HRS/AHEAD Documentation Report

Documentation of Chronic Disease Measures

in the Heath and Retirement Study (HRS/AHEAD)

Report Prepared by

Gwenith G. Fisher, Jessica D. Faul, David R. Weir, and Robert B. Wallace

With Contributions from Past and Present Members of the HRS Health Working Group:

Robert B. Wallace
A. Regula Herzog
David R. Weir
Mary Beth Ofstedal
Kenneth M. Langa
Gwenith G. Fisher
Jessica D. Faul

Survey Research Center
University of Michigan
Ann Arbor, MI

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TABLE OF CONTENTS

## I.	Integrating Health with Social, Economic and Employment Domains in the HRS

The aging process is accompanied by a decline in physical health. Declines in physical health are often associated with functional impairment, disability, and mortality. Due to the occurrence of certain degenerative changes (e.g., decline in organ function and the decline in the regulation of body systems) as well as the increase in incidence of certain diseases, many older people end up suffering from more than one health condition at the same time. Experiencing multiple disease conditions concurrently is referred to in the medical and epidemiological literature as co-morbidity. Diagnosis and treatment is complex, as the detection of one condition may be affected by the presence or absence of another. For example, in an individual with both cardiovascular disease and arthritis, heart disease symptoms may go unnoticed as a result of the limited physical activity due to arthritis.

One of the core objectives of the HRS is to examine the role of health in the retirement decision (Juster and Suzman, 1995) and the relation between health, economic behavior, and status in the later part of life (Wallace and Herzog, 1995). Health and patterns of health conditions among older people have economic implications, including potential effects on employment, activity patterns, and health service utilization. Many econometric studies have generally confirmed the significance of health in retirement behavior (e.g., Chirikos, 1993; Quinn & Burkhauser, 1990). An important goal of HRS is to understand the factors that maintain employment in the face of changing health status. Additional research is needed to understand when health is involved as a factor in the retirement decisions as well as how retirement affects health status and health over time.

The HRS health measures were designed to capture the respondents' health and functional status and health care service utilization as fully as possible, realizing the constraints of survey time and resources available and to be maximally responsive to the major study hypotheses and goals. The HRS data that have been collected over the past decade permit the longitudinal and long-term examination of how changes in health interact with economic, social, and psychological factors among older Americans.

## II.	Inventory of Measures and Cross-Wave Comparisons

In the HRS, health was conceptualized as multidimensional, with a general emphasis on physical and mental (including cognitive) domains. Physical health was viewed as multiaxial (Cote, 1982), attempting to capture as many axes as possible, including both subjective and objective assessments. This allows the analyst to apply various conceptual frameworks of personal interest. General health measures in HRS include: 1) self-rated overall health status and recent changes in overall health, 2) the presence of common chronic medical conditions and follow-up questions concerning treatments, 3) important symptoms and syndromes, 4) functional status measures, 5) health behaviors, including smoking, drinking, and exercise, 6) utilization of general health services, selected medical treatments and social services, and 7) and physiological performance measures in subsamples of respondents in 1992 and 2004 waves. (In 1992, we assessed hand-grip strength and maximum peak expiratory flow rate, and in 2004 assessed hand grip strength, maximum peak expiratory flow rate, and asked respondents to perform a timed walk).

Some methods for assessing health (e.g., pathology or other medical records) are not available. Given the self-report survey method that is used to obtain data in the HRS combined with the very

limited amount of time for asking questions of respondents, we do a reasonably comprehensive job of assessing health.

The focus of this report is on numbers 1 and 2 in the list above: overall health status and chronic medical conditions measures in all waves of the core HRS/AHEAD through 2002. For detail pertaining to measures of physical functioning, cognitive functioning, and affective functioning, please refer to other user guides prepared by the HRS Health Working Group available online on the HRS website at: http://hrsonline.isr.umich.edu/docs/sho_refs.php?hfyle=index&xtyp=3

A. Overall Health Status
Overall health status was measured across all waves as follows:

Would you say your health is excellent, very good, good, fair, or poor?

In addition, a question was asked to ascertain recent changes in overall health. In HRS92, this question asked respondents about their health compared with one year ago. In subsequent waves, respondents were asked about their health compared to two years ago/since the prior wave.

Compared with your health when we talked with you in PREVIOUS WAVE MONTH/ YEAR would you say that your health is better now, about the same, or worse?)

