of Kin:
    SA15_12    Deceased was married or cohabiting at time of death
Wave 4 Next of Kin:
    SA15_15    Deceased was married or cohabiting at time of death
Wave 5 Next of Kin:
    SA15_18    Deceased was married or cohabiting at time of death
```

(1) *Title*: The variables are documented in groups according to the concept that they measure. For example, there is 1 variable related to marital status at death which corresponds to all waves and the respondent. The title is often followed by a short description of the concept that is captured.

(2) *Variable Names*: This entry shows that the variable represents "all" waves. Please note that while the variable represents "all" waves, not every wave may ask the question encoded in the variable, in which case a special missing is assigned.

(3) *Variable Labels*: This entry shows the Stata variable labels. As discussed above, the labels typically include the name of the variable, the file on which it is present, and a description of its contents.

(4) *Variable Type*: This entry indicates the type of variable. It may be continuous (Cont), categorical (Categ), or character (Char).

(5) *Descriptive Statistics*: This entry shows descriptive statistics on each variable. They include the number of nonmissing values, the mean, standard deviation, minimum value, and maximum value.

(6) *Categorical Value Codes*: This entry shows the value label codes. These are only relevant for categorical variables. The first character(s) of the value labels indicate the value to which each label has been assigned. For example, value "1" is mapped into "1.yes" (not just "yes"). The entry also indicates which labels are assigned to which variables, and shows frequency tabulations for all categorical variables.

(7) *How Constructed*: This entry provides background on the manner in which variables were constructed.

(8) *Cross-Wave Differences in MHAS*: This entry briefly describes differences in question wording or content between interview waves.

(9) *Differences with the Harmonized HRS End of Life*: This entry describes any differences between the Harmonized HRS End of Life version of the variable and the Harmonized MHAS End of Life version of the variable. It is imperative these differences are understood when using harmonized measures.

(10) *MHAS Variables Used*: This entry provides the names and labels of raw MHAS variables that were used to construct the new variables.

4. Distribution and Technical Notes

The Harmonized MHAS End of Life data file is distributed by the Mexican Health and Aging Study. The Harmonized MHAS End of Life Data file is made available free of charge but only to users who register with MHAS and agree to the standard conditions. For more information on obtaining access to the MHAS data visit: http://www.mhasweb.org/DataDocumentationNew.aspx and select the Data tab on the top, and then Constructed/Harmonized on the right side of the page.

This is version **B** of the Harmonized MHAS End of Life Data.

A copy of the Stata programs used to create the Harmonized MHAS End of Life and a copy of this Harmonized MHAS End of Life Codebook can be obtained on the Downloads page of the Gateway to Global Aging Data (https://g2aging.org/downloads) under the End of Life Data tab or from the MHAS website (http://www.mhasweb.org).

5. Data Codebook

Section A: Demographics and Identifiers

Person Specific Identifier

```
Wave Variable        Label                                                           Type

  1  CODENT01        Person identification code 2001 (=ps3)                          Categ

  1  CODENT03        Person identification code 2003 (=ent2)                         Categ

  1  PS3             Person identification code 2001 (=codent01)                     Cont

  1  ENT2            Person identification code 2003 (=codent03)                     Cont

  1  NP              Person Number/ Numero de Persona                                Cont

  1  UNHHIDNP        UNHHIDNP: Unique Person Identifier (HH ID + Person Number)/     Cont

  1  RAHHIDNP        RAHHIDNP: Unique Person Identifier (HH ID + Person Number)/     Char

  1  TIPENT_01       Type of interview 2001                                          Categ

  1  TIPENT_03       Type of interview 2003                                          Categ

  1  TIPENT_12       Type of interview 2012                                          Categ

  1  TIPENT_15       Type of interview 2015                                          Categ

  1  TIPENT_18       Type of interview 2018                                          Categ
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
CODENT01	5316	1.30	0.46	1.00	2.00
CODENT03	5340	1.31	0.47	1.00	4.00
PS3	5316	1.30	0.46	1.00	2.00
ENT2	5340	1.31	0.47	1.00	4.00
NP	5623	13.04	4.60	10.00	24.00
UNHHIDNP	5623	583368.33	347270.67	110.00	1510410.00
TIPENT_01	5270	12.20	2.91	11.00	22.00
TIPENT_03	4690	12.38	3.17	11.00	22.00
TIPENT_12	2163	1.53	0.84	1.00	4.00
TIPENT_15	1092	1.48	0.85	1.00	4.00
TIPENT_18	1	1.00	.	1.00	1.00

Categorical Variable Codes

```
Value---------------------------------|       CODENT01
1.Selected person                     |          3722
2.Spouse of selected person           |          1594

Value---------------------------------|       CODENT03
1.Selected person in 2001             |          3723
2.Spouse of selected person in 2001   |          1598
3.New spouse of selected person in 2001 |           17
4.New spouse-of-spouse of selected perso|            2

Value---------------------------------|       TIPENT_01
```

```
11.Direct, first interview          |          3317
12.Direct, second interview         |          1495
21.Proxy, first interview           |           233
22.Proxy, second interview          |           225

Value-------------------------------|      TIPENT_03
11.Direct, first interview          |          2933
12.Direct, second interview         |          1262
21.Proxy, first interview           |           238
22.Proxy, second interview          |           257

Value-------------------------------|      TIPENT_12
1.Direct, follow-up interview       |          1488
2.Direct, new sample interview      |           240
3.Proxy, follow-up interview        |           406
4.Proxy, new sample interview       |            29

Value-------------------------------|      TIPENT_15
1.Direct, follow-up interview       |           826
2.Direct, new spouse interview      |            12
3.Proxy, follow-up interview        |           252
4.Proxy, new spouse interview       |             2

Value-------------------------------|      TIPENT_18
1.Direct, follow-up interview       |             1
```

How Constructed

```
At baseline, the unique within-household person ID, CODENT01 (also equal to PS3), is assigned to
identify the selected individual and their spouse inside the household. In Wave 2, a new unique
within-household person ID, CODENT03 (also equal to ENT2), was created to identify the respondents
inside the household. In addition to the 2 codes of CODENT01 from Wave 1, two more codes were added
to CODENT03 to identify the new spouse of the selected person in Wave 1 and the new spouse of the
spouse in Wave 1. Together, CUNICAH (also equal to UNHHID) and CODENT01 uniquely identify each
individual at baseline, while CUNICAH and CODENT03 identify each individual at Wave 2.

Starting in 2012, a new variable, NP, was created to uniquely identify each person. Together,
CUNICAH and NP uniquely identify each individual in the MHAS data. UNHHIDNP is the numeric value of
the combination of CUNICAH and NP, and uniquely identify each respondent. The variable is set to
CUNICAH*100+NP. Also, RAHHIDNP is the 7-digit character version of the UNHHIDNP.

TIPENT_01, TIPENT_03, TIPENT_12, TIPENT_15, and TIPENT_18 indicate the interview type for the
corresponding wave and are necessary to merge certain MHAS data files in conjunction with other
identifiers. TIPENT_01 indicates the interview type for Wave 1 and is coded as follows: 11.Direct,
first interview, 12.Direct, second interview, 21.Proxy, first interview, 22.Proxy, second
interview. TIPENT_03 indicates the interview type for Wave 2 and is coded as follows: 11.Direct,
first interview, 12.Direct, second interview, 21.Proxy, first interview, 22.Proxy, second
interview. TIPENT_12 indicates the interview type for Wave 3 and is coded as follows: 1.Direct,
follow-up interview, 2.Direct, new sample interview, 3.Proxy, follow-up interview, 4.Proxy, new
sample interview. TIPENT_15 indicates the interview type for Wave 4 and is coded as follows:
1.Direct, follow-up interview, 2.Direct, new spouse interview, 3.Proxy, follow-up interview,
4.Proxy, new spouse interview. TIPENT_18 indicates the interview type for Wave 5 and is coded as
follows: 1.Direct, follow-up interview.
```

Cross Wave Differences in MHAS

```
No differences known.
```

Differences with the Harmonized HRS End of Life

```
No differences known.
```

MHAS Variables Used

```
Harmonized MHAS:
    CODENT01        Person identification code 2001 (=ps3)
    CODENT03        Person identification code 2003 (=ent2)
    ENT2            Person identification code 2003 (=codent03)
    NP              Person Number/ Numero de Persona
    PS3             Person identification code 2001 (=codent01)
    RAHHIDNP        RAHHIDNP: Unique Person Identifier (HH ID + Person Numbe
```

```
TIPENT_01        Type of interview 2001
TIPENT_03        Type of interview 2003
TIPENT_12        Type of interview 2012
TIPENT_15        Type of interview 2015
TIPENT_18        Type of interview 2018
UNHHIDNP         UNHHIDNP: Unique Person Identifier (HH ID + Person Numbe
```

Household Identifier

```
Wave Variable        Label                                                          Type

  1  UNHHID           Clave Unica del Hogar (=cunicah)                               Cont

  1  CUNICAH          Clave Unica del Hogar (=unhhid)                                Cont

  1  H1HHID           h1hhid: w1 Unique Household Identifier (HH ID + SubHH)/ Num    Cont
  1  H2HHID           h2hhid: w2 Unique Household Identifier (HH ID + SubHH)/ Num    Cont
  1  H3HHID           h3hhid: w3 Unique Household Identifier (HH ID + SubHH)/ Num    Cont
  1  H4HHID           h4hhid: w4 Unique Household Identifier (HH ID + SubHH)/ Num    Cont
  1  H5HHID           h5hhid: w5 Unique Household Identifier (HH ID + SubHH)/ Num    Cont

  1  H1HHIDC          h1hhidc: w1 Unique Household Identifier (HH ID + SubHH)/ 7-C   Char
  1  H2HHIDC          h2hhidc: w2 Unique Household Identifier (HH ID + SubHH)/ 7-C   Char
  1  H3HHIDC          h3hhidc: w3 Unique Household Identifier (HH ID + SubHH)/ 7-C   Char
  1  H4HHIDC          h4hhidc: w4 Unique Household Identifier (HH ID + SubHH)/ 7-C   Char
  1  H5HHIDC          h5hhidc: w5 Unique Household Identifier (HH ID + SubHH)/ 7-C   Char

  1  ACTHOG           Update household code 2003                                     Char

  1  SUBHOG_01        2001 sub-household identifier                                  Categ

  1  SUBHOG_03        2003 sub-household identifier                                  Categ

  1  SUBHOG_12        2012 sub-household identifier                                  Categ

  1  SUBHOG_15        2015 sub-household identifier                                  Categ

  1  SUBHOG_18        2018 sub-household identifier                                  Categ
```

Descriptive Statistics

```
Variable          N          Mean      Std Dev      Minimum       Maximum

UNHHID          5623       5833.55      3472.71         1.00      15104.00

CUNICAH         5623       5833.55      3472.71         1.00      15104.00

H1HHID          5623      58340.93     34736.51        10.00     151139.00
H2HHID          5623      58346.12     34735.94        11.00     151139.00
H3HHID          5623      58362.73     34724.58        11.00     151040.00
H4HHID          5623      58388.15     34723.19        21.00     151071.00
H5HHID          5623      58420.86     34724.44        52.00     151139.00

SUBHOG_01       5623          5.41        22.49         0.00         99.00

SUBHOG_03       5623         10.59        23.93         0.00         99.00

SUBHOG_12       5623         27.20        26.23         0.00         99.00

SUBHOG_15       5623         52.62        30.50         0.00         77.00

SUBHOG_18       5623         85.33        27.17        11.00         99.00
```

Categorical Variable Codes

```
Value--------------------------------|       SUBHOG_01
00.Baseline HH                       |           5316
99.Not part of the study             |            307

Value--------------------------------|       SUBHOG_03
00.Baseline HH                       |              6
01.No change, HH contains NP=010     |           4526
11.New HH contains NP=010            |             63
```

```
12.New HH contains NP=020            |              16
14.New HH contains NP=021            |               1
31.NP=010 Deceased                   |             446
32.NP=020 Deceased                   |             207
77.HH lost to follow-up/Not contacted |             81
99.Not part of the study             |             277


Value----------------------------------|        SUBHOG_12
00.Baseline HH                       |             257
01.No change, HH contains NP=010     |            1536
02.No change, HH contains NP=020     |              36
11.New HH contains NP=010            |             181
12.New HH contains NP=020            |             150
31.NP=010 Deceased                   |            1938
32.NP=020 Deceased                   |             790
33.NP=011 Deceased                   |              12
70.NP=010 & NP=020 separated, reunited |             2
77.HH lost to follow-up/Not contacted |            171
88.Deceased before current wave      |             542
99.Not part of the study             |               8


Value----------------------------------|        SUBHOG_15
00.Baseline HH                       |              11
01.No change, HH contains NP=010     |             837
02.No change, HH contains NP=020     |              15
11.New HH contains NP=010            |             140
12.New HH contains NP=020            |             109
15.New HH contains NP=012            |               1
31.NP=010 Deceased                   |             793
32.NP=020 Deceased                   |             400
33.NP=011 Deceased                   |              11
34.NP=021 Deceased                   |               2
70.NP=010 & NP=020 separated, reunited |             8
77.HH lost to follow-up/Not contacted |            3296


Value----------------------------------|        SUBHOG_18
11.New HH contains NP=010            |               1
31.NP=010 Deceased                   |             767
32.NP=020 Deceased                   |             353
33.NP=011 Deceased                   |               7
34.NP=021 Deceased                   |               2
39.NP=014 Deceased                   |               3
40.NP=024 Deceased                   |               3
99.Not part of the study             |            4487
```

How Constructed

HwHHID uniquely identifies a household in a given wave. HwHHID consists of the household identifier (CUNICAH=UNHHID)*100 + the sub-household identifier (SUBHOG_01 in Wave 1, SUBHOG_03 in Wave 2, SUBHOG_12 in Wave 3, SUBHOG_15 in Wave 4, and SUBHOG_18 in Wave 5). The household identifier (CUNICAH) is a random sequential 5-digit number that ranges from 00001 to 11000 created to identify each household at baseline. After Wave 3, CUNICAH was also assigned to the new refresher sample. The new sample was assigned a value starting from 11001 to identify each new household.

The set of sub-household variables (SUBHOG_01, SUBHOG_03, SUBHOG_12, SUBHOG_15, SUBHOG_18) were created after the third wave and are all included in the 2012, 2015, and 2018 Master Follow-up file. The variables were created to follow the modifications of the original household and new households that result from household changes. These changes include: divorce/separation, death, or new spouse of the original subjects. The last two digits of the variable indicate the year of the respective wave. Also, the variable SUBHOG_03 was created to replace the "updated household" ID (ACTHOG) used in 2003.

HwHHIDC is a 9-digit character version of HwHHID. HwHHIDC is created using exactly the same standards as HwHHID but is stored as a character.

Cross Wave Differences in MHAS

The household code ACTHOG was created in 2003 to capture changes in the situation of the individual or couple interviewed in 2001. This variable is referred to as "updated household" and the codes reflect the type of change experienced, including divorce/separation, death, or new spouse. The updated-household codes also capture whether the household observed in 2003 contains the baseline sampled respondent, or the baseline spouse of the selected person. In 2003, the unique household identifier CUNICAH used in 2001 must be supplemented with ACTHOG to form the unique household identifier. These two variables, in combination with the person identifier for 2003 given by CODENT03 (also called ENT2) serve as unique identifiers for the second wave.

In 2012 a set of sub-household IDs (SUBHOG_XX) was introduced to follow the modifications of the original household and new households that result from household changes. The last two digits of the variable indicate the year of the respective survey. One variable has been created for each wave (SUBHOG_01, SUBHOG_03, SUBHOG_12, SUBHOG_15 SUBHOG_18), each of them reflecting the changes in the household recorded for 2001, 2003, 2012, 2015, and 2018 respectively. These new identifiers were created to replace the "updated household" ID (ACTHOG) used in 2003. The unique household identifier CUNICAH must be supplemented with SUBHOG_03, SUBHOG_12, SUBHOG_15, and SUBHOG_18 to form the unique household identifier for 2003, 2012, 2015, and 2018 respectively.

Differences with the Harmonized HRS End of Life

No differences known.

MHAS Variables Used

```
Harmonized MHAS:
    ACTHOG          Update household code 2003
    CUNICAH         Clave Unica del Hogar (=unhhid)
    H1HHID          h1hhid: w1 Unique Household Identifier (HH ID + SubHH)/
    H1HHIDC         h1hhidc: w1 Unique Household Identifier (HH ID + SubHH)/
    H2HHID          h2hhid: w2 Unique Household Identifier (HH ID + SubHH)/
    H2HHIDC         h2hhidc: w2 Unique Household Identifier (HH ID + SubHH)/
    H3HHID          h3hhid: w3 Unique Household Identifier (HH ID + SubHH)/
    H3HHIDC         h3hhidc: w3 Unique Household Identifier (HH ID + SubHH)/
    H4HHID          h4hhid: w4 Unique Household Identifier (HH ID + SubHH)/
    H4HHIDC         h4hhidc: w4 Unique Household Identifier (HH ID + SubHH)/
    H5HHID          h5hhid: w5 Unique Household Identifier (HH ID + SubHH)/
    H5HHIDC         h5hhidc: w5 Unique Household Identifier (HH ID + SubHH)/
    SUBHOG_01       2001 sub-household identifier
    SUBHOG_03       2003 sub-household identifier
    SUBHOG_12       2012 sub-household identifier
    SUBHOG_15       2015 sub-household identifier
    SUBHOG_18       2018 sub-household identifier
    UNHHID          Clave Unica del Hogar (=cunicah)
```

Wave Status: Next of Kin Interviews

```
Wave Variable          Label                                                          Type

  1  INXT              inxt: r in next of kin interview                               Categ

  1  RAXT              raxt: r next of kin interview wave                             Cont

  2  INW2XT            inw2xt: r in w2 next of kin interview                          Categ
  3  INW3XT            inw3xt: r in w3 next of kin interview                          Categ
  4  INW4XT            inw4xt: r in w4 next of kin interview                          Categ
  5  INW5XT            inw5xt: r in w5 next of kin interview                          Categ
```

Descriptive Statistics

```
Variable            N           Mean        Std Dev       Minimum       Maximum

INXT                5623        1.00        0.00          1.00          1.00

RAXT                5623        3.52        0.92          2.00          5.00

INW2XT              5623        0.10        0.30          0.00          1.00
INW3XT              5623        0.49        0.50          0.00          1.00
INW4XT              5623        0.21        0.41          0.00          1.00
INW5XT              5623        0.20        0.40          0.00          1.00
```

Categorical Variable Codes

```
Value--------------------------------|           INXT
1.resp,deceased                      |           5623

Value--------------------------------|           INW2XT        INW3XT        INW4XT
0.nonresp                            |           5081          2883          4417
1.resp,deceased                      |           542           2740          1206
```

How Constructed

INXT indicates whether a proxy completed the next of kin interview for the deceased respondent in any wave. INXT is coded as 1 if the respondent is deceased and a proxy completed the next of kin interview on their behalf in any available wave. All respondents in this dataset are coded as 1 because this dataset only includes respondents who are deceased, completed a core interview in a previous wave, and have a completed next of kin interview.

RAXT indicates which wave a proxy completed the next of kin interview for the deceased respondent. RAXT can take values of 2, 3, 4, and 5, which corresponds to a value of 1 for INWwXT in the given wave, i.e. if INW2XT is equal to 1, then RAXT will have a value of 2.

INWwXT indicates whether a proxy completed the next of kin interview for the deceased respondent in the current wave. INWwXT is coded as 1 if a proxy completed the next of kin interview on behalf of the deceased respondent in the specified wave. INWwXT is coded as 0 if a proxy completed the next of kin interview on behalf of the deceased respondent as part of another wave. Please note that this dataset only includes respondents who are deceased and have had a completed next of kin interview. INWwXT does not indicate whether the respondent is alive or dead, but rather which wave the respondent's next of kin interview took place in.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

The HRS conducts exit interviews, post-exit interviews, and post post-exit interviews. The Harmonized HRS End of Life has comparable variables to INXT, RAXT, and INWwXT indicating whether an exit interview was completed, and the wave in which the respondent's first exit interview took place. The Harmonized HRS End of Life has additional variables indicating the wave(s) in which the

respondent's post-exit or post post-exit interviews took place. The MHAS only conducts a single
next of kin interview, which is used to assign values to INWwXT in the Harmonized MHAS End of Life.

MHAS Variables Used

```
Harmonized MHAS:
    INW1            inw1: w1 Response Indicator
    INW2            inw2: w2 Response Indicator
    INW3            inw3: w3 Response Indicator
    INW4            inw4: w4 Response Indicator
2018 Master File:
    TIPENT_03       Type of interview 2003
    TIPENT_12       Type of interview 2012
    TIPENT_15       Type of interview 2015
    TIPENT_18       Type of interview 2018
```

Next of Kin Interview Dates: Month and Year

Wave	Variable	Label	Type
1	RAXTIWM	raxtiwm: r nok interview month	Cont
1	RAXTIWY	raxtiwy: r nok interview year	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXTIWM	4488	10.24	1.47	1.00	12.00
RAXTIWY	5623	2012.99	4.00	2003.00	2018.00

How Constructed

RAXTIWM and RAXTIWY indicate the month and year, respectively, in which the respondent's next of kin interview took place. Next of kin interviews have been conducted in MHAS Waves 2, 3, 4, and 5 for respondents who had participated in at least one previous wave of the MHAS. Interview date is currently not available for Wave 5 in the data, so RAXTIWM has been assigned special missing .q and a value of 2018 is assigned to RAXTIWY in Wave 5. Don't know, refuse, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

Interview date is not currently available for Wave 5 in the data, so RAXTIWM has been assigned special missing .q and RAXTIWY has been assigned a year of 2018 for this wave.

Differences with the Harmonized HRS End of Life

No differences known.

MHAS Variables Used

```
2018 Master File:
    INT_DATE_12    Interview date 2012
    INT_DATE_15    Interview date 2015
Wave 2 Next of Kin:
    ENT4_2         month of interview
```

Last Completed Core Interview

```
Wave Variable        Label                                                        Type

  1  RALSTCORE        ralstcore: r last completed core interview wave              Cont

  1  RALSTCOREY       ralstcorey: r last completed core interview year            Cont
```

Descriptive Statistics

```
Variable            N         Mean       Std Dev      Minimum      Maximum

RALSTCORE          5623        2.48         0.92         1.00         4.00

RALSTCOREY         5621      2006.92        5.41      2001.00      2015.00
```

How Constructed

```
RALSTCORE indicates the most recent core wave that the now deceased respondent completed while
alive, including if the last completed wave was completed by a proxy. This variable is determined
based on the INWw variables in the Harmonized MHAS.

RALSTCOREY indicates the year of the most recent core wave interview that the now deceased
respondent completed while alive, including if the last completed wave was completed by a proxy.
This variable is determined based on the INWw and RwIWY variables in the Harmonized MHAS.

RALSTCORE can be used to merge the Harmonized MHAS End of Life to the last completed core wave of
the MHAS study data or the Harmonized MHAS. For additional details and example code to complete
this merge, please see section 1.8 of the Introduction and Overview.
```

Cross Wave Differences in MHAS

```
No differences known.
```

Differences with the Harmonized HRS End of Life

```
No differences known.
```

MHAS Variables Used

```
Harmonized MHAS:
    INW1            inw1: w1 Response Indicator
    INW2            inw2: w2 Response Indicator
    INW3            inw3: w3 Response Indicator
    INW4            inw4: w4 Response Indicator
    R1IWY           r1iwy: w1 R Interview Year
    R2IWY           r2iwy: w2 R Interview Year
    R3IWY           r3iwy: w3 R Interview Year
    R4IWY           r4iwy: w4 R Interview Year
```

Relationship of Proxy to Respondent

```
Wave Variable          Label                                                       Type

  1  RAXPRXY           raxprxy: proxy relationship to r: nok ivw                   Categ

  1  RAXPRXYSP         raxprxysp: spouse is r's proxy: nok ivw                     Categ
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXPRXY	542	1.96	0.73	1.00	4.00
RAXPRXYSP	5623	0.29	0.46	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|        RAXPRXY
.q:not asked this wave               |          5081
1.spouse                             |           139
2.child                              |           297
3.other relative                     |            92
4.other non-relative                 |            14

Value--------------------------------|        RAXPRXYSP
0.non-spouse                         |          3970
1.spouse                             |          1653
```

How Constructed

RAXPRXY indicates the relationship of the proxy who completed the next of kin interview to the deceased respondent, as indicated by the interviewer in the coverscreen or the interviewer's report that the respondent's widow or widower completed the next of kin interview. RAXPRXY is coded as follows: 1.spouse, 2.child, 3.other relative, 4.other non-relative. RAXPRXY is coded as 1 if the proxy is the deceased respondent's spouse or partner from a consensual union. RAXPRXY is coded as 2 if the proxy is the deceased respondent's child, step-child, adopted child, foster child, son-in-law or daughter-in-law. RAXPRXY is coded as 3 if the proxy is the deceased respondent's mother/father, parent-in-law, grandparent, grandchild, great-grandchild, brother, sister, brother-in-law/sister-in-law/cousin, uncle/aunt, nephew/niece, or other relative. RAXPRXY is coded as 4 if the proxy is another non-relative. RAXPRXY is only available in Wave 2, and so is assigned special missing .q in Waves 3 and onward. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXPRXYSP indicates whether the deceased respondent's widow or widower completed the next of kin interview, as indicated by the interviewer. RAXPRXYSP is coded as 0 if the proxy is not the respondent's spouse, and is coded as 1 if the proxy is the respondent's spouse. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

While it is possible to determine the relationship of the next of kin interview proxy to the deceased respondent in Wave 2, it is only possible to distinguish whether the next of kin interview proxy is the respondent's spouse starting in Wave 3.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the relationship of the proxy to the deceased respondent is distinguishable in all waves. In the MHAS next of kin interview, the relationship of the proxy to the deceased respondent is only fully distinguishable in Wave 2. Starting in Wave 3, we can only distinguish between spouse proxies and non-spouse proxies.

MHAS Variables Used

Wave 2 Next of Kin:

```
    ENT7_2          relationship of proxy
    SA1             widow of deceased person
Wave 3 Next of Kin:
    SA1A_12         Is Informant the widow(er) of the deceased?
Wave 4 Next of Kin:
    SA1A_15         Is Informant the widow(er) of the deceased?
Wave 5 Next of Kin:
    SA1A_18         Is Informant the widow(er) of the deceased?
```

Date of Death: Month and Year

```
Wave Variable         Label                                                        Type

  1   RAXMONTH          raxmonth: r death month in nok ivw                         Cont

  1   RAXYEAR           raxyear: r death year in nok ivw                           Cont
```

Descriptive Statistics

```
Variable            N         Mean      Std Dev      Minimum      Maximum

RAXMONTH          5450        6.61         3.54         1.00        12.00

RAXYEAR           5554     2010.35         4.90      2001.00      2018.00
```

How Constructed

```
RAXMONTH and RAXYEAR indicate the deceased respondent's month and year of death, respectively. This
variable takes answers from the question in the surviving spouse interview at the end of the core
interview first, and then from the next of kin interview. RAXYEAR is assigned special missing value
.i if the proxy reported a year of death beyond the next of kin interview date. RAXMONTH is
assigned special missing .i if the proxy reported a month of death beyond the next of kin interview
date when the death and interview occurred in the same year. Don't know, refused, or other missing
responses are assigned special missing .d, .r, .m, respectively.
```

Cross Wave Differences in MHAS

```
No differences known.
```

Differences with the Harmonized HRS End of Life

```
No differences known.
```

MHAS Variables Used

```
Wave 2:
    SAB_8A1         month spouse passed away
    SAB_8A2         year spouse passed away
Wave 2 Next of Kin:
    SA8A_1          when did (name) die - month
    SA8A_2          when did (name) die - year
Wave 3:
    SA8A1_12        Month deceased passed away
    SA8A2_12        Year deceased passed away
Wave 3 Next of Kin:
    SA8_1_12        Month deceased passed away
    SA8_2_12        Year deceased passed away
Wave 4:
    SA8A1_15        Month deceased passed away
    SA8A2_15        Year deceased passed away
Wave 4 Next of Kin:
    SA8_1_15        Month deceased passed away
    SA8_2_15        Year deceased passed away
Wave 5:
    SA8A1_18        Month deceased passed away
    SA8A2_18        Year deceased passed away
Wave 5 Next of Kin:
    SA8_1_18        Month deceased passed away
    SA8_2_18        Year deceased passed away
```

Date of Death: Age at Death

```
Wave Variable        Label                                                    Type

  1  RADAGE           radage: r age at death                                  Cont

  1  RADAGEF          radagef: r flag age at death                            Categ
```

Descriptive Statistics

```
Variable           N          Mean       Std Dev      Minimum      Maximum

RADAGE           5616         76.62        11.71        40.00       115.00

RADAGEF          5616          0.02         0.16         0.00         2.00
```

Categorical Variable Codes

```
Value--------------------------------|        RADAGEF
.m:missing                           |             7
0.reported age used                  |          5516
1.month & year used                  |            87
2.only year used                     |            13
```

How Constructed

RADAGE indicates the deceased respondent's age at death. RADAGE takes the age reported in the
surviving spouse interview at the end of the core interview first, then the age reported in the
next of kin interview, then the age reported in the tracker file where possible. If these values
are missing, then RADAGE is calculated using the year and month of birth and the year and month of
death. If the birth or death month is missing, then the birth and death years are used to calculate
age at death. Don't know, refused, or other missing responses are assigned special missing .d, .r,
.m, respectively.

RADAGEF is a flag variable indicating whether an age was reported, or whether year and month or
only years are used in the calculation of RADAGE. RADAGEF is coded as follows: 0.reported age used,
1.month and year used, 2.only year used. RADAGEF is assigned special missing .m if RADAGE has a
missing value.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

No differences known.

MHAS Variables Used

```
2018 Master File:
    AGE_12          Age 2012
    AGE_15          Age 2015
    EDAD_03         Age 2003
Wave 2:
    SAB_2           age of spouse at death
    SAB_8A1         month spouse passed away
    SAB_8A2         year spouse passed away
Wave 2 Next of Kin:
    SA2             age of (name) when (s)he passed away
    SA8A_1          when did (name) die - month
    SA8A_2          when did (name) die - year
Wave 3:
    SA2_12          Deceased's age in total years
    SA8A1_12        Month deceased passed away
    SA8A2_12        Year deceased passed away
```

```
Wave 3 Next of Kin:
    SA2_12          Deceased's age in total years
    SA8_1_12        Month deceased passed away
    SA8_2_12        Year deceased passed away
Wave 4:
    SA2_15          Deceased's age in total years
    SA8A1_15        Month deceased passed away
    SA8A2_15        Year deceased passed away
Wave 4 Next of Kin:
    SA2_15          Deceased's age in years
    SA8_1_15        Month deceased passed away
    SA8_2_15        Year deceased passed away
Wave 5:
    SA2_18          Deceased's age in total years
    SA8A1_18        Month deceased passed away
    SA8A2_18        Year deceased passed away
Wave 5 Next of Kin:
    SA2_18          Deceased's age in years
    SA8_1_18        Month deceased passed away
    SA8_2_18        Year deceased passed away
```

Time from Death to Next of Kin Interview: Months and Years

Wave	Variable	Label	Type
1	RADTOIVWM	radtoivwm: r time between death and nok ivw, months	Cont
1	RADTOIVWY	radtoivwy: r time between death and nok ivw, years	Cont
1	RADTOIVWF	radtoivwf: r flag time between death and nok ivw	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RADTOIVWM	5554	35.05	30.86	0.00	153.00
RADTOIVWY	5554	2.92	2.57	0.00	12.75
RADTOIVWF	5554	1.22	0.41	1.00	2.00

Categorical Variable Codes

```
Value--------------------------------|      RADTOIVWF
.m:missing                           |              69
1.month & year used                  |            4330
2.only year used                     |            1224
```

How Constructed

RADTOIVWM and RADTOIVWY indicate the calculated months and years, respectively, from the respondent's death to the next of kin interview. RADTOIVWM is calculated using the year and month of death and the year and month of the next of kin interview. If next of kin interview month or death month is missing, then the calculation only considers the next of kin interview and death year values. RADTOIVWY is calculated by dividing RADTOIVWM by 12. If these calculations create a negative value or if death year is considered an invalid value, then RADTOIVWM and RADTOIVWY are assigned special missing .i. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RADTOIVWF is a flag variable indicating whether year and month or only years are used in the calculation of RADTOIVWM and RADTOIVWY. RADTOIVWF is coded as follows: 1.month and year used, 2.only year used. RADTOIVWF is assigned special missing .m if RADTOIVWM or RADTOIVWY have a missing value.

Cross Wave Differences in MHAS

Because the interview date for Wave 5 is not currently provided in the data, the calculation of the time between the respondent's death and the next of kin interview only uses death and interview year, and as such, all values of RADTOIVWF in this wave either take the value of 2 or special missing .m.

Differences with the Harmonized HRS End of Life

No differences known.

MHAS Variables Used

```
2018 Master File:
    INT_DATE_12    Interview date 2012
    INT_DATE_15    Interview date 2015
Wave 2:
    SAB_8A1        month spouse passed away
    SAB_8A2        year spouse passed away
Wave 2 Next of Kin:
    ENT4_2         month of interview
```

```
    SA8A_1          when did (name) die - month
    SA8A_2          when did (name) die - year
Wave 3:
    SA8A1_12        Month deceased passed away
    SA8A2_12        Year deceased passed away
Wave 3 Next of Kin:
    SA8_1_12        Month deceased passed away
    SA8_2_12        Year deceased passed away
Wave 4:
    SA8A1_15        Month deceased passed away
    SA8A2_15        Year deceased passed away
Wave 4 Next of Kin:
    SA8_1_15        Month deceased passed away
    SA8_2_15        Year deceased passed away
Wave 5:
    SA8A1_18        Month deceased passed away
    SA8A2_18        Year deceased passed away
Wave 5 Next of Kin:
    SA8_1_18        Month deceased passed away
    SA8_2_18        Year deceased passed away
```

```
┌─────────────────────────────────────────────────────────────────────────────┐
│                           Location of Death                                   │
└─────────────────────────────────────────────────────────────────────────────┘
```

```
Wave Variable        Label                                              Type

  1  RADLOCS          radlocs: r death location                         Categ
```

Descriptive Statistics

```
Variable            N         Mean       Std Dev      Minimum      Maximum

RADLOCS           5354        1.53         0.56         1.00         3.00
```

Categorical Variable Codes

```
Value--------------------------------|        RADLOCS
.d:dk                                |              9
.s:spouse ivw                        |            260
1.private home                       |           2675
2.hospital/institution               |           2517
3.other                              |            162
```

How Constructed

```
RADLOCS indicates the respondent's location at the time of their death, as reported by the proxy.
This variable takes answers from the question in the surviving spouse interview at the end of the
core interview first, and then from the next of kin interview. RADLOCS is coded as follows:
1.private home, 2.hospital/institution, 3.other. RADLOCS is coded as 1 if the proxy reports that
the respondent died at a private house. RADLOCS is coded as 2 if the proxy reports that the
respondent died at a hospital or institution. RADLOCS is coded as 3 if the proxy reports that the
respondent died in another location. RADLOCS is assigned special missing .s if this question was
not asked because the spouse was not asked to provide this information during the next of kin
interview and the spouse did not complete the surviving spouse interview at the end of the core
interview. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m,
respectively.
```

Cross Wave Differences in MHAS

```
No differences known.
```

Differences with the Harmonized HRS End of Life

```
The HRS exit interview has a more extensive list of locations for reporting the location of the
respondent's death than does the MHAS next of kin interview. As such, the Harmonized HRS End of
Life has RADLOC with answer categories as follows: 1.private home, 2.hospital, 3.nursing home,
4.hospice, 5.other. Both Harmonized End of Life datasets include a simplified version of the
variable called RADLOCS as follows: 1.private home, 2.hospital or nursing home, 3.other.
```

MHAS Variables Used

```
Wave 2:
    SAB_4           type of place where spouse passed away
Wave 2 Next of Kin:
    SA4             where (name) died
Wave 3:
    SA4_12          Deceased passed away in private house or hospital/instit
Wave 3 Next of Kin:
    SA4_12          Deceased passed away in private house or hospital/instit
Wave 4:
    SA4_15          Deceased passed away in private house or hospital/instit
Wave 4 Next of Kin:
    SA4_15          Deceased passed away in private house or hospital/instit
Wave 5:
    SA4_18          Deceased passed away in private house or hospital/instit
Wave 5 Next of Kin:
    SA4_18          Deceased passed away in private house or hospital/instit
```

Main Cause of Death

```
Wave Variable        Label                                                       Type

  1  RACOD_M          racod_m: disease that caused r's death                     Categ

  1  RAGCOD           ragcod: grouped disease that caused r's death              Categ
```

Descriptive Statistics

```
Variable            N        Mean      Std Dev     Minimum     Maximum

RACOD_M            5330      4.26       2.26        1.00        8.00

RAGCOD             5330      2.47       0.74        1.00        3.00
```

Categorical Variable Codes

```
Value-------------------------------|        RACOD_M
.d:dk                               |          23
.r:refuse                           |           2
.s:spouse ivw                       |         268
1.cancer                            |         814
2.diabetes                          |         859
3.stroke                            |         276
4.heart                             |         946
5.infection                         |         429
6.other illness                     |        1229
7.accident/violence                 |         189
8.other cause                       |         588

Value-------------------------------|         RAGCOD
.d:dk                               |          23
.r:refuse                           |           2
.s:spouse ivw                       |         268
1.cancer                            |         814
2.cardiovascular                    |        1222
3.other                             |        3294
```

How Constructed

RACOD_M indicates the respondent's specific main cause of death. This variable takes answers from the question in the surviving spouse interview at the end of the core interview first, and then from the next of kin interview. The proxy is first asked the cause of the respondent's death, with the answer choices of sickness, accident or violence, and other cause. If the proxy reports sickness, then the proxy is asked the primary sickness that caused the respondent's death, with the answer choices of cancer, diabetes, stroke, heart, infection, and other. RACOD_M is coded as follows: 1.cancer, 2.diabetes, 3.stroke, 4.heart, 5.infection, 6.other illness, 7.accident/violence, 8.other cause. RACOD_M is coded as 1 if the proxy reports that the respondent died from a sickness and the primary sickness was cancer. RACOD_M is coded as 2 if the proxy reports that the respondent died from a sickness and the primary sickness was diabetes. RACOD_M is coded as 3 if the proxy reports that the respondent died from a sickness and the primary sickness was stroke. RACOD_M is coded as 4 if the proxy reports that the respondent died from a sickness and the primary sickness was heart-related. RACOD_M is coded as 5 if the proxy reports that the respondent died from a sickness and the primary sickness was an infection. RACOD_M is coded as 6 if the proxy reports that the respondent died from a sickness and the primary sickness was something other than cancer, diabetes, stroke, heart, or infection. RACOD_M is coded as 7 if the proxy reports that the respondent died from an accident or violence. RACOD_M is coded as 8 if the proxy reports that the respondent died from a cause other than sickness, accident, or violence. RACOD_M is assigned special missing .s if these questions were not asked because the spouse was not asked to provide this information during the next of kin interview and the spouse did not complete the surviving spouse interview at the end of the core interview. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAGCOD indicates the respondent's grouped main cause of death. This variable takes answers from the question in the surviving spouse interview at the end of the core interview first, and then from the next of kin interview. RAGCOD is coded as follows: 1.cancer, 2.cardiovascular, 3.other. RAGCOD is coded as 1 if the proxy reports that the respondent died from a sickness and the primary

sickness was cancer. RAGCOD is coded as 2 if the proxy reports that the respondent died from a sickness and the primary sickness was stroke or heart-related. RAGCOD is coded as 3 if the proxy reports that the respondent died from an accident or violence, another cause, or from a sickness and the primary sickness was diabetes, infection, or other. RAGCOD is assigned special missing .s if these questions were not asked because the spouse was not asked to provide this information during the next of kin interview and the spouse did not complete the surviving spouse interview at the end of the core interview. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

The proxy can report that the primary sickness that caused the respondent's death was infection starting in Wave 4. This was not an answer option prior to this wave.

Differences with the Harmonized HRS End of Life

The HRS exit interview has many more answer categories for main cause of death than the MHAS next of kin interview. These answer categories have been grouped to provide comparable measures of cause of death in RAGCOD. The original answer categories, as released in the studies' respective Harmonized End of Life datasets, are presented in RACOD_H and RACOD_M for the HRS and MHAS, respectively. Furthermore, the HRS exit interview allows the proxy to list up to two main causes of death, though only the first one is considered in RAGCOD and RACOD_H, while the MHAS next of kin interview asks the proxy only one main cause of death.