B. Chronic Disease Conditions
The health conditions measures in HRS ask respondents to report on lifetime histories of a modest number of illnesses and conditions that are very important to older persons and account for much of the morbidity and mortality among older persons in western societies. These conditions include:

a. Hypertension (high blood pressure)
b. Diabetes mellitus
c. Cancer (various types at all bodily sites, except minor skin cancers)
d. Chronic lung disease (often including emphysema, but not asthma)
e. Coronary heart disease
f. Congestive heart failure
g. Stroke (cerebrovascular disease)
h. Arthritis (a collection of heterogeneous diseases and musculo-skeletal pain syndromes; in general older populations, most is due to degenerative joint disease that comes with age and is all but universal)
i. Psychiatric problems (in general, not further defined or categorized, with the exception of major depression, depressive symptoms, and dementia)

If a respondent reported any of the target conditions, additional disease-specific information was collected to determine whether the respondent was currently being treated for that condition, and if so, the type of treatment and/or intensity of care that was used and whether it was perceived to impair various physical functions. This was done to derive additional indicators of condition recency, activity severity, and treatment intensity. We queried the date of onset for a few conditions (e.g., cancer, heart attack, stroke).

Comments regarding some specific health conditions:

Coronary Heart Disease

The category of "heart disease" represents a diverse set of conditions of varying in severity, from transient chest pain that triggered a doctor visit but is no longer evident or treated, to experiencing an actual "acute cardiac event" such as a myocardial infarction that required invasive diagnostic tests and surgical intervention. Even in the latter case, modern procedures for the acute treatment and subsequent rehabilitation means many people with a history of acute episode are able to function quite normally for years after their event.

The lead-in question includes references to heart attack, coronary heart disease, angina, congestive heart failure, and other heart problems; this lead-in question about heart conditions and specific follow-up questions about heart attack and angina remain the same across all waves of HRS and AHEAD. This series of questions can be used for categorization of specific features of heart problems in a prospective fashion. However, retrospective life-time prevalence can only be established for heart problems in general, not for its components of heart attack and angina.

Congestive Heart Failure

In early waves of HRS, respondents were asked whether they feel weak or short of breath as a result of CHF. This question was discontinued in later waves and replaced with a question about hospitalization for CHF. Since congestive heart failure questions are asked as follow-up questions within the heart disease section of the survey, questions about congestive heart failure are only asked of respondents who reported that they have a heart condition, and who are taking medication and have seen a doctor in the last two years.

Arthritis

Arthritis is a collection of heterogeneous diseases and musculo-skeletal pain syndromes – in general, in older populations, most arthritis is due to degenerative joint disease and is all but universal in populations of this age range.

The lead-in question asks about whether the respondent has or a doctor told the respondent that he/she has arthritis (i.e., self-diagnosis is accepted). In 2004, new questions were added to clarify the type of arthritis. The user should consult the codebook and questionnaires for exact new questions when the 2004 materials are available.

Cancer

Questions about cancer pertain to any type of cancer except minor skin cancer. In the first two waves of HRS (1992 and 1994) the follow-up questions about cancer were asked concerning the only or most recent cancer as well as the second most recent cancer. In later waves the follow-up questions were only asked once about cancer in general (and presumably about only the first or most recent cancer).

Psychiatric Conditions

Psychiatric conditions were defined as a general grouping of psychiatric morbidity, not further defined or categorized, with the exception of major depression and depressive symptoms.

The lead-in question asks whether the respondent has emotional, nervous, or psychiatric problems or has been told by a doctor that he/she has such problems. This question is consistent across waves, with the exception of 1992. In 1992, the lead-in question asks whether the respondent has been told by a doctor that he/she has such problems and is followed by a separate question as to whether the respondent has experiences any such problems in the last year. In all subsequent waves, this is asked in one question. Two follow-up questions about current psychiatric or psychological treatment and current medications are consistent across waves.

C. Cross-Wave Comparisons

Two features have not changed across waves of HRS and AHEAD. First, the same chronic conditions were assessed throughout the waves of HRS and AHEAD. Second, lead-in questions about each condition (i.e., "Has a doctor told you ...?") remain the same.

However, a few discontinuities between waves have been introduced, and the data user needs to be informed of these cross-wave changes when assessing health over time in the HRS. First, follow-up questions are asked from any respondent who reports ever having had a particular condition in HRS 92. In HRS 94, only respondents who report a new or incident condition since the prior HRS interview are being asked the follow-up questions; respondents who reported the condition in HRS 92 (this information is preloaded into HRS 94) are asked no questions about this presumably established or prevalent condition. An exception is made for cancer, stroke and heart disease in HRS 94; follow-up questions are asked about established cases of these three conditions. In HRS 96, several changes were made to this structure: (a) follow-up questions were asked about established as well as incident conditions. (b) Respondents with an established disease were reminded of having reported the condition during the past interview. Some respondents disputed their previous report and were treated like respondents without the condition (i.e., they were not asked any follow-up questions about that particular condition). (c) A few screen questions were introduced for previously reported conditions in order to identify old, inactive conditions. No follow-up questions were asked about old, inactive conditions.