MHAS Variables Used

```
Wave 2:
    SAB_6           cause of death
    SAB_7           primary sickness that resulted in death
Wave 2 Next of Kin:
    SA6             cause of death
    SA7             main illness that caused the death of (name)
Wave 3:
    SA6_12          Deceased's cause of death
    SA7_12          Primary illness that caused death
Wave 3 Next of Kin:
    SA6_12          Deceased's cause of death
    SA7_12          Primary illness that caused death
Wave 4:
    SA6_15          Deceased's cause of death
    SA7_15          Primary illness that caused death
Wave 4 Next of Kin:
    SA6_15          Deceased's cause of death
    SA7_15          Primary illness that caused death
Wave 5:
    SA6_18          Deceased's cause of death
    SA7_18          Primary illness that caused death
Wave 5 Next of Kin:
    SA6_18          Deceased's cause of death
    SA7_18          Primary illness that caused death
```

	Relationship Status at Death

```
Wave Variable        Label                                                Type

  1  RADMARRP        radmarrp: r married/partnered at death               Categ
```

Descriptive Statistics

```
Variable          N        Mean      Std Dev     Minimum      Maximum

RADMARRP        5619       0.54        0.50        0.00         1.00
```

Categorical Variable Codes

```
Value--------------------------------|        RADMARRP
.r:refuse                            |             4
0.no                                 |          2565
1.yes                                |          3054
```

How Constructed

RADMARRP indicates whether the respondent was married or in a union at the time of their death.
RADMARRP is assigned based on a direct question in the next of kin interview asking if the deceased
respondent was married or in a union at the moment of passing away. RADMARRP is coded as 0 if the
proxy reports that the respondent was not married or in a union at the time of their death.
RADMARRP is coded as 1 if the proxy reports that the respondent was married or in a union at the
time of their death. Don't know, refused, or other missing responses are assigned special missing
.d, .r, .m, respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

The MHAS next of kin interview inquires whether the respondent was married or partnered at death in
a single question, whereas the HRS exit interview inquires about the respondent's relationship
status at death in several different questions. Furthermore, the HRS distinguishes between being
married and partnered, while the MHAS does not distinguish between being married and in a union.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SA15           marital status
Wave 3 Next of Kin:
    SA15_12        Deceased was married or cohabiting at time of death
Wave 4 Next of Kin:
    SA15_15        Deceased was married or cohabiting at time of death
Wave 5 Next of Kin:
    SA15_18        Deceased was married or cohabiting at time of death
```

Living Location Prior to Death

Wave	Variable	Label	Type
1	RAMVHLP	ramvhlp: r moved into someone's house for help	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAMVHLP	5619	0.12	0.33	0.00	1.00

Categorical Variable Codes

```
Value----------------------------------|        RAMVHLP
.d:dk                                   |              1
.m:missing                              |              1
.r:refuse                               |              2
0.no                                    |           4926
1.yes                                   |            693
```

How Constructed

RAMVHLP indicates whether the respondent temporarily moved in to live with someone between the previous core interview and death. RAMVHLP is coded as 0 if the respondent did not temporarily move in to live with someone since the previous core interview. RAMVHLP is coded as 1 if the respondent did temporarily move in to live with someone since the previous core interview. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

In the Harmonized HRS End of Life, RAMVHLP indicates whether the respondent moved into and then out of someone else's house or apartment in the two years preceding death, based on the exact question wording in the interview. Whereas, RAMVHLP in the Harmonized MHAS End of Life indicates whether the respondent temporarily moved in to live with someone between the previous core interview and the respondent's death. As such, the two variables capture slightly different concepts and time periods.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SB5             (name) moved in with someone who helped him/her
Wave 3 Next of Kin:
    SB5_12          Last year of life:Did the deceased temporarily move in w
Wave 4 Next of Kin:
    SB5_15          Last year of life:Did the deceased temporarily move in w
Wave 5 Next of Kin:
    SB5_18          Last year of life:Did the deceased temporarily move in w
```

Section B: Health

Doctor Diagnosed Conditions: Cancer

```
Wave Variable        Label                                                      Type

  1  RALCANCRE        ralcancre: r ever had cancer as of last ivw               Categ

  1  RAXCANCR         raxcancr: r new report of cancer since last ivw            Categ

  1  RAXCANCRE        raxcancre: r ever had cancer in lifetime                   Categ
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RALCANCRE	5595	0.05	0.22	0.00	1.00
RAXCANCR	5601	0.17	0.38	0.00	1.00
RAXCANCRE	5622	0.19	0.39	0.00	1.00

Categorical Variable Codes

```
Value-------------------------------|        RALCANCRE
.d:dk                               |               17
.r:refuse                           |                1
.s:skip                             |               10
0.no                                |             5311
1.yes                               |              284

Value-------------------------------|        RAXCANCR
.d:dk                               |               18
.m:missing                          |                1
.r:refuse                           |                3
0.no                                |             4635
1.yes                               |              966

Value-------------------------------|        RAXCANCRE
.d:dk                               |                1
0.no                                |             4555
1.yes                               |             1067
```

How Constructed

RALCANCRE indicates whether the deceased respondent had ever been told by a doctor that they had cancer, in their last completed core interview. RALCANCRE is based on RwCANCRE in the Harmonized MHAS and is taken from the last core wave completed. RALCANCRE is coded as 0 if the respondent reported never having been diagnosed with cancer, and is coded as 1 if the respondent reported being diagnosed with cancer. RALCANCRE is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXCANCR indicates whether the respondent was diagnosed with cancer or a malignant tumor, excluding minor skin cancer before passing away, as reported by the proxy. RAXCANCR is coded as 0 if the proxy reports that the respondent had not been diagnosed with cancer before passing away. RAXCANCR is coded as 1 if the proxy reports that the respondent had been diagnosed with cancer before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXCANCRE indicates whether the deceased respondent had ever been told by a doctor that they had cancer or a malignant tumor, excluding minor skin cancer. RAXCANCRE is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALCANCRE. RAXCANCRE is coded as 0 if the respondent did not report ever having cancer at their last core interview and the proxy reports that the respondent was not diagnosed with cancer before passing away. RAXCANCRE is coded as 1 if the respondent reported ever having cancer at their last core interview or the proxy reports that the respondent was diagnosed with cancer before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1CANCRE have been carried forward to RALCANCRE if the respondent's last core interview was in Wave 1.

In Wave 2, the proxy is asked whether the respondent was diagnosed with cancer "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. Starting in Wave 3, the proxy is asked whether the respondent was diagnosed with cancer "before passing away".

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked if the respondent ever had cancer. In the MHAS next of kin interview, the proxy is asked if the respondent was diagnosed with cancer before passing away or between the last core interview and the respondent's death. Despite these differences, these variables have been built to be as comparable as possible.

In most waves of the HRS exit interview, the proxy is able to dispute positive and negative reports of a cancer diagnosis. However, in the MHAS next of kin interview, the proxy is not able to dispute any previous reports of a cancer diagnosis.

For any differences in the construction of RwCANCRE, which is used to create RALCANCRE, please see "Doctor Diagnosed Health Problems: Ever have condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1CANCRE        r1cancre: w1 R Ever had cancer
    R2CANCRE        r2cancre: w2 R Ever had cancer
    R3CANCRE        r3cancre: w3 R Ever had cancer
    R4CANCRE        r4cancre: w4 R Ever had cancer
Wave 2 Next of Kin:
    SC8             cancer
Wave 3 Next of Kin:
    SC8A_12         Before Death:Did a physician ...deceased with cancer/mal
Wave 4 Next of Kin:
    SC8A_15         Before Death, did a doctor or medical personnel diagnose
Wave 5 Next of Kin:
    SC8A_18         Before Death, Dr./medical personnel diagnosed deceased w
```

Doctor Diagnosed Conditions: Lung Disease

```
Wave Variable          Label                                                    Type

  1   RALLUNGE_M        rallunge_m: r ever had lung disease as of last ivw        Categ

  1   RAXLUNG_M         raxlung_m: r new report of lung disease since last ivw    Categ

  1   RAXLUNGE_M        raxlunge_m: r ever had lung disease in lifetime           Categ
```

Descriptive Statistics

```
Variable            N          Mean       Std Dev     Minimum      Maximum

RALLUNGE_M         5595        0.14        0.34         0.00         1.00

RAXLUNG_M          5609        0.16        0.37         0.00         1.00

RAXLUNGE_M         5622        0.24        0.43         0.00         1.00
```

Categorical Variable Codes

```
Value-------------------------------|      RALLUNGE_M
.d:dk                               |            15
.r:refuse                           |             3
.s:skip                             |            10
0.no                                |          4823
1.yes                               |           772

Value-------------------------------|      RAXLUNG_M
.d:dk                               |            11
.m:missing                          |             1
.r:refuse                           |             2
0.no                                |          4689
1.yes                               |           920

Value-------------------------------|      RAXLUNGE_M
.d:dk                               |             1
0.no                                |          4250
1.yes                               |          1372
```

How Constructed

RALLUNGE_M indicates whether the deceased respondent had ever been told by a doctor that they had a respiratory illness, such as asthma or emphysema, in their last completed core interview. RALLUNGE_M is based on RwLUNGE_M in the Harmonized MHAS and is taken from the last core wave completed. RALLUNGE_M is coded as 0 if the respondent reported never having been diagnosed with lung disease, and is coded as 1 if the respondent reported being diagnosed with lung disease. RALLUNGE_M is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXLUNG_M indicates whether the respondent was diagnosed with a respiratory illness, like asthma or emphysema, before passing away, as reported by the proxy. RAXLUNG_M is coded as 0 if the proxy reports that the respondent was not diagnosed with a lung disease before passing away. RAXLUNG_M is coded as 1 if the proxy reports that the respondent was diagnosed with a lung disease before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXLUNGE_M indicates whether the deceased respondent had ever been told by a doctor that they had a respiratory illness, such as asthma or emphysema. RAXLUNGE_M is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALLUNGE_M. RAXLUNGE_M is coded as 0 if the respondent did not report ever having lung disease at their last core interview and the proxy reports that the respondent was not diagnosed with lung disease before passing away. RAXLUNGE_M is coded as 1 if the respondent reported ever having lung disease at their last core interview or the proxy reports that the respondent was diagnosed with lung disease before passing

away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1LUNGE_M have been carried forward to RALLUNGE_M if the respondent's last core interview was in Wave 1.

In Wave 2, the proxy is asked whether the respondent was diagnosed with a respiratory illness "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. Starting in Wave 3, the proxy is asked whether the respondent was diagnosed with a respiratory illness "before passing away".

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked if the respondent ever had chronic lung disease, such as bronchitis or emphysema, excluding asthma. In the MHAS next of kin interview, the proxy is asked if the respondent was diagnosed with a respiratory illness, such as asthma or emphysema, between the last core interview and the respondent's death. Because of the difference in included and excluded lung conditions, variables in the Harmonized MHAS End of Life end in "_M", but have otherwise been built to be as comparable as possible.

In most waves of the HRS exit interview, the proxy is able to dispute positive and negative reports of a chronic lung disease diagnosis. However, in the MHAS next of kin interview, the proxy is not able to dispute any previous reports of a lung disease diagnosis.

For any differences in the construction of RwLUNGE_M, which is used to create RALLUNGE_M, please see "Doctor Diagnosed Health Problems: Ever Have Condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1LUNGE_M       r1lunge_m: w1 R Ever had lung disease
    R2LUNGE_M       r2lunge_m: w2 R Ever had lung disease
    R3LUNGE_M       r3lunge_m: w3 R Ever had lung disease
    R4LUNGE_M       r4lunge_m: w4 R Ever had lung disease
Wave 2 Next of Kin:
    SC11            respiratory illness
Wave 3 Next of Kin:
    SC11_12         Before Death:Did a physician...deceased with a respirato
Wave 4 Next of Kin:
    SC11_15         Before Death, did a doctor or medical personnel diagnose
Wave 5 Next of Kin:
    SC11_18         Before Death, Dr./medical personnel diagnosed...resp. il
```

Doctor Diagnosed Conditions: Heart Conditions

Wave	Variable	Label	Type
1	RALHRTATTE	ralhrtatte: r ever had heart attack as of last ivw	Categ
1	RAXHRTATT	raxhrtatt: r new report of heart attack since last ivw	Categ
1	RAXHRTATT1Y	raxhrtatt1y: r new report of heart attack in last year of li	Categ
1	RAXHRTATTE	raxhrtatte: r ever had heart attack in lifetime	Categ
1	RALHEARTE	ralhearte: r ever had heart problems as of last ivw	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RALHRTATTE	5595	0.10	0.30	0.00	1.00
RAXHRTATT	2873	0.16	0.37	0.00	1.00
RAXHRTATT1Y	2735	0.17	0.37	0.00	1.00
RAXHRTATTE	2883	0.24	0.42	0.00	1.00
RALHEARTE	1089	0.17	0.37	0.00	1.00

Categorical Variable Codes

```
Value-------------------------------|     RALHRTATTE
.d:dk                               |           13
.m:missing                          |            1
.r:refuse                           |            4
.s:skip                             |           10
0.no                                |         5017
1.yes                               |          578

Value-------------------------------|     RAXHRTATT
.d:dk                               |            6
.m:missing                          |            1
.q:not available this wave          |         2740
.r:refuse                           |            3
0.no                                |         2406
1.yes                               |          467

Value-------------------------------|     RAXHRTATT1Y
.d:dk                               |            4
.q:not available this wave          |         2883
.r:refuse                           |            1
0.no                                |         2274
1.yes                               |          461

Value-------------------------------|     RAXHRTATTE
.q:not available this wave          |         2740
0.no                                |         2205
1.yes                               |          678

Value-------------------------------|     RALHEARTE
.d:dk                               |            1
.m:missing                          |            1
.q:not available this wave          |         4532
0.no                                |          908
1.yes                               |          181
```

How Constructed

RALHRTATTE indicates whether the deceased respondent had ever been told by a doctor that they had a heart attack, in their last completed core interview. RALHRTATTE is based on RwHRTATTE in the Harmonized MHAS and is taken from the last core wave completed. RALHRTATTE is coded as 0 if the

respondent reported never having been diagnosed with a heart attack, and is coded as 1 if the respondent reported being diagnosed with a heart attack. RALHRTATTE is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXHRTATT indicates whether the respondent was diagnosed with a heart attack before passing away, as reported by the proxy. RAXHRTATT is coded as 0 if the proxy reports that the respondent had not been diagnosed with a heart attack before passing away. RAXHRTATT is coded as 1 if the proxy reports that the respondent had been diagnosed with a heart attack before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXHRTATT is not available in Wave 3 when the proxy is asked if the respondent was diagnosed with a heart attack in the last year of their life, and so RAXHRTATT is assigned special missing .q in this wave.

RAXHRTATT1Y indicates whether the respondent was diagnosed with a heart attack in the last year of their life, as reported by the proxy. RAXHRTATT1Y is coded as 0 if the proxy reports that the respondent had not been diagnosed with a heart attack in the last year of their life. RAXHRTATT1Y is coded as 1 if the proxy reports that the respondent had been diagnosed with a heart attack in the last year of their life. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXHRTATT1Y is not available in Waves 2, 4, or 5 when the proxy is asked if the respondent was diagnosed with a heart attack between the previous interview and death or before passing away, and so RAXHRTATT1Y is assigned special missing .q in these waves.

RAXHRTATTE indicates whether the deceased respondent had ever been told by a doctor that they had a heart attack. RAXHRTATTE is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALHRTATTE. RAXHRTATTE is coded as 0 if the respondent did not report ever having a heart attack at their last core interview and the proxy reports that the respondent was not diagnosed with a heart attack before passing away. RAXHRTATTE is coded as 1 if the respondent reported ever having a heart attack at their last core interview or the proxy reports that the respondent was diagnosed with a heart attack before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXHRTATTE is not available in Wave 3 when the proxy is asked if the respondent was diagnosed with a heart attack in the last year of their life, resulting in a several year gap in which we cannot determine whether or not the respondent had a heart attack, and so RAXHRTATTE is assigned special missing .q in this wave.

RALHEARTE indicates whether the deceased respondent had ever been told by a doctor that they had a heart problem, such as heart failure/cardiac failure/congestive heart failure, arrhythmia, angina, or a heart attack. RALHEARTE is based on RwHEARTE in the Harmonized MHAS and is taken from the last core interview completed. RALHEARTE is coded as 0 if the respondent reported never having been told by a doctor that they had a heart problem, and is coded as 1 if the respondent reported having been told by a doctor that they had a heart problem. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RALHEARTE is only available starting in Wave 5 because RwHEARTE is available in the core interview starting in Wave 4, and so RALHEARTE is assigned special missing .q in Waves 2, 3, and 4.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1HRTATTE have been carried forward to RALHRTATTE if the respondent's last core interview was in Wave 1.

In Wave 2, the proxy is asked whether the respondent was told that they had a heart attack by a doctor "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. In Wave 3, the proxy is asked whether the respondent was told that they had a heart attack by a doctor "in the last year of his/her life". Starting in Wave 4, the proxy is asked whether the respondent was told that they had a heart attack by a doctor "before passing away".

Starting in Wave 3, the proxy is asked whether the respondent was diagnosed with heart failure, congestive heart failure, arrhythmia, or angina in the last year of their life. Because this question is only asked if the respondent had been diagnosed with a heart attack, we have not incorporated this question into a Harmonized variable because it would not be comparable to other Harmonized variables pertaining to heart conditions.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked if the respondent ever had a heart attack or myocardial infarction. In the MHAS next of kin interview, the proxy is asked if the respondent was diagnosed with a heart attack between the last core interview and the respondent's death, in the last year of their life, or before passing away. Despite these differences, these variables have been built to be as comparable as possible. The Harmonized MHAS End of Life includes RAXHRTATT1Y, indicating whether the respondent was diagnosed with a heart attack in the last year of their life, which is not used in the Harmonized HRS End of Life.

In most waves of the HRS exit interview, the proxy is able to dispute positive and negative reports of heart problems. However, in the MHAS next of kin interview, the proxy is not able to dispute any previous reports of heart problems.

Please note that the MHAS begins asking about heart failure, congestive heart failure, arrhythmia, or angina in Wave 3 of the core interview, however in Wave 3, this question is only asked to respondents who reported having a heart attack. Because of this, RwHEARTE is available in the core interview starting in Wave 4. As such, both the Harmonized HRS End of Life and the Harmonized MHAS End of Life include RALHEARTE. The Harmonized HRS End of Life includes RAXHEART and RAXHEARTE, which is not included in Harmonized MHAS End of Life. A comparable question is asked in the next of kin interview starting in Wave 3 but only pertains to the last year of life and is not asked to all respondents, so no comparable variables to RAXHEART and RAXHEARTE from the Harmonized HRS End of Life are available in the Harmonized MHAS End of Life.

For any differences in the construction of RwHRTATTE, which is used to create RALHRTATTE, please see "Doctor Diagnosed Health Problems: Ever Have Condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1HRTATTE       r1hrtatte: w1 R Ever had heart attack
    R2HRTATTE       r2hrtatte: w2 R Ever had heart attack
    R3HRTATTE       r3hrtatte: w3 R Ever had heart attack
    R4HEARTE        r4hearte: w4 R Ever had heart problems
    R4HRTATTE       r4hrtatte: w4 R Ever had heart attack
Wave 2 Next of Kin:
    SC13            heart attack
Wave 3 Next of Kin:
    SC13_12         Before Death:Did a physician tell the deceased he/she ha
Wave 4 Next of Kin:
    SC13_15         Before Death, did a doctor or medical personnel tell the
Wave 5 Next of Kin:
    SC13_18         Before Death, did doctor/medical personnel tell deceased
```

Doctor Diagnosed Conditions: Stroke

Wave	Variable	Label	Type
1	RALSTROKE	ralstroke: r ever had stroke as of last ivw	Categ
1	RAXSTROK	raxstrok: r new report of stroke since last ivw	Categ
1	RAXSTROKE	raxstroke: r ever had stroke in lifetime	Categ
1	RAXSTROK1Y	raxstrok1y: r new report of stroke in last year of life	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RALSTROKE	5604	0.08	0.27	0.00	1.00
RAXSTROK	542	0.11	0.32	0.00	1.00
RAXSTROKE	542	0.18	0.38	0.00	1.00
RAXSTROK1Y	5066	0.09	0.29	0.00	1.00

Categorical Variable Codes

```
Value----------------------------------|     RALSTROKE
.d:dk                                   |             7
.m:missing                              |             1
.r:refuse                               |             1
.s:skip                                 |            10
0.no                                    |          5154
1.yes                                   |           450

Value----------------------------------|     RAXSTROK
.q:not available this wave              |          5081
0.no                                    |           481
1.yes                                   |            61

Value----------------------------------|     RAXSTROKE
.q:not available this wave              |          5081
0.no                                    |           447
1.yes                                   |            95

Value----------------------------------|    RAXSTROK1Y
.d:dk                                   |            12
.m:missing                              |             1
.q:not available this wave              |           542
.r:refuse                               |             2
0.no                                    |          4598
1.yes                                   |           468
```

How Constructed

RALSTROKE indicates whether the deceased respondent had ever been told by a doctor that they had a stroke in their last completed core interview. RALSTROKE is based on RwSTROKE in the Harmonized MHAS and is taken from the last core wave completed. RALSTROKE is coded as 0 if the respondent reported never having been diagnosed with a stroke, and is coded as 1 if the respondent reported being diagnosed with a stroke. RALSTROKE is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXSTROK indicates whether the respondent was diagnosed with a stroke between the last completed core interview and the respondent's death, as reported by the proxy. RAXSTROK is coded as 0 if the proxy reports that the respondent was not diagnosed with a stroke between the last core interview and death. RAXSTROK is coded as 1 if the proxy reports that the respondent was diagnosed with a stroke between the last core interview and death. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXSTROK is not available starting in Wave 3

when the proxy is asked whether the respondent was diagnosed with a stroke in the last year of their life, and so RAXSTROK is assigned special missing .q in these waves.

RAXSTROKE indicates whether the deceased respondent had ever been told by a doctor that they had a stroke. RAXSTROKE is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALSTROKE. RAXSTROKE is coded as 0 if the respondent did not report ever having a stroke at their last core interview and the proxy reports that the respondent was not diagnosed with a stroke between the previous core interview and death. RAXSTROKE is coded as 1 if the respondent reported ever having a stroke at their last core interview or the proxy reports that the respondent was diagnosed with a stroke between the previous core interview and death. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXSTROKE is not available starting in Wave 3 when the proxy is asked whether the respondent was diagnosed with a stroke in the last year of their life, resulting in a several year gap in which we cannot determine whether or not the respondent had a stroke, and so RAXSTROKE is assigned special missing .q in these waves.

RAXSTROK1Y indicates whether the respondent was diagnosed with a stroke in their last year of life, as reported by the proxy. RAXSTROK1Y is coded as 0 if the proxy reports that the respondent was not diagnosed with a stroke in the last year of their life. RAXSTROK1Y is coded as 1 if the proxy reports that the respondent was diagnosed with a stroke in the last year of their life. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXSTROK1Y is not available in Wave 2 when the proxy is asked whether the respondent was diagnosed with a stroke between the last completed core interview and death, and so RAXSTROK1Y is assigned special missing .q in this wave.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1STROKE have been carried forward to RALSTROKE if the respondent's last core interview was in Wave 1.

In Wave 2, the proxy is asked whether the respondent was told that they had a stroke by a doctor "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. Starting in Wave 3, the proxy is asked whether the respondent was told that they had a stroke by a doctor in or during "the last year of his/her life".

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked if the respondent ever had a stroke, and can report a possible stroke. In the MHAS next of kin interview, the proxy is asked if the respondent was diagnosed with a stroke between the last core interview and the respondent's death or in the last year of the respondent's life. While these variables have been built to be as comparable as possible, there is a value of 2 for RAXSTROKE in the Harmonized HRS End of Life indicating a possible stroke, and most waves of the Harmonized MHAS End of Life include values for RAXSTROK1Y and do not include values for RAXSTROK and RAXSTROKE.

In most waves of the HRS exit interview, the proxy is able to dispute positive and negative reports of a stroke. However, in the MHAS next of kin interview, the proxy is not able to dispute any previous reports of a stroke.

For any differences in the construction of RwSTROKE, which is used to create RALSTROKE, please see "Doctor Diagnosed Health Problems: Ever Have Condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1STROKE        r1stroke: w1 R Ever had stroke
    R2STROKE        r2stroke: w2 R Ever had stroke
    R3STROKE        r3stroke: w3 R Ever had stroke
    R4STROKE        r4stroke: w4 R Ever had stroke
Wave 2 Next of Kin:
    SC16            had a stroke
Wave 3 Next of Kin:
    SC16_12         Last year of life:Did a physician tell the deceased he/s
Wave 4 Next of Kin:
```

    SC16_15   Last year of life: Did a doctor or medical personnel tel
Wave 5 Next of Kin:
    SC16_18   Last year of life: Did a Dr./medical personnel tell dece

Doctor Diagnosed Conditions: Diabetes

Wave	Variable	Label	Type
1	RALDIABE	raldiabe: r ever had diabetes as of last ivw	Categ
1	RAXDIAB	raxdiab: r new report of diabetes since last ivw	Categ
1	RAXDIABE	raxdiabe: r ever had diabetes in lifetime	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RALDIABE	5593	0.34	0.47	0.00	1.00
RAXDIAB	5597	0.35	0.48	0.00	1.00
RAXDIABE	5623	0.40	0.49	0.00	1.00

Categorical Variable Codes

```
Value-------------------------------|       RALDIABE
.d:dk                               |             18
.r:refuse                           |              2
.s:skip                             |             10
0.no                                |           3718
1.yes                               |           1875

Value-------------------------------|       RAXDIAB
.d:dk                               |             20
.m:missing                          |              1
.r:refuse                           |              5
0.no                                |           3660
1.yes                               |           1937

Value-------------------------------|       RAXDIABE
0.no                                |           3387
1.yes                               |           2236
```

How Constructed

RALDIABE indicates whether the deceased respondent had ever been told by a doctor that they had diabetes in their last completed core interview. RALDIABE is based on RwDIABE in the Harmonized MHAS and is taken from the last core wave completed. RALDIABE is coded as 0 if the respondent reported never having been diagnosed with diabetes, and is coded as 1 if the respondent reported being diagnosed with diabetes. RALDIABE is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXDIAB indicates whether the respondent was diagnosed with diabetes or high blood sugar before passing away, as reported by the proxy. RAXDIAB is coded as 0 if the proxy reports that the respondent was not diagnosed with diabetes before passing away. RAXDIAB is coded as 1 if the proxy reports that the respondent was diagnosed with diabetes before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXDIABE indicates whether the deceased respondent had ever been told by a doctor that they had diabetes or high blood sugar. RAXDIABE is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALDIABE. RAXDIABE is coded as 0 if the respondent did not report ever having diabetes at their last core interview and the proxy reports that the respondent was not diagnosed with diabetes before passing away. RAXDIABE is coded as 1 if the respondent reported ever having diabetes at their last core interview or the proxy reports that the respondent was diagnosed with diabetes before passing away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1DIABE have been carried forward to RALDIABE if the respondent's last core interview was in Wave 1.

In Wave 2, the proxy is asked whether the respondent was diagnosed with diabetes "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. Starting in Wave 3, the proxy is asked whether the respondent was diagnosed with diabetes "before passing away".

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is not asked whether the respondent had ever been diagnosed with diabetes or high blood sugar. As such, RAXDIAB and RAXDIABE are not available in the Harmonized HRS End of Life as they are in the Harmonized MHAS End of Life.

For any differences in the construction of RwDIABE, which is used to create RALDIABE, please see "Doctor Diagnosed Health Problems: Ever Have Condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1DIABE         r1diabe: w1 R Ever had diabetes
    R2DIABE         r2diabe: w2 R Ever had diabetes
    R3DIABE         r3diabe: w3 R Ever had diabetes
    R4DIABE         r4diabe: w4 R Ever had diabetes
Wave 2 Next of Kin:
    SC3             diabetes
Wave 3 Next of Kin:
    SC3_12          Before Death: Did a physician...deceased with diabetes/h
Wave 4 Next of Kin:
    SC3_15          Before Death, did a doctor or medical personnel diagnose
Wave 5 Next of Kin:
    SC3_18          Before Death, Dr./medical personnel diagnosed deceased w
```

Doctor Diagnosed Conditions: Hypertension

```
Wave Variable        Label                                                    Type

  1  RALHIBPE        ralhibpe: r ever had high bp as of last ivw              Categ

  1  RAXHIBP         raxhibp: r new report of high bp since last ivw          Categ

  1  RAXHIBPE        raxhibpe: r ever had high bp in lifetime                 Categ
```

Descriptive Statistics

```
Variable            N         Mean       Std Dev      Minimum       Maximum

RALHIBPE          5594        0.60         0.49         0.00          1.00

RAXHIBP            529        0.48         0.50         0.00          1.00

RAXHIBPE           541        0.62         0.49         0.00          1.00
```

Categorical Variable Codes

```
Value-------------------------------|        RALHIBPE
.d:dk                               |              17
.r:refuse                           |               2
.s:skip                             |              10
0.no                                |            2262
1.yes                               |            3332

Value-------------------------------|        RAXHIBP
.d:dk                               |              13
.q:not available this wave          |            5081
0.no                                |             275
1.yes                               |             254

Value-------------------------------|        RAXHIBPE
.d:dk                               |               1
.q:not available this wave          |            5081
0.no                                |             206
1.yes                               |             335
```

How Constructed

RALHIBPE indicates whether the deceased respondent had ever been told by a doctor that they had hypertension or high blood pressure in their last completed core interview. RALHIBPE is based on RwHIBPE in the Harmonized MHAS and is taken from the last core wave completed. RALHIBPE is coded as 0 if the respondent reported never having been diagnosed with high blood pressure, and is coded as 1 if the respondent reported being diagnosed with high blood pressure. RALHIBPE is assigned special missing .s if the respondent's last core interview was in Wave 1 and the respondent was not asked whether they had been diagnosed with any conditions because they reported not ever having seen a medical doctor. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXHIBP indicates whether the respondent was diagnosed with hypertension or high blood pressure between the last completed core interview and the respondent's death, as reported by the proxy. RAXHIBP is coded as 0 if the proxy reports that the respondent was not diagnosed with high blood pressure between the last core interview and death. RAXHIBP is coded as 1 if the proxy reports that the respondent was diagnosed with high blood pressure between the last core interview and death. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. This question is no longer asked starting in Wave 3, and so RAXHIBP is assigned special missing .q in these waves.

RAXHIBPE indicates whether the deceased respondent had ever been told by a doctor that they had hypertension or high blood pressure. RAXHIBPE is based on questions asked to the proxy in the next of kin interview, and carries forward responses from RALHIBPE. RAXHIBPE is coded as 0 if the respondent did not report ever having high blood pressure at their last core interview and the proxy reports that the respondent was not diagnosed with high blood pressure between the previous core interview and death. RAXHIBPE is coded as 1 if the respondent reported ever having high blood

pressure at their last core interview or the proxy reports that the respondent was diagnosed with high blood pressure between the previous core interview and death. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. This question is no longer asked in the next of kin interview starting in Wave 3, and so RAXHIBPE is assigned special missing .q in these waves.

Cross Wave Differences in MHAS

In the Wave 1 core interview, respondents who reported never having seen a medical doctor, or who responded don't know or refuse to that question, were not asked whether they had ever been diagnosed with health conditions. These special missing .s values from R1HIBPE have been carried forward to RALHIBPE if the respondent's last core interview was in Wave 1.

Starting in Wave 3, the proxy is not asked whether the respondent was diagnosed with hypertension between the previous core interview and death.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is not asked whether the respondent had ever been diagnosed with hypertension or high blood pressure. As such, RAXHIBP and RAXHIBPE are not available in the Harmonized HRS End of Life as they are in the Harmonized MHAS End of Life.

For any differences in the construction of RwHIBPE, which is used to create RALHIBPE, please see "Doctor Diagnosed Health Problems: Ever Have Condition" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R1HIBPE         r1hibpe: w1 R Ever had high blood pressure
    R2HIBPE         r2hibpe: w2 R Ever had high blood pressure
    R3HIBPE         r3hibpe: w3 R Ever had high blood pressure
    R4HIBPE         r4hibpe: w4 R Ever had high blood pressure
Wave 2 Next of Kin:
    SC1             hypertension
```

Doctor Diagnosed Conditions: Memory Disease

```
Wave Variable         Label                                                              Type

  1  RAXMEMRY          raxmemry: r had memory disease since last ivw                    Categ

  1  RAXMEMRY1Y        raxmemry1y: r had memory disease in last year of life            Categ
```

Descriptive Statistics

```
Variable              N        Mean      Std Dev    Minimum     Maximum

RAXMEMRY            540        0.15       0.36       0.00        1.00

RAXMEMRY1Y         5069        0.12       0.33       0.00        1.00
```

Categorical Variable Codes

```
Value--------------------------------|        RAXMEMRY
.d:dk                                 |            2
.q:not available this wave            |         5081
0.no                                  |          460
1.yes                                 |           80

Value--------------------------------|        RAXMEMRY1Y
.d:dk                                 |            8
.m:missing                            |            1
.q:not available this wave            |          542
.r:refuse                             |            3
0.no                                  |         4443
1.yes                                 |          626
```

How Constructed

RAXMEMRY indicates whether the respondent was diagnosed with an illness that affects the memory between the last completed core interview and the respondent's death, as reported by the proxy. RAXMEMRY is coded as 0 if the proxy reports that the respondent had not been diagnosed with a memory disease between the last core interview and death. RAXMEMRY is coded as 1 if the proxy reports that the respondent had been diagnosed with a memory disease between the last core interview and death. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXMEMRY is no longer available starting in Wave 3 when the proxy is asked whether the respondent was diagnosed with an illness that affects the memory in the last year of their life, and so RAXMEMRY is assigned special missing .q starting in Wave 3.

RAXMEMRY1Y indicates whether the respondent was diagnosed with an illness that affects the memory in the last year of their life, as reported by the proxy. RAXMEMRY1Y is coded as 0 if the proxy reports that the respondent had not been diagnosed with a memory disease in the last year of life. RAXMEMRY1Y is coded as 1 if the proxy reports that the respondent had been diagnosed with a memory disease in the last year of life. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively. RAXMEMRY is not available in Wave 2 when the proxy is asked whether the respondent was diagnosed with an illness that affects the memory between the last completed core interview and the respondent's death, and so RAXMEMRY1Y is assigned special missing .q in this wave.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked whether the respondent was diagnosed with an illness that affects the memory "during the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. Starting in Wave 3, the proxy is asked whether the respondent was diagnosed with an illness that affects the memory "during the last year of his/her life".

Differences with the Harmonized HRS End of Life

In the Harmonized HRS End of Life, RAXMEMRY1M indicates whether the deceased respondent had memory problems as of one month before death and RAXMEMRYE takes into account ever being diagnosed with

Alzheimer's disease or dementia in the previous core interview along with whether the respondent
had memory problems as of one month before death. In the Harmonized MHAS End of Life, RAXMEMRY
indicates whether the deceased respondent was diagnosed with an illness that affects the memory
between the last core interview and death and RAXMEMRY1Y indicates whether the deceased respondent
was diagnosed with an illness that affects the memory during their last year of life, and RALMEMRYE
and RAXMEMRYE are not available because respondents are not asked about memory problems or disease
in the core MHAS interview.

Please note that the MHAS next of kin question wording specifies "an illness that affects the
memory", while the HRS exit interview asks whether the respondent had "memory problems", and the
HRS core interview question wording specifies a "memory-related disease" in Waves 4 through 9, and
then "Alzheimer's disease" and "dementia, senility or any other serious memory impairment" in two
separate questions in Waves 10 and onward.

MHAS Variables Used

```
    SC19_1          illness related to memory
Wave 3 Next of Kin:
    SC19_1_12       Last year of life:Did a physician...deceased with an Ill
Wave 4 Next of Kin:
    SC19_1_15       Last year of life: Did a doctor or medical personnel dia
Wave 5 Next of Kin:
    SC19_1_18       Last yr of life: Did Dr./medical personnel...deceased w/
```

Section C: Health Care Utilization and Insurance

Hospital Stays: Since Last Interview

Wave	Variable	Label	Type
1	RAXHOSP1Y	raxhosp1y: r any hospital stay last year of life	Categ
1	RAXHSPNIT1Y	raxhspnit1y: r total # nights in hospital last year of life	Cont
1	RAXHSPNITD1Y	raxhspnitd1y: r total duration hospital stays last year of l	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXHOSP1Y	5573	0.71	0.46	0.00	1.00
RAXHSPNIT1Y	5573	12.30	29.03	0.00	365.00
RAXHSPNITD1Y	5573	1.19	1.00	0.00	6.00

Categorical Variable Codes

```
Value-------------------------------|      RAXHOSP1Y
.d:dk                               |             41
.m:missing                          |              1
.r:refuse                           |              8
0.no                                |           1644
1.yes                               |           3929

Value-------------------------------|      RAXHSPNITD1Y
.d:dk                               |             41
.m:missing                          |              1
.r:refuse                           |              8
0.0 nights                          |           1644
1.less than 1 week                  |           1739
2.1 week to lt 1 month              |           1788
3.1 month to lt 3 months            |            317
4.3 months to lt 6 months           |             52
5.6 months to lt 1 year             |             25
6.1 year or more                    |              8
```

How Constructed

RAXHOSP1Y indicates whether the deceased respondent stayed in a hospital overnight in the last year of their life. The proxy is asked for the number of nights the respondent stayed in a hospital overnight, including all of the stays between the previous interview and death or in the last year of life depending on the wave. RAXHOSP1Y is coded as 0 if the proxy reports that the respondent spent no nights in a hospital. RAXHOSP1Y is coded as 1 if the proxy reports that the respondent spent any nights in a hospital. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXHSPNIT1Y indicates how many nights the respondent stayed in a hospital in the last year of their life, and takes the value reported by the proxy. RAXHSPNITD1Y is a categorized version of RAXHSPNIT1Y and is coded as follows: 0.zero nights, 1.less than one week, 2.one week to less than one month, 3.one month to less than three months, 4.three months to less than six months, 5.six months to less than one year, 6.one year or more. If the respondent spent no nights in a hospital, then RAXHSPNIT1Y and RAXHSPNITD1Y are assigned a value of 0. Don't know, refused, or other missing responses for RAXHSPNIT1Y and RAXHSPNITD1Y are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked how many nights the respondent stayed in a hospital overnight "in the last _ months of his/her life", which is meant to indicate the period of time between the last core interview and the respondent's death. Starting in Wave 3, the proxy is asked how many nights the respondent stayed in a hospital overnight "in the last year of his/her life".

Differences with the Harmonized HRS End of Life

The HRS exit interview inquires about hospital stays in the last 2 years before death or since the previous interview, while the MHAS next of kin interview inquires about hospital stays between the previous interview and death or in the last year of life depending on the wave. Because of this difference, the Harmonized HRS End of Life uses the variables RAXHOSP, RAXHSPNIT, and RAXHSPNITD, while the Harmonized MHAS End of Life uses the variables RAXHOSP1Y, RAXHSPNIT1Y and RAXHSPNITD1Y.

Additionally, in the HRS exit interview, the proxy can report the number of times the respondent had overnight stays in a hospital, which is provided in RAXHSPTIM in the Harmonized HRS End of Life, and is not asked and so cannot be created in the Harmonized MHAS End of Life.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SD3            number of overnight stays in a hospital
Wave 3 Next of Kin:
    SD3_12         Last year of life:Number of overnight stays in hospital
Wave 4 Next of Kin:
    SD3_15         Last year of life: Number of overnight stays in hospital
Wave 5 Next of Kin:
    SD3_18         Last year of life: Number of overnight stays in hospital
```

Doctor Visits: Since Last Interview

Wave	Variable	Label	Type
1	RAXDOCTOR1Y	raxdoctor1y: r any doctor visits last year of life	Categ
1	RAXDOCTIM1Y	raxdoctim1y: r number doctor visits last year of life	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXDOCTOR1Y	5467	0.90	0.30	0.00	1.00
RAXDOCTIM1Y	5467	12.93	23.83	0.00	365.00

Categorical Variable Codes

```
Value--------------------------------|     RAXDOCTOR1Y
.d:dk                                 |          149
.m:missing                            |            1
.r:refuse                             |            6
0.no                                  |          527
1.yes                                 |         4940
```

How Constructed

RAXDOCTOR1Y indicates whether the deceased respondent visited or consulted a doctor or medical personnel in the last year of their life. The proxy is asked the number of times the respondent visited a doctor between the previous core interview and death or in the last year of life depending on the wave. RAXDOCTOR1Y is coded as 0 if the proxy reports that the respondent had no doctor visits. RAXDOCTOR1Y is coded as 1 if the proxy reports that the respondent had any doctor visits. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXDOCTIM1Y indicates the number of times the deceased respondent visited or consulted a doctor or medical personnel in the last year of their life, and takes the value reported by the proxy. RAXDOCTIM1Y is assigned a value of 0 if the respondent had no doctor visits. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked how many times the respondent visited a doctor "in the last _ months of his/her life", which is meant to indicate the period of time between the last core interview and the respondent's death. Starting in Wave 3, the proxy is asked how many times the respondent visited a doctor "in the last year of his/her life".

Differences with the Harmonized HRS End of Life

The HRS exit interview inquires about visits to the doctor in the last 2 years before death or since the previous interview, while the MHAS next of kin interview inquires about visits to the doctor between the previous core interview and death or in the last year of life depending on the wave. Because of this difference, the Harmonized HRS End of Life uses the variables RAXDOCTOR and RAXDOCTIM, while the Harmonized MHAS End of Life uses the variables RAXDOCTOR1Y and RAXDOCTIM1Y.

The HRS asks how many times the respondent saw or talked to a medical doctor about their health, including emergency room or clinic visits, while the MHAS asks how many times the respondent visited or consulted a doctor or medical personnel.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SD7             how many times visited a doctor
Wave 3 Next of Kin:
    SD7_12          Last year of life:The deceased number of medical visits
```

```
Wave 4 Next of Kin:
    SD7_15          Last year of life: Deceased number of medical visits
Wave 5 Next of Kin:
    SD7_18          Last year of life: Deceased number of medical visits
```

Out of Pocket Medical Costs

Wave	Variable	Label	Type
1	RAXOOPHOS1Y	raxoophos1y: r OOP cost: hospital last year of life	Cont
1	RAXOOPHOSF1Y	raxoophosf1y: r OOP w2 cost flag: hospital last year of life	Categ
1	RAXOOPHOSMF1Y	raxoophosmf1y: r OOP w3+ MHAS cost flag: hospital last year	Categ
1	RAXOOPDOC1Y	raxoopdoc1y: r OOP cost: doctor visits last year of life	Cont
1	RAXOOPDOCF1Y	raxoopdocf1y: r OOP w2 cost flag: doctor visits last year of	Categ
1	RAXOOPDOCMF1Y	raxoopdocmf1y: r OOP w3+ MHAS cost flag: doctor visits last	Categ
1	RAXOOPDRUG1Y	raxoopdrug1y: r OOP cost: medicine last year of life	Cont
1	RAXOOPDRUGMF1Y	raxoopdrugmf1y: r OOP w3+ MHAS cost flag: medicine last year	Categ
1	RAXOOPMD1Y_M	raxoopmd1y_m: r OOP cost: total major medical expenses last	Categ
1	RAXOOPNMD1Y_M	raxoopnmd1y_m: r OOP cost: total non-medical expenses last y	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXOOPHOS1Y	5623	6321.09	30828.26	0.00	700000.00
RAXOOPHOSF1Y	542	2.72	2.32	1.00	7.00
RAXOOPHOSMF1Y	5081	0.07	0.26	0.00	1.00
RAXOOPDOC1Y	5621	5001.69	24221.19	0.00	840169.75
RAXOOPDOCF1Y	542	2.12	2.04	1.00	7.00
RAXOOPDOCMF1Y	5081	0.09	0.28	0.00	1.00
RAXOOPDRUG1Y	5081	3371.93	11566.89	0.00	300000.00
RAXOOPDRUGMF1Y	5081	0.11	0.31	0.00	1.00
RAXOOPMD1Y_M	5371	3.81	3.54	0.00	8.00
RAXOOPNMD1Y_M	5211	2.74	3.21	0.00	8.00

Categorical Variable Codes

```
Value--------------------------------|  RAXOOPHOSF1Y
.q:not available this wave           |          5081
1.continuous value                   |           336
2.closed bracket                     |            13
3.open bracket                       |            11
5.no bracket info                    |            23
6.no costs                           |           149
7.dk whether costs                   |            10

Value--------------------------------|  RAXOOPHOSMF1Y
.q:not available this wave           |           542
0.not imputed                        |          4722
1.imputed                            |           359

Value--------------------------------|  RAXOOPDOCF1Y
.q:not available this wave           |          5081
1.continuous value                   |           392
2.closed bracket                     |            20
```

```
3.open bracket                           |              23
5.no bracket info                        |              26
6.no costs                               |              47
7.dk whether costs                       |              34


Value----------------------------------| RAXOOPDOCMF1Y
.q:not available this wave               |             542
0.not imputed                            |            4646
1.imputed                                |             435


Value----------------------------------| RAXOOPDRUGMF1Y
.q:not available this wave               |             542
0.not imputed                            |            4526
1.imputed                                |             555


Value----------------------------------| RAXOOPMD1Y_M
.d:dk                                    |             236
.m:missing                               |               1
.r:refuse                                |              15
0.no oop expenses                        |            2321
1.0-2000 pesos                           |              54
2.2000-4000 pesos                        |              44
3.4000-16000 pesos                       |             111
4.more than 16000 pesos                  |             101
5.0-3000 pesos                           |             234
6.3000-6000 pesos                        |             292
7.6000-24000 pesos                       |            1043
8.more than 24000 pesos                  |            1171


Value----------------------------------| RAXOOPNMD1Y_M
.d:dk                                    |             344
.m:missing                               |               1
.r:refuse                                |              24
.s:skip error, more than 6000            |              43
0.no oop expenses                        |            2734
1.0-2000 pesos                           |             237
2.2000-4000 pesos                        |              47
3.4000-16000 pesos                       |              44
4.more than 16000 pesos                  |              43
5.0-3000 pesos                           |             636
6.3000-6000 pesos                        |             313
7.6000-24000 pesos                       |             662
8.more than 24000 pesos                  |             495
```

How Constructed

RAXOOPHOS1Y, RAXOOPDOC1Y, and RAXOOPDRUG1Y provide information on out-of-pocket medical expenses. These values have been adjusted to 2010 pesos based on the consumer price index for the year of death.

RAXOOPHOS1Y, RAXOOPDOC1Y, and RAXOOPDRUG1Y are the out-of-pocket costs for hospital visits, doctor visits, and medicine, respectively, and include imputed values to address item-missingness. The proxy is asked about how much the respondent paid out-of-pocket for hospital and doctor visits in their last year of life, and how much they paid for medicine in a typical month in the last year of life which has been converted to a yearly value. The proxy is not asked about the amount spent on medicine in Wave 2, so RAXOOPDRUG1Y is assigned special missing .q in this wave.

If the proxy answers don't know or refused to answer, a series of unfolding bracket questions is asked to obtain a minimum and maximum bracket value of the out-of-pocket expenses. If the proxy does not give an exact amount for each out-of-pocket expenditure, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value. In Wave 2, the threshold values for hospital visits are 2,000, 4,000, and 16,000 pesos. Starting in Wave 3, the threshold values for hospital visits are 3,000, 6,000, and 24,000 pesos. In Wave 2, the threshold values for doctor visits are 200, 1,000, and 8,000 pesos. Starting in Wave 3, the threshold values for doctor visits are 300, 1,500, and 12,000 pesos. Starting in Wave 3, the threshold values for medicine are 150, 300, and 1,500 pesos.

Out-of-pocket costs for hospital visits and doctor visits in Wave 2 are imputed by the Gateway. For the imputations produced by the Gateway in Wave 2, if the respondent did not use one of the services, then the out-of-pocket cost for that item is assumed to be 0. The proxy can report that the respondent paid in-kind for doctor visits, in which case RAXOOPDOC1Y is assigned special missing .k.

RAXOOPHOSF1Y and RAXOOPDOCF1Y are flag variables indicating the level of imputation for the specified out-of-pocket expense for Wave 2. A code of 1 indicates the proxy reported a continuous

value and no imputation was necessary. A code of 2 indicates that the component was imputed based on a closed bracket. A code of 3 indicates that the component was imputed based on an open bracket. A code of 5 indicates that the component was imputed without any bracket information. A code of 6 indicates the proxy reported the respondent not having the expense and the value is 0. A code of 7 indicates that the proxy was not sure whether the respondent had the expense. A code of -1 indicates that the expense could not be imputed due to a lack of reference observations in the donor pool. A code of -2 indicates that the expense could not be imputed due to one or more missing values in the covariates used in the imputation procedure. RAXOOPDOCF1Y is assigned special missing .k if the proxy reports that the respondent paid in-kind for doctor visits. RAXOOPHOSF1Y and RAXOOPDOCF1Y are only available for Wave 2, and are assigned special missing .q starting in Wave 3.

Out-of-pocket costs for hospital visits, doctor visits, and medicine in Waves 3 and forward are imputed by MHAS. Please see the 2012 (here), 2015 (here), and 2018 (here) MHAS documents titled "Imputation of Non-Response on Economic Variables in the MHAS", available in the study website www.MHASweb.org for more details on the imputation method used, variables imputed, and covariates included.

RAXOOPHOSMF1Y, RAXOOPDOCMF1Y, and RAXOOPDRUGMF1Y are flag variables indicating whether the specified out-of-pocket expense was imputed starting in Wave 3. A code of 0 indicates that the value was not imputed, while a code of 1 indicates that the value was imputed. Please see the documents listed above for further information. RAXOOPHOSMF1Y, RAXOOPDOCMF1Y, and RAXOOPDRUGMF1Y are not available in Wave 2, and are assigned special missing .q in this wave.

RAXOOPMD1Y_M is the estimated total cost of hospitalizations, medical visits, procedures, surgeries, medicines, special services (such as contracting someone to take care of the respondent), and other medical costs that were made for the respondent in the last year of their life. The proxy is not asked for an estimated value, but instead only asked a series of unfolding bracket questions to obtain a minimum and maximum bracket value of the out-of-pocket medical expenses. As such, in Wave 2 RAXOOPMD1Y_M is coded as follows: 0.no out-of-pocket expenses, 1.0-2,000 pesos, 2.2,000-4,000 pesos, 3.4,000-16,000 pesos, and 4.more than 16,000 pesos. Starting in Wave 3, RAXOOPMD1Y_M is coded as follows: 0.no out-of-pocket expenses, 5.0-3,000 pesos, 6.3,000-6,000 pesos, 7.6,000-24,000 pesos, and 8.more than 24,000 pesos. The amounts and coding are different between waves due to the different threshold amounts used across waves. RAXOOPMD1Y_M is assigned a value of 0 if the proxy reports that the respondent had no out-of-pocket medical costs when asked who paid most of those costs. RAXOOPMD1Y_M does not include any imputed values and has not been adjusted to 2010 pesos. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXOOPNMD1Y_M is the estimated total cost of non-medical costs, like contracting help, modifying the home, and other changes for the care of the sick respondent in the last year of their life. The proxy is not asked for an estimated value, but instead only asked a series of unfolding bracket questions to obtain a minimum and maximum bracket value of the out-of-pocket non-medical expenses. As such, in Wave 2 RAXOOPNMD1Y_M is coded as follows: 1.0-2,000 pesos, 2.2,000-4,000 pesos, 3.4,000-16,000 pesos, and 4.more than 16000 pesos. Starting in Wave 3, RAXOOPNMD1Y_M is coded as follows: 1.no out-of-pocket expenses, 5.0-3,000 pesos, 6.3,000-6,000 pesos, 7.6,000-24,000 pesos, and 8.more than 24,000 pesos. The amounts and coding are different between waves due to the different threshold amounts used across waves. Additionally, the proxy can state that the respondent had no non-medical cost expenses starting in Wave 3. In Wave 5, there appears to be a skip pattern error in which some proxies who reported that the respondent's non-medical costs were greater than 6,000 pesos are not asked whether it was more than 24,000 pesos, in which case RAXOOPNMD1Y_M is assigned special missing .s. RAXOOPNMD1Y_M does not include any imputed values and has not been adjusted to 2010 pesos. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked how much money the respondent paid for overnight hospital stays "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. If the proxy does not give an exact amount, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value. In Wave 2, the threshold values are 2,000, 4,000, and 16,000 pesos. Starting in Wave 3, the proxy is asked how much money the respondent paid for overnight hospital stays "in the last year of his/her life". Starting in Wave 3, the threshold values are 3,000, 6,000, and 24,000 pesos.

In Wave 2, the proxy is asked how much money the respondent paid for doctor visits "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. If the proxy does not give an exact amount, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value.

In Wave 2, the threshold values are 200, 1,000, and 8,000 pesos. Starting in Wave 3, the proxy is asked how much money the respondent paid for doctor visits "in the last year of his/her life". Starting in Wave 3, the threshold values are 300, 1,500, and 12,000 pesos.

The proxy is asked how much money the respondent paid for medicine in a typical month during the last year of the respondent's life starting in Wave 3. If the proxy does not give an exact amount, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value. Starting in Wave 3, the threshold values are 150, 300, and 1,500 pesos.

The MHAS team provides imputed out-of-pocket values for hospital stays, doctor visits, and medication starting in Wave 3, but not for Wave 2.

In Wave 2, the proxy is asked how much money was spent on hospitalizations, medical visits, procedures, surgeries, medicines, and other medical costs in the last year of the respondent's life. The proxy is not asked for an estimated value, but instead only asked a set of bracket questions and answers if the minimum and maximum value were more than the threshold value. In Wave 2, the threshold values are 2,000, 4,000, and 16,000 pesos. Starting in Wave 3, the threshold values are 3,000, 6,000, and 24,000 pesos.

In Wave 2, the proxy is asked how much money was spent on non-medical expenses, like contracting help and modifying the home in the last year of the respondent's life. The proxy is not asked for an estimated value, but instead only asked a set of bracket questions and answers if the minimum and maximum value were more than the threshold value. In Wave 2, the threshold values are 2,000, 4,000, and 16,000 pesos. Starting in Wave 3, the proxy can state that the respondent had no expenses, and the threshold values are 3,000, 6,000, and 24,000 pesos.

Differences with the Harmonized HRS End of Life

Monetary values in the Harmonized HRS are denominated in 2010 US dollars, whereas the values in the Harmonized MHAS are 2010 pesos for RAXOOPHOS1Y, RAXOOPDOC1Y, and RAXOOPDRUG1Y, and in nominal pesos for RAXOOPMD1Y_M and RAXOOPNMD1Y_M. As such, conversion into a common currency is necessary and adjustment for inflation may be necessary before comparison of these values.

The HRS exit interview inquires about out-of-pocket costs in the last 2 years before death or since the previous interview, while the MHAS next of kin interview inquires about out-of-pocket costs primarily in the last year for hospital and doctor visits, and for total medical and non-medical expenditures, and in a typical month during the respondent's last year of life for medicine, which is converted to an annual value. As such the variables in the Harmonized MHAS End of Life end in "1Y" to indicate the difference in time period.

The MHAS provides imputed values for individual out-of-pocket costs starting in Wave 3. Gateway-produced imputed values are used for individual out-of-pocket costs in Wave 2 of the Harmonized MHAS End of Life, as well as for all out-of-pocket costs in the Harmonized HRS End of Life.

RAXOOPMD in the Harmonized HRS End of Life is the sum of reported or imputed out-of-pocket expenses for hospital stays, nursing home stays, hospice, doctor visits, drug expenses, special facilities or services, in-home medical care, and other medical expenses not covered by insurance, where each value has been reported or imputed separately and adjusted to 2010 dollars. RAXOOPMD1Y_M in the Harmonized MHAS End of Life is the total estimated cost of medical expenses in pesos from a single question, is released as bracket values rather than continuous values, and has no imputations or adjustments made for the consumer price index.

RAXOOPNMD in the Harmonized HRS End of Life is the reported total of out-of-pocket non-medical expenses, and contains values reported or imputed and adjusted to 2010 dollars. RAXOOPNMD1Y_M in the Harmonized MHAS End of Life is the total estimated cost of non-medical expenses in pesos, is released as bracket values rather than continuous values, and has no imputations or adjustments made for the consumer price index.

MHAS Variables Used

Wave 2 Next of Kin:
    SD10   who mostly paid for the medical expenses
    SD12A   more than 4,000
    SD12B   more than 2,000
    SD12C   more than 16,000
    SD13A   more than 4,000
    SD13B   more than 2,000

```
    SD13C           more than 16,000
    SD3             number of overnight stays in a hospital
    SD5             cost of hospitalizations
    SD6A            more than 4,000
    SD6B            more than 2,000
    SD6C            more than 16,000
    SD7             how many times visited a doctor
    SD8             how much had to pay in kind or cash
    SD9A            more than 1,000
    SD9B            more than 200
    SD9C            more than 8,000
Wave 3 Next of Kin:
    IMAMSD10A_12
    IMAMSD5_12
    IMAMSD8_12
    SD10A_IMP_12
    SD11A_12        Last year of life:Who paid most of the out-of-pocket med
    SD12A_12        Last year of life:Total medical expense >$6,000 pesos
    SD12B_12        Last year of life:Total medical expense >$3,000 pesos
    SD12C_12        Last year of life:Total medical expense >$24,000 pesos
    SD13A_12        Last year of life:Non-medical expense(s)>$6,000 pesos
    SD13B_12        Last year of life:Non-medical expense(s)>$3,000 pesos
    SD13C_12        Last year of life:Non-medical expense(s)>$24,000 pesos
    SD3_12          Last year of life:Number of overnight stays in hospital
    SD5_IMP_12
    SD7_12          Last year of life:The deceased number of medical visits
    SD8_IMP_12
Wave 4 Next of Kin:
    IMAMSD10A_15    Medications costs - Next of kin (imputed)
    IMAMSD5_15      Total hospitalization costs - Next of kin (imputed)
    IMAMSD8_15      Medical visits pay in-kind - Next of kin (imputed)
    SD10A_IMP_15    Medications costs - Next of kin (Flag if imputed value)
    SD11A_15        Last year of life: Who paid most of the out-of-pocket me
    SD12A_15        Last year of life: Total medical expense >$6,000 pesos
    SD12B_15        Last year of life: Total medical expense >$3,000 pesos
    SD12C_15        Last year of life: Total medical expense >$24,000 pesos
    SD13A_15        Last year of life: Non-medical expense(s)>$6,000 pesos
    SD13B_15        Last year of life: Non-medical expense(s)>$3,000 pesos
    SD13C_15        Last year of life: Non-medical expense(s)>$24,000 pesos
    SD3_15          Last year of life: Number of overnight stays in hospital
    SD5_IMP_15      Total hospitalization costs - Next of kin (Flag if imput
    SD7_15          Last year of life: Deceased number of medical visits
    SD8_IMP_15      Medical visits pay in-kind - Next of kin (Flag if impute
Wave 5 Next of Kin:
    IMAMSD10A_18    Medications costs - Next of kin (imputed)
    IMAMSD5_18      Total hospitalization costs - Next of kin (imputed)
    IMAMSD8_18      Medical visits pay in-kind - Next of kin (imputed)
    SD10A_IMP_18    Medications costs - Next of kin (Flag if imputed value)
    SD11A_18        Last year of life: Who paid most of the out-of-pocket me
    SD12A_18        Last year of life: Total medical expense >$6,000 pesos
    SD12B_18        Last year of life: Total medical expense >$3,000 pesos
    SD12C_18        Last year of life: Total medical expense >$24,000 pesos
    SD13A_18        Last year of life: Non-medical expense(s)>$6,000 pesos
    SD13B_18        Last year of life: Non-medical expense(s)>$3,000 pesos
    SD13C_18        Last year of life: Non-medical expense(s)>$24,000 pesos
    SD3_18          Last year of life: Number of overnight stays in hospital
    SD5_IMP_18      Total hospitalization costs - Next of kin (Flag if imput
    SD7_18          Last year of life: Deceased number of medical visits
    SD8_IMP_18      Medical visits pay in-kind - Next of kin (Flag if impute
```

Out of Pocket Medical Costs: Help with OOP Costs from Others

```
Wave Variable          Label                                                  Type

  1  RAXOOPHELP_M       raxoophelp_m: r whether anyone helped pay oop costs    Categ

  1  RAXOOPWHO_M        raxoopwho_m: r who helped pay oop costs                Categ
```

Descriptive Statistics

```
Variable              N          Mean      Std Dev      Minimum      Maximum

RAXOOPHELP_M        3780         0.71         0.45         0.00         1.00

RAXOOPWHO_M         2675         1.12         0.39         1.00         3.00
```

Categorical Variable Codes

```
Value-------------------------------|    RAXOOPHELP_M
.d:dk                               |           20
.m:missing                          |            1
.r:refuse                           |           15
.x:no costs                         |         1807
0.no                                |         1105
1.yes                               |         2675

Value-------------------------------|    RAXOOPWHO_M
.d:dk                               |           20
.h:no help                          |         1105
.m:missing                          |            1
.r:refuse                           |           15
.x:no costs                         |         1807
1.child/grandchild                  |         2407
2.relative                          |          207
3.other                             |           61
```

How Constructed

```
RAXOOPHELP_M indicates whether anyone helped the respondent pay for out-of-pocket medical costs.
The proxy is asked who paid most of the out-of-pocket medical costs since the last interview.
RAXOOPHELP_M is coded as 0 if the respondent and/or their spouse paid most of the out-of-pocket
medical costs. RAXOOPHELP_M is coded as 1 if the respondent's son/daughter, son-in-law/daughter-in-
law, grandchild, father/mother, other relative, or other person paid most of the out-of-pocket
medical costs. RAXOOPHELP is assigned special missing .x if the respondent did not have any
expenses. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m,
respectively.
```

```
RAXOOPWHO_M indicates the relationship of the person(s) who paid most of the out-of-pocket medical
costs. The proxy can only name one relationship. RAXOOPWHO_M is coded as follows: 1.child,
2.relative, 3.other. RAXOOPWHO_M is coded as 1 if the proxy reports that a son/daughter, son-in-
law/daughter-in-law, or grandchild paid most of the out-of-pocket medical costs. RAXOOPWHO_M is
coded as 2 if the proxy reports that a father/mother or other relative paid most of the out-of-
pocket medical costs. RAXOOPWHO_M is coded as 3 if the proxy reports that another person paid most
of the out-of-pocket medical costs. RAXOOPWHO_M is assigned special missing .x if the respondent
did not have any expenses. RAXOOPWHO_M is coded as special missing .h if the respondent and/or
their spouse paid most of the out-of-pocket medical costs. Don't know, refused, or other missing
responses are assigned special missing .d, .r, .m, respectively.
```

Cross Wave Differences in MHAS

```
In Wave 2, the proxy is asked who paid most of the out-of-pocket medical costs "in the last _
months" of the respondent's life, which is meant to indicate the period of time between the last
core interview and the respondent's death. Starting in Wave 3, the proxy is asked who paid most of
the out-of-pocket medical costs "in the last year" of the respondent's life.
```

Differences with the Harmonized HRS End of Life

The HRS exit interview inquires about out-of-pocket costs in the last 2 years before death or since the previous interview, while the MHAS next of kin interview inquires about out-of-pocket costs primarily in the respondent's last year of life.

In the HRS exit interview, the proxy is asked if anyone helped pay for out-of-pocket major medical expenses or for health or long-term care insurance, and can name as many relationships as apply. While in the MHAS next of kin interview, the proxy is asked who paid most of the out-of-pocket medical costs and can only name one relationship or the respondent. Because multiple people can be named marking any help received in the HRS, while only a single person can be named which may miss some help received, these variables in the Harmonized MHAS End of Life end in "_M" to indicate that the variables are not entirely comparable.

Starting in Wave 11 of the HRS exit interview, if the respondent's out-of-pocket medical expenditures totaled to $10,000 or less, the proxy was not asked the questions recorded in RAXOOPHELP and RAXOOPWHO. Whereas, no monetary restriction is in place before asking about help covering out-of-pocket costs in the MHAS next of kin interview.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SD10            who mostly paid for the medical expenses
Wave 3 Next of Kin:
    SD11A_12        Last year of life:Who paid most of the out-of-pocket med
Wave 4 Next of Kin:
    SD11A_15        Last year of life: Who paid most of the out-of-pocket me
Wave 5 Next of Kin:
    SD11A_18        Last year of life: Who paid most of the out-of-pocket me
```

Covered by Government Health Insurance

Wave Variable	Label	Type
1 RAXHIGOV	raxhigov: r covered by gov plan	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXHIGOV	5576	0.83	0.37	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|        RAXHIGOV
.d:dk                                 |            31
.m:missing                            |             1
.r:refuse                             |            15
0.no                                  |           925
1.yes                                 |          4651
```

How Constructed

RwHIGOV indicates whether the respondent was covered by any government health insurance program.
The question asks if the respondent had the right to medical service in an organization or
institution that provided the service. RwHIGOV is coded as 0 if the respondent had no coverage, or
was not covered by Social Security (IMSS), ISSSTE, Seguro Popular, or Pemex, Defense or Navy.
RwHIGOV is coded as 1 if the respondent was covered by Social Security (IMSS), ISSSTE, Seguro
Popular, or Pemex, Defense or Navy. Don't know, refused, or other missing responses are assigned
special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked whether the respondent is covered by any of the following government
health insurance programs: "Social Security (IMSS)", "ISSSTE", and/or "Pemex, Defense or Navy".
Starting in Wave 4, "ISSSTE" is renamed to "ISSSTE/ISSSTE Estatal".

Starting in Wave 3, the option of "Popular Insurance" is added as a possible response. Starting in
Wave 4, "Popular Insurance" is renamed to "Seguro Popular".

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked if the respondent was covered by specific government
health insurance programs separately. In the MHAS next of kin interview, the proxy is asked if the
respondent 'had the right to medical service' in an organization or institution. Proxies are asked
if the respondent had the right to each of the options including different government programs,
private insurance, and other programs (not listed before).

MHAS Variables Used

```
Wave 2 Next of Kin:
    SD1_1          medical services from social security imss
    SD1_2          medical services from issste
    SD1_3          medical services from pemex, defense or mavy
Wave 3 Next of Kin:
    SD1_1_12       Did the deceased have a right to medical service_IMSS
    SD1_2_12       Did the deceased have a right to medical service_ISSSTE
    SD1_3_12       Did the deceased have a right to medical service_Seg Pop
    SD1_4_12       Did the deceased have a right to medical service_PEMEX,D
Wave 4 Next of Kin:
    SD1_1_15       Did the deceased have a right to medical service: IMSS
    SD1_2_15       Did the deceased have a right to medical service: ISSSTE
    SD1_3_15       Did the deceased have a right to medical service: Seguro
    SD1_4_15       Did the deceased have a right to medical service: PEMEX,
Wave 5 Next of Kin:
```

```
SD1_1_18        Did the deceased have a right to medical service: IMSS
SD1_2_18        Did the deceased have a right to medical service: ISSSTE
SD1_3_18        Did the deceased have a right to medical service: Seguro
SD1_4_18        Did the deceased have a right to medical service: PEMEX,
```

Covered by Private Health Insurance

Wave Variable	Label	Type
1 RAXHIPRIV	raxhipriv: r covered by private health ins	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXHIPRIV	5576	0.03	0.18	0.00	1.00

Categorical Variable Codes

```
Value----------------------------------|      RAXHIPRIV
.d:dk                                   |          31
.m:missing                              |           1
.r:refuse                               |          15
0.no                                    |        5397
1.yes                                   |         179
```

How Constructed

RwHIPRIV indicates whether the respondent was covered by any private medical health insurance. The question asks if the respondent had the right to medical service in an organization or institution that provided the service. RwHIPRIV is coded as 0 if the respondent had no coverage, or was not covered by any private medical insurance. RwHIPRIV is coded as 1 if the respondent was covered by private medical insurance. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

In most waves of the HRS exit interview, the proxy is asked if the respondent was covered by other types of health insurance plans, including insurance through an employer or business, coverage for retirees, or health insurance you buy for yourself, including any (Medigap or) other supplemental coverage in a single question. In the MHAS next of kin interview, the proxy is asked if the respondent 'had the right to medical service' in an organization or institution. Proxies are asked if the respondent had the right to each of the options including different government programs, private insurance, and other programs (not listed before).

MHAS Variables Used

```
Wave 2 Next of Kin:
   SD1_1          medical services from social security imss
   SD1_4          medical services from private medical insurance
Wave 3 Next of Kin:
   SD1_5_12       Did the deceased have a right to medical service_Private
Wave 4 Next of Kin:
   SD1_5_15       Did the deceased have a right to medical service: Privat
Wave 5 Next of Kin:
   SD1_5_18       Did the deceased have a right to medical service: Privat
```

Section D: Cognition

Memory and Concentration: Rating of Memory and Abilities

```
Wave Variable        Label                                               Type

  1   RARMEM          rarmem: r memory rating                            Categ

  1   RARJUDG         rarjudg: r judgement rating                        Categ
```

Descriptive Statistics

```
Variable          N        Mean      Std Dev     Minimum      Maximum

RARMEM          5611       3.17        1.15        1.00         5.00

RARJUDG         5605       3.29        1.15        1.00         5.00
```

Categorical Variable Codes

```
Value--------------------------------|        RARMEM
.d:dk                                |           8
.m:missing                           |           2
.r:refuse                            |           2
1.excellent                          |         587
2.very good                          |         746
3.good                               |        2259
4.fair                               |        1181
5.poor                               |         838

Value--------------------------------|        RARJUDG
.d:dk                                |          14
.m:missing                           |           2
.r:refuse                            |           2
1.excellent                          |         487
2.very good                          |         628
3.good                               |        2276
4.fair                               |        1173
5.poor                               |        1041
```

How Constructed

RARMEM is a rating of the respondent's memory in the last month of their life. RARMEM is coded as:
1.Excellent, 2.Very good, 3.Good, 4.Fair, and 5.Poor. Don't know, refused, or other missing
responses are assigned special missing .d, .r, .m, respectively.

RARJUDG is a rating of the respondent's capacity to make judgements and decisions in the last month
of their life. RARJUDG is coded as follows: 1.Excellent, 2.Very good, 3.Good, 4.Fair, and 5.Poor.
Don't know, refused, or other missing responses are assigned special missing .d, .r, .m,
respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

No differences known.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SE1            memory in the last month of his/her life
    SE2            ability to make judgments and decisions
Wave 3 Next of Kin:
    SE1_12         Last month of his/her life:Rate the deceased memory
    SE2_12         Last month of his/her life:The deceased ability to make
Wave 4 Next of Kin:
    SE1_15         Last month of his/her life: Deceased memory
```

    SE2_15   Last month of his/her life: Deceased ability to make jud
Wave 5 Next of Kin:
    SE1_18   Last month of his/her life: Deceased's memory
    SE2_18   Last month of his/her life: Deceased's ability to make j

Memory and Concentration: Ability to Complete Certain Tasks Compared to the Past

```
Wave Variable        Label                                                      Type

  1  RACFAMF         racfamf: r comparison remembering things about family/friend  Categ

  1  RACEVNT         racevnt: r comparison remembering recent events            Categ

  1  RACCONV         racconv: r comparison recalling conversations days later    Categ

  1  RACFINL         racfinl: r comparison handling financial matters           Categ
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RACFAMF	5603	2.14	0.53	1.00	3.00
RACEVNT	5602	2.15	0.52	1.00	3.00
RACCONV	5598	2.17	0.52	1.00	3.00
RACFINL	5501	2.22	0.52	1.00	3.00

Categorical Variable Codes

```
Value--------------------------------|        RACFAMF
.d:dk                                 |             13
.m:missing                            |              2
.r:refuse                             |              5
1.improved                            |            430
2.stayed the same                     |           3940
3.worsened                            |           1233

Value--------------------------------|        RACEVNT
.d:dk                                 |             13
.m:missing                            |              2
.r:refuse                             |              6
1.improved                            |            380
2.stayed the same                     |           3984
3.worsened                            |           1238

Value--------------------------------|        RACCONV
.d:dk                                 |             15
.m:missing                            |              2
.r:refuse                             |              8
1.improved                            |            346
2.stayed the same                     |           3950
3.worsened                            |           1302

Value--------------------------------|        RACFINL
.d:dk                                 |             80
.m:missing                            |              2
.r:refuse                             |             40
1.improved                            |            275
2.stayed the same                     |           3716
3.worsened                            |           1510
```

How Constructed

RACFAMF, RACEVNT, RACCONV, and RACFINL indicate how well the respondent performed with specific aspects of memory and concentration at the end of their life compared to two years prior in Waves 2 and 4, and compared to one year prior in Waves 3 and 5. RACFAMF indicates how well the respondent remembered things about their family and friends, such as professions, birthdays, or addresses. RACEVNT indicates how well the respondent remembered things that had recently occurred. RACCONV indicates how well the respondent remembered conversations after a few days. RACFINL indicates how well the respondent handled their economic affairs, such as their pension or dealing with the bank. These variables are coded as follows: 1.improved, 2.stayed the same, 3.worsened. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Waves 2 and 4, the proxy is asked how well the respondent performed with specific aspects of memory and concentration in the last month of their life, compared to two years before death. In Waves 3 and 5, the proxy is asked how well the respondent performed on the same tasks in the last month of their life, compared to the last year before death.

Differences with the Harmonized HRS End of Life

The HRS exit interview and MHAS next of kin interview both ask how the respondent performed toward the end of life compared to two years before for the following tasks: remembering things about their family and friends, remembering things that had happened recently, recalling conversations a few days after they had taken place, and handling financial matters. These same questions are asked in Waves 3 and 5 of the MHAS next of kin interview but referring to the year before death instead of two years before. The HRS also asks about remembering their address or phone number, remembering the date, remembering where things were usually kept, remembering where to find things, knowing how to work familiar machines, learning new machines, learning new things, following a story, making everyday decisions, handling money, ability to do daily arithmetic problems, and reasoning, which have coinciding variables in the Harmonized HRS End of Life. If the proxy reports that the respondent improved or worsened, the HRS exit interview further asks whether it was "much" or "a bit" improved or worsened. However, these responses were not incorporated into the variables in the Harmonized HRS End of Life.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SE3             remembered things of family/friends as well as professio
    SE4             remembered things that just occurred as well as in 2001
    SE5             remembered conversations after a few days
    SE6             managed money matters as well as in 2001
Wave 3 Next of Kin:
    SE3_12          Compared to last year before death:Rate deceased memory
    SE4_12          Compared to last year before death:Rate deceased memory
    SE5_12          Compared to last year before death:Rate deceased memory
    SE6_12          Compared to last year before death:Rate deceased ability
Wave 4 Next of Kin:
    SE3_15          Compared to two years, during the last month of his/her
    SE4_15          Compared to two years, during the last month of his/her
    SE5_15          Compared to two years, during the last month of his/her
    SE6_15          Compared to two years, during the last month of his/her
Wave 5 Next of Kin:
    SE3_18          Last mo. of life vs. 1 yr. before death: Memory of thing
    SE4_18          Last mo. of life vs. 1 yr. before death: How well they r
    SE5_18          Last mo. of life vs. 1 yr. before death: Memory of conve
    SE6_18          Last mo. of life vs. 1 year before death: How well they
```

Memory and Concentration: Ever had Problem

```
Wave Variable        Label                                                       Type

  1   RAELOST1M        raelost1m: r ever lost in familiar environment             Categ

  1   RAEALN11M        raealn11m: r could not be left alone for 1 hour            Categ
```

Descriptive Statistics

```
Variable              N         Mean       Std Dev      Minimum      Maximum

RAELOST1M            5587        0.22        0.41         0.00         1.00

RAEALN11M            5612        0.35        0.48         0.00         1.00
```

Categorical Variable Codes

```
Value-------------------------------|      RAELOST1M
.d:dk                               |             19
.m:missing                          |              2
.r:refuse                           |             15
0.no                                |           4363
1.yes                               |           1224

Value-------------------------------|      RAEALN11M
.d:dk                               |              5
.m:missing                          |              2
.r:refuse                           |              4
0.no                                |           3622
1.yes                               |           1990
```

How Constructed

RAELOST1M and RAEALN11M indicate whether the respondent ever exhibited certain behaviors related to specific aspects of memory and concentration during the last month of their life. RAELOST1M indicates whether the respondent got disoriented (lost) in environments with which they were familiar during the last month of life. RAEALN11M indicates whether the respondent could not be left alone for an hour or so during the last month of life. These variables are coded with a 0 if the respondent never exhibited these behaviors, and are coded as 1 if the respondent ever exhibited these behaviors. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Please note that the MHAS asks whether the respondent could be left alone for an hour or so, which has been reverse coded so that RAEALN11M indicates whether the respondent could not be left alone for an hour or so.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

The HRS exit interview and MHAS next of kin interview both ask whether the respondent ever got lost in a familiar environment and whether the respondent could be left alone for an hour or so. However, the HRS does not specify a time frame for ever getting lost in a familiar environment, while the MHAS asks about the last month of life. Further, the HRS asks if they could be left alone for an hour since the previous interview or in the last two years, while the MHAS asks about the last month of life. As a result of these differences, the MHAS variables end in "1M" to indicate that the two variables are similar but not strictly comparable due to the 1 month time frame used in the MHAS.

In both the Harmonized HRS End of Life and Harmonized MHAS End of Life, the original variables have been reverse coded so that RAEALN1 and RAEALN11M, respectively, indicate whether the respondent could not be left alone for about an hour.