In HRS 96 some of the follow-up questions were modified and extended. Details concerning which follow-up questions have been asked across waves can be obtained by reviewing the measures in Appendix 1.

In HRS 2002, HRS interviews conducted with a different reporter compared to the prior wave were treated like new respondents in an effort to not reveal confidential information about a respondent's health status. (Examples of a "different reporter" compared to the prior wave include a proxy reporter in 2002 when a self-respondent completed the interview in 2000, or a different individual serving as a proxy in 2002 compared to 2000 even though both interviews were conducted by proxy)

In order to track established conditions and capture new onsets, information from previous waves has to be used. This can be done by carrying forward data from a prior wave and using the preload variables. Preload variables are created using data from the prior wave and affect the flow of the questionnaire, including which questions are asked of respondents, or which versions of questions are asked of respondents. With regard to the health conditions questions, the preload variables for each of the chronic health conditions affect whether respondents are asked the "incident" version of the

question (e.g., "Since we last talked to you in (previous wave interview month/year), has a doctor told you that you have…") or a confirmation statement (e.g., "Our records from your last interview (previous wave interview month/year), show that you have had…"). The user should note that the preload variables are only based on data obtained during the prior wave and do not carry forward prevalence information from the baseline interview.

With regard to question wording, there are some places where the question wording differed slightly across waves, particularly before AHEAD and HRS were merged into the same study in 1998. An example is with arthritis in the baseline wave of AHEAD (1993) compared to subsequent waves. In 1993, respondents were asked: "During the last 12 months, have you seen a doctor specifically for arthritis or rheumatism?" In other waves of AHEAD as well as HRS, the question was "(Since we last talked to you,) have you had or has a doctor told you that you have arthritis or rheumatism?"

Another change across waves occurred with follow-up questions concerning cancer. Specifically, in 1998 respondents with cancer were asked "Are you now receiving treatment for your cancer" whereas in later waves they were asked about treatment received during the last two years/since their last interview.

Although the question wording generally remained consistent across waves, there are some circumstances when the skip patterns changed slightly and some respondents were no longer asked the same questions. We strongly encourage data users to consult the questionnaires (that describe the branchpoints or skip patterns in the survey) and codebooks for detailed documentation, particularly related to survey skip patterns.

In all waves prior to 2002, the health status section of the survey was designated as Section B. However, starting with the 2002 interview (which was conducted using different software for the CAPI/CATI survey instrument), the health status section is section C of the survey.

D. Core vs. Exit Interview

The HRS core is survey conducted among living respondents. This includes a survey among self-respondents, as well as proxy respondents (when a living respondent is not able to participate due to cognitive limitations or available for other reasons). Once an HRS respondent has died, we conduct an "exit" interview with a proxy respondent to tell us about the period of time prior to the respondent's death. The purpose of this report is to provide users with documentation concerning the chronic health conditions measures in the core study, although it is important to note that only a subset of the chronic health conditions are assessed in the exit survey. Whereas the core survey asks about hypertension, diabetes, cancer, lung disease, heart disease, stroke, arthritis, and psychiatric conditions, the exit survey includes questions about cancer, lung disease, heart disease, and stroke. For details concerning the wording of questions and follow-up question sequence in the exit interview, please refer to the questionnaires and codebooks available on the HRS website.

III.   Origin of Health Conditions Measures

Health measures in the HRS were developed by the original Health Working Group, which was chaired by Bob Wallace, coordinated by Regula Herzog, and included John Bound, Mary Grace Kovar, Jersey Liang, Willard Manning, Willard Rodgers, Frank Sloan, and John Ware at the time the first

wave of HRS was developed. This group consulted many prior health surveys and scientists with relevant expertise to develop the Wave 1 HRS health measures.

In the HRS, health was conceptualized as multidimensional, with a general emphasis on physical and mental (including cognitive) domains. Physical health was viewed as multiaxial (Cote, 1982), attempting to capture as many axes as possible, including both subjective and objective assessments. This allows the analyst to apply various conceptual frameworks of personal interest. General health measure categories include: 1) self-rated overall health status and recent changes in overall health, 2) the presence of common chronic medical conditions and follow-up questions concerning treatments, 3) important symptoms and syndromes, 4) function status measures, 5) previously established important hygienic behaviors (e.g., exercise and alcohol and tobacco use) 6) utilization of general health services, selected medical treatments and social support services, and 7) two physiological performance measures in 1992 (hand-grip strength and maximum peak expiratory flow rate in an experimental sub-sample) and three physiological performance measures in 2004 also among a subsample of respondents (hand grip strength, maximum peak expiratory flow rate, and a timed walk).