The HRS also asks whether the respondent ever wandered off and did not return by themselves, and if they ever saw or heard things that were not really there, which are made available in variables in the Harmonized HRS End of Life.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SE7            was disoriented in familiar environment
    SE8            could be left alone for an hour
Wave 3 Next of Kin:
    SE7_12         Last month of his/her life:Was the deceased disoriented
    SE8_12         Last month of his/her life:Could the deceased be left al
Wave 4 Next of Kin:
    SE7_15         Last month of his/her life: Did the deceased get disorie
    SE8_15         Last month of his/her life: Could the deceased be left a
Wave 5 Next of Kin:
    SE7_18         Last month of life: Did the deceased get disoriented in
    SE8_18         Last mo. of his/her life: Could the deceased be left alo
```

Memory and Concentration: How Often Experienced Problem

```
Wave Variable         Label                                                 Type

  1   RAOANGRY        raoangry: how often r became angry                    Categ

  1   RAODNGR         raodngr: how often r was dangerous                    Categ
```

Descriptive Statistics

```
Variable            N          Mean       Std Dev     Minimum     Maximum

RAOANGRY          5593         2.49         0.74         1.00        3.00

RAODNGR           5603         2.83         0.46         1.00        3.00
```

Categorical Variable Codes

```
Value-------------------------------|        RAOANGRY
.d:dk                               |              19
.m:missing                          |               2
.r:refuse                           |               9
1.most of the time                  |             812
2.sometimes                         |            1208
3.rarely or never                   |            3573
Value-------------------------------|        RAODNGR
.d:dk                               |              10
.m:missing                          |               2
.r:refuse                           |               8
1.most of the time                  |             197
2.sometimes                         |             532
3.rarely or never                   |            4874
```

How Constructed

RAOANGRY and RAODNGR indicate how often the respondent exhibited certain behaviors related to
specific aspects of memory and concentration during the last month of their life. RAOANGRY
indicates how often the respondent was angry or hostile. RAODNGR indicates how often the respondent
did things that were dangerous for themselves or others. These variables are coded as follows:
1.most of the time, 2.sometimes, 3.never. Don't know, refused, or other missing responses are
assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked how often the respondent was angry or hostile in the last month of
their life, with the following responses: "Most of the time", "Sometimes", or "Never". Starting in
Wave 3, the following scale is used: "Most of the time", "Sometimes", or "Rarely or never".

In Waves 2, 4, and 5, the proxy is asked how often the respondent did things that were dangerous
for themselves or others in the last month of their life with the following responses: "Most of the
time", "Sometimes", or "Never". In Wave 3, the following response scale is used: "Most of the
time", "Sometimes", or "Rarely or never".

Differences with the Harmonized HRS End of Life

The HRS exit interview asks how often the respondent became angry or hostile without reason in the
last few months of life, while the MHAS next of kin interview asks how often the respondent became
angry or hostile in the last month of life. The HRS exit interview asks how often the respondent
did things that were dangerous to themselves or others in the last few months of life, while the
MHAS next of kin interview asks about the last month of life. The middle answer choice in the HRS
exit interview is "some of the time" while it is called "sometimes" in the MHAS next of kin
interview. Despite these differences, RAOANGRY and RAODNGR do not have any different naming
conventions because we believe the variables to be comparable.

The HRS exit interview also asks how often the respondent had difficulties falling asleep, pacing or making unexplained rocking movements, mentioned that people were plotting against them, or drank too much alcohol, which are made available in variables in the Harmonized HRS End of Life.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SE10          did dangerous things
    SE9           frequently angry or hostile
Wave 3 Next of Kin:
    SE10_12       Last month of his/her life:Did the deceased do dangerous
    SE9_12        Last month of his/her life:Was the deceased frequently a
Wave 4 Next of Kin:
    SE10_15       Last month of his/her life: Did the deceased do dangerou
    SE9_15        Last month of his/her life: Was the deceased frequently
Wave 5 Next of Kin:
    SE10_18       Last mo. of life: How often deceased did dangerous thing
    SE9_18        Last month of his/her life: How frequently was the decea
```

Section E: Financial and Housing Wealth

Inflation Multiplier

Wave	Variable	Label	Type
1	C2000CPINDEX	2000 consumer price index, 2010=100	Cont
1	C2001CPINDEX	2001 consumer price index, 2010=100	Cont
1	C2002CPINDEX	2002 consumer price index, 2010=100	Cont
1	C2003CPINDEX	2003 consumer price index, 2010=100	Cont
1	C2004CPINDEX	2004 consumer price index, 2010=100	Cont
1	C2005CPINDEX	2005 consumer price index, 2010=100	Cont
1	C2006CPINDEX	2006 consumer price index, 2010=100	Cont
1	C2007CPINDEX	2007 consumer price index, 2010=100	Cont
1	C2008CPINDEX	2008 consumer price index, 2010=100	Cont
1	C2009CPINDEX	2009 consumer price index, 2010=100	Cont
1	C2010CPINDEX	2010 consumer price index, 2010=100	Cont
1	C2011CPINDEX	2011 consumer price index, 2010=100	Cont
1	C2012CPINDEX	2012 consumer price index, 2010=100	Cont
1	C2013CPINDEX	2013 consumer price index, 2010=100	Cont
1	C2014CPINDEX	2014 consumer price index, 2010=100	Cont
1	C2015CPINDEX	2015 consumer price index, 2010=100	Cont
1	C2016CPINDEX	2016 consumer price index, 2010=100	Cont
1	C2017CPINDEX	2017 consumer price index, 2010=100	Cont
1	C2018CPINDEX	2018 consumer price index, 2010=100	Cont
1	C2019CPINDEX	2019 consumer price index, 2010=100	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
C2000CPINDEX	5623	63.30	0.00	63.30	63.30
C2001CPINDEX	5623	67.30	0.00	67.30	67.30
C2002CPINDEX	5623	70.70	0.00	70.70	70.70
C2003CPINDEX	5623	73.90	0.00	73.90	73.90
C2004CPINDEX	5623	77.40	0.00	77.40	77.40
C2005CPINDEX	5623	80.50	0.00	80.50	80.50
C2006CPINDEX	5623	83.50	0.00	83.50	83.50
C2007CPINDEX	5623	86.70	0.00	86.70	86.70
C2008CPINDEX	5623	91.30	0.00	91.30	91.30
C2009CPINDEX	5623	96.10	0.00	96.10	96.10
C2010CPINDEX	5623	100.00	0.00	100.00	100.00
C2011CPINDEX	5623	103.40	0.00	103.40	103.40
C2012CPINDEX	5623	107.70	0.00	107.70	107.70
C2013CPINDEX	5623	111.80	0.00	111.80	111.80
C2014CPINDEX	5623	116.20	0.00	116.20	116.20
C2015CPINDEX	5623	119.40	0.00	119.40	119.40
C2016CPINDEX	5623	122.80	0.00	122.80	122.80
C2017CPINDEX	5623	130.20	0.00	130.20	130.20
C2018CPINDEX	5623	136.60	0.00	136.60	136.60
C2019CPINDEX	5623	141.50	0.00	141.50	141.50

How Constructed

CyyyyCPINDEX is the annual consumer price index for Mexican pesos for the year of the respondent's death. CyyyyCPINDEX uses 2010 as its base year so the consumer price index for a respondent who died in 2010 would be 100. This consumer price index is used as an inflation multiplier for the comparison of financial values between different years for most financial variables in the Harmonized MHAS End of Life dataset. The consumer price index of the year of death has already been used to adjust the specified monetary values provided in the MHAS next of kin survey, except where otherwise specified.

CyyyyCPINDEX values were provided by the OECD as part of the Consumer Price (MEI) dataset. The index measures monthly changes in the general level of prices of goods and services that households acquire for consumption. For more information on the calculation of the consumer price index see http://stats.oecd.org.

Cross Wave Differences in MHAS

Consumer price index values are not based on any MHAS next of kin survey question.

Differences with the Harmonized HRS End of Life

No differences known.

<div style="border:1px solid black">

Main House: Ownership and Disposition

</div>

```
Wave Variable          Label                                                    Type

  1  RAXAHOWN          raxahown: r owned home at death                          Categ

  1  RAXHOMEDIS_M      raxhomedis_m: disposition of r's home after death        Categ
```

Descriptive Statistics

```
Variable            N        Mean       Std Dev      Minimum      Maximum

RAXAHOWN          4869       0.58         0.49         0.00         1.00

RAXHOMEDIS_M      3041       2.71         1.55         1.00         7.00
```

Categorical Variable Codes

```
Value--------------------------------|        RAXAHOWN
.b:skipped-both died                 |             177
.d:dk                                |             130
.m:missing                           |               4
.r:refuse                            |               4
.s:skipped-spouse ivw                |             439
0.no                                 |            2038
1.yes                                |            2831

Value--------------------------------|      RAXHOMEDIS_M
.b:skipped-both died                 |             191
.d:dk                                |             133
.m:missing                           |               4
.r:refuse                            |               6
.s:skipped-spouse ivw                |             440
.x:didn't own home                   |            1808
1.property of spouse                 |            1058
2.not yet available to spouse        |              77
3.property of relatives              |            1253
4.inherited by someone else          |             288
5.sold                               |              79
6.hasn't been dealt with             |             275
7.rented                             |              11
```

How Constructed

RAXAHOWN indicates whether the deceased respondent and/or their spouse owned a house, apartment, ranch, or farm at the moment the respondent passed away. This variable takes answers from the question in the surviving spouse interview at the end of the core interview first, and then from the next of kin interview. In the surviving widow/er interview, the surviving spouse is asked "When your spouse passed away, were you and/or your spouse owners of a house, an apartment, a ranch, or a farm?" In the next of kin interview, the proxy is asked "At the moment of passing away, did [the respondent] own a house, apartment, ranch, or farm?" If the responses from these questions are still missing, then the respondent's report of housing status in their last core interview and their spouse's report of housing status in the current interview, along with the spouse's report of a change in housing resulting from the death of their spouse in the current interview are used. Housing status is based on a question asking if the house is rented, borrowed or transferred without payment, or private property or currently paying it off. The respondent's spouse's change in housing is based on a question in the widowhood section of the core interview asking if the spouse changed residence, someone else moved in to live with the respondent, or no change in housing occurred.

RAXAHOWN is coded as 0 if the spouse reports that they or the respondent did not own a home when the respondent passed away, the proxy reports that the respondent did not own a home, or if the respondent reports renting or borrowing a house in the last core interview, the spouse reports renting or borrowing a house, and that someone else moved in or there was no change in residence in the current core interview. RAXAHOWN is coded as 1 if the spouse reports that they or the respondent did own a home when the respondent passed away, the proxy reports that the respondent did own a home, or if the respondent reports that the house is private property or being paid off in the last core interview, the spouse reports that the house is private property or being paid off, and that someone else moved in or there was no change in residence in the current interview.

RAXAHOWN is assigned special missing .s if this question was skipped because the next of kin interview was done by spouse proxy and the information could not be filled in. RAXAHOWN is assigned special missing .b if both members of a couple passed away in the current wave, but these questions were skipped in error for one of the couple members in the next of kin interview. Don't know, refused, and other missing responses are assigned special missing .d, .r, .m, respectively.

RAXHOMEDIS_M indicates what happened to the respondent's property, according to the proxy. This variable takes answers from the question in the surviving spouse interview at the end of the core interview first, and then from the next of kin interview. If the responses from these questions are still missing, then the respondent's report of housing status in their last core interview and their spouse's report of housing status in the current interview, along with the spouse's report of a change in housing resulting from the death of their spouse in the current interview are used. Housing status is based on a question asking if the house is rented, borrowed or transferred without payment, or private property or currently paying it off. The respondent's spouse's change in housing is based on a question in the widowhood section of the core interview asking if the spouse changed residence, someone else moved in to live with the respondent, or no change in housing occurred.

RAXHOMEDIS_M is coded as follows: 1.property of spouse, 2.not yet available to spouse, 3.property of relatives, 4.inherited by someone else, 5.sold, 6.hasn't been dealt with, 7.rented. RAXHOMEDIS_M is assigned a value of 1 if the spouse reports that it is still totally or partially their property in the surviving spouse interview, or if the respondent reports that the house is private property or being paid off in the last core interview, the spouse reports that the house is private property or being paid off and that someone else moved in or there was no change in residence in the current interview. RAXHOMEDIS_M is assigned a value of 2 if the spouse reports that it is not yet available to them in the surviving spouse interview. RAXHOMEDIS_M is assigned a value of 3 if the spouse reports that it is property of the children/grandchildren in the surviving spouse interview, or if the proxy reports that it is property of the respondent's relatives in the next of kin interview. RAXHOMEDIS_M is assigned a value of 4 if the spouse reports that it was inherited by someone else in the surviving spouse interview, or if the proxy reports that it was inherited by someone else in the next of kin interview. RAXHOMEDIS_M is assigned a value of 5 if the spouse reports that it was sold in the surviving spouse interview, or if the proxy reports that it was sold in the next of kin interview. RAXHOMEDIS_M is assigned a value of 6 if the proxy reports that it still has not been dealt with in the next of kin interview. RAXHOMEDIS_M is assigned a value of 7 if the proxy reports that it was rented in the next of kin interview. RAXHOMEDIS_M is assigned special missing .x if the respondent did not own a home when they passed away. RAXHOMEDIS_M is assigned special missing .s if this question was skipped because the next of kin interview was done by spouse proxy and the information could not be filled in. RAXHOMEDIS_M is assigned special missing .b if both members of a couple passed away in the current wave, but these questions were skipped in error for one of the couple members in the next of kin interview. Don't know, refused, and other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

In the MHAS next of kin and surviving spouse interview, the proxy or spouse is asked a single direct question to ascertain the deceased respondent's home ownership, the answers to which are used to assign values in RAXAHOWN in the Harmonized MHAS End of Life. If this information is missing then additional questions from the respondent's previous interview and the spouse's current interview are used to assign values to RAXAHOWN. In the HRS exit interview, the proxy is asked whether the respondent still owned their main residence when they died, if a preload indicates that the respondent owned their main residence at the previous interview. This question is used to assign values in RAXAHOWN in the Harmonized HRS End of Life. As such, RAXAHOWN captures a slightly different concept in the Harmonized HRS End of Life because the HRS specified whether the residence was still owned at the time of death specifically and does not allow for the possibility of becoming a homeowner in the time between the previous interview and death, as compared to a more general question of homeownership without limiting the time period in the Harmonized MHAS End of Life.

In the MHAS next of kin and surviving spouse interviews, the proxy or spouse is asked what happened to the respondent's home with slightly different answer categories between the two questions. In the HRS exit interview, the proxy is asked what happened to the respondent's home separately for those who still owned the home at the time of death and for those who owned the home at the previous interview but no longer owned it at the time of death. The questions asked about the

disposition of the respondent's main home are different in each survey, leading to different response scales for RAXHOMEDIS_M in the Harmonized MHAS End of Life and RAXHOMEDIS in the Harmonized HRS End of Life.

MHAS Variables Used

```
Wave 2:
    SAB_8B          own property upon spouse's death
    SAB_8C          what happened to the property
Wave 2 Next of Kin:
    SJ1             interview is alone, with couple (alive), both passed awa
    SJ2             was owner of property, house, farm or ranch
    SJ3             what happened to the property
Wave 3:
    SA8B_12         When your spouse died, were you owners of a property?
    SA8C_12         What happened to the property?
Wave 3 Next of Kin:
    SJ1_12          Interviewer: indicate if interview about deceased is ind
    SJ2_12          At death:Was deceased a property owner
    SJ3_12          After death:What happened to deceased's property
Wave 4:
    SA8B_15         When your spouse died, were you owners of a property?
    SA8C_15         What happened to the property?
Wave 4 Next of Kin:
    SJ1_15          Interviewer: Indicate if the interview is individual or
    SJ2_15          At death: Was deceased a property owner
    SJ3_15          After death: What happened to deceased's property
Wave 5:
    SA8B_18         When your spouse died, were you owners of a property?
    SA8C_18         What happened to the property?
Wave 5 Next of Kin:
    SJ1_18          Type of next-of-kin interview
    SJ2_18          At death: Was deceased a property owner
    SJ3_18          After death: What happened to deceased's property
```

Other Property

```
Wave Variable         Label                                                          Type

  1  RAXPRSOLD         raxprsold: r sold assets before death                         Categ
```

Descriptive Statistics

```
Variable           N          Mean      Std Dev      Minimum       Maximum

RAXPRSOLD        4550         0.05        0.23         0.00          1.00
```

Categorical Variable Codes

```
Value--------------------------------|       RAXPRSOLD
.b:skipped-both died                 |           109
.d:dk                                |            65
.m:missing                           |             4
.q:not available this wave           |           661
.r:refuse                            |             4
.s:skipped-spouse ivw                |           230
0.no                                 |          4301
1.yes                                |           249
```

How Constructed

RAXPRSOLD indicates whether the deceased respondent sold any belongings, real estate property or business to pay for costs, such as medical costs, before death, as reported by the proxy. This variable takes answers from the question in the widowhood section of the core interview first, which asks "In order to pay for the expenses associated with the (sickness/accident and) death of your spouse, did you have to sell belongings, spend money that you normally would not have touched, seek help from family, or do something else to get money?", then from the question in the next of kin interview, which asks did the respondent "sell any real estate property or business to pay for costs, such as medical costs, for example." RAXPRSOLD is coded as 0 if the spouse did not report selling belongings or if the proxy reports that the respondent did not sell any belongings, property or business before death. RAXPRSOLD is coded as 1 if the spouse reports selling belongings or if the proxy reports that the respondent sold any belongings, property or business before death. RAXPRSOLD is assigned special missing .s if this question was skipped because the next of kin interview was done by spouse proxy and the information could not be filled in. RAXPRSOLD is assigned special missing .b if both members of a couple passed away in the current wave, but these questions were skipped in error for one of the couple members in the next of kin interview. RAXPRSOLD is assigned special missing value .q in Wave 5 for respondents without a living spouse in the current wave because the question is not asked in the next of kin interview. Don't know, refused, and other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In the Wave 2 next of kin interview, the proxy is asked whether the respondent sold any real estate property or business "in the last _ months of his/her life", which is meant to indicate the period of time between the previous core interview and the respondent's death. In Waves 3 and 4 next of kin interviews, the proxy is asked whether the respondent sold any real estate property or business "in the last year of his/her life". In Wave 5 next of kin interview, this question is not asked.

Differences with the Harmonized HRS End of Life

No directly comparable variable is available in the Harmonized HRS End of Life. The HRS exit interview ascertains whether the respondent owned their main home at the time of death, or whether it was sold or otherwise distributed prior to their death. However, this question in the MHAS next of kin interview asks whether the respondent sold any belongings, real estate property or business since the previous interview and the respondent's death or in the last year of the respondent's life. As such, these questions capture different concepts and RAXPRSOLD is not available in the Harmonized HRS End of Life.

MHAS Variables Used

```
Wave 2:
    K114_1           costs associated with death of spouse
Wave 2 Next of Kin:
    SJ1              interview is alone, with couple (alive), both passed awa
    SJ4              sold property to pay for expenses
Wave 3:
    K114_1_12        Strategies to cover death expenses _Sell assets
Wave 3 Next of Kin:
    SJ1_12           Interviewer: indicate if interview about deceased is ind
    SJ4_12           Last year of life:Did deceased sell property to pay for
Wave 4:
    K114_1_15        Strategies to cover expenses associated to death: Sell a
Wave 4 Next of Kin:
    SJ1_15           Interviewer: Indicate if the interview is individual or
    SJ4_15           Last year of life: Did he/she sell property to pay for h
Wave 5:
    K114_1_18        Strategies to cover expenses associated to death: Sell a
```

Section G: Family Structure

Number of Living Children

Wave	Variable	Label	Type
1	RAXCHILD	raxchild: number of children when r died	Cont
1	RAXCHILDF	raxchildf: flag number of children when r died	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXCHILD	5623	5.45	3.31	0.00	27.00
RAXCHILDF	5623	1.43	0.50	1.00	2.00

Categorical Variable Codes

```
Value--------------------------------|      RAXCHILDF
1.nok-r level                        |         3184
2.core-h level                       |         2439
```

How Constructed

RAXCHILD provides the number of living children the respondent had at the moment they passed away, including biological children, step-children, and adopted children. RAXCHILD takes the number provided by the proxy in the next of kin interview. If there is a living spouse, then this question is skipped in the next of kin interview, and the number of living children reported for the household in the previous core interview is used. RAXCHILD is assigned a value of 0 if the proxy reports that the respondent had no living children when they passed away. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

RAXCHILDF is a flag variable indicating where the value of the number of children came from. RAXCHILDF is coded as 1 if the number of children is taken from the number of the respondent's children provided in the next of kin interview, which is asked at the respondent level. RAXCHILDF is coded as 2 if the number of children is taken from the number of the respondent's and spouse's children in the previous core interview, which is available at the couple level. RAXCHILDF is assigned special missing .m if RAXCHILD is assigned special missing .d, .r, or .m.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

RAXCHILDF is provided in the Harmonized MHAS End of Life to indicate whether the number of children was provided for the respondent in the next of kin interview or was provided for the household in the previous core interview. RAXCHILDF is not provided in the Harmonized HRS End of Life.

MHAS Variables Used

```
Harmonized MHAS:
    H1CHILD        h1child: w1 Number of living children R/P
    H2CHILD        h2child: w2 Number of living children R/P
    H3CHILD        h3child: w3 Number of living children R/P
    H4CHILD        h4child: w4 Number of living children R/P
Wave 2 Next of Kin:
    SG1A           next of kin interview is individual or with couple
    SG1B           had living children when he/she died
    SG2            how many living children
Wave 3 Next of Kin:
    SG1A_12        Interviewer: indicate if interview about deceased is ind
    SG1B_12        Deceased had living children at the time of his/her deat
    SG2_12         How many living children at the time of his/her death
```

```
Wave 4 Next of Kin:
    SG1A_15         Interviewer: Indicate if the interview is individual or
    SG1B_15         Did deceased have living children at the time of his/her
    SG2_15          How many living children at the time of his/her death
Wave 5 Next of Kin:
    SG1A_18         Interviewer: Type of next-of-kin interview
    SG1B_18         Did deceased have living children at the time of his/her
    SG2_18          How many living children at the time of his/her death
```

Section H: Employment History

Whether Working Prior to Death

Wave Variable   Label   Type

  1 RAXWORK   raxwork: r working up until time of death   Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXWORK	5616	0.13	0.34	0.00	1.00

Categorical Variable Codes

```
Value---------------------------------|        RAXWORK
.d:dk                                  |              1
.m:missing                             |              2
.r:refuse                              |              4
0.no                                   |           4861
1.yes                                  |            755
```

How Constructed

RAXWORK indicates whether the deceased respondent was working up until the time of death, according
to the proxy. The proxy is asked "Before [the respondent] passed away, was he/she working, not
working, looking for work?". RAXWORK is coded as 0 if the proxy reported that the respondent was
not working or looking for work. RAXWORK is coded as 1 if the proxy reported that the respondent
was working. Don't know, refused, or other missing responses are assigned special missing .d, .r,
.m, respectively.

Cross Wave Differences in MHAS

No differences known.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is not asked directly whether the respondent did any paid work
since their last interview. Rather, the proxy is asked the month and year the respondent stopped
working either for themselves or for someone else based on a preload indicating whether the
respondent was working at the time of the previous interview. In the MHAS next of kin interview,
the proxy is asked directly whether the respondent was working before they passed away. As such,
RAXWORK in the Harmonized HRS End of Life is based on whether the month and year the respondent was
reported to stop working matches the month and year of the respondent's death. RAXWORK in the
Harmonized MHAS End of Life is based more on a direct report of working or not.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SI1             (name) worked before he/she passed away
Wave 3 Next of Kin:
    SI1_12          Before death: Deceased employment status
Wave 4 Next of Kin:
    SI1_15          Before death: Deceased employment status
Wave 5 Next of Kin:
    SI1_18          Before death: Deceased's employment status
```

	Year Last Worked	

Wave	Variable	Label	Type
1	RAXJLASTY	raxjlasty: r year last worked	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXJLASTY	2844	1995.43	17.24	1931.00	2018.00

How Constructed

RAXJLASTY indicates the year that the respondent left their last job, according to the proxy or based on time of death. The proxy is first asked whether the respondent was working, not working, or looking for work before they passed away. If the proxy responded that the respondent was not working or looking for work, then the proxy is asked what year they left their last job. If the proxy responded that the respondent was working, then this question is not asked. RAXJLASTY takes the value of the year that the respondent stopped working or the year of the respondent's death if the respondent worked up until the time of death. If the respondent had stopped working before the previous interview, then the value of RwJLASTY in the Harmonized MHAS from the previous interview year is carried forward to RAXJLASTY. Special missing .n is assigned to RAXJLASTY if the proxy reports that the respondent never worked in a business, self-employed activity, or as an assistant without pay in Waves 2 through 4, or if the respondent reported never having a job for which they received a payment or profit in their previous interview in any wave. Special missing .q is assigned to RAXJLASTY in Wave 5 if the proxy responded that the respondent was not working or looking for work because the question about what year they left their last job is not asked in the next of kin interview. Special missing .s is assigned to RAXJLASTY if this information is not available because the respondent's last core wave was Wave 1, in which this question was not asked. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In the Wave 5 next of kin interview, the questions about whether the respondent ever worked and what year the respondent left their last job are not asked.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy provides the month and year last worked separately if the respondent worked for themselves or if the respondent worked for someone else. In the MHAS next of kin interview, the proxy provides only the year last worked if the respondent was not working or looking for work. As such, RAXJLASTM is not available in the Harmonized MHAS End of Life as it is in the Harmonized HRS End of Life.

For any differences in the construction of RwJLASTY, which is used in the construction of RAXJLASTY, please see "Year Last Job Ended" in the Harmonized MHAS codebook.

MHAS Variables Used

```
Harmonized MHAS:
    R2JLASTY       r2jlasty: w2 R Year last job ended
    R3JLASTY       r3jlasty: w3 R Year last job ended
    R4JLASTY       r4jlasty: w4 R Year last job ended
Wave 1:
    I1             ever had a job
Wave 2:
    SAB_8A2        year spouse passed away
Wave 2 Next of Kin:
    SA8A_2         when did (name) die - year
    SI4            ever worked without pay
    SI6            year left his/her last job
Wave 3:
    SA8A2_12       Year deceased passed away
```

```
Wave 3 Next of Kin:
    SA8_2_12        Year deceased passed away
    SI4_12          Was deceased ever self-employed/employed/working without
    SI6_12          The year deceased left his/her last job
Wave 4:
    SA8A2_15        Year deceased passed away
Wave 4 Next of Kin:
    SA8_2_15        Year deceased passed away
    SI4_15          Did deceased ever worked in a business/self-employed/as
    SI6_15          Year deceased left his/her last job
```

Section L: Assistance and Caregiving

Activities of Daily Living: Whether Received Any Care

Wave	Variable	Label	Type
1	RAXRACANY	raxracany: R received any care for ADLs	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRACANY	5603	0.61	0.49	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|       RAXRACANY
.d:dk                                 |            3
.j:didn't do activities              |            3
.m:missing                            |            5
.r:refuse                             |            4
.t:couldn't do activities             |            5
0.no                                  |         2199
1.yes                                 |         3404
```

How Constructed

RAXRACANY indicates whether, in the last three months of life, the respondent received any care for difficulties with activities of daily living (ADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. RAXRACANY is assigned a value of 0 if the respondent received no help with any ADL activity. RAXRACANY is assigned a value of 1 if someone helped the respondent with at least one ADL activity. In Wave 2, RAXRACANY is assigned special missings .t and .j if the proxy reported that the respondent couldn't do the activities and didn't do the activities, respectively. Don't know, refused, and other missing responses are assigned special missing .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't do or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1            received help for doing certain activities
Wave 3 Next of Kin:
    SH1_12         Due to health problems: Deceased receive help with certa
Wave 4 Next of Kin:
    SH1_15         Due to health problems: Deceased receive help with at le
Wave 5 Next of Kin:
    SH1_18         Due to health problems: Deceased receive help with at le
```

Activities of Daily Living: Whether Received Any Informal Care

```
Wave Variable         Label                                                       Type

  1  RAXRACAANY        raxracaany: R received any informal care for ADLs           Categ
```

Descriptive Statistics

```
Variable              N         Mean      Std Dev    Minimum     Maximum

RAXRACAANY          5584        0.59        0.49       0.00        1.00
```

Categorical Variable Codes

```
Value--------------------------------|    RAXRACAANY
.d:dk                                |             3
.j:didn't do activities              |             1
.m:missing                           |            28
.r:refuse                            |             4
.t:couldn't do activities            |             3
0.no                                 |          2272
1.yes                                |          3312
```

How Constructed

RAXRACAANY indicates whether, in the last three months of life, the respondent received any informal care for difficulties with activities of daily living (ADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. If the respondent received help, then the proxy is asked to report all the people who helped the respondent with ADL activities. The following relationships are considered to provide informal care: spouse, child, child-in-law, grandchild, parent, other relative, other person.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRACAANY is assigned a value of 0 if the respondent received help with at least one ADL but received no help from an informal caregiver, or if the respondent did not receive any help with ADL activities. RAXRACAANY is assigned a value of 1 if the respondent received help with at least one ADL and an informal caregiver helped with at least one of the activities. In Wave 2, RAXRACAANY is assigned special missing value .j if the proxy reports that the respondent didn't do the activities, and is assigned special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, RAXRACAANY is assigned special missing value .a if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and

IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible in the Harmonized HRS End of Life and Harmonized MHAS End of Life.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1             received help for doing certain activities
    SH3             relationship
    SH4             registration number
Wave 3 Next of Kin:
    SH1_12          Due to health problems: Deceased receive help with certa
    SH3_10_12       Assistant's registration number
    SH3_1_12        Assistant's registration number
    SH3_2_12        Assistant's registration number
    SH3_3_12        Assistant's registration number
    SH3_4_12        Assistant's registration number
    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
Wave 4 Next of Kin:
    SH1_15          Due to health problems: Deceased receive help with at le
    SH3_10_15       Assistant's registration number
    SH3_1_15        Assistant's registration number
    SH3_2_15        Assistant's registration number
    SH3_3_15        Assistant's registration number
    SH3_4_15        Assistant's registration number
    SH3_5_15        Assistant's registration number
    SH3_6_15        Assistant's registration number
    SH3_7_15        Assistant's registration number
    SH3_8_15        Assistant's registration number
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
```

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    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Received Informal Care from Spouse

Wave	Variable	Label	Type
1	RAXRASCARE	raxrascare: R received informal care from spouse for ADLs	Categ
1	RAXRASCAREN	raxrascaren: # spouses who helped R with ADLs	Cont
1	RAXRASCAREDPM	raxrascaredpm: days/month spouse helped R with ADLs	Cont
1	RAXRASCAREDPMM	raxrascaredpmm: R # spouse missing days of help for ADLs	Cont
1	RAXRASCAREHR	raxrascarehr: hours/day spouse helped R with ADLs	Cont
1	RAXRASCAREHRM	raxrascarehrm: R # spouse missing hours of help for ADLs	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRASCARE	3377	0.19	0.39	0.00	1.00
RAXRASCAREN	3377	0.20	0.43	0.00	2.00
RAXRASCAREDPM	2680	6.40	13.11	0.00	60.00
RAXRASCAREDPMM	2680	0.00	0.00	0.00	0.00
RAXRASCAREHR	2679	3.28	7.69	0.00	48.00
RAXRASCAREHRM	2680	0.00	0.02	0.00	1.00

Categorical Variable Codes

```
Value-------------------------------|      RAXRASCARE
.d:dk                               |             3
.h:received no help                 |          2199
.j:didn't do activities             |             1
.m:missing                          |            36
.r:refuse                           |             4
.t:couldn't do activities           |             3
0.no                                |          2731
1.yes                               |           646
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's spouse helped the respondent with any ADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The proxy is first asked whether anyone helped the respondent with any ADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with ADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRASCARE, RAXRASCAREN, RAXRASCAREDPM, RAXRASCAREDPMM, RAXRASCAREHR, and RAXRASCAREHRM include help from the respondent's spouse.

RAXRASCARE indicates whether the respondent's spouse helped the respondent with any ADL needs. RAXRASCARE is coded as 0 if the respondent received no assistance from their spouse; and is coded as 1 if the respondent did receive help from their spouse. RAXRASCAREN indicates the number of spouses who were reported to help the respondent with any ADL needs. Cases of multiple spouse reports are most often caused when a spouse helper with a matching spouse roster number and a spouse helper with no roster number are both reported.

RAXRASCAREDPM indicates the total number of days in the last month the respondent's spouse helped the respondent with ADL needs. If the proxy reports that the respondent received help every day from their spouse, then a value of 30 is assumed. RAXRASCAREDPM is the sum of days per month for all spouse helpers, and so values can be over 30 days. RAXRASCAREDPM is calculated as long as there is one non-missing value. RAXRASCAREDPM is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRASCAREDPMM indicates the number of spouses who helped the respondent for whom no value of days was reported and so was not accounted for in RAXRASCAREDPM. RAXRASCAREDPMM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRASCAREDPM and RAXRASCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRASCAREHR indicates the total number of hours per day the respondent's spouse helped the respondent with any ADL needs on the days that the respondent receives help. Proxies are asked, on days the respondent's spouse helped, how many hours per day that was. If the proxy reports less than an hour for their spouse, then a 1 is assumed. RAXRASCAREHR is the sum of hours per day for all spouse helpers, and so values can be over 24 hours. RAXRASCAREHR is calculated as long as there is one non-missing value. RAXRASCAREHR is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRASCAREHRM indicates the number of spouses who helped the respondent for whom no value of hours was reported and so was not accounted for in RAXRASCAREHR. RAXRASCAREHRM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRASCAREHR and RAXRASCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible. These variables in the Harmonized HRS include help provided by the respondent's spouse or former spouse, whereas these variables only include help provided by the respondent's spouse in the Harmonized MHAS.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

RAXRASCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRASCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

Wave 2 Next of Kin:
```
    SH1           received help for doing certain activities
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
```
Wave 3 Next of Kin:
```
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
    SH3_9_12      Assistant's registration number
    SH4_10_12     Assistant's relationship to the deceased
    SH4_1_12      Assistant's relationship to the deceased
    SH4_2_12      Assistant's relationship to the deceased
    SH4_3_12      Assistant's relationship to the deceased
    SH4_4_12      Assistant's relationship to the deceased
    SH4_5_12      Assistant's relationship to the deceased
    SH4_6_12      Assistant's relationship to the deceased
    SH4_7_12      Assistant's relationship to the deceased
    SH4_8_12      Assistant's relationship to the deceased
    SH4_9_12      Assistant's relationship to the deceased
    SH5_10_12     Last month of life:How many days did he/she assist the d
    SH5_1_12      Last month of life:How many days did he/she assist the d
    SH5_2_12      Last month of life:How many days did he/she assist the d
    SH5_3_12      Last month of life:How many days did he/she assist the d
    SH5_4_12      Last month of life:How many days did he/she assist the d
    SH5_5_12      Last month of life:How many days did he/she assist the d
    SH5_6_12      Last month of life:How many days did he/she assist the d
    SH5_7_12      Last month of life:How many days did he/she assist the d
    SH5_8_12      Last month of life:How many days did he/she assist the d
    SH5_9_12      Last month of life:How many days did he/she assist the d
    SH6_10_12     Last month of life:How many hours per day did he/she ass
    SH6_1_12      Last month of life:How many hours per day did he/she ass
    SH6_2_12      Last month of life:How many hours per day did he/she ass
    SH6_3_12      Last month of life:How many hours per day did he/she ass
    SH6_4_12      Last month of life:How many hours per day did he/she ass
    SH6_5_12      Last month of life:How many hours per day did he/she ass
    SH6_6_12      Last month of life:How many hours per day did he/she ass
    SH6_7_12      Last month of life:How many hours per day did he/she ass
    SH6_8_12      Last month of life:How many hours per day did he/she ass
    SH6_9_12      Last month of life:How many hours per day did he/she ass
```
Wave 4 Next of Kin:
```
    SH1_15        Due to health problems: Deceased receive help with at le
    SH3_10_15     Assistant's registration number
    SH3_1_15      Assistant's registration number
    SH3_2_15      Assistant's registration number
    SH3_3_15      Assistant's registration number
    SH3_4_15      Assistant's registration number
    SH3_5_15      Assistant's registration number
    SH3_6_15      Assistant's registration number
```

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    SH3_7_15        Assistant's registration number
    SH3_8_15        Assistant's registration number
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH5_10_15       Last month of life: How many days did he/she assist the
    SH5_1_15        Last month of life: How many days did he/she assist the
    SH5_2_15        Last month of life: How many days did he/she assist the
    SH5_3_15        Last month of life: How many days did he/she assist the
    SH5_4_15        Last month of life: How many days did he/she assist the
    SH5_5_15        Last month of life: How many days did he/she assist the
    SH5_6_15        Last month of life: How many days did he/she assist the
    SH5_7_15        Last month of life: How many days did he/she assist the
    SH5_8_15        Last month of life: How many days did he/she assist the
    SH5_9_15        Last month of life: How many days did he/she assist the
    SH6_10_15       Last month of life: How many hours per day did he/she as
    SH6_1_15        Last month of life: How many hours per day did he/she as
    SH6_2_15        Last month of life: How many hours per day did he/she as
    SH6_3_15        Last month of life: How many hours per day did he/she as
    SH6_4_15        Last month of life: How many hours per day did he/she as
    SH6_5_15        Last month of life: How many hours per day did he/she as
    SH6_6_15        Last month of life: How many hours per day did he/she as
    SH6_7_15        Last month of life: How many hours per day did he/she as
    SH6_8_15        Last month of life: How many hours per day did he/she as
    SH6_9_15        Last month of life: How many hours per day did he/she as
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Received Informal Care from Children or Grandchildren

Wave	Variable	Label	Type
1	RAXRACCARE	raxraccare: R received informal care from kids/grandkids for	Categ
1	RAXRACCAREN	raxraccaren: # kids/grandkids who helped R with ADLs	Cont
1	RAXRACCAREDPM	raxraccaredpm: days/month kids/grandkids helped R with ADLs	Cont
1	RAXRACCAREDPMM	raxraccaredpmm: R # kids/grandkids missing days of help for	Cont
1	RAXRACCAREHR	raxraccarehr: hours/day kids/grandkids helped R with ADLs	Cont
1	RAXRACCAREHRM	raxraccarehrm: R # kids/grandkids missing hours of help for	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRACCARE	3382	0.79	0.41	0.00	1.00
RAXRACCAREN	3382	1.27	1.09	0.00	10.00
RAXRACCAREDPM	2680	31.32	28.37	0.00	300.00
RAXRACCAREDPMM	2680	0.00	0.00	0.00	0.00
RAXRACCAREHR	2680	13.46	15.23	0.00	144.00
RAXRACCAREHRM	2680	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value-------------------------------|    RAXRACCARE
.d:dk                               |             3
.h:received no help                 |          2199
.j:didn't do activities             |             3
.m:missing                          |            27
.r:refuse                           |             4
.t:couldn't do activities           |             5
0.no                                |           724
1.yes                               |          2658
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's children or grandchildren helped the respondent with any ADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The proxy is first asked whether anyone helped the respondent with any ADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with ADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRACCARE, RAXRACCAREN, RAXRACCAREDPM, RAXRACCAREDPMM, RAXRACCAREHR, and RAXRACCAREHRM include help from a child, child-in-law, or grandchild.

RAXRACCARE indicates whether any of the respondent's children or grandchildren helped the respondent with ADL needs. RAXRACCAREN indicates the number of the respondent's children or grandchildren who helped the respondent with ADL needs. RAXRACCARE is coded as 0 if none of the respondent's children or grandchildren helped the respondent with ADLs; and is coded as 1 if at least one of the respondent's children or grandchildren helped the respondent with ADLs.

RAXRACCAREDPM indicates the number of total days per month the respondent's children or grandchildren helped the respondent with ADL needs. If the proxy reports that the respondent received help every day from that child or grandchild, then a value of 30 is assumed. RAXRACCAREDPM is the sum of days per month for all children or grandchildren helpers, and so values can be over 30 days. RAXRACCAREDPM is calculated as long as there is one non-missing value. RAXRACCAREDPM is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRACCAREDPMM indicates the number of children or grandchildren who helped the respondent for whom no value of days was reported and was not accounted for in RAXRACCAREDPM. RAXRACCAREDPMM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRACCAREDPM and RAXRACCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRACCAREHR indicates the number of hours per day the respondent's children or grandchildren helped the respondent with ADL needs. Proxies are asked, on days the respondent's children or grandchildren helped, how many hours per day that was. If the proxy reports less than an hour for that child or grandchild, then a 1 is assumed. RAXRACCAREHR is the sum of hours per day for all children or grandchildren helpers, and so values can be over 24 hours. RAXRACCAREHR is calculated as long as there is one non-missing value. RAXRACCAREHR is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRACCAREHRM indicates the number of children or grandchildren who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRACCAREHR. RAXRACCAREHRM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRACCAREHR and RAXRACCAREHRM in Wave 5 because the question about how hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast,

asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

RAXRACCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRACCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1          received help for doing certain activities
    SH3          relationship
    SH4          registration number
    SH5          how many days did they help (name)
    SH6          how many hours a day
Wave 3 Next of Kin:
    SH1_12       Due to health problems: Deceased receive help with certa
    SH3_10_12    Assistant's registration number
    SH3_1_12     Assistant's registration number
    SH3_2_12     Assistant's registration number
    SH3_3_12     Assistant's registration number
    SH3_4_12     Assistant's registration number
    SH3_5_12     Assistant's registration number
    SH3_6_12     Assistant's registration number
    SH3_7_12     Assistant's registration number
    SH3_8_12     Assistant's registration number
    SH3_9_12     Assistant's registration number
    SH4_10_12    Assistant's relationship to the deceased
    SH4_1_12     Assistant's relationship to the deceased
    SH4_2_12     Assistant's relationship to the deceased
    SH4_3_12     Assistant's relationship to the deceased
    SH4_4_12     Assistant's relationship to the deceased
    SH4_5_12     Assistant's relationship to the deceased
    SH4_6_12     Assistant's relationship to the deceased
    SH4_7_12     Assistant's relationship to the deceased
    SH4_8_12     Assistant's relationship to the deceased
    SH4_9_12     Assistant's relationship to the deceased
    SH5_10_12    Last month of life:How many days did he/she assist the d
    SH5_1_12     Last month of life:How many days did he/she assist the d
    SH5_2_12     Last month of life:How many days did he/she assist the d
    SH5_3_12     Last month of life:How many days did he/she assist the d
    SH5_4_12     Last month of life:How many days did he/she assist the d
    SH5_5_12     Last month of life:How many days did he/she assist the d
    SH5_6_12     Last month of life:How many days did he/she assist the d
    SH5_7_12     Last month of life:How many days did he/she assist the d
    SH5_8_12     Last month of life:How many days did he/she assist the d
    SH5_9_12     Last month of life:How many days did he/she assist the d
    SH6_10_12    Last month of life:How many hours per day did he/she ass
    SH6_1_12     Last month of life:How many hours per day did he/she ass
    SH6_2_12     Last month of life:How many hours per day did he/she ass
    SH6_3_12     Last month of life:How many hours per day did he/she ass
    SH6_4_12     Last month of life:How many hours per day did he/she ass
    SH6_5_12     Last month of life:How many hours per day did he/she ass
    SH6_6_12     Last month of life:How many hours per day did he/she ass
    SH6_7_12     Last month of life:How many hours per day did he/she ass
    SH6_8_12     Last month of life:How many hours per day did he/she ass
    SH6_9_12     Last month of life:How many hours per day did he/she ass
Wave 4 Next of Kin:
    SH1_15       Due to health problems: Deceased receive help with at le
    SH3_10_15    Assistant's registration number
    SH3_1_15     Assistant's registration number
    SH3_2_15     Assistant's registration number
    SH3_3_15     Assistant's registration number
    SH3_4_15     Assistant's registration number
    SH3_5_15     Assistant's registration number
    SH3_6_15     Assistant's registration number
    SH3_7_15     Assistant's registration number
    SH3_8_15     Assistant's registration number
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    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH5_10_15       Last month of life: How many days did he/she assist the
    SH5_1_15        Last month of life: How many days did he/she assist the
    SH5_2_15        Last month of life: How many days did he/she assist the
    SH5_3_15        Last month of life: How many days did he/she assist the
    SH5_4_15        Last month of life: How many days did he/she assist the
    SH5_5_15        Last month of life: How many days did he/she assist the
    SH5_6_15        Last month of life: How many days did he/she assist the
    SH5_7_15        Last month of life: How many days did he/she assist the
    SH5_8_15        Last month of life: How many days did he/she assist the
    SH5_9_15        Last month of life: How many days did he/she assist the
    SH6_10_15       Last month of life: How many hours per day did he/she as
    SH6_1_15        Last month of life: How many hours per day did he/she as
    SH6_2_15        Last month of life: How many hours per day did he/she as
    SH6_3_15        Last month of life: How many hours per day did he/she as
    SH6_4_15        Last month of life: How many hours per day did he/she as
    SH6_5_15        Last month of life: How many hours per day did he/she as
    SH6_6_15        Last month of life: How many hours per day did he/she as
    SH6_7_15        Last month of life: How many hours per day did he/she as
    SH6_8_15        Last month of life: How many hours per day did he/she as
    SH6_9_15        Last month of life: How many hours per day did he/she as
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Received Informal Care from Relatives

```
Wave Variable          Label                                                        Type

  1  RAXRARCARE        raxrarcare: R received informal care from relatives for ADLs Categ

  1  RAXRARCAREN       raxrarcaren: # relatives who helped R with ADLs              Cont

  1  RAXRARCAREDPM     raxrarcaredpm: days/month relatives helped R with ADLs       Cont

  1  RAXRARCAREDPMM    raxrarcaredpmm: R # relatives missing days of help for ADLs  Cont

  1  RAXRARCAREHR      raxrarcarehr: hours/day relatives helped R with ADLs         Cont

  1  RAXRARCAREHRM     raxrarcarehrm: R # relatives missing hours of help for ADLs  Cont
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRARCARE	3379	0.07	0.26	0.00	1.00
RAXRARCAREN	3379	0.10	0.42	0.00	10.00
RAXRARCAREDPM	2680	2.46	11.52	0.00	300.00
RAXRARCAREDPMM	2680	0.00	0.00	0.00	0.00
RAXRARCAREHR	2680	1.02	5.07	0.00	120.00
RAXRARCAREHRM	2680	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value-------------------------------|      RAXRARCARE
.d:dk                               |                3
.h:received no help                 |             2199
.j:didn't do activities             |                3
.m:missing                          |               30
.r:refuse                           |                4
.t:couldn't do activities           |                5
0.no                                |             3142
1.yes                               |              237
```

How Constructed

The following variables indicate whether, in the last three months of life, any of the respondent's relatives helped the respondent with any ADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The proxy is first asked whether anyone helped the respondent with any ADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with ADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRARCARE, RAXRARCAREN, RAXRARCAREDPM, RAXRARCAREDPMM, RAXRARCAREHR, and RAXRARCAREHRM include help from the respondent's parent or other relative.

RAXRARCARE indicates whether any of the respondent's relatives helped the respondent with ADL needs. RAXRARCAREN indicates the number of the respondent's relatives who helped the respondent with ADL needs. RAXRARCARE is coded as 0 if none of the respondent's relatives helped the respondent with ADLs; and is coded as 1 if at least one of the respondent's relatives helped the respondent with ADLs.

RAXRARCAREDPM indicates the number of total days per month the respondent's relatives help the respondent with ADL needs. If the proxy reports that the respondent received help every day from that relative, then a value of 30 is assumed. RAXRARCAREDPM is the sum of days per month for all relative helpers, and so values can be over 30 days. RAXRARCAREDPM is calculated as long as there is one non-missing value. RAXRARCAREDPM is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRARCAREDPMM indicates the number of relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRARCAREDPM. RAXRARCAREDPMM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRARCAREDPM and RAXRARCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRARCAREHR indicates the number of hours per day the respondent's relatives helped the respondent with ADL needs. Proxies are asked, on days the respondent's relatives helped, how many hours per day that was. If the proxy reports less than an hour for that relative, then a 1 is assumed. RAXRARCAREHR is the sum of hours per day for all relative helpers, and so values can be over 24 hours. RAXRARCAREHR is calculated as long as there is one non-missing value. RAXRARCAREHR is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRARCAREHRM indicates the number of relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRARCAREHR. RAXRARCAREHRM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRARCAREHR and RAXRARCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast, asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

RAXRARCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRARCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1           received help for doing certain activities
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
Wave 3 Next of Kin:
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
    SH3_9_12      Assistant's registration number
    SH4_10_12     Assistant's relationship to the deceased
    SH4_1_12      Assistant's relationship to the deceased
    SH4_2_12      Assistant's relationship to the deceased
    SH4_3_12      Assistant's relationship to the deceased
    SH4_4_12      Assistant's relationship to the deceased
    SH4_5_12      Assistant's relationship to the deceased
    SH4_6_12      Assistant's relationship to the deceased
    SH4_7_12      Assistant's relationship to the deceased
    SH4_8_12      Assistant's relationship to the deceased
    SH4_9_12      Assistant's relationship to the deceased
    SH5_10_12     Last month of life:How many days did he/she assist the d
    SH5_1_12      Last month of life:How many days did he/she assist the d
    SH5_2_12      Last month of life:How many days did he/she assist the d
    SH5_3_12      Last month of life:How many days did he/she assist the d
    SH5_4_12      Last month of life:How many days did he/she assist the d
    SH5_5_12      Last month of life:How many days did he/she assist the d
    SH5_6_12      Last month of life:How many days did he/she assist the d
    SH5_7_12      Last month of life:How many days did he/she assist the d
    SH5_8_12      Last month of life:How many days did he/she assist the d
    SH5_9_12      Last month of life:How many days did he/she assist the d
    SH6_10_12     Last month of life:How many hours per day did he/she ass
    SH6_1_12      Last month of life:How many hours per day did he/she ass
    SH6_2_12      Last month of life:How many hours per day did he/she ass
    SH6_3_12      Last month of life:How many hours per day did he/she ass
    SH6_4_12      Last month of life:How many hours per day did he/she ass
    SH6_5_12      Last month of life:How many hours per day did he/she ass
    SH6_6_12      Last month of life:How many hours per day did he/she ass
    SH6_7_12      Last month of life:How many hours per day did he/she ass
    SH6_8_12      Last month of life:How many hours per day did he/she ass
    SH6_9_12      Last month of life:How many hours per day did he/she ass
Wave 4 Next of Kin:
    SH1_15        Due to health problems: Deceased receive help with at le
    SH3_10_15     Assistant's registration number
    SH3_1_15      Assistant's registration number
    SH3_2_15      Assistant's registration number
    SH3_3_15      Assistant's registration number
    SH3_4_15      Assistant's registration number
    SH3_5_15      Assistant's registration number
    SH3_6_15      Assistant's registration number
    SH3_7_15      Assistant's registration number
    SH3_8_15      Assistant's registration number
    SH3_9_15      Assistant's registration number
    SH4_10_15     Assistant's relationship to the deceased
    SH4_1_15      Assistant's relationship to the deceased
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    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH5_10_15       Last month of life: How many days did he/she assist the
    SH5_1_15        Last month of life: How many days did he/she assist the
    SH5_2_15        Last month of life: How many days did he/she assist the
    SH5_3_15        Last month of life: How many days did he/she assist the
    SH5_4_15        Last month of life: How many days did he/she assist the
    SH5_5_15        Last month of life: How many days did he/she assist the
    SH5_6_15        Last month of life: How many days did he/she assist the
    SH5_7_15        Last month of life: How many days did he/she assist the
    SH5_8_15        Last month of life: How many days did he/she assist the
    SH5_9_15        Last month of life: How many days did he/she assist the
    SH6_10_15       Last month of life: How many hours per day did he/she as
    SH6_1_15        Last month of life: How many hours per day did he/she as
    SH6_2_15        Last month of life: How many hours per day did he/she as
    SH6_3_15        Last month of life: How many hours per day did he/she as
    SH6_4_15        Last month of life: How many hours per day did he/she as
    SH6_5_15        Last month of life: How many hours per day did he/she as
    SH6_6_15        Last month of life: How many hours per day did he/she as
    SH6_7_15        Last month of life: How many hours per day did he/she as
    SH6_8_15        Last month of life: How many hours per day did he/she as
    SH6_9_15        Last month of life: How many hours per day did he/she as
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Received Informal Care from Other Individuals

Wave	Variable	Label	Type
1	RAXRAFCARE	raxrafcare: R received informal care from non-relatives for	Categ
1	RAXRAFCAREN	raxrafcaren: # non-relatives who helped R with ADLs	Cont
1	RAXRAFCAREDPM	raxrafcaredpm: days/month non-relatives helped R with ADLs	Cont
1	RAXRAFCAREDPMM	raxrafcaredpmm: R # non-relatives missing days of help for A	Cont
1	RAXRAFCAREHR	raxrafcarehr: hours/day non-relatives helped R with ADLs	Cont
1	RAXRAFCAREHRM	raxrafcarehrm: R # non-relatives missing hours of help for A	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRAFCARE	3378	0.05	0.21	0.00	1.00
RAXRAFCAREN	3378	0.05	0.24	0.00	2.00
RAXRAFCAREDPM	2680	1.00	5.52	0.00	60.00
RAXRAFCAREDPMM	2680	0.00	0.00	0.00	0.00
RAXRAFCAREHR	2680	0.42	2.67	0.00	24.00
RAXRAFCAREHRM	2680	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value-------------------------------|      RAXRAFCARE
.d:dk                               |                3
.h:received no help                 |             2199
.j:didn't do activities             |                3
.m:missing                          |               31
.r:refuse                           |                4
.t:couldn't do activities           |                5
0.no                                |             3221
1.yes                               |              157
```

How Constructed

The following variables indicate whether, in the last three months of life, any non-relative helped the respondent with any ADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The proxy is first asked whether anyone helped the respondent with any ADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with ADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRAFCARE, RAXRAFCAREN, RAXRAFCAREDPM, RAXRAFCAREDPMM, RAXRAFCAREHR, and RAXRAFCAREHRM include help from another person (not their spouse, child, child-in-law, grandchild, parent, other relative, or paid person).

RAXRAFCARE indicates whether any of the respondent's non-relatives helped the respondent with ADL needs. RAXRAFCAREN indicates the number of the respondent's non-relatives who helped the respondent with ADL needs. RAXRAFCARE is coded as 0 if none of the respondent's non-relatives helped the respondent with ADLs; and is coded as 1 if at least one of the respondent's non-relatives helped the respondent with ADLs.

RAXRAFCAREDPM indicates the number of total days per month the respondent's non-relatives help the respondent with ADL needs. If the proxy reports that the respondent received help every day from that non-relative, then a value of 30 is assumed. RAXRAFCAREDPM is the sum of days per month for all non-relative helpers, and so values can be over 30 days. RAXRAFCAREDPM is calculated as long as there is one non-missing value. RAXRAFCAREDPM is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRAFCAREDPMM indicates the number of non-relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRAFCAREDPM. RAXRAFCAREDPMM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRAFCAREDPM and RAXRAFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRAFCAREHR indicates the number of hours per day the respondent's non-relatives helped the respondent with ADL needs. Proxies are asked, on days the respondent's non-relatives helped, how many hours per day that was. If the proxy reports less than an hour for that non-relative, then a 1 is assumed. RAXRAFCAREHR is the sum of hours per day for all non-relative helpers, and so values can be over 24 hours. RAXRAFCAREHR is calculated as long as there is one non-missing value. RAXRAFCAREHRE is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRAFCAREHRM indicates the number of non-relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRAFCAREHR. RAXRAFCAREHRM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRAFCAREHR and RAXRAFCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast,

asks for the relationships of people who help with walking across a room, bathing, eating, getting
in and out of bed, and using the toilet, but does not include dressing.

RAXRAFCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received
help, while RAXRAFCAREDPM in the Harmonized MHAS End of Life indicates the days per month the
respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1           received help for doing certain activities
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
Wave 3 Next of Kin:
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
    SH3_9_12      Assistant's registration number
    SH4_10_12     Assistant's relationship to the deceased
    SH4_1_12      Assistant's relationship to the deceased
    SH4_2_12      Assistant's relationship to the deceased
    SH4_3_12      Assistant's relationship to the deceased
    SH4_4_12      Assistant's relationship to the deceased
    SH4_5_12      Assistant's relationship to the deceased
    SH4_6_12      Assistant's relationship to the deceased
    SH4_7_12      Assistant's relationship to the deceased
    SH4_8_12      Assistant's relationship to the deceased
    SH4_9_12      Assistant's relationship to the deceased
    SH5_10_12     Last month of life:How many days did he/she assist the d
    SH5_1_12      Last month of life:How many days did he/she assist the d
    SH5_2_12      Last month of life:How many days did he/she assist the d
    SH5_3_12      Last month of life:How many days did he/she assist the d
    SH5_4_12      Last month of life:How many days did he/she assist the d
    SH5_5_12      Last month of life:How many days did he/she assist the d
    SH5_6_12      Last month of life:How many days did he/she assist the d
    SH5_7_12      Last month of life:How many days did he/she assist the d
    SH5_8_12      Last month of life:How many days did he/she assist the d
    SH5_9_12      Last month of life:How many days did he/she assist the d
    SH6_10_12     Last month of life:How many hours per day did he/she ass
    SH6_1_12      Last month of life:How many hours per day did he/she ass
    SH6_2_12      Last month of life:How many hours per day did he/she ass
    SH6_3_12      Last month of life:How many hours per day did he/she ass
    SH6_4_12      Last month of life:How many hours per day did he/she ass
    SH6_5_12      Last month of life:How many hours per day did he/she ass
    SH6_6_12      Last month of life:How many hours per day did he/she ass
    SH6_7_12      Last month of life:How many hours per day did he/she ass
    SH6_8_12      Last month of life:How many hours per day did he/she ass
    SH6_9_12      Last month of life:How many hours per day did he/she ass
Wave 4 Next of Kin:
    SH1_15        Due to health problems: Deceased receive help with at le
    SH3_10_15     Assistant's registration number
    SH3_1_15      Assistant's registration number
    SH3_2_15      Assistant's registration number
    SH3_3_15      Assistant's registration number
    SH3_4_15      Assistant's registration number
    SH3_5_15      Assistant's registration number
    SH3_6_15      Assistant's registration number
    SH3_7_15      Assistant's registration number
    SH3_8_15      Assistant's registration number
```

```
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH5_10_15       Last month of life: How many days did he/she assist the
    SH5_1_15        Last month of life: How many days did he/she assist the
    SH5_2_15        Last month of life: How many days did he/she assist the
    SH5_3_15        Last month of life: How many days did he/she assist the
    SH5_4_15        Last month of life: How many days did he/she assist the
    SH5_5_15        Last month of life: How many days did he/she assist the
    SH5_6_15        Last month of life: How many days did he/she assist the
    SH5_7_15        Last month of life: How many days did he/she assist the
    SH5_8_15        Last month of life: How many days did he/she assist the
    SH5_9_15        Last month of life: How many days did he/she assist the
    SH6_10_15       Last month of life: How many hours per day did he/she as
    SH6_1_15        Last month of life: How many hours per day did he/she as
    SH6_2_15        Last month of life: How many hours per day did he/she as
    SH6_3_15        Last month of life: How many hours per day did he/she as
    SH6_4_15        Last month of life: How many hours per day did he/she as
    SH6_5_15        Last month of life: How many hours per day did he/she as
    SH6_6_15        Last month of life: How many hours per day did he/she as
    SH6_7_15        Last month of life: How many hours per day did he/she as
    SH6_8_15        Last month of life: How many hours per day did he/she as
    SH6_9_15        Last month of life: How many hours per day did he/she as
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Whether Received Any Formal Care

```
Wave Variable         Label                                                      Type

  1  RAXRAFAANY        raxrafaany: R received any formal care for ADLs            Categ
```

Descriptive Statistics

```
Variable              N         Mean      Std Dev    Minimum     Maximum

RAXRAFAANY           5576       0.02       0.15       0.00        1.00
```

Categorical Variable Codes

```
Value-------------------------------|     RAXRAFAANY
.d:dk                               |          3
.j:didn't do activities             |          3
.m:missing                          |         32
.r:refuse                           |          4
.t:couldn't do activities           |          5
0.no                                |       5450
1.yes                               |        126
```

How Constructed

RAXRAFAANY indicates whether, in the last three months of life, the respondent received any formal care for difficulties with activities of daily living (ADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. If the respondent received help, then the proxy is asked to report all the people who helped the respondent with ADL activities. Helpers with a relationship of "paid person" are considered to provide formal care.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRAFAANY is assigned a value of 0 if the respondent received help with at least one ADL but received no help from a formal caregiver, or if the respondent did not receive any help with ADL activities. RAXRAFAANY is assigned a value of 1 if the respondent received help with at least one ADL and a formal caregiver helped with at least one of the activities. In Wave 2, RAXRAFAANY is assigned special missing value .j if the proxy reports that the respondent didn't do the activities, and is assigned special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, RAXRACAANY is assigned special missing value .a if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and

IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible in the Harmonized HRS End of Life and Harmonized MHAS End of Life.

In the Harmonized HRS End of Life, RAXRAFAANY indicates whether the respondent received help from either paid or unpaid formal caregivers, while in the MHAS End of Life, RAXRAFAANY indicates only whether the respondent received help from paid formal caregivers based on the categories of relationships available in each study.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1             received help for doing certain activities
    SH3             relationship
    SH4             registration number
Wave 3 Next of Kin:
    SH1_12          Due to health problems: Deceased receive help with certa
    SH3_10_12       Assistant's registration number
    SH3_1_12        Assistant's registration number
    SH3_2_12        Assistant's registration number
    SH3_3_12        Assistant's registration number
    SH3_4_12        Assistant's registration number
    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
Wave 4 Next of Kin:
    SH1_15          Due to health problems: Deceased receive help with at le
    SH3_10_15       Assistant's registration number
    SH3_1_15        Assistant's registration number
    SH3_2_15        Assistant's registration number
    SH3_3_15        Assistant's registration number
    SH3_4_15        Assistant's registration number
    SH3_5_15        Assistant's registration number
    SH3_6_15        Assistant's registration number
    SH3_7_15        Assistant's registration number
    SH3_8_15        Assistant's registration number
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
```

```
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
```

Activities of Daily Living: Received Formal Care from Paid Professional

Wave	Variable	Label	Type
1	RAXRAPFCARE	raxrapfcare: R received formal care from paid professional f	Categ
1	RAXRAPFCAREN	raxrapfcaren: # paid professionals who helped R with ADLs	Cont
1	RAXRAPFCAREDPM	raxrapfcaredpm: days/month paid professionals helped R with	Cont
1	RAXRAPFCAREDPMM	raxrapfcaredpmm: R # paid professionals missing days of help	Cont
1	RAXRAPFCAREHR	raxrapfcarehr: hours/day paid professionals helped R with AD	Cont
1	RAXRAPFCAREHRM	raxrapfcarehrm: R # paid professionals missing hours of help	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRAPFCARE	3377	0.04	0.19	0.00	1.00
RAXRAPFCAREN	3377	0.04	0.23	0.00	4.00
RAXRAPFCAREDPM	2680	1.08	6.06	0.00	90.00
RAXRAPFCAREDPMM	2680	0.00	0.00	0.00	0.00
RAXRAPFCAREHR	2680	0.47	3.07	0.00	50.00
RAXRAPFCAREHRM	2680	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value-------------------------------|    RAXRAPFCARE
.d:dk                               |              3
.h:received no help                 |           2199
.j:didn't do activities             |              3
.m:missing                          |             32
.r:refuse                           |              4
.t:couldn't do activities           |              5
0.no                                |           3251
1.yes                               |            126
```

How Constructed

The following variables indicate whether, in the last three months of life, paid formal caregivers helped the respondent with any ADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The proxy is first asked whether anyone helped the respondent with any ADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with ADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRAPFCARE, RAXRAPFCAREN, RAXRAPFCAREDPM, RAXRAPFCAREDPMM, RAXRAPFCAREHR, and RAXRAPFCAREHRM include help from a paid person.

RAXRAPFCARE indicates whether any paid professionals helped the respondent with ADL needs. RAXRAPFCAREN indicates the number of paid professionals who helped the respondent with ADL needs. RAXRAPFCARE is coded as 0 if no paid professionals helped the respondent with ADLs; and is coded as 1 if at least one paid professional helped the respondent with ADLs.

RAXRAPFCAREDPM indicates the number of total days per month paid professionals help the respondent with ADL needs. If the proxy reports that the respondent received help every day from that paid professional, then a value of 30 is assumed. RAXRAPFCAREDPM is the sum of days per month for all paid professional helpers, and so values can be over 30 days. RAXRAPFCAREDPM is calculated as long as there is one non-missing value. RAXRAPFCAREDPM is assigned a value of 0 if the respondent did not receive help from any paid professionals. RAXRAPFCAREDPMM indicates the number of paid professionals who helped the respondent for whom no value of days was reported and was not accounted for in RAXRAPFCAREDPM. RAXRAPFCAREDPMM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRAPFCAREDPM and RAXRAPFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRAPFCAREHR indicates the number of hours per day paid professionals helped the respondent with ADL needs. Proxies are asked, on days paid professionals helped, how many hours per day that was. If the proxy reports less than an hour for that paid professional, then a 1 is assumed. RAXRAPFCAREHR is the sum of hours per day for all paid professional helpers, and so values can be over 24 hours. RAXRAPFCAREHR is calculated as long as there is one non-missing value. RAXRAPFCAREHR is assigned a value of 0 if the respondent did not receive help from any paid professionals. RAXRAPFCAREHRM indicates the number of paid professionals who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRAPFCAREHR. RAXRAPFCAREHRM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRAPFCAREHR and RAXRAPFCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast, asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

RAXRAPFCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRAPFCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1           received help for doing certain activities
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
Wave 3 Next of Kin:
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
    SH3_9_12      Assistant's registration number
    SH4_10_12     Assistant's relationship to the deceased
    SH4_1_12      Assistant's relationship to the deceased
    SH4_2_12      Assistant's relationship to the deceased
    SH4_3_12      Assistant's relationship to the deceased
    SH4_4_12      Assistant's relationship to the deceased
    SH4_5_12      Assistant's relationship to the deceased
    SH4_6_12      Assistant's relationship to the deceased
    SH4_7_12      Assistant's relationship to the deceased
    SH4_8_12      Assistant's relationship to the deceased
    SH4_9_12      Assistant's relationship to the deceased
    SH5_10_12     Last month of life:How many days did he/she assist the d
    SH5_1_12      Last month of life:How many days did he/she assist the d
    SH5_2_12      Last month of life:How many days did he/she assist the d
    SH5_3_12      Last month of life:How many days did he/she assist the d
    SH5_4_12      Last month of life:How many days did he/she assist the d
    SH5_5_12      Last month of life:How many days did he/she assist the d
    SH5_6_12      Last month of life:How many days did he/she assist the d
    SH5_7_12      Last month of life:How many days did he/she assist the d
    SH5_8_12      Last month of life:How many days did he/she assist the d
    SH5_9_12      Last month of life:How many days did he/she assist the d
    SH6_10_12     Last month of life:How many hours per day did he/she ass
    SH6_1_12      Last month of life:How many hours per day did he/she ass
    SH6_2_12      Last month of life:How many hours per day did he/she ass
    SH6_3_12      Last month of life:How many hours per day did he/she ass
    SH6_4_12      Last month of life:How many hours per day did he/she ass
    SH6_5_12      Last month of life:How many hours per day did he/she ass
    SH6_6_12      Last month of life:How many hours per day did he/she ass
    SH6_7_12      Last month of life:How many hours per day did he/she ass
    SH6_8_12      Last month of life:How many hours per day did he/she ass
    SH6_9_12      Last month of life:How many hours per day did he/she ass
Wave 4 Next of Kin:
    SH1_15        Due to health problems: Deceased receive help with at le
    SH3_10_15     Assistant's registration number
    SH3_1_15      Assistant's registration number
    SH3_2_15      Assistant's registration number
    SH3_3_15      Assistant's registration number
    SH3_4_15      Assistant's registration number
    SH3_5_15      Assistant's registration number
    SH3_6_15      Assistant's registration number
    SH3_7_15      Assistant's registration number
    SH3_8_15      Assistant's registration number
    SH3_9_15      Assistant's registration number
```

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    SH4_10_15      Assistant's relationship to the deceased
    SH4_1_15       Assistant's relationship to the deceased
    SH4_2_15       Assistant's relationship to the deceased
    SH4_3_15       Assistant's relationship to the deceased
    SH4_4_15       Assistant's relationship to the deceased
    SH4_5_15       Assistant's relationship to the deceased
    SH4_6_15       Assistant's relationship to the deceased
    SH4_7_15       Assistant's relationship to the deceased
    SH4_8_15       Assistant's relationship to the deceased
    SH4_9_15       Assistant's relationship to the deceased
    SH5_10_15      Last month of life: How many days did he/she assist the
    SH5_1_15       Last month of life: How many days did he/she assist the
    SH5_2_15       Last month of life: How many days did he/she assist the
    SH5_3_15       Last month of life: How many days did he/she assist the
    SH5_4_15       Last month of life: How many days did he/she assist the
    SH5_5_15       Last month of life: How many days did he/she assist the
    SH5_6_15       Last month of life: How many days did he/she assist the
    SH5_7_15       Last month of life: How many days did he/she assist the
    SH5_8_15       Last month of life: How many days did he/she assist the
    SH5_9_15       Last month of life: How many days did he/she assist the
    SH6_10_15      Last month of life: How many hours per day did he/she as
    SH6_1_15       Last month of life: How many hours per day did he/she as
    SH6_2_15       Last month of life: How many hours per day did he/she as
    SH6_3_15       Last month of life: How many hours per day did he/she as
    SH6_4_15       Last month of life: How many hours per day did he/she as
    SH6_5_15       Last month of life: How many hours per day did he/she as
    SH6_6_15       Last month of life: How many hours per day did he/she as
    SH6_7_15       Last month of life: How many hours per day did he/she as
    SH6_8_15       Last month of life: How many hours per day did he/she as
    SH6_9_15       Last month of life: How many hours per day did he/she as
Wave 5 Next of Kin:
    SH1_18         Due to health problems: Deceased receive help with at le
    SH3_1_18       (First) ADL Assistant's registration number
    SH3_2_18       (Second) ADL Assistant's registration number
    SH4_1_18       (First) ADL Assistant's relationship to the deceased
    SH4_2_18       (Second) ADL Assistant's relationship to the deceased
```

Instrumental Activities of Daily Living: Whether Received Any Care

Wave	Variable	Label	Type
1	RAXRICANY	raxricany: R received any care for IADLs	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRICANY	5555	0.66	0.47	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|      RAXRICANY
.d:dk                                |              2
.j:didn't do activities              |             32
.m:missing                           |              5
.r:refuse                            |              5
.t:couldn't do activities            |             24
0.no                                 |           1892
1.yes                                |           3663
```

How Constructed

RAXRICANY indicates whether, in the last three months of life, the respondent received any care for difficulties with instrumental activities of daily living (IADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one IADL in the last three months of their life due to physical, mental, emotional, or memory-related problems. The instrumental activities of daily living include preparing hot meals, making purchases/shopping, taking medications, and managing money. RAXRICANY is assigned a value of 0 if the respondent received no help with any IADL activity. RAXRICANY is assigned a value of 1 if someone helped the respondent with at least one IADL activity. In Wave 2, RAXRICANY is assigned special missing values .t and .j if the proxy reported that the respondent couldn't do the activities and didn't do the activities, respectively. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't do or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each IADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any IADL.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping. The HRS also includes help the respondent received using the telephone, which is not included in the MHAS.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH7          received help for doing other certain activities
Wave 3 Next of Kin:
    SH7_12       Last three months before death:Deceased receive help wit
Wave 4 Next of Kin:
    SH7_15       Last three months before death: Deceased receive help wi
Wave 5 Next of Kin:
    SH7_18       Last three months before death: Deceased receive help wi
```

Instrumental Activities of Daily Living: Whether Received Any Informal Care

```
Wave Variable          Label                                                     Type

  1  RAXRICAANY        raxricaany: R received any informal care for IADLs         Categ
```

Descriptive Statistics

```
Variable              N          Mean        Std Dev       Minimum       Maximum

RAXRICAANY          5537         0.64         0.48          0.00          1.00
```

Categorical Variable Codes

```
Value--------------------------------|       RAXRICAANY
.d:dk                                |                2
.j:didn't do activities              |               32
.m:missing                           |               23
.r:refuse                            |                5
.t:couldn't do activities            |               24
0.no                                 |             1969
1.yes                                |             3568
```

How Constructed

RAXRICAANY indicates whether, in the last three months of life, the respondent received any
informal care for difficulties with instrumental activities of daily living (IADL) according to the
proxy. The proxy is asked if someone helped the respondent with at least one IADL in the last three
months of their life due to physical, mental, emotional, or memory-related problems. The
instrumental activities of daily living include preparing meals, making purchases/shopping, taking
medications, and managing money. If the respondent received help, then the proxy is asked to report
all the people who helped the respondent with IADL activities. The following relationships are
considered to provide informal care: spouse, child, child-in-law, grandchild, parent, other
relative, other person.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to
the caregiver and their roster number, if any. In cases where the reported relationship disagrees
with the roster number, the roster number takes precedence in defining the relationship for spouses
and children, for which the roster numbers follow clear rules. In cases where the reported
relationship is "spouse" but the roster number indicates a non-spouse household member, the
relationship type is changed to "other person". In cases where the reported relationship is
"spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this
occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver
relationship and roster number, we only consider the caregiver with the highest level of care
provided to the respondent as reported by the proxy. In cases of multiple records with the same
caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRICAANY is assigned a value of 0 if the respondent received help with at least one IADL but
received no help from an informal caregiver, or if the respondent did not receive any help with
IADL activities. RAXRICAANY is assigned a value of 1 if the respondent received help with at least
one IADL and an informal caregiver helped with at least one of the activities. In Wave 2,
RAXRICAANY is assigned special missing value .j if the proxy reports that the respondent didn't do
the activities, and is assigned special missing value .t if the proxy reports that the respondent
couldn't do the activities. In Wave 5, RAXRICAANY is assigned special missing value .a if the proxy
reports that the respondent was helped by "all" the people in the respondent's roster. Don't know,
refused, and other missing responses are assigned special missing values .d, .r, and .m,
respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the
proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the
respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each IADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any IADL.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping. The HRS also includes help the respondent received using the telephone, which is not included in the MHAS.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10           registration number
    SH7            received help for doing other certain activities
    SH9            relationship
Wave 3 Next of Kin:
    SH10_10_12     Assistant's relationship to the deceased
    SH10_1_12      Assistant's relationship to the deceased
    SH10_2_12      Assistant's relationship to the deceased
    SH10_3_12      Assistant's relationship to the deceased
    SH10_4_12      Assistant's relationship to the deceased
    SH10_5_12      Assistant's relationship to the deceased
    SH10_6_12      Assistant's relationship to the deceased
    SH10_7_12      Assistant's relationship to the deceased
    SH10_8_12      Assistant's relationship to the deceased
    SH10_9_12      Assistant's relationship to the deceased
    SH7_12         Last three months before death:Deceased receive help wit
    SH9_10_12      Assistant's registration number
    SH9_1_12       Assistant's registration number
    SH9_2_12       Assistant's registration number
    SH9_3_12       Assistant's registration number
    SH9_4_12       Assistant's registration number
    SH9_5_12       Assistant's registration number
    SH9_6_12       Assistant's registration number
    SH9_7_12       Assistant's registration number
    SH9_8_12       Assistant's registration number
    SH9_9_12       Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15     Assistant's relationship to the deceased
    SH10_1_15      Assistant's relationship to the deceased
    SH10_2_15      Assistant's relationship to the deceased
    SH10_3_15      Assistant's relationship to the deceased
    SH10_4_15      Assistant's relationship to the deceased
    SH10_5_15      Assistant's relationship to the deceased
    SH10_6_15      Assistant's relationship to the deceased
    SH10_7_15      Assistant's relationship to the deceased
    SH10_8_15      Assistant's relationship to the deceased
    SH10_9_15      Assistant's relationship to the deceased
    SH7_15         Last three months before death: Deceased receive help wi
    SH9_10_15      Assistant's registration number
    SH9_1_15       Assistant's registration number
    SH9_2_15       Assistant's registration number
    SH9_3_15       Assistant's registration number
    SH9_4_15       Assistant's registration number
    SH9_5_15       Assistant's registration number
    SH9_6_15       Assistant's registration number
    SH9_7_15       Assistant's registration number
```

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    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
    SH9_2_18        (Second) IADL Assistant's registration number
    SH9_3_18        (Third) IADL Assistant's registration number
```

Instrumental Activities of Daily Living: Received Informal Care from Spouse

Wave	Variable	Label	Type
1	RAXRISCARE	raxriscare: R received informal care from spouse for IADLs	Categ
1	RAXRISCAREN	raxriscaren: # spouses who helped R with IADLs	Cont
1	RAXRISCAREDPM	raxriscaredpm: days/month spouse helped R with IADLs	Cont
1	RAXRISCAREDPMM	raxriscaredpmm: R # spouse missing days of help for IADLs	Cont
1	RAXRISCAREHR	raxriscarehr: hours/day spouse helped R with IADLs	Cont
1	RAXRISCAREHRM	raxriscarehrm: R # spouse missing hours of help for IADLs	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRISCARE	3642	0.19	0.39	0.00	1.00
RAXRISCAREN	3642	0.20	0.43	0.00	2.00
RAXRISCAREDPM	2885	6.10	13.01	0.00	60.00
RAXRISCAREDPMM	2885	0.00	0.00	0.00	0.00
RAXRISCAREHR	2885	2.79	7.15	0.00	48.00
RAXRISCAREHRM	2885	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value--------------------------------|    RAXRISCARE
.d:dk                                |             2
.h:received no help                  |          1892
.j:didn't do activities              |            32
.m:missing                           |            26
.r:refuse                            |             5
.t:couldn't do activities            |            24
0.no                                 |          2945
1.yes                                |           697
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's spouse helped the respondent with any IADL needs according to the proxy. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any IADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRISCARE, RAXRISCAREN, RAXRISCAREDPM, RAXRISCAREDPMM, RAXRISCAREHR, and RAXRISCAREHRM include help from the respondent's spouse.

RAXRISCARE indicates whether the respondent's spouse helped the respondent with any IADL needs. RAXRISCARE is coded as 0 if the respondent received no assistance from their spouse; and is coded as 1 if the respondent did receive help from their spouse. RAXRISCAREN indicates the number of spouses who were reported to help the respondent with any IADL needs. Cases of multiple spouse reports are most often caused when a spouse helper with a matching spouse roster number and a spouse helper with no roster number are both reported.