These dimensions are consistent with other comprehensive health assessment instruments. For example, the comprehensive and well-evaluated Sickness Impact Profile (Bergner, Bobbitt, Carter, & Gilson, 1981; Williams, 1994) contains questions on physical, cognitive, emotional, and social functioning. The thoroughly evaluated SF-36, derived from the Medical Outcomes Study (McHorney, Ware, and Raczek, 1993; Stewart & Ware, 1992; Wright, 1994) includes most of these categories as well as items on symptoms and overall self-ratings of health. Although the choice and format of specific questions vary from one measure to the next, most available health assessment tools, including the HRS, are derived from a similar conceptual and measurement tradition. According to that tradition, health is viewed as a multidimensional concept that includes social, behavioral, and psychological dimensions and health perceptions, in addition to medical pathophysiology and clinical phenomenology.

A general issue faced when formulating HRS health measures was whether to employ individual items or item sets from diverse sources or to use multidimensional instruments already in existence. Each approach has strengths and weaknesses. The use of existing instruments, such as the SF-36, the Sickness Impact Profile, the Cornell Medical Index, or many available disease-specific health instruments would give the benefit of prior experience and information on the measurement properties, and would allow comparison with many studies and cross-references with various national or local studies. However, there were some issues that made adaptation of questions from these existing instruments problematic and undesirable. For example, many of these measures have different goals from the health measures of the HRS and are quite long. (Given the breadth of topics assessed in the HRS, time to assess health status is quite limited.) In addition, these measures paid more attention to the more severe end of the health and function spectrum than desired. HRS investigators felt that these other measures did not adequately address various health domains (such as diseases or health care utilization). Lastly, they didn't seem to fit the function and purpose of the longitudinal HRS because they did not discriminate well with regard to small variations in health or functional status postulated to relate to work performance. In addition, these other measures did not include recently described, promising items, and importantly, don't have nationally referent data, whereas HRS was able to adapt items from existing national surveys like the NHANES and the NHIS.

The process of designing and designating items and scales for inclusion was complex and iterative. There was extensive literature review and scientific consultation to be certain that the menu for item selection was broad and modern. Where raw data on selected items were available from previous surveys, analyses were conducted to assess reliability and construct validity, reduce redundancy, and evaluate desired associations with other variables. The three survey pretests resulted in alterations of initial selection and wording. Several criteria were used in designing or otherwise specifying health items, although it was clearly not possible to meet all criteria at all times:

- High quality measures that can provide maximally valid and reliable information for the HRS
- Proven items and instruments from the scientific literature, counterbalanced by the need to create new items responsive to modern hypotheses and conceptualizations of health and its interrelationship with work
- Items and instruments that are at least in part represented in other recent national surveys in order to compare and contrast findings
- Measures that can be administered repeatedly and be sensitive to subtle changes in health status
- Measures that are appropriate for persons of various cultural and socioeconomic backgrounds
- Measures that re adaptable for the telephone administration of HRS, necessitating that items are simple and well-understood, with short response scales that can be used without visual aids
- Level of item difficulty that is suitable for participants with high or low functional status

The health conditions included in the HRS (hypertension (high blood pressure), diabetes mellitus, cancer, chronic lung disease, coronary heart disease, congestive heart failure, stroke, arthritis, and psychiatric conditions) were chosen because they have characteristic patterns or preventability and health service needs and predictable functional outcomes and prognoses. Furthermore, they often form the administrative basis for disability designation. With constraints on interview length, the HRS focused on a subset of conditions that have public health significance —diseases that are most prevalent among middle-aged and elderly persons and/or which are most likely to result in work disability. In addition, these conditions are major causes of morbidity and mortality among older persons. By tracking these conditions across multiple waves, research investigators can monitor these conditions for their impact on disability, job mobility, job loss, retirement behavior, and mortality. It is also important to note that there is an open-ended question in which respondents can report other important but more rare health conditions. The specific wording of this question is: "Are there any medical diseases or conditions that are important to your health now, that we have not talked about?"

In addition, past research on retirement and health suggested several considerations for framing the HRS health measures:

A. Linked vs. Independent Health Assessment

Linked vs. independent health assessment pertains to whether respondents' attributions of the impact of health conditions and problems. Although existing econometric studies have generally confirmed the significance of health in retirement behavior, the magnitude of the effect varies (for

reviews see Chirikos, 1993; Quinn & Burkhauser, 1990). One reason may relate to the health measures used. For example, self attribution of work limitation or retirement to health factors may suggest a stronger role for health status than independently measured disease and disability factors which are then analytically linked to retirement behavior. Which type of measure yields the more accurate effect has been a matter of considerable debate. The former approach may produce overstated effects because they allow for easy rationalization (Anderson & Burkhauser, 1984; 1985; Bound, 1991; Myers, 1982), but the latter approach may produce understated effects because it assesses aspects of health that are not directly relevant to the work setting at hand. Although the HRS includes both types of measures, many are independent rather than linked. This is because the endogeneity of the problem is difficult to assess, since health problems, particularly among elders, are multi-causal and can lead to multiple outcomes.