RAXRISCAREDPM indicates the total number of days per month the respondent's spouse helped the respondent with IADL needs. If the proxy reports that the respondent received help every day from their spouse, then a value of 30 is assumed. RAXRISCAREDPM is the sum of days per month for all spouse helpers, and so values can be over 30 days. RAXRISCAREDPM is calculated as long as there is one non-missing value. RAXRISCAREDPM is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRISCAREDPMM indicates the number of spouses who helped the respondent for whom no value of days was reported and so was not accounted for in RAXRISCAREDPM. RAXRISCAREDPMM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRISCAREDPM and RAXRISCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRISCAREHR indicates the total number of hours per day the respondent's spouse helped the respondent with any IADL needs. Proxies are asked, on days the respondent's spouse helped, how many hours per day that was. If the proxy reports less than an hour for their spouse, then a 1 is assumed. RAXRISCAREHR is the sum of hours per day for all spouse helpers, and so values can be over 24 hours. RAXRISCAREHR is calculated as long as there is one non-missing value. RAXRISCAREHR is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRISCAREHRM indicates the number of spouses who helped the respondent for whom no value of hours was reported and so was not accounted for in RAXRISCAREHR. RAXRISCAREHRM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRISCAREHR and RAXRISCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible. These variables in the Harmonized HRS include help provided by the respondent's spouse or former spouse, whereas these variables only include help provided by the respondent's spouse in the Harmonized MHAS.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing

money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRISCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRISCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH7_12        Last three months before death:Deceased receive help wit
    SH9_10_12     Assistant's registration number
    SH9_1_12      Assistant's registration number
    SH9_2_12      Assistant's registration number
    SH9_3_12      Assistant's registration number
    SH9_4_12      Assistant's registration number
    SH9_5_12      Assistant's registration number
    SH9_6_12      Assistant's registration number
    SH9_7_12      Assistant's registration number
    SH9_8_12      Assistant's registration number
    SH9_9_12      Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15    Assistant's relationship to the deceased
    SH10_1_15     Assistant's relationship to the deceased
    SH10_2_15     Assistant's relationship to the deceased
    SH10_3_15     Assistant's relationship to the deceased
    SH10_4_15     Assistant's relationship to the deceased
    SH10_5_15     Assistant's relationship to the deceased
    SH10_6_15     Assistant's relationship to the deceased
    SH10_7_15     Assistant's relationship to the deceased
    SH10_8_15     Assistant's relationship to the deceased
    SH10_9_15     Assistant's relationship to the deceased
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    SH11_10_15      Last month of life: How many days did he/she assist the
    SH11_1_15       Last month of life: How many days did he/she assist the
    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
    SH12_1_15       Last month of life: How many hours per day did he/she as
    SH12_2_15       Last month of life: How many hours per day did he/she as
    SH12_3_15       Last month of life: How many hours per day did he/she as
    SH12_4_15       Last month of life: How many hours per day did he/she as
    SH12_5_15       Last month of life: How many hours per day did he/she as
    SH12_6_15       Last month of life: How many hours per day did he/she as
    SH12_7_15       Last month of life: How many hours per day did he/she as
    SH12_8_15       Last month of life: How many hours per day did he/she as
    SH12_9_15       Last month of life: How many hours per day did he/she as
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
    SH9_2_18        (Second) IADL Assistant's registration number
    SH9_3_18        (Third) IADL Assistant's registration number
```

Instrumental Activities of Daily Living: Received Informal Care from Children or Grandchildren

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```
Wave Variable          Label                                                    Type

  1  RAXRICCARE        raxriccare: R received informal care from kids/grandkids for  Categ

  1  RAXRICCAREN       raxriccaren: # kids/grandkids who helped R with IADLs         Cont

  1  RAXRICCAREDPM     raxriccaredpm: days/month kids/grandkids helped R with IADLs  Cont

  1  RAXRICCAREDPMM    raxriccaredpmm: R # kids/grandkids missing days of help for   Cont

  1  RAXRICCAREHR      raxriccarehr: hours/day kids/grandkids helped R with IADLs    Cont

  1  RAXRICCAREHRM     raxriccarehrm: R # kids/grandkids missing hours of help for   Cont
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRICCARE	3643	0.76	0.43	0.00	1.00
RAXRICCAREN	3643	1.10	0.96	0.00	10.00
RAXRICCAREDPM	2885	26.97	24.35	0.00	300.00
RAXRICCAREDPMM	2885	0.00	0.02	0.00	1.00
RAXRICCAREHR	2885	10.37	12.19	0.00	120.00
RAXRICCAREHRM	2885	0.00	0.02	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|      RAXRICCARE
.d:dk                                |            2
.h:received no help                  |         1892
.j:didn't do activities              |           32
.m:missing                           |           25
.r:refuse                            |            5
.t:couldn't do activities            |           24
0.no                                 |          887
1.yes                                |         2756
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's children or grandchildren helped the respondent with any IADL needs according to the proxy. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any IADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRICCARE, RAXRICCAREN, RAXRICCAREDPM, RAXRICCAREDPMM, RAXRICCAREHR, and RAXRICCAREHRM include help from a child, child-in-law, or grandchild.

RAXRICCARE indicates whether any of the respondent's children or grandchildren helped the respondent with IADL needs. RAXRICCAREN indicates the number of the respondent's children or grandchildren who helped the respondent with IADL needs. RAXRICCARE is coded as 0 if none of the respondent's children or grandchildren helped the respondent with IADLS; and is coded as 1 if at least one of the respondent's children or grandchildren helped the respondent with IADLs.

RAXRICCAREDPM indicates the number of total days per month the respondent's children or grandchildren help the respondent with IADL needs. If the proxy reports that the respondent received help every day from that child or grandchild, then a value of 30 is assumed. RAXRICCAREDPM is the sum of days per month for all children or grandchildren helpers, and so values can be over 30 days. RAXRICCAREDPM is calculated as long as there is one non-missing value. RAXRICCAREDPM is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRICCAREDPMM indicates the number of children or grandchildren who helped the respondent for whom no value of days was reported and was not accounted for in RAXRICCAREDPM. RAXRICCAREDPMM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRICCAREDPM and RAXRICCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRICCAREHR indicates the number of hours per day the respondent's children or grandchildren helped the respondent with IADL needs. Proxies are asked, on days the respondent's children or grandchildren helped, how many hours per day that was. If the proxy reports less than an hour for that child or grandchild, then a 1 is assumed. RAXRICCAREHR is the sum of hours per day for all children or grandchildren helpers, and so values can be over 24 hours. RAXRICCAREHR is calculated as long as there is one non-missing value. RAXRICCAREHR is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRICCAREHRM indicates the number of children or grandchildren who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRICCAREHR. RAXRICCAREHRM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRICCAREHR and RAXRICCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing

money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRICCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRICCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH7_12        Last three months before death:Deceased receive help wit
    SH9_10_12     Assistant's registration number
    SH9_1_12      Assistant's registration number
    SH9_2_12      Assistant's registration number
    SH9_3_12      Assistant's registration number
    SH9_4_12      Assistant's registration number
    SH9_5_12      Assistant's registration number
    SH9_6_12      Assistant's registration number
    SH9_7_12      Assistant's registration number
    SH9_8_12      Assistant's registration number
    SH9_9_12      Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15    Assistant's relationship to the deceased
    SH10_1_15     Assistant's relationship to the deceased
    SH10_2_15     Assistant's relationship to the deceased
    SH10_3_15     Assistant's relationship to the deceased
    SH10_4_15     Assistant's relationship to the deceased
    SH10_5_15     Assistant's relationship to the deceased
    SH10_6_15     Assistant's relationship to the deceased
    SH10_7_15     Assistant's relationship to the deceased
    SH10_8_15     Assistant's relationship to the deceased
    SH10_9_15     Assistant's relationship to the deceased
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    SH11_10_15      Last month of life: How many days did he/she assist the
    SH11_1_15       Last month of life: How many days did he/she assist the
    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
    SH12_1_15       Last month of life: How many hours per day did he/she as
    SH12_2_15       Last month of life: How many hours per day did he/she as
    SH12_3_15       Last month of life: How many hours per day did he/she as
    SH12_4_15       Last month of life: How many hours per day did he/she as
    SH12_5_15       Last month of life: How many hours per day did he/she as
    SH12_6_15       Last month of life: How many hours per day did he/she as
    SH12_7_15       Last month of life: How many hours per day did he/she as
    SH12_8_15       Last month of life: How many hours per day did he/she as
    SH12_9_15       Last month of life: How many hours per day did he/she as
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
    SH9_2_18        (Second) IADL Assistant's registration number
    SH9_3_18        (Third) IADL Assistant's registration number
```

Instrumental Activities of Daily Living: Received Informal Care from Relatives

Wave	Variable	Label	Type
1	RAXRIRCARE	raxrircare: R received informal care from relatives for IADL	Categ
1	RAXRIRCAREN	raxrircaren: # relatives who helped R with IADLs	Cont
1	RAXRIRCAREDPM	raxrircaredpm: days/month relatives helped R with IADLs	Cont
1	RAXRIRCAREDPMM	raxrircaredpmm: R # relatives missing days of help for IADLs	Cont
1	RAXRIRCAREHR	raxrircarehr: hours/day relatives helped R with Iadls	Cont
1	RAXRIRCAREHRM	raxrircarehrm: R # relatives missing hours of help for IADLs	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRIRCARE	3642	0.06	0.24	0.00	1.00
RAXRIRCAREN	3642	0.08	0.37	0.00	10.00
RAXRIRCAREDPM	2885	2.25	10.84	0.00	300.00
RAXRIRCAREDPMM	2885	0.00	0.00	0.00	0.00
RAXRIRCAREHR	2885	0.80	4.45	0.00	120.00
RAXRIRCAREHRM	2885	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value--------------------------------|    RAXRIRCARE
.d:dk                                |            2
.h:received no help                  |         1892
.j:didn't do activities              |           32
.m:missing                           |           26
.r:refuse                            |            5
.t:couldn't do activities            |           24
0.no                                 |         3420
1.yes                                |          222
```

How Constructed

The following variables indicate whether, in the last three months of life, any of the respondent's relatives helped the respondent with any IADL needs according to the proxy. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any IADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRIRCARE, RAXRIRCAREN, RAXRIRCAREDPM, RAXRIRCAREDPMM, RAXRIRCAREHR, and RAXRIRCAREHRM include help from the respondent's parent or other relative.

RAXRIRCARE indicates whether any of the respondent's relatives helped the respondent with IADL needs. RAXRIRCAREN indicates the number of the respondent's relatives who helped the respondent with IADL needs. RAXRIRCARE is coded as 0 if none of the respondent's relatives helped the respondent with IADLS; and is coded as 1 if at least one of the respondent's relatives helped the respondent with IADLs.

RAXRIRCAREDPM indicates the number of total days per month the respondent's relatives help the respondent with IADL needs. If the proxy reports that the respondent received help every day from that relative, then a value of 30 is assumed. RAXRIRCAREDPM is the sum of days per month for all relative helpers, and so values can be over 30 days. RAXRIRCAREDPM is calculated as long as there is one non-missing value. RAXRIRCAREDPM is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRIRCAREDPMM indicates the number of relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRIRCAREDPM. RAXRIRCAREDPMM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRIRCAREDPM and RAXRIRCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRIRCAREHR indicates the number of hours per day the respondent's relatives helped the respondent with IADL needs. Proxies are asked, on days the respondent's relatives helped, how many hours per day that was. If the proxy reports less than an hour for that relative, then a 1 is assumed. RAXRIRCAREHR is the sum of hours per day for all relative helpers, and so values can be over 24 hours. RAXRIRCAREHR is calculated as long as there is one non-missing value. RAXRIRCAREHR is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRIRCAREHRM indicates the number of relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRIRCAREHR. RAXRIRCAREHRM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRIRCAREHR and RAXRIRCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRIRCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRIRCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

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Wave 2 Next of Kin:
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH7_12        Last three months before death:Deceased receive help wit
    SH9_10_12     Assistant's registration number
    SH9_1_12      Assistant's registration number
    SH9_2_12      Assistant's registration number
    SH9_3_12      Assistant's registration number
    SH9_4_12      Assistant's registration number
    SH9_5_12      Assistant's registration number
    SH9_6_12      Assistant's registration number
    SH9_7_12      Assistant's registration number
    SH9_8_12      Assistant's registration number
    SH9_9_12      Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15    Assistant's relationship to the deceased
    SH10_1_15     Assistant's relationship to the deceased
    SH10_2_15     Assistant's relationship to the deceased
    SH10_3_15     Assistant's relationship to the deceased
    SH10_4_15     Assistant's relationship to the deceased
    SH10_5_15     Assistant's relationship to the deceased
    SH10_6_15     Assistant's relationship to the deceased
    SH10_7_15     Assistant's relationship to the deceased
    SH10_8_15     Assistant's relationship to the deceased
    SH10_9_15     Assistant's relationship to the deceased
    SH11_10_15    Last month of life: How many days did he/she assist the
    SH11_1_15     Last month of life: How many days did he/she assist the
    SH11_2_15     Last month of life: How many days did he/she assist the
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    SH11_3_15        Last month of life: How many days did he/she assist the
    SH11_4_15        Last month of life: How many days did he/she assist the
    SH11_5_15        Last month of life: How many days did he/she assist the
    SH11_6_15        Last month of life: How many days did he/she assist the
    SH11_7_15        Last month of life: How many days did he/she assist the
    SH11_8_15        Last month of life: How many days did he/she assist the
    SH11_9_15        Last month of life: How many days did he/she assist the
    SH12_10_15       Last month of life: How many hours per day did he/she as
    SH12_1_15        Last month of life: How many hours per day did he/she as
    SH12_2_15        Last month of life: How many hours per day did he/she as
    SH12_3_15        Last month of life: How many hours per day did he/she as
    SH12_4_15        Last month of life: How many hours per day did he/she as
    SH12_5_15        Last month of life: How many hours per day did he/she as
    SH12_6_15        Last month of life: How many hours per day did he/she as
    SH12_7_15        Last month of life: How many hours per day did he/she as
    SH12_8_15        Last month of life: How many hours per day did he/she as
    SH12_9_15        Last month of life: How many hours per day did he/she as
    SH7_15           Last three months before death: Deceased receive help wi
    SH9_10_15        Assistant's registration number
    SH9_1_15         Assistant's registration number
    SH9_2_15         Assistant's registration number
    SH9_3_15         Assistant's registration number
    SH9_4_15         Assistant's registration number
    SH9_5_15         Assistant's registration number
    SH9_6_15         Assistant's registration number
    SH9_7_15         Assistant's registration number
    SH9_8_15         Assistant's registration number
    SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18        (First) IADL Assistant's relationship to the deceased
    SH10_2_18        (Second) IADL Assistant's relationship to the deceased
    SH10_3_18        (Third) IADL Assistant's relationship to the deceased
    SH7_18           Last three months before death: Deceased receive help wi
    SH9_1_18         (First) IADL Assistant's registration number
    SH9_2_18         (Second) IADL Assistant's registration number
    SH9_3_18         (Third) IADL Assistant's registration number
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Instrumental Activities of Daily Living: Received Informal Care from Other Individuals

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Wave	Variable	Label	Type
1	RAXRIFCARE	raxrifcare: R received informal care from non-relatives for	Categ
1	RAXRIFCAREN	raxrifcaren: # non-relatives who helped R with IADLs	Cont
1	RAXRIFCAREDPM	raxrifcaredpm: days/month non-relatives helped R with IADLs	Cont
1	RAXRIFCAREDPMM	raxrifcaredpmm: R # non-relatives missing days of help for I	Cont
1	RAXRIFCAREHR	raxrifcarehr: hours/day non-relatives helped R with IADLs	Cont
1	RAXRIFCAREHRM	raxrifcarehrm: R # non-relatives missing hours of help for I	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRIFCARE	3641	0.07	0.25	0.00	1.00
RAXRIFCAREN	3641	0.09	0.39	0.00	3.00
RAXRIFCAREDPM	2885	1.02	5.83	0.00	90.00
RAXRIFCAREDPMM	2885	0.00	0.00	0.00	0.00
RAXRIFCAREHR	2885	0.33	2.25	0.00	24.00
RAXRIFCAREHRM	2885	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value--------------------------------|    RAXRIFCARE
.d:dk                                 |            2
.h:received no help                   |         1892
.j:didn't do activities               |           32
.m:missing                            |           27
.r:refuse                             |            5
.t:couldn't do activities             |           24
0.no                                  |         3400
1.yes                                 |          241
```

How Constructed

The following variables indicate whether, in the last three months of life, any non-relative helped the respondent with any IADL needs according to the proxy. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any IADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRIFCARE, RAXRIFCAREN, RAXRIFCAREDPM, RAXRIFCAREDPMM, RAXRIFCAREHR, and RAXRIFCAREHRM include help from another person (not their spouse, child, child-in-law, grandchild, parent, other relative, or paid person).

RAXRIFCARE indicates whether any of the respondent's non-relatives helped the respondent with IADL needs. RAXRIFCAREN indicates the number of the respondent's non-relatives who helped the respondent with IADL needs. RAXRIRCARE is coded as 0 if none of the respondent's non-relatives helped the respondent with IADLS; and is coded as 1 if at least one of the respondent's non-relatives helped the respondent with IADLs.

RAXRIFCAREDPM indicates the number of total days per month the respondent's non-relatives help the respondent with IADL needs. If the proxy reports that the respondent received help every day from that non-relative, then a value of 30 is assumed. RAXRIFCAREDPM is the sum of days per month for all non-relative helpers, and so values can be over 30 days. RAXRIFCAREDPM is calculated as long as there is one non-missing value. RAXRIFCAREDPM is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRIFCAREDPMM indicates the number of non-relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRIFCAREDPM. RAXRIFCAREDPMM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRIFCAREDPM and RAXRIFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRIFCAREHR indicates the number of hours per day the respondent's non-relatives helped the respondent with IADL needs. Proxies are asked, on days the respondent's non-relatives helped, how many hours per day that was. If the proxy reports less than an hour for that non-relative, then a 1 is assumed. RAXRIFCAREHR is the sum of hours per day for all non-relative helpers, and so values can be over 24 hours. RAXRIFCAREHR is calculated as long as there is one non-missing value. RAXRIFCAREHR is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRIFCAREHRM indicates the number of non-relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRIFCAREHR. RAXRIFCAREHRM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRIFCAREHR and RAXRIFCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRIFCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRIFCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH7_12        Last three months before death:Deceased receive help wit
    SH9_10_12     Assistant's registration number
    SH9_1_12      Assistant's registration number
    SH9_2_12      Assistant's registration number
    SH9_3_12      Assistant's registration number
    SH9_4_12      Assistant's registration number
    SH9_5_12      Assistant's registration number
    SH9_6_12      Assistant's registration number
    SH9_7_12      Assistant's registration number
    SH9_8_12      Assistant's registration number
    SH9_9_12      Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15    Assistant's relationship to the deceased
    SH10_1_15     Assistant's relationship to the deceased
    SH10_2_15     Assistant's relationship to the deceased
    SH10_3_15     Assistant's relationship to the deceased
    SH10_4_15     Assistant's relationship to the deceased
    SH10_5_15     Assistant's relationship to the deceased
    SH10_6_15     Assistant's relationship to the deceased
    SH10_7_15     Assistant's relationship to the deceased
    SH10_8_15     Assistant's relationship to the deceased
    SH10_9_15     Assistant's relationship to the deceased
    SH11_10_15    Last month of life: How many days did he/she assist the
    SH11_1_15     Last month of life: How many days did he/she assist the
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    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
    SH12_1_15       Last month of life: How many hours per day did he/she as
    SH12_2_15       Last month of life: How many hours per day did he/she as
    SH12_3_15       Last month of life: How many hours per day did he/she as
    SH12_4_15       Last month of life: How many hours per day did he/she as
    SH12_5_15       Last month of life: How many hours per day did he/she as
    SH12_6_15       Last month of life: How many hours per day did he/she as
    SH12_7_15       Last month of life: How many hours per day did he/she as
    SH12_8_15       Last month of life: How many hours per day did he/she as
    SH12_9_15       Last month of life: How many hours per day did he/she as
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
    SH9_2_18        (Second) IADL Assistant's registration number
    SH9_3_18        (Third) IADL Assistant's registration number
```

Instrumental Activities of Daily Living: Whether Received Any Formal Care

```
Wave Variable        Label                                                              Type

 1  RAXRIFAANY        raxrifaany: R received any formal care for IADLs                   Categ
```

Descriptive Statistics

```
Variable              N          Mean        Std Dev       Minimum      Maximum

RAXRIFAANY          5533         0.02          0.14          0.00         1.00
```

Categorical Variable Codes

```
Value--------------------------------|       RAXRIFAANY
.d:dk                                |            2
.j:didn't do activities              |           32
.m:missing                           |           27
.r:refuse                            |            5
.t:couldn't do activities            |           24
0.no                                 |         5420
1.yes                                |          113
```

How Constructed

RAXRIFAANY indicates whether, in the last three months of life, the respondent received any formal care for difficulties with instrumental activities of daily living (IADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one IADL in the last three months of their life due to physical, mental, emotional, or memory-related problems. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. If the respondent received help, then the proxy is asked to report all the people who helped the respondent with IADL activities. Helpers with a relationship of "paid person" are considered to provide formal care.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRIFAANY is assigned a value of 0 if the respondent received help with at least one IADL but received no help from a formal caregiver, or if the respondent did not receive any help with IADL activities. RAXRIFAANY is assigned a value of 1 if the respondent received help with at least one IADL and a formal caregiver helped with at least one of the activities. In Wave 2, RAXRIFAANY is assigned special missing value .j if the proxy reports that the respondent didn't do the activities, and is assigned special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, RAXRACAANY is assigned special missing value .a if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

In the Harmonized HRS End of Life, RAXRIFAANY indicates whether the respondent received help from either paid or unpaid formal caregivers, while in the MHAS End of Life, RAXRIFAANY indicates only whether the respondent received help from paid formal caregivers based on the categories of relationships available in each study.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each IADL, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any IADL.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping. The HRS also includes help the respondent received using the telephone, which is not included in the MHAS.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10            registration number
    SH7             received help for doing other certain activities
    SH9             relationship
Wave 3 Next of Kin:
    SH10_10_12      Assistant's relationship to the deceased
    SH10_1_12       Assistant's relationship to the deceased
    SH10_2_12       Assistant's relationship to the deceased
    SH10_3_12       Assistant's relationship to the deceased
    SH10_4_12       Assistant's relationship to the deceased
    SH10_5_12       Assistant's relationship to the deceased
    SH10_6_12       Assistant's relationship to the deceased
    SH10_7_12       Assistant's relationship to the deceased
    SH10_8_12       Assistant's relationship to the deceased
    SH10_9_12       Assistant's relationship to the deceased
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
```

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    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
    SH9_2_18        (Second) IADL Assistant's registration number
    SH9_3_18        (Third) IADL Assistant's registration number
```

Instrumental Activities of Daily Living: Received Formal Care from Paid Professional

Wave	Variable	Label	Type
1	RAXRIPFCARE	raxripfcare: R received formal care from paid professional f	Categ
1	RAXRIPFCAREN	raxripfcaren: # paid professionals who helped R with IADLs	Cont
1	RAXRIPFCAREDPM	raxripfcaredpm: days/month paid professionals helped R with	Cont
1	RAXRIPFCAREDPMM	raxripfcaredpmm: R # paid professionals missing days of help	Cont
1	RAXRIPFCAREHR	raxripfcarehr: hours/day paid professionals helped R with IA	Cont
1	RAXRIPFCAREHRM	raxripfcarehrm: R # paid professionals missing hours of help	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRIPFCARE	3641	0.03	0.17	0.00	1.00
RAXRIPFCAREN	3641	0.03	0.19	0.00	2.00
RAXRIPFCAREDPM	2885	0.92	5.27	0.00	60.00
RAXRIPFCAREDPMM	2885	0.00	0.00	0.00	0.00
RAXRIPFCAREHR	2885	0.37	2.42	0.00	24.00
RAXRIPFCAREHRM	2885	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value--------------------------------|    RAXRIPFCARE
.d:dk                                 |             2
.h:received no help                   |          1892
.j:didn't do activities               |            32
.m:missing                            |            27
.r:refuse                             |             5
.t:couldn't do activities             |            24
0.no                                  |          3528
1.yes                                 |           113
```

How Constructed

The following variables indicate whether, in the last three months of life, paid formal caregivers helped the respondent with any IADL needs according to the proxy. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any IADL activities in the last three months of life, and if so, they are asked for the relationships of all the people who helped them with IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRIPFCARE, RAXRIPFCAREN, RAXRIPFCAREDPM, RAXRIPFCAREDPMM, RAXRIPFCAREHR, and RAXRIPFCAREHRM include help from a paid person.

RAXRIPFCARE indicates whether any paid professionals helped the respondent with IADL needs. RAXRIPFCAREN indicates the number of paid professionals who helped the respondent with IADL needs. RAXRIPFCARE is coded as 0 if no paid professionals helped the respondent with IADLS; and is coded as 1 if at least one paid professional helped the respondent with IADLs.

RAXRIPFCAREDPM indicates the number of total days per month paid professionals help the respondent with IADL needs. If the proxy reports that the respondent received help every day from that paid professional, then a value of 30 is assumed. RAXRIPFCAREDPM is the sum of days per month for all paid professional helpers, and so values can be over 30 days. RAXRIPFCAREDPM is calculated as long as there is one non-missing value. RAXRIPFCAREDPM is assigned a value of 0 if the respondent did not receive help from any paid professionals. RAXRIPFCAREDPMM indicates the number of paid professionals who helped the respondent for whom no value of days was reported and was not accounted for in RAXRIPFCAREDPM. RAXRIPFCAREDPMM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRIPFCAREDPM and RAXRIPFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRIPFCAREHR indicates the number of hours per day paid professionals helped the respondent with IADL needs. Proxies are asked, on days paid professionals helped, how many hours per day that was. If the proxy reports less than an hour for that paid professional, then a 1 is assumed. RAXRIPFCAREHR is the sum of hours per day for all paid professional helpers, and so values can be over 24 hours. RAXRIPFCAREHR is calculated as long as there is one non-missing value. RAXRIPFCAREHR is assigned a value of 0 if the respondent did not receive help from any paid professionals. RAXRIPFCAREHRM indicates the number of paid professionals who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRIPFCAREHR. RAXRIPFCAREHRM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRIPFCAREHR and RAXRIPFCAREHRM because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRIPFCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRIPFCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH7_12        Last three months before death:Deceased receive help wit
    SH9_10_12     Assistant's registration number
    SH9_1_12      Assistant's registration number
    SH9_2_12      Assistant's registration number
    SH9_3_12      Assistant's registration number
    SH9_4_12      Assistant's registration number
    SH9_5_12      Assistant's registration number
    SH9_6_12      Assistant's registration number
    SH9_7_12      Assistant's registration number
    SH9_8_12      Assistant's registration number
    SH9_9_12      Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15    Assistant's relationship to the deceased
    SH10_1_15     Assistant's relationship to the deceased
    SH10_2_15     Assistant's relationship to the deceased
    SH10_3_15     Assistant's relationship to the deceased
    SH10_4_15     Assistant's relationship to the deceased
    SH10_5_15     Assistant's relationship to the deceased
    SH10_6_15     Assistant's relationship to the deceased
    SH10_7_15     Assistant's relationship to the deceased
    SH10_8_15     Assistant's relationship to the deceased
    SH10_9_15     Assistant's relationship to the deceased
    SH11_10_15    Last month of life: How many days did he/she assist the
    SH11_1_15     Last month of life: How many days did he/she assist the
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        SH11_2_15        Last month of life: How many days did he/she assist the
        SH11_3_15        Last month of life: How many days did he/she assist the
        SH11_4_15        Last month of life: How many days did he/she assist the
        SH11_5_15        Last month of life: How many days did he/she assist the
        SH11_6_15        Last month of life: How many days did he/she assist the
        SH11_7_15        Last month of life: How many days did he/she assist the
        SH11_8_15        Last month of life: How many days did he/she assist the
        SH11_9_15        Last month of life: How many days did he/she assist the
        SH12_10_15       Last month of life: How many hours per day did he/she as
        SH12_1_15        Last month of life: How many hours per day did he/she as
        SH12_2_15        Last month of life: How many hours per day did he/she as
        SH12_3_15        Last month of life: How many hours per day did he/she as
        SH12_4_15        Last month of life: How many hours per day did he/she as
        SH12_5_15        Last month of life: How many hours per day did he/she as
        SH12_6_15        Last month of life: How many hours per day did he/she as
        SH12_7_15        Last month of life: How many hours per day did he/she as
        SH12_8_15        Last month of life: How many hours per day did he/she as
        SH12_9_15        Last month of life: How many hours per day did he/she as
        SH7_15           Last three months before death: Deceased receive help wi
        SH9_10_15        Assistant's registration number
        SH9_1_15         Assistant's registration number
        SH9_2_15         Assistant's registration number
        SH9_3_15         Assistant's registration number
        SH9_4_15         Assistant's registration number
        SH9_5_15         Assistant's registration number
        SH9_6_15         Assistant's registration number
        SH9_7_15         Assistant's registration number
        SH9_8_15         Assistant's registration number
        SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
        SH10_1_18        (First) IADL Assistant's relationship to the deceased
        SH10_2_18        (Second) IADL Assistant's relationship to the deceased
        SH10_3_18        (Third) IADL Assistant's relationship to the deceased
        SH7_18           Last three months before death: Deceased receive help wi
        SH9_1_18         (First) IADL Assistant's registration number
        SH9_2_18         (Second) IADL Assistant's registration number
        SH9_3_18         (Third) IADL Assistant's registration number
```

Activities of Daily Living and Instrumental Activities of Daily Living: Whether Received Any Care

Wave Variable   Label   Type

  1 RAXRCANY   raxrcany: R received any care for ADLs/IADLs   Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRCANY	5610	0.70	0.46	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|        RAXRCANY
.d:dk                                |             1
.j:didn't do activities              |             1
.m:missing                           |             5
.r:refuse                            |             3
.t:couldn't do activities            |             3
0.no                                 |          1658
1.yes                                |          3952
```

How Constructed

RAXRCANY indicates whether, in the last three months of life, the respondent received any care for difficulties with activities of daily living (ADL) and/or instrumental activities of daily living (IADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL and one IADL, separately, in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. RAXRCANY is assigned a value of 0 if the respondent received no help with any ADL or IADL. RAXRCANY is assigned a value of 1 if someone helped the respondent with at least one ADL or IADL activity. In Wave 2, RAXRCANY is assigned special missing values .t and .j if the proxy reported that the respondent couldn't do the activities and didn't do the activities, respectively. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't do or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL and IADL separately, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL or with any IADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1            received help for doing certain activities
    SH7            received help for doing other certain activities
Wave 3 Next of Kin:
```

```
    SH1_12          Due to health problems: Deceased receive help with certa
    SH7_12          Last three months before death:Deceased receive help wit
Wave 4 Next of Kin:
    SH1_15          Due to health problems: Deceased receive help with at le
    SH7_15          Last three months before death: Deceased receive help wi
Wave 5 Next of Kin:
    SH1_18          Due to health problems: Deceased receive help with at le
    SH7_18          Last three months before death: Deceased receive help wi
```

Activities of Daily Living and Instrumental Activities of Daily Living: Whether Received Any Informal Care

---

```
Wave Variable         Label                                              Type

  1  RAXRCAANY         raxrcaany: R received any informal care for ADLs/IADLs    Categ
```

Descriptive Statistics

```
Variable            N        Mean      Std Dev     Minimum      Maximum

RAXRCAANY          5599      0.69       0.46        0.00         1.00
```

Categorical Variable Codes

```
Value--------------------------------|      RAXRCAANY
.d:dk                                |          1
.j:didn't do activities              |          1
.m:missing                           |         16
.r:refuse                            |          3
.t:couldn't do activities            |          3
0.no                                 |       1718
1.yes                                |       3881
```

How Constructed

RAXRCAANY indicates whether, in the last three months of life, the respondent received any informal care for difficulties with activities of daily living (ADL) and/or instrumental activities of daily living (IADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL and one IADL, separately, in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. If the respondent reports having difficulty with an ADL or IADL, then they are asked whether someone helps them with that activity. If the respondent received help, then the proxy is asked to report all the people who helped the respondent with ADL activities and IADL activities separately. The following relationships are considered to provide informal care: spouse, child, child-in-law, grandchild, parent, other relative, other person.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRCAANY is assigned a value of 0 if the respondent received help with at least one ADL or IADL but received no help from an informal caregiver, or if the respondent did not receive any help with any ADL or IADL activities. RAXRCAANY is assigned a value of 1 if the respondent received help with at least one ADL or IADL and an informal caregiver helped with at least one of the activities. In Wave 2, RAXRCAANY is assigned special missing value .j if the proxy reports that the respondent didn't do the activities, and is assigned special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, RAXRACAANY is assigned special missing value .a if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL and IADL separately, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL or with any IADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1             received help for doing certain activities
    SH10            registration number
    SH3             relationship
    SH4             registration number
    SH7             received help for doing other certain activities
    SH9             relationship
Wave 3 Next of Kin:
    SH10_10_12      Assistant's relationship to the deceased
    SH10_1_12       Assistant's relationship to the deceased
    SH10_2_12       Assistant's relationship to the deceased
    SH10_3_12       Assistant's relationship to the deceased
    SH10_4_12       Assistant's relationship to the deceased
    SH10_5_12       Assistant's relationship to the deceased
    SH10_6_12       Assistant's relationship to the deceased
    SH10_7_12       Assistant's relationship to the deceased
    SH10_8_12       Assistant's relationship to the deceased
    SH10_9_12       Assistant's relationship to the deceased
    SH1_12          Due to health problems: Deceased receive help with certa
    SH3_10_12       Assistant's registration number
    SH3_1_12        Assistant's registration number
    SH3_2_12        Assistant's registration number
    SH3_3_12        Assistant's registration number
    SH3_4_12        Assistant's registration number
    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
```

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    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH1_15          Due to health problems: Deceased receive help with at le
    SH3_10_15       Assistant's registration number
    SH3_1_15        Assistant's registration number
    SH3_2_15        Assistant's registration number
    SH3_3_15        Assistant's registration number
    SH3_4_15        Assistant's registration number
    SH3_5_15        Assistant's registration number
    SH3_6_15        Assistant's registration number
    SH3_7_15        Assistant's registration number
    SH3_8_15        Assistant's registration number
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH5_10_15       Last month of life: How many days did he/she assist the
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
    SH4_1_18        (First) ADL Assistant's relationship to the deceased
    SH4_2_18        (Second) ADL Assistant's relationship to the deceased
    SH7_18          Last three months before death: Deceased receive help wi
    SH9_1_18        (First) IADL Assistant's registration number
```

```
SH9_2_18          (Second) IADL Assistant's registration number
SH9_3_18          (Third)  IADL Assistant's registration number
```

Activities of Daily Living and Instrumental Activities of Daily Living: Received Informal Care from Spouse

---

```
Wave Variable          Label                                                    Type

  1  RAXRSCARE         raxrscare: R received informal care from spouse for ADLs/IAD  Categ

  1  RAXRSCAREN        raxrscaren: # spouses who helped R with ADLs/IADLs       Cont

  1  RAXRSCAREDPM      raxrscaredpm: days/month spouse helped R with ADLs/IADLs  Cont

  1  RAXRSCAREDPMM     raxrscaredpmm: R # spouse missing days of help for ADLs/IADL  Cont

  1  RAXRSCAREHR       raxrscarehr: hours/day spouse helped R with ADLs/IADLs   Cont

  1  RAXRSCAREHRM      raxrscarehrm: R # spouse missing hours of help for ADLs/IADL  Cont
```

Descriptive Statistics

```
Variable              N         Mean       Std Dev      Minimum       Maximum

RAXRSCARE           3920        0.22         0.41         0.00          1.00

RAXRSCAREN          3920        0.25         0.49         0.00          2.00

RAXRSCAREDPM        3119        7.18        14.08         0.00         60.00

RAXRSCAREDPMM       3119        0.00         0.00         0.00          0.00

RAXRSCAREHR         3118        3.61         8.18         0.00         48.00

RAXRSCAREHRM        3119        0.00         0.02         0.00          1.00
```

Categorical Variable Codes

```
Value---------------------------------|       RAXRSCARE
.d:dk                                  |           1
.h:received no help                    |        1658
.j:didn't do activities                |           1
.m:missing                             |          37
.r:refuse                              |           3
.t:couldn't do activities              |           3
0.no                                   |        3057
1.yes                                  |         863
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's spouse helped the respondent with any ADL or IADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any ADL activities and IADL activities in the last three months of life separately, and if so, they are asked for the relationships of all the people who helped them with ADLs and/or IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy.

In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRSCARE, RAXRSCAREN, RAXRSCAREDPM, RAXRSCAREDPMM, RAXRSCAREHR, and RAXRSCAREHRM include help from the respondent's spouse.

RAXRSCARE indicates whether the respondent's spouse helped the respondent with any ADL or IADL needs. RAXRSCARE is coded as 0 if the respondent received no assistance from their spouse; and is coded as 1 if the respondent did receive help from their spouse. RAXRSCAREN indicates the number of spouses who were reported to help the respondent with any ADL or IADL needs. Cases of multiple spouse reports are most often caused when a spouse helper with a matching spouse roster number and a spouse helper with no roster number are both reported.

RAXRSCAREDPM indicates the total number of days per month the respondent's spouse helped the respondent with ADL or IADL needs. If the proxy reports that the respondent received help every day from their spouse, then a value of 30 is assumed. RAXRSCAREDPM is the sum of days per month for all spouse helpers, and so values can be over 30 days. RAXRSCAREDPM is calculated as long as there is one non-missing value. RAXRSCAREDPM is the sum of days per month for all spouse helpers, and so values can be over 30 days. RAXRSCAREDPM is calculated as long as there is one non-missing value. RAXRSCAREDPM is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRSCAREDPMM indicates the number of spouses who helped the respondent for whom no value of days was reported and so was not accounted for in RAXRSCAREDPM. RAXRSCAREDPMM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRSCAREDPM and RAXRSCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRSCAREHR indicates the total number of hours per day the respondent's spouse helped the respondent with any ADL or IADL needs. Proxies are asked, on days the respondent's spouse helped, how many hours per day that was. If the proxy reports less than an hour for their spouse, then a 1 is assumed. RAXRSCAREHR is the sum of hours per day for all spouse helpers, and so values can be over 24 hours. RAXRSCAREHR is calculated as long as there is one non-missing value. RAXRSCAREHR is the sum of hours per day for all spouse helpers, and so values can be over 24 hours. RAXRSCAREHR is calculated as long as there is one non-missing value. RAXRSCAREHR is assigned a value of 0 if the respondent did not receive help from their spouse. RAXRSCAREHRM indicates the number of spouses who helped the respondent for whom no value of hours was reported and so was not accounted for in RAXRSCAREHR. RAXRSCAREHRM is assigned special missing value .m if the respondent was not helped by their spouse. Special missing .q is assigned to RAXRSCAREHR and RAXRSCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. In Waves 3 and 4, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but

these variables have been created to be as comparable as possible. These variables in the Harmonized HRS include help provided by the respondent's spouse or former spouse, whereas these variables only include help provided by the respondent's spouse in the Harmonized MHAS.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast, asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRSCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRSCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1           received help for doing certain activities
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
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    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
    SH5_10_12       Last month of life:How many days did he/she assist the d
    SH5_1_12        Last month of life:How many days did he/she assist the d
    SH5_2_12        Last month of life:How many days did he/she assist the d
    SH5_3_12        Last month of life:How many days did he/she assist the d
    SH5_4_12        Last month of life:How many days did he/she assist the d
    SH5_5_12        Last month of life:How many days did he/she assist the d
    SH5_6_12        Last month of life:How many days did he/she assist the d
    SH5_7_12        Last month of life:How many days did he/she assist the d
    SH5_8_12        Last month of life:How many days did he/she assist the d
    SH5_9_12        Last month of life:How many days did he/she assist the d
    SH6_10_12       Last month of life:How many hours per day did he/she ass
    SH6_1_12        Last month of life:How many hours per day did he/she ass
    SH6_2_12        Last month of life:How many hours per day did he/she ass
    SH6_3_12        Last month of life:How many hours per day did he/she ass
    SH6_4_12        Last month of life:How many hours per day did he/she ass
    SH6_5_12        Last month of life:How many hours per day did he/she ass
    SH6_6_12        Last month of life:How many hours per day did he/she ass
    SH6_7_12        Last month of life:How many hours per day did he/she ass
    SH6_8_12        Last month of life:How many hours per day did he/she ass
    SH6_9_12        Last month of life:How many hours per day did he/she ass
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH11_10_15      Last month of life: How many days did he/she assist the
    SH11_1_15       Last month of life: How many days did he/she assist the
    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
```

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     SH12_1_15        Last month of life: How many hours per day did he/she as
     SH12_2_15        Last month of life: How many hours per day did he/she as
     SH12_3_15        Last month of life: How many hours per day did he/she as
     SH12_4_15        Last month of life: How many hours per day did he/she as
     SH12_5_15        Last month of life: How many hours per day did he/she as
     SH12_6_15        Last month of life: How many hours per day did he/she as
     SH12_7_15        Last month of life: How many hours per day did he/she as
     SH12_8_15        Last month of life: How many hours per day did he/she as
     SH12_9_15        Last month of life: How many hours per day did he/she as
     SH1_15           Due to health problems: Deceased receive help with at le
     SH3_10_15        Assistant's registration number
     SH3_1_15         Assistant's registration number
     SH3_2_15         Assistant's registration number
     SH3_3_15         Assistant's registration number
     SH3_4_15         Assistant's registration number
     SH3_5_15         Assistant's registration number
     SH3_6_15         Assistant's registration number
     SH3_7_15         Assistant's registration number
     SH3_8_15         Assistant's registration number
     SH3_9_15         Assistant's registration number
     SH4_10_15        Assistant's relationship to the deceased
     SH4_1_15         Assistant's relationship to the deceased
     SH4_2_15         Assistant's relationship to the deceased
     SH4_3_15         Assistant's relationship to the deceased
     SH4_4_15         Assistant's relationship to the deceased
     SH4_5_15         Assistant's relationship to the deceased
     SH4_6_15         Assistant's relationship to the deceased
     SH4_7_15         Assistant's relationship to the deceased
     SH4_8_15         Assistant's relationship to the deceased
     SH4_9_15         Assistant's relationship to the deceased
     SH5_10_15        Last month of life: How many days did he/she assist the
     SH5_1_15         Last month of life: How many days did he/she assist the
     SH5_2_15         Last month of life: How many days did he/she assist the
     SH5_3_15         Last month of life: How many days did he/she assist the
     SH5_4_15         Last month of life: How many days did he/she assist the
     SH5_5_15         Last month of life: How many days did he/she assist the
     SH5_6_15         Last month of life: How many days did he/she assist the
     SH5_7_15         Last month of life: How many days did he/she assist the
     SH5_8_15         Last month of life: How many days did he/she assist the
     SH5_9_15         Last month of life: How many days did he/she assist the
     SH6_10_15        Last month of life: How many hours per day did he/she as
     SH6_1_15         Last month of life: How many hours per day did he/she as
     SH6_2_15         Last month of life: How many hours per day did he/she as
     SH6_3_15         Last month of life: How many hours per day did he/she as
     SH6_4_15         Last month of life: How many hours per day did he/she as
     SH6_5_15         Last month of life: How many hours per day did he/she as
     SH6_6_15         Last month of life: How many hours per day did he/she as
     SH6_7_15         Last month of life: How many hours per day did he/she as
     SH6_8_15         Last month of life: How many hours per day did he/she as
     SH6_9_15         Last month of life: How many hours per day did he/she as
     SH7_15           Last three months before death: Deceased receive help wi
     SH9_10_15        Assistant's registration number
     SH9_1_15         Assistant's registration number
     SH9_2_15         Assistant's registration number
     SH9_3_15         Assistant's registration number
     SH9_4_15         Assistant's registration number
     SH9_5_15         Assistant's registration number
     SH9_6_15         Assistant's registration number
     SH9_7_15         Assistant's registration number
     SH9_8_15         Assistant's registration number
     SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
     SH10_1_18        (First) IADL Assistant's relationship to the deceased
     SH10_2_18        (Second) IADL Assistant's relationship to the deceased
     SH10_3_18        (Third) IADL Assistant's relationship to the deceased
     SH1_18           Due to health problems: Deceased receive help with at le
     SH3_1_18         (First) ADL Assistant's registration number
     SH3_2_18         (Second) ADL Assistant's registration number
```

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SH4_1_18        (First) ADL Assistant's relationship to the deceased
SH4_2_18        (Second) ADL Assistant's relationship to the deceased
SH7_18          Last three months before death: Deceased receive help wi
SH9_1_18        (First) IADL Assistant's registration number
SH9_2_18        (Second) IADL Assistant's registration number
SH9_3_18        (Third) IADL Assistant's registration number
```

Activities of Daily Living and Instrumental Activities of Daily Living: Received Informal Care from Children or Grandchildren

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```
Wave Variable          Label                                                      Type

  1  RAXRCCARE         raxrccare: R received informal care from kids/grandkids for  Categ

  1  RAXRCCAREN        raxrccaren: # kids/grandkids who helped R with ADLs/IADLs     Cont

  1  RAXRCCAREDPM      raxrccaredpm: days/month kids/grandkids helped R with ADLs/I  Cont

  1  RAXRCCAREDPMM     raxrccaredpmm: R # kids/grandkids missing days of help for A  Cont

  1  RAXRCCAREHR       raxrccarehr: hours/day kids/grandkids helped R with ADLs/IAD  Cont

  1  RAXRCCAREHRM      raxrccarehrm: R # kids/grandkids missing hours of help for A  Cont
```