B. Global vs. Specific Health Measures

Most prior research on health and retirement emphasized global measures of health; research that examined the effect of specific conditions or symptoms (Bartel and Taubman, 1979; Burkhauser, Butler, & Mitchell, 1986; Mitchell & Anderson, 1989) typically did not include comprehensive health measurement. In an attempt to address this deficiency, the HRS health measurement includes a good range of specific illnesses, functions, and symptoms.

C. Objective vs. Self-Reported and Subjective Health Measures

An issue permeating research on the effect of health in the retirement decision relates to the self-reported or subjective nature of many of the health measures in this research, and the assumption that more objective health measures would provide better estimates of prevalence because they are not as affected by the possibly biased or unreliable reporting of individuals. Opponents of this assumption point to the respectable correlation between self-reported health status and assessments provided by health care professionals (e.g., Ferraro, 1980; La Rue, Bank, Jarvik, & Hetland, 1979; Maddox & Douglas, 1973).

A number of studies have been undertaken to compare self-reports of chronic health conditions with medical records, medical provider surveys, and results of physical examinations (e.g.,Burgess, Martel, & Wyman, 1971; Bush, Miller, Golden, & Hale, 1989; Colditz, Martin, Stampfer, Willett, Sampson, & Rosner, 1986; Kehoe, Wu, Leske, & Chylack, 1994; Kriegsman, Penninx, van Eijk, Boeke, & Deeg, 1996). In general, these studies have found acceptable levels of agreement between self-report measures of chronic diseases and more "objective" measures, such as medical records. However, prior studies have found that the correspondence between self-reports and medical records seems to vary depending on the condition and respondent characteristics. For example, agreement is higher for well-defined diagnoses such as diabetes (Lampe, Walker, Lennon, Whincup, & Ebrahim, 1999), and among well-educated respondents with a level of socioeconomic status (Bush et al., 989; Colditz et al., 1986). Respondents are more likely to report conditions that are salient, whether it is because the conditions are important to them and/or because they are currently receiving treatment for the condition. Studies that have examined the validity of self-reported heart conditions have found that respondents may be prone to mis-classify or under-report specific diagnoses (e.g., acute myocardial infarction, angina, etc.) and that self-reports have more validity when heart disease is defined more broadly (Lampe et al., 1999; O'Donnell, Glynn, Field, Averback, Satterfied, Friesenger, Taylor, & Hennekens, 1999). Beckett, Weinstein, Goldman, & Yu-Hsuan (2000) examined the reliability of reports of chronic conditions in longitudinal surveys. They found that among respondents who reported a particular condition during an interview, the likelihood that the same condition was

acknowledged in the subsequent wave differed by health condition. Specifically, they found that reliability of self-reports across waves was higher for hypertension and diabetes than for arthritis or stroke.

The view of the HRS Health Working Group is that subjective perceptions of health have independent value because they capture knowledge and interpretations not reflected in more objective indicators. The retirement decision is in part an individual decision, and subjective perceptions — regardless of whether they are accurate reflections of objective indicators— are likely to play a role in this decision. Thus, HRS contains several subjective measures as well as more objective health measures in assessing specific disease conditions, symptoms, and function. There are many advantages to using self-reported measures of chronic disease conditions compared to field or clinical studies. For example, there is an opportunity to collect information on a large, representative sample at a relatively low cost. There are a number of important health issues that can only be assessed via self report, including questions about symptoms and pain. A number of these types of questions are included in the HRS.

In an effort to reduce subjectivity while still using a self-report methodology, the HRS investigators designed the chronic health conditions questions such that respondents are asked to report health conditions *where a doctor has told them that they have a particular condition.* This is in lieu of just asking the respondent whether they have a particular condition. In addition, this is consistent with methods used in other studies and intended to encourage respondents to only report conditions that have been diagnosed by a medical doctor rather than include anything based on a self-diagnosis.

To the extent that respondents don't have any or adequate healthcare, conditions may not be diagnosed. This would result in an underestimate of condition prevalence regardless of self-report or obtaining information from medical records. One way the HRS addresses this issue is by asking general questions regarding health status and change, as well as symptoms.