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRCCARE	3932	0.80	0.40	0.00	1.00
RAXRCCAREN	3932	1.40	1.20	0.00	10.00
RAXRCCAREDPM	3119	34.27	30.64	0.00	300.00
RAXRCCAREDPMM	3119	0.00	0.02	0.00	1.00
RAXRCCAREHR	3119	14.33	16.01	0.00	144.00
RAXRCCAREHRM	3119	0.00	0.02	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|       RAXRCCARE
.d:dk                                |           1
.h:received no help                  |        1658
.j:didn't do activities              |           1
.m:missing                           |          25
.r:refuse                            |           3
.t:couldn't do activities            |           3
0.no                                 |         781
1.yes                                |        3151
```

How Constructed

The following variables indicate whether, in the last three months of life, the respondent's children or grandchildren helped the respondent with any ADL or IADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any ADL activities and IADL activities in the last three months of life separately, and if so, they are asked for the relationships of all the people who helped them with ADLs and/or IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as

reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRCCARE, RAXRCCAREN, RAXRCCAREDPM, RAXRCCAREDPMM, RAXRCCAREHR, and RAXRCCAREHRM include help from a child, child-in-law, or grandchild.

RAXRCCARE indicates whether any of the respondent's children or grandchildren helped the respondent with ADL or IADL needs. RAXRCCAREN indicates the number of the respondent's children or grandchildren who helped the respondent with ADL or IADL needs. RAXRCCARE is coded as 0 if none of the respondent's children or grandchildren helped the respondent with ADLs or IADLS; and is coded as 1 if at least one of the respondent's children or grandchildren helped the respondent with ADLs or IADLs.

RAXRCCAREDPM indicates the number of total days per month the respondent's children or grandchildren help the respondent with ADL or IADL needs. If the proxy reports that the respondent received help every day from that child or grandchild, then a value of 30 is assumed. RAXRCCAREDPM is the sum of days per month for all children or grandchildren helpers, and so values can be over 30 days. RAXRCCAREDPM is calculated as long as there is one non-missing value. RAXRCCAREDPM is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRCCAREDPMM indicates the number of children or grandchildren who helped the respondent for whom no value of days was reported and was not accounted for in RAXRCCAREDPM. RAXRCCAREDPMM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRCCAREDPM and RAXRCCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRCCAREHR indicates the number of hours per day the respondent's children or grandchildren helped the respondent with ADL or IADL needs. Proxies are asked, on days the respondent's children or grandchildren helped, how many hours per day that was. If the proxy reports less than an hour for that child or grandchild, then a 1 is assumed. RAXRCCAREHR is the sum of hours per day for all children or grandchildren helpers, and so values can be over 24 hours. RAXRCCAREHR is calculated as long as there is one non-missing value. RAXRCCAREHR is assigned a value of 0 if the respondent did not receive help from any children or grandchildren. RAXRCCAREHRM indicates the number of children or grandchildren who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRCCAREHR. RAXRCCAREHRM is assigned special missing value .m if the respondent was not helped by any children or grandchildren. Special missing .q is assigned to RAXRCCAREHR and RAXRCCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast, asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRCCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRCCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1          received help for doing certain activities
    SH10         registration number
    SH11         how many days did they help (name)
    SH12         how many hours a day
    SH3          relationship
    SH4          registration number
    SH5          how many days did they help (name)
    SH6          how many hours a day
    SH7          received help for doing other certain activities
    SH9          relationship
Wave 3 Next of Kin:
    SH10_10_12   Assistant's relationship to the deceased
    SH10_1_12    Assistant's relationship to the deceased
    SH10_2_12    Assistant's relationship to the deceased
    SH10_3_12    Assistant's relationship to the deceased
    SH10_4_12    Assistant's relationship to the deceased
    SH10_5_12    Assistant's relationship to the deceased
    SH10_6_12    Assistant's relationship to the deceased
    SH10_7_12    Assistant's relationship to the deceased
    SH10_8_12    Assistant's relationship to the deceased
    SH10_9_12    Assistant's relationship to the deceased
    SH11_10_12   Last month of life:How many days did he/she assist the d
    SH11_1_12    Last month of life:How many days did he/she assist the d
    SH11_2_12    Last month of life:How many days did he/she assist the d
    SH11_3_12    Last month of life:How many days did he/she assist the d
    SH11_4_12    Last month of life:How many days did he/she assist the d
    SH11_5_12    Last month of life:How many days did he/she assist the d
    SH11_6_12    Last month of life:How many days did he/she assist the d
    SH11_7_12    Last month of life:How many days did he/she assist the d
    SH11_8_12    Last month of life:How many days did he/she assist the d
    SH11_9_12    Last month of life:How many days did he/she assist the d
    SH12_10_12   Last month of life:How many hours per day did he/she ass
    SH12_1_12    Last month of life:How many hours per day did he/she ass
    SH12_2_12    Last month of life:How many hours per day did he/she ass
    SH12_3_12    Last month of life:How many hours per day did he/she ass
    SH12_4_12    Last month of life:How many hours per day did he/she ass
    SH12_5_12    Last month of life:How many hours per day did he/she ass
    SH12_6_12    Last month of life:How many hours per day did he/she ass
    SH12_7_12    Last month of life:How many hours per day did he/she ass
    SH12_8_12    Last month of life:How many hours per day did he/she ass
    SH12_9_12    Last month of life:How many hours per day did he/she ass
    SH1_12       Due to health problems: Deceased receive help with certa
    SH3_10_12    Assistant's registration number
    SH3_1_12     Assistant's registration number
    SH3_2_12     Assistant's registration number
    SH3_3_12     Assistant's registration number
    SH3_4_12     Assistant's registration number
    SH3_5_12     Assistant's registration number
    SH3_6_12     Assistant's registration number
    SH3_7_12     Assistant's registration number
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    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
    SH5_10_12       Last month of life:How many days did he/she assist the d
    SH5_1_12        Last month of life:How many days did he/she assist the d
    SH5_2_12        Last month of life:How many days did he/she assist the d
    SH5_3_12        Last month of life:How many days did he/she assist the d
    SH5_4_12        Last month of life:How many days did he/she assist the d
    SH5_5_12        Last month of life:How many days did he/she assist the d
    SH5_6_12        Last month of life:How many days did he/she assist the d
    SH5_7_12        Last month of life:How many days did he/she assist the d
    SH5_8_12        Last month of life:How many days did he/she assist the d
    SH5_9_12        Last month of life:How many days did he/she assist the d
    SH6_10_12       Last month of life:How many hours per day did he/she ass
    SH6_1_12        Last month of life:How many hours per day did he/she ass
    SH6_2_12        Last month of life:How many hours per day did he/she ass
    SH6_3_12        Last month of life:How many hours per day did he/she ass
    SH6_4_12        Last month of life:How many hours per day did he/she ass
    SH6_5_12        Last month of life:How many hours per day did he/she ass
    SH6_6_12        Last month of life:How many hours per day did he/she ass
    SH6_7_12        Last month of life:How many hours per day did he/she ass
    SH6_8_12        Last month of life:How many hours per day did he/she ass
    SH6_9_12        Last month of life:How many hours per day did he/she ass
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH11_10_15      Last month of life: How many days did he/she assist the
    SH11_1_15       Last month of life: How many days did he/she assist the
    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
    SH12_1_15       Last month of life: How many hours per day did he/she as
    SH12_2_15       Last month of life: How many hours per day did he/she as
    SH12_3_15       Last month of life: How many hours per day did he/she as
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    SH12_4_15        Last month of life: How many hours per day did he/she as
    SH12_5_15        Last month of life: How many hours per day did he/she as
    SH12_6_15        Last month of life: How many hours per day did he/she as
    SH12_7_15        Last month of life: How many hours per day did he/she as
    SH12_8_15        Last month of life: How many hours per day did he/she as
    SH12_9_15        Last month of life: How many hours per day did he/she as
    SH1_15           Due to health problems: Deceased receive help with at le
    SH3_10_15        Assistant's registration number
    SH3_1_15         Assistant's registration number
    SH3_2_15         Assistant's registration number
    SH3_3_15         Assistant's registration number
    SH3_4_15         Assistant's registration number
    SH3_5_15         Assistant's registration number
    SH3_6_15         Assistant's registration number
    SH3_7_15         Assistant's registration number
    SH3_8_15         Assistant's registration number
    SH3_9_15         Assistant's registration number
    SH4_10_15        Assistant's relationship to the deceased
    SH4_1_15         Assistant's relationship to the deceased
    SH4_2_15         Assistant's relationship to the deceased
    SH4_3_15         Assistant's relationship to the deceased
    SH4_4_15         Assistant's relationship to the deceased
    SH4_5_15         Assistant's relationship to the deceased
    SH4_6_15         Assistant's relationship to the deceased
    SH4_7_15         Assistant's relationship to the deceased
    SH4_8_15         Assistant's relationship to the deceased
    SH4_9_15         Assistant's relationship to the deceased
    SH5_10_15        Last month of life: How many days did he/she assist the
    SH5_1_15         Last month of life: How many days did he/she assist the
    SH5_2_15         Last month of life: How many days did he/she assist the
    SH5_3_15         Last month of life: How many days did he/she assist the
    SH5_4_15         Last month of life: How many days did he/she assist the
    SH5_5_15         Last month of life: How many days did he/she assist the
    SH5_6_15         Last month of life: How many days did he/she assist the
    SH5_7_15         Last month of life: How many days did he/she assist the
    SH5_8_15         Last month of life: How many days did he/she assist the
    SH5_9_15         Last month of life: How many days did he/she assist the
    SH6_10_15        Last month of life: How many hours per day did he/she as
    SH6_1_15         Last month of life: How many hours per day did he/she as
    SH6_2_15         Last month of life: How many hours per day did he/she as
    SH6_3_15         Last month of life: How many hours per day did he/she as
    SH6_4_15         Last month of life: How many hours per day did he/she as
    SH6_5_15         Last month of life: How many hours per day did he/she as
    SH6_6_15         Last month of life: How many hours per day did he/she as
    SH6_7_15         Last month of life: How many hours per day did he/she as
    SH6_8_15         Last month of life: How many hours per day did he/she as
    SH6_9_15         Last month of life: How many hours per day did he/she as
    SH7_15           Last three months before death: Deceased receive help wi
    SH9_10_15        Assistant's registration number
    SH9_1_15         Assistant's registration number
    SH9_2_15         Assistant's registration number
    SH9_3_15         Assistant's registration number
    SH9_4_15         Assistant's registration number
    SH9_5_15         Assistant's registration number
    SH9_6_15         Assistant's registration number
    SH9_7_15         Assistant's registration number
    SH9_8_15         Assistant's registration number
    SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18        (First) IADL Assistant's relationship to the deceased
    SH10_2_18        (Second) IADL Assistant's relationship to the deceased
    SH10_3_18        (Third) IADL Assistant's relationship to the deceased
    SH1_18           Due to health problems: Deceased receive help with at le
    SH3_1_18         (First) ADL Assistant's registration number
    SH3_2_18         (Second) ADL Assistant's registration number
    SH4_1_18         (First) ADL Assistant's relationship to the deceased
    SH4_2_18         (Second) ADL Assistant's relationship to the deceased
    SH7_18           Last three months before death: Deceased receive help wi
```

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SH9_1_18          (First) IADL Assistant's registration number
SH9_2_18          (Second) IADL Assistant's registration number
SH9_3_18          (Third) IADL Assistant's registration number
```

Activities of Daily Living and Instrumental Activities of Daily Living: Received Informal Care from Relatives

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Wave	Variable	Label	Type
1	RAXRRCARE	raxrrcare: R received informal care from relatives for ADLs/	Categ
1	RAXRRCAREN	raxrrcaren: # relatives who helped R with ADLs/IADLs	Cont
1	RAXRRCAREDPM	raxrrcaredpm: days/month relatives helped R with ADLs/IADLs	Cont
1	RAXRRCAREDPMM	raxrrcaredpmm: R # relatives missing days of help for ADLs/I	Cont
1	RAXRRCAREHR	raxrrcarehr: hours/day relatives helped R with ADLs/IADLs	Cont
1	RAXRRCAREHRM	raxrrcarehrm: R # relatives missing hours of help for ADLs/I	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRRCARE	3916	0.08	0.27	0.00	1.00
RAXRRCAREN	3916	0.11	0.44	0.00	10.00
RAXRRCAREDPM	3119	2.67	11.88	0.00	300.00
RAXRRCAREDPMM	3119	0.00	0.00	0.00	0.00
RAXRRCAREHR	3119	1.04	5.01	0.00	120.00
RAXRRCAREHRM	3119	0.00	0.00	0.00	0.00

Categorical Variable Codes

```
Value--------------------------------|        RAXRRCARE
.d:dk                                |            1
.h:received no help                  |         1658
.j:didn't do activities              |            1
.m:missing                           |           41
.r:refuse                            |            3
.t:couldn't do activities            |            3
0.no                                 |         3618
1.yes                                |          298
```

How Constructed

The following variables indicate whether, in the last three months of life, any of the respondent's relatives helped the respondent with any ADL or IADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any ADL activities and IADL activities in the last three months of life separately, and if so, they are asked for the relationships of all the people who helped them with ADLs and/or IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy.

In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRRCARE, RAXRRCAREN, RAXRRCAREDPM, RAXRRCAREDPMM, RAXRRCAREHR, and RAXRRCAREHRM include help from the respondent's parent or other relative.

RAXRRCARE indicates whether any of the respondent's relatives helped the respondent with ADL or IADL needs. RAXRRCAREN indicates the number of the respondent's relatives who helped the respondent with ADL or IADL needs. RAXRRCARE is coded as 0 if none of the respondent's relatives helped the respondent with ADLs or IADLS; and is coded as 1 if at least one of the respondent's relatives helped the respondent with ADLs or IADLs.

RAXRRCAREDPM indicates the number of total days per month the respondent's relatives help the respondent with ADL or IADL needs. If the proxy reports that the respondent received help every day from that relative, then a value of 30 is assumed. RAXRRCAREDPM is the sum of days per month for all relative helpers, and so values can be over 30 days. RAXRRCAREDPM is calculated as long as there is one non-missing value. RAXRRCAREDPM is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRRCAREDPMM indicates the number of relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRRCAREDPM. RAXRRCAREDPMM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRRCAREDPM and RAXRRCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRRCAREHR indicates the number of hours per day the respondent's relatives helped the respondent with ADL or IADL needs. Proxies are asked, on days the respondent's relatives helped, how many hours per day that was. If the proxy reports less than an hour for that relative, then a 1 is assumed. RAXRRCAREHR is the sum of hours per day for all relative helpers, and so values can be over 24 hours. RAXRRCAREHR is calculated as long as there is one non-missing value. RAXRRCAREHR is assigned a value of 0 if the respondent did not receive help from any relatives. RAXRRCAREHRM indicates the number of relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRRCAREHR. RAXRRCAREHRM is assigned special missing value .m if the respondent was not helped by any relatives. Special missing .q is assigned to RAXRRCAREHR and RAXRRCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast,

asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRRCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRRCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1             received help for doing certain activities
    SH10            registration number
    SH11            how many days did they help (name)
    SH12            how many hours a day
    SH3             relationship
    SH4             registration number
    SH5             how many days did they help (name)
    SH6             how many hours a day
    SH7             received help for doing other certain activities
    SH9             relationship
Wave 3 Next of Kin:
    SH10_10_12      Assistant's relationship to the deceased
    SH10_1_12       Assistant's relationship to the deceased
    SH10_2_12       Assistant's relationship to the deceased
    SH10_3_12       Assistant's relationship to the deceased
    SH10_4_12       Assistant's relationship to the deceased
    SH10_5_12       Assistant's relationship to the deceased
    SH10_6_12       Assistant's relationship to the deceased
    SH10_7_12       Assistant's relationship to the deceased
    SH10_8_12       Assistant's relationship to the deceased
    SH10_9_12       Assistant's relationship to the deceased
    SH11_10_12      Last month of life:How many days did he/she assist the d
    SH11_1_12       Last month of life:How many days did he/she assist the d
    SH11_2_12       Last month of life:How many days did he/she assist the d
    SH11_3_12       Last month of life:How many days did he/she assist the d
    SH11_4_12       Last month of life:How many days did he/she assist the d
    SH11_5_12       Last month of life:How many days did he/she assist the d
    SH11_6_12       Last month of life:How many days did he/she assist the d
    SH11_7_12       Last month of life:How many days did he/she assist the d
    SH11_8_12       Last month of life:How many days did he/she assist the d
    SH11_9_12       Last month of life:How many days did he/she assist the d
    SH12_10_12      Last month of life:How many hours per day did he/she ass
    SH12_1_12       Last month of life:How many hours per day did he/she ass
    SH12_2_12       Last month of life:How many hours per day did he/she ass
    SH12_3_12       Last month of life:How many hours per day did he/she ass
    SH12_4_12       Last month of life:How many hours per day did he/she ass
    SH12_5_12       Last month of life:How many hours per day did he/she ass
    SH12_6_12       Last month of life:How many hours per day did he/she ass
    SH12_7_12       Last month of life:How many hours per day did he/she ass
    SH12_8_12       Last month of life:How many hours per day did he/she ass
    SH12_9_12       Last month of life:How many hours per day did he/she ass
    SH1_12          Due to health problems: Deceased receive help with certa
    SH3_10_12       Assistant's registration number
    SH3_1_12        Assistant's registration number
    SH3_2_12        Assistant's registration number
    SH3_3_12        Assistant's registration number
    SH3_4_12        Assistant's registration number
    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
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     SH4_1_12        Assistant's relationship to the deceased
     SH4_2_12        Assistant's relationship to the deceased
     SH4_3_12        Assistant's relationship to the deceased
     SH4_4_12        Assistant's relationship to the deceased
     SH4_5_12        Assistant's relationship to the deceased
     SH4_6_12        Assistant's relationship to the deceased
     SH4_7_12        Assistant's relationship to the deceased
     SH4_8_12        Assistant's relationship to the deceased
     SH4_9_12        Assistant's relationship to the deceased
     SH5_10_12       Last month of life:How many days did he/she assist the d
     SH5_1_12        Last month of life:How many days did he/she assist the d
     SH5_2_12        Last month of life:How many days did he/she assist the d
     SH5_3_12        Last month of life:How many days did he/she assist the d
     SH5_4_12        Last month of life:How many days did he/she assist the d
     SH5_5_12        Last month of life:How many days did he/she assist the d
     SH5_6_12        Last month of life:How many days did he/she assist the d
     SH5_7_12        Last month of life:How many days did he/she assist the d
     SH5_8_12        Last month of life:How many days did he/she assist the d
     SH5_9_12        Last month of life:How many days did he/she assist the d
     SH6_10_12       Last month of life:How many hours per day did he/she ass
     SH6_1_12        Last month of life:How many hours per day did he/she ass
     SH6_2_12        Last month of life:How many hours per day did he/she ass
     SH6_3_12        Last month of life:How many hours per day did he/she ass
     SH6_4_12        Last month of life:How many hours per day did he/she ass
     SH6_5_12        Last month of life:How many hours per day did he/she ass
     SH6_6_12        Last month of life:How many hours per day did he/she ass
     SH6_7_12        Last month of life:How many hours per day did he/she ass
     SH6_8_12        Last month of life:How many hours per day did he/she ass
     SH6_9_12        Last month of life:How many hours per day did he/she ass
     SH7_12          Last three months before death:Deceased receive help wit
     SH9_10_12       Assistant's registration number
     SH9_1_12        Assistant's registration number
     SH9_2_12        Assistant's registration number
     SH9_3_12        Assistant's registration number
     SH9_4_12        Assistant's registration number
     SH9_5_12        Assistant's registration number
     SH9_6_12        Assistant's registration number
     SH9_7_12        Assistant's registration number
     SH9_8_12        Assistant's registration number
     SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
     SH10_10_15      Assistant's relationship to the deceased
     SH10_1_15       Assistant's relationship to the deceased
     SH10_2_15       Assistant's relationship to the deceased
     SH10_3_15       Assistant's relationship to the deceased
     SH10_4_15       Assistant's relationship to the deceased
     SH10_5_15       Assistant's relationship to the deceased
     SH10_6_15       Assistant's relationship to the deceased
     SH10_7_15       Assistant's relationship to the deceased
     SH10_8_15       Assistant's relationship to the deceased
     SH10_9_15       Assistant's relationship to the deceased
     SH11_10_15      Last month of life: How many days did he/she assist the
     SH11_1_15       Last month of life: How many days did he/she assist the
     SH11_2_15       Last month of life: How many days did he/she assist the
     SH11_3_15       Last month of life: How many days did he/she assist the
     SH11_4_15       Last month of life: How many days did he/she assist the
     SH11_5_15       Last month of life: How many days did he/she assist the
     SH11_6_15       Last month of life: How many days did he/she assist the
     SH11_7_15       Last month of life: How many days did he/she assist the
     SH11_8_15       Last month of life: How many days did he/she assist the
     SH11_9_15       Last month of life: How many days did he/she assist the
     SH12_10_15      Last month of life: How many hours per day did he/she as
     SH12_1_15       Last month of life: How many hours per day did he/she as
     SH12_2_15       Last month of life: How many hours per day did he/she as
     SH12_3_15       Last month of life: How many hours per day did he/she as
     SH12_4_15       Last month of life: How many hours per day did he/she as
     SH12_5_15       Last month of life: How many hours per day did he/she as
     SH12_6_15       Last month of life: How many hours per day did he/she as
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    SH12_7_15        Last month of life: How many hours per day did he/she as
    SH12_8_15        Last month of life: How many hours per day did he/she as
    SH12_9_15        Last month of life: How many hours per day did he/she as
    SH1_15           Due to health problems: Deceased receive help with at le
    SH3_10_15        Assistant's registration number
    SH3_1_15         Assistant's registration number
    SH3_2_15         Assistant's registration number
    SH3_3_15         Assistant's registration number
    SH3_4_15         Assistant's registration number
    SH3_5_15         Assistant's registration number
    SH3_6_15         Assistant's registration number
    SH3_7_15         Assistant's registration number
    SH3_8_15         Assistant's registration number
    SH3_9_15         Assistant's registration number
    SH4_10_15        Assistant's relationship to the deceased
    SH4_1_15         Assistant's relationship to the deceased
    SH4_2_15         Assistant's relationship to the deceased
    SH4_3_15         Assistant's relationship to the deceased
    SH4_4_15         Assistant's relationship to the deceased
    SH4_5_15         Assistant's relationship to the deceased
    SH4_6_15         Assistant's relationship to the deceased
    SH4_7_15         Assistant's relationship to the deceased
    SH4_8_15         Assistant's relationship to the deceased
    SH4_9_15         Assistant's relationship to the deceased
    SH5_10_15        Last month of life: How many days did he/she assist the
    SH5_1_15         Last month of life: How many days did he/she assist the
    SH5_2_15         Last month of life: How many days did he/she assist the
    SH5_3_15         Last month of life: How many days did he/she assist the
    SH5_4_15         Last month of life: How many days did he/she assist the
    SH5_5_15         Last month of life: How many days did he/she assist the
    SH5_6_15         Last month of life: How many days did he/she assist the
    SH5_7_15         Last month of life: How many days did he/she assist the
    SH5_8_15         Last month of life: How many days did he/she assist the
    SH5_9_15         Last month of life: How many days did he/she assist the
    SH6_10_15        Last month of life: How many hours per day did he/she as
    SH6_1_15         Last month of life: How many hours per day did he/she as
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    SH6_3_15         Last month of life: How many hours per day did he/she as
    SH6_4_15         Last month of life: How many hours per day did he/she as
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    SH6_8_15         Last month of life: How many hours per day did he/she as
    SH6_9_15         Last month of life: How many hours per day did he/she as
    SH7_15           Last three months before death: Deceased receive help wi
    SH9_10_15        Assistant's registration number
    SH9_1_15         Assistant's registration number
    SH9_2_15         Assistant's registration number
    SH9_3_15         Assistant's registration number
    SH9_4_15         Assistant's registration number
    SH9_5_15         Assistant's registration number
    SH9_6_15         Assistant's registration number
    SH9_7_15         Assistant's registration number
    SH9_8_15         Assistant's registration number
    SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18         (First) IADL Assistant's relationship to the deceased
    SH10_2_18         (Second) IADL Assistant's relationship to the deceased
    SH10_3_18         (Third) IADL Assistant's relationship to the deceased
    SH1_18            Due to health problems: Deceased receive help with at le
    SH3_1_18          (First) ADL Assistant's registration number
    SH3_2_18          (Second) ADL Assistant's registration number
    SH4_1_18          (First) ADL Assistant's relationship to the deceased
    SH4_2_18          (Second) ADL Assistant's relationship to the deceased
    SH7_18            Last three months before death: Deceased receive help wi
    SH9_1_18          (First) IADL Assistant's registration number
    SH9_2_18          (Second) IADL Assistant's registration number
    SH9_3_18          (Third) IADL Assistant's registration number
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Activities of Daily Living and Instrumental Activities of Daily Living: Received Informal Care from Other Individuals

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Wave	Variable	Label	Type
1	RAXRFCARE	raxrfcare: R received informal care from non-relatives for A	Categ
1	RAXRFCAREN	raxrfcaren: # non-relatives who helped R with ADLs/IADLs	Cont
1	RAXRFCAREDPM	raxrfcaredpm: days/month non-relatives helped R with ADLs/IA	Cont
1	RAXRFCAREDPMM	raxrfcaredpmm: R # non-relatives missing days of help for AD	Cont
1	RAXRFCAREHR	raxrfcarehr: hours/day non-relatives helped R with ADLs/IADL	Cont
1	RAXRFCAREHRM	raxrfcarehrm: R # non-relatives missing hours of help for AD	Cont

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRFCARE	3922	0.08	0.27	0.00	1.00
RAXRFCAREN	3922	0.10	0.40	0.00	3.00
RAXRFCAREDPM	3119	1.26	6.56	0.00	90.00
RAXRFCAREDPMM	3119	0.00	0.00	0.00	0.00
RAXRFCAREHR	3119	0.46	2.71	0.00	24.00
RAXRFCAREHRM	3119	0.00	0.00	0.00	0.00

Categorical Variable Codes

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Value--------------------------------|     RAXRFCARE
.d:dk                                 |             1
.h:received no help                   |          1658
.j:didn't do activities               |             1
.m:missing                            |            35
.r:refuse                             |             3
.t:couldn't do activities             |             3
0.no                                  |          3618
1.yes                                 |           304
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How Constructed

The following variables indicate whether, in the last three months of life, any non-relative helped the respondent with any ADL or IADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any ADL activities and IADL activities in the last three months of life separately, and if so, they are asked for the relationships of all the people who helped them with ADLs and/or IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In

cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent"s roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRFCARE, RAXRFCAREN, RAXRFCAREDPM, RAXRFCAREDPMM, RAXRFCAREHR, and RAXRFCAREHRM include help from another person (not their spouse, child, child-in-law, grandchild, parent, other relative, or paid person).

RAXRFCARE indicates whether any of the respondent's non-relatives helped the respondent with ADL or IADL needs. RAXRFCAREN indicates the number of the respondent's non-relatives who helped the respondent with ADL or IADL needs. RAXRRCARE is coded as 0 if none of the respondent's non-relatives helped the respondent with ADLs or IADLS; and is coded as 1 if at least one of the respondent's non-relatives helped the respondent with ADLs or IADLs.

RAXRFCAREDPM indicates the number of total days per month the respondent's non-relatives help the respondent with ADL or IADL needs. If the proxy reports that the respondent received help every day from that non-relative, then a value of 30 is assumed. RAXRFCAREDPM is the sum of days per month for all non-relative helpers, and so values can be over 30 days. RAXRFCAREDPM is calculated as long as there is one non-missing value. RAXRFCAREDPM is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRFCAREDPMM indicates the number of non-relatives who helped the respondent for whom no value of days was reported and was not accounted for in RAXRFCAREDPM. RAXRFCAREDPMM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRFCAREDPM and RAXRFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRFCAREHR indicates the number of hours per day the respondent's non-relatives helped the respondent with ADL or IADL needs. Proxies are asked, on days the respondent's non-relatives helped, how many hours per day that was. If the proxy reports less than an hour for that non-relative, then a 1 is assumed. RAXRFCAREHR is the sum of hours per day for all non-relative helpers, and so values can be over 24 hours. RAXRFCAREHR is calculated as long as there is one non-missing value. RAXRFCAREHR is assigned a value of 0 if the respondent did not receive help from any non-relatives. RAXRFCAREHRM indicates the number of non-relatives who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRFCAREHR. RAXRFCAREDHRM is assigned special missing value .m if the respondent was not helped by any non-relatives. Special missing .q is assigned to RAXRFCAREHR and RAXRFCAREHRM in Wave 5 because the question about how many hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

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MHAS Variables Used

```
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    SH1           received help for doing certain activities
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
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     SH3_9_12        Assistant's registration number
     SH4_10_12       Assistant's relationship to the deceased
     SH4_1_12        Assistant's relationship to the deceased
     SH4_2_12        Assistant's relationship to the deceased
     SH4_3_12        Assistant's relationship to the deceased
     SH4_4_12        Assistant's relationship to the deceased
     SH4_5_12        Assistant's relationship to the deceased
     SH4_6_12        Assistant's relationship to the deceased
     SH4_7_12        Assistant's relationship to the deceased
     SH4_8_12        Assistant's relationship to the deceased
     SH4_9_12        Assistant's relationship to the deceased
     SH5_10_12       Last month of life:How many days did he/she assist the d
     SH5_1_12        Last month of life:How many days did he/she assist the d
     SH5_2_12        Last month of life:How many days did he/she assist the d
     SH5_3_12        Last month of life:How many days did he/she assist the d
     SH5_4_12        Last month of life:How many days did he/she assist the d
     SH5_5_12        Last month of life:How many days did he/she assist the d
     SH5_6_12        Last month of life:How many days did he/she assist the d
     SH5_7_12        Last month of life:How many days did he/she assist the d
     SH5_8_12        Last month of life:How many days did he/she assist the d
     SH5_9_12        Last month of life:How many days did he/she assist the d
     SH6_10_12       Last month of life:How many hours per day did he/she ass
     SH6_1_12        Last month of life:How many hours per day did he/she ass
     SH6_2_12        Last month of life:How many hours per day did he/she ass
     SH6_3_12        Last month of life:How many hours per day did he/she ass
     SH6_4_12        Last month of life:How many hours per day did he/she ass
     SH6_5_12        Last month of life:How many hours per day did he/she ass
     SH6_6_12        Last month of life:How many hours per day did he/she ass
     SH6_7_12        Last month of life:How many hours per day did he/she ass
     SH6_8_12        Last month of life:How many hours per day did he/she ass
     SH6_9_12        Last month of life:How many hours per day did he/she ass
     SH7_12          Last three months before death:Deceased receive help wit
     SH9_10_12       Assistant's registration number
     SH9_1_12        Assistant's registration number
     SH9_2_12        Assistant's registration number
     SH9_3_12        Assistant's registration number
     SH9_4_12        Assistant's registration number
     SH9_5_12        Assistant's registration number
     SH9_6_12        Assistant's registration number
     SH9_7_12        Assistant's registration number
     SH9_8_12        Assistant's registration number
     SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
     SH10_10_15      Assistant's relationship to the deceased
     SH10_1_15       Assistant's relationship to the deceased
     SH10_2_15       Assistant's relationship to the deceased
     SH10_3_15       Assistant's relationship to the deceased
     SH10_4_15       Assistant's relationship to the deceased
     SH10_5_15       Assistant's relationship to the deceased
     SH10_6_15       Assistant's relationship to the deceased
     SH10_7_15       Assistant's relationship to the deceased
     SH10_8_15       Assistant's relationship to the deceased
     SH10_9_15       Assistant's relationship to the deceased
     SH11_10_15      Last month of life: How many days did he/she assist the
     SH11_1_15       Last month of life: How many days did he/she assist the
     SH11_2_15       Last month of life: How many days did he/she assist the
     SH11_3_15       Last month of life: How many days did he/she assist the
     SH11_4_15       Last month of life: How many days did he/she assist the
     SH11_5_15       Last month of life: How many days did he/she assist the
     SH11_6_15       Last month of life: How many days did he/she assist the
     SH11_7_15       Last month of life: How many days did he/she assist the
     SH11_8_15       Last month of life: How many days did he/she assist the
     SH11_9_15       Last month of life: How many days did he/she assist the
     SH12_10_15      Last month of life: How many hours per day did he/she as
     SH12_1_15       Last month of life: How many hours per day did he/she as
     SH12_2_15       Last month of life: How many hours per day did he/she as
     SH12_3_15       Last month of life: How many hours per day did he/she as
     SH12_4_15       Last month of life: How many hours per day did he/she as
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    SH12_5_15        Last month of life: How many hours per day did he/she as
    SH12_6_15        Last month of life: How many hours per day did he/she as
    SH12_7_15        Last month of life: How many hours per day did he/she as
    SH12_8_15        Last month of life: How many hours per day did he/she as
    SH12_9_15        Last month of life: How many hours per day did he/she as
    SH1_15           Due to health problems: Deceased receive help with at le
    SH3_10_15        Assistant's registration number
    SH3_1_15         Assistant's registration number
    SH3_2_15         Assistant's registration number
    SH3_3_15         Assistant's registration number
    SH3_4_15         Assistant's registration number
    SH3_5_15         Assistant's registration number
    SH3_6_15         Assistant's registration number
    SH3_7_15         Assistant's registration number
    SH3_8_15         Assistant's registration number
    SH3_9_15         Assistant's registration number
    SH4_10_15        Assistant's relationship to the deceased
    SH4_1_15         Assistant's relationship to the deceased
    SH4_2_15         Assistant's relationship to the deceased
    SH4_3_15         Assistant's relationship to the deceased
    SH4_4_15         Assistant's relationship to the deceased
    SH4_5_15         Assistant's relationship to the deceased
    SH4_6_15         Assistant's relationship to the deceased
    SH4_7_15         Assistant's relationship to the deceased
    SH4_8_15         Assistant's relationship to the deceased
    SH4_9_15         Assistant's relationship to the deceased
    SH5_10_15        Last month of life: How many days did he/she assist the
    SH5_1_15         Last month of life: How many days did he/she assist the
    SH5_2_15         Last month of life: How many days did he/she assist the
    SH5_3_15         Last month of life: How many days did he/she assist the
    SH5_4_15         Last month of life: How many days did he/she assist the
    SH5_5_15         Last month of life: How many days did he/she assist the
    SH5_6_15         Last month of life: How many days did he/she assist the
    SH5_7_15         Last month of life: How many days did he/she assist the
    SH5_8_15         Last month of life: How many days did he/she assist the
    SH5_9_15         Last month of life: How many days did he/she assist the
    SH6_10_15        Last month of life: How many hours per day did he/she as
    SH6_1_15         Last month of life: How many hours per day did he/she as
    SH6_2_15         Last month of life: How many hours per day did he/she as
    SH6_3_15         Last month of life: How many hours per day did he/she as
    SH6_4_15         Last month of life: How many hours per day did he/she as
    SH6_5_15         Last month of life: How many hours per day did he/she as
    SH6_6_15         Last month of life: How many hours per day did he/she as
    SH6_7_15         Last month of life: How many hours per day did he/she as
    SH6_8_15         Last month of life: How many hours per day did he/she as
    SH6_9_15         Last month of life: How many hours per day did he/she as
    SH7_15           Last three months before death: Deceased receive help wi
    SH9_10_15        Assistant's registration number
    SH9_1_15         Assistant's registration number
    SH9_2_15         Assistant's registration number
    SH9_3_15         Assistant's registration number
    SH9_4_15         Assistant's registration number
    SH9_5_15         Assistant's registration number
    SH9_6_15         Assistant's registration number
    SH9_7_15         Assistant's registration number
    SH9_8_15         Assistant's registration number
    SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18        (First) IADL Assistant's relationship to the deceased
    SH10_2_18        (Second) IADL Assistant's relationship to the deceased
    SH10_3_18        (Third) IADL Assistant's relationship to the deceased
    SH1_18           Due to health problems: Deceased receive help with at le
    SH3_1_18         (First) ADL Assistant's registration number
    SH3_2_18         (Second) ADL Assistant's registration number
    SH4_1_18         (First) ADL Assistant's relationship to the deceased
    SH4_2_18         (Second) ADL Assistant's relationship to the deceased
    SH7_18           Last three months before death: Deceased receive help wi
    SH9_1_18         (First) IADL Assistant's registration number
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SH9_2_18          (Second) IADL Assistant's registration number
SH9_3_18          (Third) IADL Assistant's registration number
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Activities of Daily Living and Instrumental Activities of Daily Living: Whether Received Any Formal Care

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Wave	Variable	Label	Type
1	RAXRFAANY	raxrfaany: R received any formal care for ADLs/IADLs	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAXRFAANY	5571	0.03	0.17	0.00	1.00

Categorical Variable Codes

```
Value----------------------------------|      RAXRFAANY
.d:dk                                   |           1
.j:didn't do activities                 |           1
.m:missing                              |          44
.r:refuse                               |           3
.t:couldn't do activities               |           3
0.no                                    |        5404
1.yes                                   |         167
```

How Constructed

RAXRFAANY indicates whether, in the last three months of life, the respondent received any formal care for difficulties with activities of daily living (ADL) and/or instrumental activities of daily living (IADL) according to the proxy. The proxy is asked if someone helped the respondent with at least one ADL and one IADL, separately, in the last three months of their life due to physical, mental, emotional, or memory-related problems. The activities of daily living include dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. If the respondent reports having difficulty with an ADL or IADL, then they are asked whether someone helps them with that activity. If the respondent received help, then the proxy is asked to report all the people who helped the respondent with ADL activities and IADL activities separately. Helpers with a relationship of "paid person" are considered to provide formal care.

Please note that for each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household member, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

RAXRFAANY is assigned a value of 0 if the respondent received help with at least one ADL or IADL but received no help from a formal caregiver, or if the respondent did not receive any help with any ADL or IADL activities. RAXRFAANY is assigned a value of 1 if the respondent received help with at least one ADL or IADL and a formal caregiver helped with at least one of the activities. In Wave 2, RAXRFAANY is assigned special missing value .j if the proxy reports that the respondent didn't do the activities, and is assigned special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, RAXRACAANY is assigned special missing value .a if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, and other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

In the Harmonized HRS End of Life, RAXRFAANY indicates whether the respondent received help from either paid or unpaid formal caregivers, while in the MHAS End of Life, RAXRFAANY indicates only whether the respondent received help from paid formal caregivers based on the categories of relationships available in each study.

In the HRS exit interview, the proxy is asked whether someone helped the respondent with each ADL and IADL separately, while in the MHAS next of kin interview, the proxy is asked whether someone helped the respondent with any ADL or with any IADL.