The notion of "disease" requires some elaboration. Ideally for classification purposes, it would be useful to have all conditions fall into unique, well-defined categories in which the cause, degree of anatomic and physiological disruption, functional impact and outcomes are known. Unfortunately, that is the exception rather than the rule. Even modern medical practices often cannot fully define the nature of even those diseases that appear to be homogeneous entities, let alone those that are only partially understood and physiologically characterized, or those that are clearly heterogeneous syndromes. Syndromes are collections of signs (observable health abnormalities) and symptoms (patient perceptions) such as back pain, skin rash, limping, headache or chronic fatigue. The less well-defined a clinical "entity" is, the more it is likely to be a heterogeneous mixture of conditions, with greater variation in clinical behavior and outcomes. The basic progress in medical knowledge has been to take apparently homogeneous medical "conditions," such as kidney failure, and distinguish within them categorically separate conditions out of them. The greater the homogeneity of the category, the easier it is to predict clinical behavior and outcomes.

IV. Special Methodological Issues

A. *Age eligibility for the HRS Study*

The desire of the HRS surveys to collect information on both spouses of a married couple has lead to two mutually exclusive groups –those age-eligible for the survey, and those who are spouses of an age-eligible respondent but are not age-eligible themselves. The initial wave of HRS sampled households with at least one individual born between 1931 and 1941 and also interviewed the spouse when that individual was married, regardless of the spouse's birth year. Therefore, some households contain two respondents who are age-eligible while some contain only one age-eligible respondent.

It is important to note that these not-age-eligible respondents are <u>not</u> a random sample representative of their age cohort. Rather than being chosen at random, they were sampled because they were married to an age-eligible person. In the HRS, not-age-eligible respondents born before 1931 (therefore older than the HRS cohort) tend to be the male husbands of age- eligible female respondents. Those not-age-eligible respondents born in 1942 or later (therefore younger than the HRS cohort) tend to be female (the wives of HRS-age-eligible male respondents). Including these not-age-eligible respondents in an analysis can lead to biases. Therefore, the researcher must be careful to account for this conditionally selected group. Excluding these individuals is recommended. Hence, only age-eligible respondents are included in the tabulations that appear in this paper. See Table 1 for sample sizes of age-eligible respondents at each wave and for definitions of age eligibility at each wave.

Table 1. Age-Eligibility Across Waves of HRS and AHEAD

	1992	**1993**	**1994**	**1996**	**1995**	**1998**	**2000**	**2002**
Wave	HRS 1	AHEAD 1	HRS 2	HRS 3	AHEAD 2	HRS 98	HRS 2000	HRS 2002
Definiti on	Born between 1931 & 1941	Born in 1923 or before	Born between 1931 & 1941	Born between 1931 & 1941	Born in 1923 or before	Born in 1947 or before	Born in 1947 or before	Born in 1947 or before
N	9772	7443	8974	8469	6296	20449	18616	17211

This includes all self- and proxy respondents, except for n=177 proxy respondents in 1994 who were interviewed because the original respondent was deceased by the time the 1994 interview was conducted. After 1994, a separate exit interview was conducted among proxy respondents in cases where the original respondent was deceased at the time of the interview.

The age-eligible sample in the first three waves of HRS and the age-eligible sample in Wave 2 of AHEAD do not overlap; HRS respondents were age 51-61 in 1992 (54-64 in 1995), and AHEAD respondents were age 70 or older in 1995. In 1998, the HRS and AHEAD studies were merged into one study. In addition, two new cohorts were added: (1) respondents born between 1942 and 1947

(called the War Babies cohort), to add a younger group to the study since the youngest of the original age-eligible HRS respondents were 57 in 1998; (2) respondents born between 1924 and 1930 (called Children of the Depression Age; CODA), to fill in the gap in age between HRS and AHEAD respondents. Additional details about the study design can be
found online at the following location: http://hrsonline.isr.umich.edu/intro/sho_intro.php?hfyle=uinfo

B. Discrepancy Reports

Starting with AHEAD 1995 and HRS 1996, respondents with an established disease were reminded of having reported the condition during the past interview. Some respondents disputed their previous report and were treated like respondents without the condition (i.e., they were not asked any follow-up questions about that particular condition). In HRS 1998, this same methodology was continued, and respondents who voluntarily disputed the prior wave record were coded separately from those who either had the disease or did not have the disease.

In HRS 2000 and 2002, more information about the nature of the discrepancy was coded. Specifically, this wave was the first to take into account whether the respondent disputes the prior wave record but now reports having the condition or disputes the prior wave record and does not have the condition. In general, HRS has found that among the discrepancy reports, many respondents report that they no longer have the condition, particularly hypertension and arthritis, which may be controlled or alleviated through behavioral modifications (diet, exercise) as well as medications/supplements. Other respondents have indicated that their condition was mis-diagnosed and they have since learned that they don't have the condition.

Handling the Discrepancy:
How we recommend that users handle these discrepancies will depend on the goal of the analysis. For example, to look at active conditions where self-care or care utilization is an issue, then these inactive conditions may be less important. To examine the cumulative health impact, the reader should be aware that conditions such as diabetes and hypertension never really go away and should be considered as present if once correctly diagnosed. However, it is possible, (as mentioned previously), that the condition may have been misdiagnosed.