The HRS asks about help the respondent received with dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The MHAS asks about help the respondent received with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS specifies whether someone helped the respondent shop for groceries, while the MHAS specifies whether someone helped the respondent with making purchases/shopping.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1             received help for doing certain activities
    SH10            registration number
    SH3             relationship
    SH4             registration number
    SH7             received help for doing other certain activities
    SH9             relationship
Wave 3 Next of Kin:
    SH10_10_12      Assistant's relationship to the deceased
    SH10_1_12       Assistant's relationship to the deceased
    SH10_2_12       Assistant's relationship to the deceased
    SH10_3_12       Assistant's relationship to the deceased
    SH10_4_12       Assistant's relationship to the deceased
    SH10_5_12       Assistant's relationship to the deceased
    SH10_6_12       Assistant's relationship to the deceased
    SH10_7_12       Assistant's relationship to the deceased
    SH10_8_12       Assistant's relationship to the deceased
    SH10_9_12       Assistant's relationship to the deceased
    SH1_12          Due to health problems: Deceased receive help with certa
    SH3_10_12       Assistant's registration number
    SH3_1_12        Assistant's registration number
    SH3_2_12        Assistant's registration number
    SH3_3_12        Assistant's registration number
    SH3_4_12        Assistant's registration number
    SH3_5_12        Assistant's registration number
    SH3_6_12        Assistant's registration number
    SH3_7_12        Assistant's registration number
    SH3_8_12        Assistant's registration number
    SH3_9_12        Assistant's registration number
    SH4_10_12       Assistant's relationship to the deceased
    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
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    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH1_15          Due to health problems: Deceased receive help with at le
    SH3_10_15       Assistant's registration number
    SH3_1_15        Assistant's registration number
    SH3_2_15        Assistant's registration number
    SH3_3_15        Assistant's registration number
    SH3_4_15        Assistant's registration number
    SH3_5_15        Assistant's registration number
    SH3_6_15        Assistant's registration number
    SH3_7_15        Assistant's registration number
    SH3_8_15        Assistant's registration number
    SH3_9_15        Assistant's registration number
    SH4_10_15       Assistant's relationship to the deceased
    SH4_1_15        Assistant's relationship to the deceased
    SH4_2_15        Assistant's relationship to the deceased
    SH4_3_15        Assistant's relationship to the deceased
    SH4_4_15        Assistant's relationship to the deceased
    SH4_5_15        Assistant's relationship to the deceased
    SH4_6_15        Assistant's relationship to the deceased
    SH4_7_15        Assistant's relationship to the deceased
    SH4_8_15        Assistant's relationship to the deceased
    SH4_9_15        Assistant's relationship to the deceased
    SH7_15          Last three months before death: Deceased receive help wi
    SH9_10_15       Assistant's registration number
    SH9_1_15        Assistant's registration number
    SH9_2_15        Assistant's registration number
    SH9_3_15        Assistant's registration number
    SH9_4_15        Assistant's registration number
    SH9_5_15        Assistant's registration number
    SH9_6_15        Assistant's registration number
    SH9_7_15        Assistant's registration number
    SH9_8_15        Assistant's registration number
    SH9_9_15        Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18       (First) IADL Assistant's relationship to the deceased
    SH10_2_18       (Second) IADL Assistant's relationship to the deceased
    SH10_3_18       (Third) IADL Assistant's relationship to the deceased
    SH1_18          Due to health problems: Deceased receive help with at le
    SH3_1_18        (First) ADL Assistant's registration number
    SH3_2_18        (Second) ADL Assistant's registration number
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SH4_1_18        (First) ADL Assistant's relationship to the deceased
SH4_2_18        (Second) ADL Assistant's relationship to the deceased
SH7_18          Last three months before death: Deceased receive help wi
SH9_1_18        (First) IADL Assistant's registration number
SH9_2_18        (Second) IADL Assistant's registration number
SH9_3_18        (Third) IADL Assistant's registration number
```

Activities of Daily Living and Instrumental Activities of Daily Living: Received Formal Care from Paid Professional

```
Wave Variable        Label                                                    Type

  1  RAXRPFCARE      raxrpfcare: R received formal care from paid professional fo  Categ

  1  RAXRPFCAREN     raxrpfcaren: # paid professionals who helped R with ADLs/IAD  Cont

  1  RAXRPFCAREDPM   raxrpfcaredpm: days/month paid professionals helped R with A  Cont

  1  RAXRPFCAREDPMM  raxrpfcaredpmm: R # paid professionals missing days of help   Cont

  1  RAXRPFCAREHR    raxrpfcarehr: hours/day paid professionals helped R with ADL  Cont

  1  RAXRPFCAREHRM   raxrpfcarehrm: R # paid professionals missing hours of help   Cont
```

Descriptive Statistics

```
Variable             N         Mean      Std Dev     Minimum      Maximum

RAXRPFCARE          3913        0.04        0.20        0.00         1.00

RAXRPFCAREN         3913        0.05        0.25        0.00         4.00

RAXRPFCAREDPM       3119        1.20        6.28        0.00        90.00

RAXRPFCAREDPMM      3119        0.00        0.00        0.00         0.00

RAXRPFCAREHR        3119        0.51        3.12        0.00        50.00

RAXRPFCAREHRM       3119        0.00        0.00        0.00         0.00
```

Categorical Variable Codes

```
Value--------------------------------|     RAXRPFCARE
.d:dk                                |              1
.h:received no help                  |           1658
.j:didn't do activities              |              1
.m:missing                           |             44
.r:refuse                            |              3
.t:couldn't do activities            |              3
0.no                                 |           3746
1.yes                                |            167
```

How Constructed

The following variables indicate whether, in the last three months of life, paid formal caregivers helped the respondent with any ADL or IADL needs according to the proxy. The activities of daily living include walking across a room, bathing, eating, getting in and out of bed, and using the toilet. The instrumental activities of daily living include preparing meals, making purchases/shopping, taking medications, and managing money. The proxy is first asked whether anyone helped the respondent with any ADL activities and IADL activities in the last three months of life separately, and if so, they are asked for the relationships of all the people who helped them with ADLs and/or IADLs. The information used to derive these variables is taken from the next of kin help files in Wave 2 and from the next of kin individual files in Waves 3 and forward. For each caregiver, the proxy is asked to report the respondent's relationship to the caregiver and their roster number, if any. In cases where the reported relationship disagrees with the roster number, the roster number takes precedence in defining the relationship for spouses and children, for which the roster numbers follow clear rules. In cases where the reported relationship is "spouse" but the roster number indicates a non-spouse household, the relationship type is changed to "other person". In cases where the reported relationship is "spouse" and no roster number is indicated, then the relationship type is kept as "spouse" (this occurs more frequently in Waves 3 and 5). In cases of multiple records with the same caregiver relationship and roster number, we only consider the caregiver with the highest level of care provided to the respondent as reported by the proxy. In

cases of multiple records with the same caregiver relationship and no roster number, we assume all mentions are separate individuals.

The following variables are coded as special missing value .h if the respondent did not receive any help, as special missing .j if the proxy reports that the respondent didn't do the activities, and as special missing value .t if the proxy reports that the respondent couldn't do the activities. In Wave 5, special missing value .a is assigned if the proxy reports that the respondent was helped by "all" the people in the respondent's roster. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

RAXRPFCARE, RAXRPFCAREN, RAXRPFCAREDPM, RAXRPFCAREDPMM, RAXRPFCAREHR, and RAXRPFCAREHRM include help from a paid person.

RAXRPFCARE indicates whether any paid professionals helped the respondent with ADL or IADL needs. RAXRPFCAREN indicates the number of paid professionals who helped the respondent with ADL or IADL needs. RAXRPFCARE is coded as 0 if no paid professionals helped the respondent with ADLs or IADLS; and is coded as 1 if at least one paid professional helped the respondent with ADLs or IADLs.

RAXRPFCAREDPM indicates the number of total days per month paid professionals help the respondent with ADL or IADL needs. If the proxy reports that the respondent received help every day from that paid professional, then a value of 30 is assumed. RAXRPFCAREDPM is the sum of days per month for all paid professional helpers, and so values can be over 30 days. RAXRPFCAREDPM is calculated as long as there is one non-missing value. RAXRPFCAREDPM is assigned a value of 0 if the respondent did not receive help from any paid professionals. RAXRPFCAREDPMM indicates the number of paid professionals who helped the respondent for whom no value of days was reported and was not accounted for in RAXRPFCAREDPM. RAXRPFCAREDPMM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRPFCAREDPM and RAXRPFCAREDPMM in Wave 5 because the question about how many days the respondent was helped during the last month of their life is not asked in the next of kin interview.

RAXRPFCAREHR indicates the number of hours per day paid professionals helped the respondent with ADL or IADL needs. Proxies are asked, on days paid professionals helped, how many hours per day that was. If the proxy reports less than an hour for that paid professional, then a 1 is assumed. RAXRPFCAREHR is the sum of hours per day for all paid professional helpers, and so values can be over 24 hours. RAXRPFCAREHR is calculated as long as there is one non-missing value. RAXRPFCAREHR is assigned a value of 0 if the respondent does not receive help from any paid professionals. RAXRPFCAREHRM indicates the number of paid professionals who helped the respondent for whom no value of hours was reported and was not accounted for in RAXRPFCAREHR. RAXRPFCAREHRM is assigned special missing value .m if the respondent was not helped by any paid professionals. Special missing .q is assigned to RAXRPFCAREHR and RAXRPFCAREHRM in Wave 5 because the question about how hours per day the respondent was helped during the last month of their life is not asked in the next of kin interview.

Cross Wave Differences in MHAS

In Wave 2, if the proxy reports that the respondent couldn't or didn't do the activities, then the proxy is not asked who helped the respondent. Starting in Wave 3, the proxy is asked who helped the respondent if the proxy reports that the respondent couldn't or didn't do the activities.

In Waves 2 through 4, the proxy can provide information for up to 10 helpers each for ADLs and IADLs. Starting in Wave 5, the proxy can provide information for up to 3 helpers each for ADLs and IADLs. In Wave 5, the variable indicating the roster number of the third ADL helper is missing in the data, so these variables only consider the first two reported ADL helpers.

In Wave 5, the proxy can report that the respondent was helped by "all" roster members.

In the Wave 5 next of kin interview, the questions about how many days the respondent was helped during the last month of their life and how many hours per day the respondent was helped during the last month of their life are not asked.

Differences with the Harmonized HRS End of Life

The HRS has different categories of relationships between the respondent and their caregiver, but these variables have been created to be as comparable as possible.

The HRS asks for up to 7 relationships of people who help with ADLs (dressing, walking across a room, bathing, eating, getting in and out of bed, and using the toilet). The MHAS, in contrast,

asks for the relationships of people who help with walking across a room, bathing, eating, getting in and out of bed, and using the toilet, but does not include dressing.

The HRS asks for up to 6 relationships of people who help with IADLs (preparing meals, grocery shopping, making phone calls, and taking medications), and up to 2 people who help with managing money. The MHAS, in contrast, asks for the relationships of people who help with preparing meals, making purchases/shopping, taking medications, and managing money together.

RAXRPFCAREDPW in the Harmonized HRS End of Life indicates the days per week the respondent received help, while RAXRPFCAREDPM in the Harmonized MHAS End of Life indicates the days per month the respondent received help. As such, adjustment must be made before comparison of these variables.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SH1           received help for doing certain activities
    SH10          registration number
    SH11          how many days did they help (name)
    SH12          how many hours a day
    SH3           relationship
    SH4           registration number
    SH5           how many days did they help (name)
    SH6           how many hours a day
    SH7           received help for doing other certain activities
    SH9           relationship
Wave 3 Next of Kin:
    SH10_10_12    Assistant's relationship to the deceased
    SH10_1_12     Assistant's relationship to the deceased
    SH10_2_12     Assistant's relationship to the deceased
    SH10_3_12     Assistant's relationship to the deceased
    SH10_4_12     Assistant's relationship to the deceased
    SH10_5_12     Assistant's relationship to the deceased
    SH10_6_12     Assistant's relationship to the deceased
    SH10_7_12     Assistant's relationship to the deceased
    SH10_8_12     Assistant's relationship to the deceased
    SH10_9_12     Assistant's relationship to the deceased
    SH11_10_12    Last month of life:How many days did he/she assist the d
    SH11_1_12     Last month of life:How many days did he/she assist the d
    SH11_2_12     Last month of life:How many days did he/she assist the d
    SH11_3_12     Last month of life:How many days did he/she assist the d
    SH11_4_12     Last month of life:How many days did he/she assist the d
    SH11_5_12     Last month of life:How many days did he/she assist the d
    SH11_6_12     Last month of life:How many days did he/she assist the d
    SH11_7_12     Last month of life:How many days did he/she assist the d
    SH11_8_12     Last month of life:How many days did he/she assist the d
    SH11_9_12     Last month of life:How many days did he/she assist the d
    SH12_10_12    Last month of life:How many hours per day did he/she ass
    SH12_1_12     Last month of life:How many hours per day did he/she ass
    SH12_2_12     Last month of life:How many hours per day did he/she ass
    SH12_3_12     Last month of life:How many hours per day did he/she ass
    SH12_4_12     Last month of life:How many hours per day did he/she ass
    SH12_5_12     Last month of life:How many hours per day did he/she ass
    SH12_6_12     Last month of life:How many hours per day did he/she ass
    SH12_7_12     Last month of life:How many hours per day did he/she ass
    SH12_8_12     Last month of life:How many hours per day did he/she ass
    SH12_9_12     Last month of life:How many hours per day did he/she ass
    SH1_12        Due to health problems: Deceased receive help with certa
    SH3_10_12     Assistant's registration number
    SH3_1_12      Assistant's registration number
    SH3_2_12      Assistant's registration number
    SH3_3_12      Assistant's registration number
    SH3_4_12      Assistant's registration number
    SH3_5_12      Assistant's registration number
    SH3_6_12      Assistant's registration number
    SH3_7_12      Assistant's registration number
    SH3_8_12      Assistant's registration number
    SH3_9_12      Assistant's registration number
    SH4_10_12     Assistant's relationship to the deceased
```

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    SH4_1_12        Assistant's relationship to the deceased
    SH4_2_12        Assistant's relationship to the deceased
    SH4_3_12        Assistant's relationship to the deceased
    SH4_4_12        Assistant's relationship to the deceased
    SH4_5_12        Assistant's relationship to the deceased
    SH4_6_12        Assistant's relationship to the deceased
    SH4_7_12        Assistant's relationship to the deceased
    SH4_8_12        Assistant's relationship to the deceased
    SH4_9_12        Assistant's relationship to the deceased
    SH5_10_12       Last month of life:How many days did he/she assist the d
    SH5_1_12        Last month of life:How many days did he/she assist the d
    SH5_2_12        Last month of life:How many days did he/she assist the d
    SH5_3_12        Last month of life:How many days did he/she assist the d
    SH5_4_12        Last month of life:How many days did he/she assist the d
    SH5_5_12        Last month of life:How many days did he/she assist the d
    SH5_6_12        Last month of life:How many days did he/she assist the d
    SH5_7_12        Last month of life:How many days did he/she assist the d
    SH5_8_12        Last month of life:How many days did he/she assist the d
    SH5_9_12        Last month of life:How many days did he/she assist the d
    SH6_10_12       Last month of life:How many hours per day did he/she ass
    SH6_1_12        Last month of life:How many hours per day did he/she ass
    SH6_2_12        Last month of life:How many hours per day did he/she ass
    SH6_3_12        Last month of life:How many hours per day did he/she ass
    SH6_4_12        Last month of life:How many hours per day did he/she ass
    SH6_5_12        Last month of life:How many hours per day did he/she ass
    SH6_6_12        Last month of life:How many hours per day did he/she ass
    SH6_7_12        Last month of life:How many hours per day did he/she ass
    SH6_8_12        Last month of life:How many hours per day did he/she ass
    SH6_9_12        Last month of life:How many hours per day did he/she ass
    SH7_12          Last three months before death:Deceased receive help wit
    SH9_10_12       Assistant's registration number
    SH9_1_12        Assistant's registration number
    SH9_2_12        Assistant's registration number
    SH9_3_12        Assistant's registration number
    SH9_4_12        Assistant's registration number
    SH9_5_12        Assistant's registration number
    SH9_6_12        Assistant's registration number
    SH9_7_12        Assistant's registration number
    SH9_8_12        Assistant's registration number
    SH9_9_12        Assistant's registration number
Wave 4 Next of Kin:
    SH10_10_15      Assistant's relationship to the deceased
    SH10_1_15       Assistant's relationship to the deceased
    SH10_2_15       Assistant's relationship to the deceased
    SH10_3_15       Assistant's relationship to the deceased
    SH10_4_15       Assistant's relationship to the deceased
    SH10_5_15       Assistant's relationship to the deceased
    SH10_6_15       Assistant's relationship to the deceased
    SH10_7_15       Assistant's relationship to the deceased
    SH10_8_15       Assistant's relationship to the deceased
    SH10_9_15       Assistant's relationship to the deceased
    SH11_10_15      Last month of life: How many days did he/she assist the
    SH11_1_15       Last month of life: How many days did he/she assist the
    SH11_2_15       Last month of life: How many days did he/she assist the
    SH11_3_15       Last month of life: How many days did he/she assist the
    SH11_4_15       Last month of life: How many days did he/she assist the
    SH11_5_15       Last month of life: How many days did he/she assist the
    SH11_6_15       Last month of life: How many days did he/she assist the
    SH11_7_15       Last month of life: How many days did he/she assist the
    SH11_8_15       Last month of life: How many days did he/she assist the
    SH11_9_15       Last month of life: How many days did he/she assist the
    SH12_10_15      Last month of life: How many hours per day did he/she as
    SH12_1_15       Last month of life: How many hours per day did he/she as
    SH12_2_15       Last month of life: How many hours per day did he/she as
    SH12_3_15       Last month of life: How many hours per day did he/she as
    SH12_4_15       Last month of life: How many hours per day did he/she as
    SH12_5_15       Last month of life: How many hours per day did he/she as
    SH12_6_15       Last month of life: How many hours per day did he/she as
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    SH12_7_15        Last month of life: How many hours per day did he/she as
    SH12_8_15        Last month of life: How many hours per day did he/she as
    SH12_9_15        Last month of life: How many hours per day did he/she as
    SH1_15           Due to health problems: Deceased receive help with at le
    SH3_10_15        Assistant's registration number
    SH3_1_15         Assistant's registration number
    SH3_2_15         Assistant's registration number
    SH3_3_15         Assistant's registration number
    SH3_4_15         Assistant's registration number
    SH3_5_15         Assistant's registration number
    SH3_6_15         Assistant's registration number
    SH3_7_15         Assistant's registration number
    SH3_8_15         Assistant's registration number
    SH3_9_15         Assistant's registration number
    SH4_10_15        Assistant's relationship to the deceased
    SH4_1_15         Assistant's relationship to the deceased
    SH4_2_15         Assistant's relationship to the deceased
    SH4_3_15         Assistant's relationship to the deceased
    SH4_4_15         Assistant's relationship to the deceased
    SH4_5_15         Assistant's relationship to the deceased
    SH4_6_15         Assistant's relationship to the deceased
    SH4_7_15         Assistant's relationship to the deceased
    SH4_8_15         Assistant's relationship to the deceased
    SH4_9_15         Assistant's relationship to the deceased
    SH5_10_15        Last month of life: How many days did he/she assist the
    SH5_1_15         Last month of life: How many days did he/she assist the
    SH5_2_15         Last month of life: How many days did he/she assist the
    SH5_3_15         Last month of life: How many days did he/she assist the
    SH5_4_15         Last month of life: How many days did he/she assist the
    SH5_5_15         Last month of life: How many days did he/she assist the
    SH5_6_15         Last month of life: How many days did he/she assist the
    SH5_7_15         Last month of life: How many days did he/she assist the
    SH5_8_15         Last month of life: How many days did he/she assist the
    SH5_9_15         Last month of life: How many days did he/she assist the
    SH6_10_15        Last month of life: How many hours per day did he/she as
    SH6_1_15         Last month of life: How many hours per day did he/she as
    SH6_2_15         Last month of life: How many hours per day did he/she as
    SH6_3_15         Last month of life: How many hours per day did he/she as
    SH6_4_15         Last month of life: How many hours per day did he/she as
    SH6_5_15         Last month of life: How many hours per day did he/she as
    SH6_6_15         Last month of life: How many hours per day did he/she as
    SH6_7_15         Last month of life: How many hours per day did he/she as
    SH6_8_15         Last month of life: How many hours per day did he/she as
    SH6_9_15         Last month of life: How many hours per day did he/she as
    SH7_15           Last three months before death: Deceased receive help wi
    SH9_10_15        Assistant's registration number
    SH9_1_15         Assistant's registration number
    SH9_2_15         Assistant's registration number
    SH9_3_15         Assistant's registration number
    SH9_4_15         Assistant's registration number
    SH9_5_15         Assistant's registration number
    SH9_6_15         Assistant's registration number
    SH9_7_15         Assistant's registration number
    SH9_8_15         Assistant's registration number
    SH9_9_15         Assistant's registration number
Wave 5 Next of Kin:
    SH10_1_18        (First) IADL Assistant's relationship to the deceased
    SH10_2_18        (Second) IADL Assistant's relationship to the deceased
    SH10_3_18        (Third) IADL Assistant's relationship to the deceased
    SH1_18           Due to health problems: Deceased receive help with at le
    SH3_1_18         (First) ADL Assistant's registration number
    SH3_2_18         (Second) ADL Assistant's registration number
    SH4_1_18         (First) ADL Assistant's relationship to the deceased
    SH4_2_18         (Second) ADL Assistant's relationship to the deceased
    SH7_18           Last three months before death: Deceased receive help wi
    SH9_1_18         (First) IADL Assistant's registration number
    SH9_2_18         (Second) IADL Assistant's registration number
    SH9_3_18         (Third) IADL Assistant's registration number
```

Section O: End of Life Planning

Will: Whether Had a Will

Wave	Variable	Label	Type
1	RAWITWILL_M	rawitwill_m: r had a will	Categ
1	RAWITWILL	rawitwill: r had a witnessed will	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RAWITWILL_M	4664	0.27	0.44	0.00	1.00
RAWITWILL	3361	0.23	0.42	0.00	1.00

Categorical Variable Codes

```
Value--------------------------------|    RAWITWILL_M
.d:dk                                |          196
.m:missing                           |           15
.r:refuse                            |            8
.s:skipped-spouse ivw                |           86
.x:no assets                         |          654
0.no                                 |         3416
1.yes                                |         1248

Value--------------------------------|    RAWITWILL
.d:dk                                |          202
.m:missing                           |           81
.q:not asked this wave               |          542
.r:refuse                            |            8
.s:skipped-spouse ivw                |          881
.x:no assets                         |          548
0.no                                 |         2576
1.yes                                |          785
```

How Constructed

RAWITWILL_M is an MHAS specific variable that indicates whether the respondent made arrangements to transfer their assets in case of death, as reported by the proxy. RAWITWILL_M is based first on the report by the proxy in the next of kin interview, and if this is missing, then it is based on the respondent's report of arrangements from the last core interview completed. RAWITWILL_M is assigned a 0 if no arrangements were made, and is assigned a 1 if arrangements were made to transfer their assets in case of death. RAWITWILL_M is assigned special missing .x if the proxy voluntarily reports that the respondent did not have assets or if the respondent reported having no assets in their last core interview. RAWITWILL_M is assigned special missing .s if this question was skipped because there was a spouse proxy for the next of kin interview and the information from a prior wave was missing. Don't know, refused or otherwise missing responses are assigned special missing .d, .r, and .m, respectively.

RAWITWILL indicates whether the respondent made arrangements to transfer their assets in case of death which have been written in a formal testament by a notary, as reported by the proxy. RAWITWILL is based first on the report by the proxy in the next of kin interview, and if this is missing, then starting in Wave 4, it is based on the respondent's report of a formal and notarized testament from the last core interview completed. Starting in Wave 3, the proxy is first asked whether the respondent made any arrangements to transfer their assets in case of death, and if so, is then asked if these arrangements were written in a formal testament by a notary. RAWITWILL is assigned a 0 if no arrangements had been made or if arrangements had been made but they were not written in a formal testament by a notary. RAWITWILL is assigned a 1 if arrangements had been made and they were written in a formal testament by a notary. RAWITWILL is assigned special missing .x if the proxy voluntarily reports that they did not have assets or if the respondent reported having no assets in their last core interview. RAWITWILL is assigned special missing .s if these questions were skipped because there was a spouse proxy for the next of kin interview and the information from a prior wave was missing. RAWITWILL is assigned special missing .q in

Wave 2 when this question was not asked. Don't know, refused or otherwise missing responses are assigned special missing .d, .r, and .m, respectively. Please note that this question is not asked in the core interview or next of kin interview until Wave 3, as such, respondents whose next of kin interview took place in Wave 3 have no report from a previous core interview to carry forward and there is a much higher percentage of missing responses from Wave 3.

Cross Wave Differences in MHAS

In all waves, the proxy is asked "Before his/her passing away, did [the respondent] make any arrangements to transfer his/her assets in case he/she died?" Starting in Wave 3, if the answer is yes, then the respondent is asked "Were these arrangements written in a formal testament notarized?" As such, RAWITWILL_M, which refers to making any arrangements, is available in all waves, while RAWITWILL, which refers to making formal arrangements, is only available starting in Wave 3.

Differences with the Harmonized HRS End of Life

The HRS exit interview asks whether the respondent had a will that is written and witnessed, the answers to which are presented in RAWITWILL in the Harmonized HRS End of Life. The MHAS next of kin interview asks whether arrangements had been made to transfer the respondent's assets in case of death, which could indicate a formal or informal arrangement, which is presented in RAWITWILL_M in the Harmonized MHAS End of Life. Starting in Wave 3 of the MHAS next of kin interview, the proxy is asked whether the respondent's arrangements had been written in a formal testament by a notary, making the question more comparable to the one asked in the HRS exit interview, and the answers to which are presented in RAWITWILL in the Harmonized MHAS End of Life.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SJ1            interview is alone, with couple (alive), both passed awa
    SJ9            made arrangements to transfer assets
Wave 3 Next of Kin:
    SJ1_12         Interviewer: indicate if interview about deceased is ind
    SJ9A_12        Before death:Made arrangements to transfer his/her asset
    SJ9B_12        Were the arrangements formally written and notarized
Wave 4 Next of Kin:
    SJ1_15         Interviewer: Indicate if the interview is individual or
    SJ9A_15        Before death: Did he/she make arrangements to transfer h
    SJ9B_15        Were the arrangements formally written and notarized
Wave 5 Next of Kin:
    SJ1_18         Type of next-of-kin interview
    SJ9A_18        Before death: Did he/she make arrangements to transfer h
    SJ9B_18        Were the arrangements formally written and notarized
```

Will: Beneficiaries of Will

```
Wave Variable          Label                                                             Type

  1  RAWILLSP          rawillsp: r's will had provisions for spouse                      Categ

  1  RAWILLCG          rawillcg: r's will had provisions for child/grandchild            Categ

  1  RAWILLOT          rawillot: r's will had provisions for other                       Categ
```

Descriptive Statistics

```
Variable               N         Mean      Std Dev     Minimum     Maximum

RAWILLSP             1245        0.39        0.49        0.00        1.00

RAWILLCG             1183        0.90        0.31        0.00        1.00

RAWILLOT             1183        0.11        0.31        0.00        1.00
```

Categorical Variable Codes

```
Value--------------------------------|        RAWILLSP
.d:dk                                |             197
.m:missing                           |              15
.r:refuse                            |              11
.s:skipped-spouse ivw                |              90
.w:no will                           |            3411
.x:no assets                         |             654
0.no                                 |             761
1.yes                                |             484

Value--------------------------------|        RAWILLCG
.d:dk                                |             209
.m:missing                           |              17
.r:refuse                            |              12
.s:skipped-spouse ivw                |              95
.w:no will                           |            3453
.x:no assets                         |             654
0.no                                 |             124
1.yes                                |            1059

Value--------------------------------|        RAWILLOT
.d:dk                                |             209
.m:missing                           |              17
.r:refuse                            |              12
.s:skipped-spouse ivw                |             111
.w:no will                           |            3437
.x:no assets                         |             654
0.no                                 |            1053
1.yes                                |             130
```

How Constructed

RAWILLSP indicates whether the respondent's spouse would receive their assets, as reported by the proxy. RAWILLCG indicates whether the respondent's children and/or grandchildren would receive their assets, as reported by the proxy. RAWILLOT indicates whether someone other than the respondent's spouse, children and/or grandchildren would receive their assets, as reported by the proxy. In Wave 2 if the proxy reports that the respondent made arrangements to transfer assets in case of death, and starting in Wave 3 if the proxy reports the respondent having a written testament, then the respondent was asked "Who would receive (received/will receive) [the respondent's] assets?" RAWILLSP, RAWILLCG, and RAWILLOT are based first on the report by the proxy in the next of kin interview, and if this is missing, then it is based on the respondent's report of arrangements from the last core interview completed. RAWILLSP is assigned a value of 0 if the respondent had a testament and was not married or partnered, and is assigned a value of 1 if the respondent had a will and was married or in union. Due to institutional arrangements in Mexico, a

spouse will automatically be a beneficiary of their spouse's will. RAWILLCG is assigned a value of 0 if
the proxy reports that another person or no one else would receive assets, and is assigned a value of 1
if the proxy reports that children and/or grandchildren would receive assets. RAWILLOT is assigned a
value of 0 if the proxy reports that the children and/or grandchildren or no one else would receive
assets, and is assigned a value of 1 if the proxy reports that another person would receive their assets.
RAWILLSP, RAWILLCG, and RAWILLOT are assigned special missing .x if the proxy voluntarily reports that
the respondent did not have assets or if the respondent reported having no assets in their last core
interview. RAWILLSP, RAWILLCG, and RAWILLOT are assigned special missing .w if the respondent had not
made arrangements to transfer assets in case of death in Wave 2, and if the respondent did not have a
written will starting in Wave 3 or if the respondent reported having no arrangements in their last core
interview. RAWILLSP, RAWILLCG, and RAWILLOT are assigned special missing .s if these questions were not
asked because the spouse was not asked to provide this information during the next of kin interview and
the report of arrangements for the respondent's assets after their death from the last core interview
were missing. Don't know, refused or otherwise missing responses are assigned special missing .d, .r, and
.m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked who would receive the respondent's assets if the respondent had made
arrangements to leave things to certain members of their family in case of death. Starting in Wave 3,
respondents are asked this question only if they report having a formal will written by a notary.

Differences with the Harmonized HRS End of Life

In the HRS exit interview, if the respondent has a will or trust, then the proxy is directly asked
whether the respondent made provisions in the will or trust for their spouse,
children/grandchildren/great-grandchildren, charities, siblings, other relatives, friends, or anyone else
or anything else in separate questions. The proxy is not asked if the respondent left anything to the
spouse or children/grandchildren/great-grandchildren if the respondent did not have a spouse or any
children. If the respondent did not have a will or trust, then the proxy is asked whether the same groups
of individuals were left any assets. Because this includes beneficiaries of the respondent's will, trust,
or estate (without a will or trust), the variables in the Harmonized HRS End of Life are called
RABNFCRSP, RABNFCRCG, RABNFCRRL, RABNFCROT, and RABNFCRIN.

In the MHAS next of kin interview, if the respondent had made arrangements for their assets in Wave 2 or
had a formal will starting in Wave 3, then the proxy is asked who would receive the assets with the
following answer choices: children and/or grandchildren, children and/or grandchildren and others,
others, no one. The proxy is not given the choice to report a spouse receiving assets because due to
institutional arrangements in Mexico, a spouse will automatically be a beneficiary of their spouse's
will. Despite these differences, these variables in the Harmonized MHAS End of Life are largely
comparable to those explained in the above paragraph in the Harmonized HRS End of Life, but the dataset
for the HRS has additional variables indicating people with different categories of relationships
receiving some of the respondent's assets.

MHAS Variables Used

```
Wave 2 Next of Kin:
    SJ1            interview is alone, with couple (alive), both passed awa
    SJ10           who received these assets
    SJ9            made arrangements to transfer assets
Wave 3 Next of Kin:
    SJ10_12        Likely or actual recipient of deceased's transferred ass
    SJ1_12         Interviewer: indicate if interview about deceased is ind
    SJ9A_12        Before death:Made arrangements to transfer his/her asset
Wave 4 Next of Kin:
    SJ10_15        Likely or actual recipient of deceased's transferred ass
    SJ1_15         Interviewer: Indicate if the interview is individual or
    SJ9A_15        Before death: Did he/she make arrangements to transfer h
Wave 5 Next of Kin:
    SJ10_18        Likely or actual recipient of deceased's transferred ass
    SJ1_18         Type of next-of-kin interview
    SJ9A_18        Before death: Did he/she make arrangements to transfer h
```

Death Expenses

Wave	Variable	Label	Type
1	RADEXPENSE	radexpense: r death expense: total	Cont
1	RADEXPENSEF	radexpensef: r death expense flag: total	Categ
1	RAINSCOVR	rainscovr: r death expenses covered by insurance	Categ

Descriptive Statistics

Variable	N	Mean	Std Dev	Minimum	Maximum
RADEXPENSE	3618	19578.73	22875.42	0.00	438116.09
RADEXPENSEF	3622	1.75	1.38	-2.00	5.00
RAINSCOVR	4926	0.14	0.35	0.00	1.00

Categorical Variable Codes

```
Value---------------------------------|    RADEXPENSEF
.s:skipped-spouse ivw                 |         2001
-2.not imputed, missing covariates    |            4
1.continuous value                    |         2650
2.closed bracket                      |           98
3.open bracket                        |          423
5.no bracket info                     |          447

Value---------------------------------|    RAINSCOVR
.d:dk                                 |          167
.m:missing                            |          179
.r:refuse                             |            5
.s:skipped-spouse ivw                 |          346
0.no                                  |         4233
1.yes                                 |          693
```

How Constructed

RADEXPENSE has been adjusted to 2010 pesos based on the consumer price index for the year of death.

RADEXPENSE indicates the total costs associated with the respondent's death, such as the funeral, legal fees, etc. (in Mexican pesos) and includes imputed values to address item-missingness. Proxies are first asked, "Now we would like to ask about the costs associated with their death, such as the funeral, legal fees, etc. About how much was spent in total for these costs?" If the proxy responds don't know or refused, then an unfolding bracket sequence is asked to obtain a minimum and maximum value for the respondent's death expenses. RADEXPENSE prioritizes information given by the spouse in the widowhood section of the core interview, then the information provided in the next of kin interview. RADEXPENSE has reported and imputed values that have been adjusted to 2010 pesos based on the consumer price index for the year of death. RADEXPENSE is assigned special missing .s if this question was skipped because there was a spouse proxy for the next of kin interview and no information was provided in the widowhood section of the core interview.

If the proxy does not give an exact amount for the respondent's death expenses, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value. In Wave 2, the threshold values are 2,000, 4,000, and 16,000 in the widowhood section of the core interview, and the threshold values are 500, 1,000, and 4,000 in the next of kin interview. In Waves 3 and 4, the threshold values are 3,000, 6,000, and 24,000 in the widowhood section of the core interview, and the threshold values are 750, 1,500, and 6,000 in the next of kin interview. In Wave 5, the threshold values are 4,000, 7,500, and 30,000 in the widowhood section of the core interview, and the threshold values are 750, 1,500, and 6,000 in the next of kin interview. This information is used in the imputation of RADEXPENSE.

Please note that this question is only asked once in the next of kin interview even if two individuals in the household passed away, though the frequency of this occurrence is low. As such, we cannot be sure if the value reported is meant for one or both individuals. In either case, the value reported is assigned to both individuals who passed away, and so may be artificially high if the reported value was meant for both individuals.

RADEXPENSEF is a flag variable indicating the level of imputation used for RADEXPENSE. A code of 1 indicates the proxy reported a continuous value for all components and no imputation was necessary. A code of 2 indicates that the value was imputed based on a closed bracket. A code of 3 indicates that the value was imputed based on an open bracket. A code of 5 indicates that the value was imputed without any bracket information. A code of 6 indicates the proxy reported that the respondent did not have any death expenses and the value is 0. A code of 7 indicates whether the proxy did not know if the respondent had any death expenses. A code of -1 indicates that the value could not be imputed due to a lack of reference observations in the donor pool. A code of -2 indicates that the expense could not be imputed due to one or more missing values in the covariates used in the imputation procedure. RADEXPENSEF is assigned special missing .s if this question was skipped because there was a spouse proxy for the next of kin interview and no information was provided in the widowhood section of the core interview.

RAINSCOVR indicates whether any of the death expenses were covered by insurance. RAINSCOVR prioritizes information given by the spouse in the widowhood section of the core interview, then the information provided in the next of kin interview. RAINSCOVR is coded as 0 if none of the costs were covered by insurance. RAINSCOVR is coded as 1 if some of the costs were covered by insurance. RAINSCOVR is assigned special missing .s if this question was skipped because there was a spouse proxy for the next of kin interview and no information was provided in the widowhood section of the core interview. Don't know, refused, or other missing responses are assigned special missing .d, .r, .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is asked how much money was spent on the respondent's death, such as the funeral and legal fees. If the proxy does not give an exact amount, the proxy is asked a set of bracket questions and answers if the true value was more than the threshold value. In Wave 2, the threshold values are 2,000, 4,000, and 16,000 in the widowhood section of the core interview, and the threshold values are 500, 1,000, and 4,000 in the next of kin interview. In Waves 3 and 4, the threshold values are 3,000, 6,000, and 24,000 in the widowhood section of the core interview, and the threshold values are 750, 1,500, and 6,000 in the next of kin interview. In Wave 5, the threshold values are 4,000, 7,500, and 30,000 in the widowhood section of the core interview, and the threshold values are 750, 1,500, and 6,000 in the next of kin interview.

Differences with the Harmonized HRS End of Life

RADEXPENSE in the Harmonized HRS End of Life is denominated in 2010 U.S. dollars, whereas RADEXPENSE in the Harmonized MHAS End of Life is denominated in 2010 Mexican pesos. Conversion to a common currency is necessary before comparison of these variables. Additionally, this value is asked for each person who passed away in the HRS exit interview, whereas it is only asked once for the household in the MHAS next of kin interview (although this distinction matters infrequently).

The HRS exit interview also asks for the value paid by insurance, which is available in the variable RAINSPAID in the Harmonized HRS End of Life. The value insurance covered is not asked in the MHAS next of kin interview.

MHAS Variables Used

```
Wave 2:
    K111          total non-medical costs of his/her death
    K112A         non-medical costs more than 4,000
    K112B         non-medical costs more than 2,000
    K112C         non-medical costs more than 16,000
    K113          insurance covered expenditures
Wave 2 Next of Kin:
    SJ1           interview is alone, with couple (alive), both passed awa
    SJ6           cost of funeral and other expenses
```

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    SJ7A            more than 1,000
    SJ7B            more than 500
    SJ7C            more than 4,000
    SJ8             costs covered by insurance
Wave 3:
    K111_12         Total death expenditures for respondent's spouse
    K112A_12        Total death expenditures>$6,000 pesos
    K112B_12        Total death expenditures>$3,000 pesos
    K112C_12        Total death expenditures>$24,000 pesos
    K113_12         Any death expenditures covered by insurance
Wave 3 Next of Kin:
    SJ1_12          Interviewer: indicate if interview about deceased is ind
    SJ6_12          Funeral cost and other expenses associated with his/her
    SJ7A_12         Funeral cost and other expenses >$1,500 pesos
    SJ7B_12         Funeral cost and other expenses >$750 pesos
    SJ7C_12         Funeral cost and other expenses >$6,000 pesos
    SJ8_12          Were any expenses covered by insurance
Wave 4:
    K111_15         Total expenditures associated to the death of spouse
    K112A_15        Total expenditures associated to death: >$6,000 pesos
    K112B_15        Total expenditures associated to death: >$3,000 pesos
    K112C_15        Total expenditures associated to death: >$24,000 pesos
    K113_15         Any expenditures associated to detah covered by insuranc
Wave 4 Next of Kin:
    SJ1_15          Interviewer: Indicate if the interview is individual or
    SJ6_15          Funeral cost and other expenses associated with his/her
    SJ7A_15         Funeral cost and other expenses >$1,500 pesos
    SJ7B_15         Funeral cost and other expenses >$750 pesos
    SJ7C_15         Funeral cost and other expenses >$6,000 pesos
    SJ8_15          Were any expenses covered by insurance
Wave 5:
    K111_18         Total expenditures associated to the death of spouse
    K112A_18        Total expenditures associated to death: >$7,500 pesos
    K112B_18        Total expenditures associated to death: >$4,000 pesos
    K112C_18        Total expenditures associated to death: >$30,000 pesos
    K113_18         Any expenditures associated to detah covered by insuranc
Wave 5 Next of Kin:
    SJ1_18          Type of next-of-kin interview
    SJ6_18          Funeral cost and other expenses associated with his/her
    SJ7A_18         Funeral cost and other expenses >$1,500 pesos
    SJ7B_18         Funeral cost and other expenses >$750 pesos
    SJ7C_18         Funeral cost and other expenses >$6,000 pesos
    SJ8_18          Were any expenses covered by insurance
```

End of Life Decisions

```
Wave Variable         Label                                                    Type

  1  RAEOLDCSNM_M      raeoldcsnm_m: main decision-maker in r's care decisions at e  Categ
```

Descriptive Statistics

```
Variable              N        Mean      Std Dev     Minimum     Maximum

RAEOLDCSNM_M        5062       2.15        0.99        1.00        4.00
```

Categorical Variable Codes

```
Value--------------------------------|   RAEOLDCSNM_M
.d:dk                                |             13
.m:missing                           |              1
.q:not asked this wave               |            542
.r:refuse                            |              5
1.deceased respondent                |           1910
2.spouse                             |            713
3.children                           |           2192
4.other                              |            247
```

How Constructed

RAEOLDCSNM_M indicates who the main decision-maker was in important decisions like medical treatment about the respondent during the last year of their life. The proxy is directly asked who had more weight in decision-making when important decisions were taken like medical treatment in the last year of their life. RAEOLDCSNM_M is coded as follows: 1.deceased respondent, 2.spouse, 3.son/daughter, 4.other. RAEOLDCSNM_M is assigned special missing .q in Wave 2 because the question is only asked starting in Wave 3. Don't know, refused, or other missing responses are assigned special missing values .d, .r, and .m, respectively.

Cross Wave Differences in MHAS

In Wave 2, the proxy is not asked who the main decision-maker was in important decisions like medical treatment about the respondent during the last year of their life. Starting in Wave 3, the proxy is asked who had more weight in decision-making when important decisions were taken like medical treatment in the last year of their life.

Differences with the Harmonized HRS End of Life

The HRS exit interview inquires about the relationships of the individuals involved in making decisions about the respondent's medical care during the final days of their life, then the proxy is asked if the respondent was able to participate in these decisions, and if the proxy reported more than one individual, they are asked who the main decision-maker was. Because of this difference, the Harmonized HRS End of Life uses the variables RAEOLDCSNR and RAEOLDCSNM, while the Harmonized MHAS End of Life uses the variable RAEOLDCSNM_M.

MHAS Variables Used

```
Wave 3 Next of Kin:
    SD14_12      Last year of life:Who had more weight with important med
Wave 4 Next of Kin:
    SD14_15      Last year of life: Who had more weight with important me
Wave 5 Next of Kin:
    SD14_18      Last year of life: Who had more weight with important me
```

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