In HRS 1996 and 1998 we recommend that the user obtain the preloaded information and combine it with the current wave reports to identify the nature of the discrepancy. In HRS 2000 and 2002 this is a lot easier to handle. Specifically, those with a value of 3 (DISPUTES PREVIOUS WAVE RECORD, BUT NOW HAS CONDITION) could be treated as having the condition and those with a 4 (DISPUTES PREVIOUS WAVE RECORD, DOES NOT HAVE CONDITION) could be treated as not having the condition. We would like to note that these are suggestions and the user is encouraged to adopt the coding strategy that seems most appropriate for his/her research.

V. Evaluation of Data Quality

A. Prevalence Across Waves

Health condition prevalence rates were calculated for the original HRS cohort (i.e., individuals who were between the ages of 51-61 in 1992), the AHEAD cohort (who were age 70 or older in 1993),

and the combined HRS/AHEAD cohorts age 55+ in 1998, 2000, and 2002. These prevalence rates are presented in a series of tables in Appendix A.

HRS Original Cohort (1992 – 2002)

Among the original HRS cohort members, prevalence rates generally increase with age, and show expected patterns by age and gender.

Hypertension - Hypertension is one of the most prevalent health conditions. Based on the data provided in Table 2, prevalence of hypertension increases with age by more than 12% between 1992 and 2002. In addition, prevalence is significantly higher among non-Hispanic Blacks compared to the other racial/ethnic groups.

Diabetes - According to Table 3, diabetes prevalence increases from 9.9% in 1992 to 17.2% in 2002, indicating a significant increase in prevalence with age. Diabetes is more common among Blacks and Hispanics compared to White and non-Hispanic individuals.

Cancer - Table 4 presents results of cancer prevalence in the original HRS cohort. Cancer is more common among women compared to men, particularly in earlier waves. Cancer prevalence ranged from 5.6% in 1992 to 12% in 2002.

Lung Disease - With regard to lung disease (Table 5), there is a slight increase in prevalence over time, from 8.2% to 10.2%.

Heart disease - Heart disease prevalence (see Table 6) increases significantly (from 12.6% to 21.7%) between 1992 and 2002 among original HRS cohort individuals. Men are more likely than women in this cohort to have heart disease.

Stroke - In comparison to other chronic health conditions, prevalence of stroke was fairly low (ranging from 2.6% in 1992 to 4.6% in 2002; see Table 7). Non-Hispanic Blacks are more likely to report having had a stroke compared to individuals in other racial/ethnic groups.

Arthritis - Arthritis, in addition to hypertension, is one of the most prevalent health conditions among older adults and among the conditions included in the HRS. For example, arthritis prevalence rates in 2002 (presented in Table 8) range from 37% in 1992 to 59.5% in 2002. Arthritis is more common among women compared to men, is higher among non-Hispanic Blacks with regard to other racial/ethnic groups, and arthritis prevalence increases with age.

Psychiatric conditions - Table 9 presents results of psychiatric condition/problem prevalence. Overall rates increased over time from 10.9% in 1992 to 14.8% in 2002. Women became more likely to have a psychiatric problem than men, and Hispanic individuals are more likely than those in other racial/ethnic groups to have a psychiatric problem.

Overall Health Status - HRS respondents were asked to rate their overall health status (using a 5-point scale ranging from excellent, very good, good, fair, and poor). Prevalence of those who rated their health as fair or poor are presented in Table 10. Hispanics are most likely to rate their health as being

fair or poor. In addition, Black respondents are twice as likely to rate low health compared with non-Hispanic Whites.

AHEAD Original Cohort (1993 – 2002)

Health condition prevalence among the original AHEAD respondents is presented in Tables 11 through 19. In general, the same pattern of findings exists for AHEAD respondents compared to the original HRS cohort. However, prevalence is higher among the AHEAD respondents for all conditions except psychiatric/psychological problems.

Hypertension - Hypertension is one of the most prevalent health conditions. Based on the data provided in Table 11, prevalence of hypertension increases with age by about 12% between 1993 and 2002. In addition, prevalence is significantly higher among non-Hispanic Blacks compared to the other racial/ethnic groups.

Diabetes - According to Table 12, diabetes prevalence increases from 12.4% in 1993 to 16.4% in 2002. Diabetes is more common among Blacks and Hispanics compared to White and non-Hispanic individuals.

Cancer - Table 13 presents results of cancer prevalence in the original AHEAD cohort. Cancer is more common among women compared to men, particularly in earlier waves. Cancer prevalence ranged from 13.9% in 1993 to 20.2% in 2002.

Lung Disease – Prevalence of lung disease is shown in Table 14. In 1993 11.9% of AHEAD respondents had chronic lung disease. By 2002, 10.6 % reported having lung disease. Although it appears that the prevalence of lung disease decreased over time among this cohort, this pattern could be explained by selective mortality whereby the more unhealthy respondents died prior to 2002.

Heart disease - Heart disease prevalence (see Table 15) increases significantly (from 31.9% to 40.4%) between 1993 and 2002 among original AHEAD cohort individuals. Men are more likely than women in this cohort to have heart disease.

Stroke - In comparison to other chronic health conditions, prevalence of stroke was fairly low (ranging from 8.7% in 1993 to 11.4% in 2002; see Table 16). Non-Hispanic Blacks are more likely to report having had a stroke compared to individuals in other racial/ethnic groups.

Arthritis - Arthritis, in addition to hypertension, is one of the most prevalent health conditions among older adults and among the conditions included in the HRS/AHEAD. For example, arthritis prevalence rates in 2002 (presented in Table 17) range from 54.1% in 1995 to 71.4% in 2002. Arthritis is more common among women compared to men.

Psychiatric conditions - Table 18 presents results of psychiatric condition/problem prevalence. Overall rates increased over time from 10.0% in 1993 to 13.3% in 2002. Women were more likely to have a psychiatric problem than men.

Overall Health Status - AHEAD respondents were asked to rate their overall health status (using a 5-point scale ranging from excellent, very good, good, fair, and poor). Prevalence of those who rated their health as fair or poor are presented in Table 19. Hispanics and Non-Hispanic Blacks are most likely to rate their health as being fair or poor. Black respondents are twice as likely to rate low health compared with non-Hispanic Whites.

HRS/AHEAD (1998 – 2002)

Tables 20 through 46 show results of prevalence for HRS/AHEAD respondents age 55 and older in 1998, 2000, and 2002. These results include percentages for the total sample as well as results by age, gender, and race. These tables can be compared to tables 47-54 that show health condition prevalence for the National Health Interview Survey (NHIS). More detailed results concerning the HRS vs. NHIS comparison may be found in the next section of this report.

B. Benchmarking Against Other Surveys

One way to evaluate the quality of data on chronic health conditions collected in the HRS is to compare prevalence estimates with those obtained from other similar national surveys. We chose the National Health Interview Survey (NHIS) for comparison because it is a well-cited, nationally representative self-report health survey with questions that are very comparable to those asked in the HRS. When the HRS health measures were developed, they were adapted from existing national surveys such as NHANES and NHIS, so the HRS measures are quite comparable.

The main objective of the NHIS is to monitor the health of the United States population through the collection of self-reported data on a broad range of health topics. The NHIS is conducted by the National Center for Health Statistics and is a cross-sectional household interview survey for which a probability sample of the civilian noninstitutionalized population of the United States is interviewed by the U.S. Bureau of the Census regarding the health and other characteristics of each household member. The sample for each year is a stratified, multistage sample, with data collected through face-to-face interviews from about 40,000 households including about 100,000 people. Respondents include all adult members of the sampled household 17 years of age and over who are at home at the time of the interview. Interviews concerning children and adults not at home during the interview are provided by an adult family member (18 years of age and over) residing in the household. Sampling and interviewing are conducted continuously throughout each year. Because of the large sample size, representativeness, and high response rate (96%-98%), the NHIS is regarded as a principal source of information on the health of the noninstitutionalized civilian U.S. population and the data are used to monitor trends in disability and illness and to track progress toward national health objectives.

Similar to the HRS, the NHIS asks respondents directly about the presence of specific health conditions as told to them by a doctor including hypertension, heart disease, cancer, diabetes, stroke, and arthritis. The reference period for identifying the presence of the conditions studied is either "ever" or the last 12 months in the NHIS, whereas the corresponding information is either "ever" for new interviews or "since the last interview" for reinterviewed respondents in the HRS. For more information about the NHIS, please see http://www.cdc.gov/nchs/about/major/nhis/hisdesc.htm.

Tables 47 through 54 in Appendix A present prevalence of health conditions among respondents age 55+ in the NHIS in 1998, 2000, and 2002. Tables 55 through 61 compare prevalence estimates obtained in HRS and NHIS. In general, these tables illustrate that there is a high degree of correspondence between prevalence estimates obtained in the two studies, providing evidence of external validity for the chronic health conditions measures in the HRS.

For example, both HRS and NHIS, respondents are asked whether they have ever been told by a doctor that they had hypertension, or high blood pressure. The prevalence estimates and trends are comparable between studies and across waves. For some conditions (e.g., hypertension, diabetes, arthritis, and self-rated health status), a slightly frequency of HRS respondents report having the condition in each wave compared to NHIS respondents. With regard to diabetes, the slightly higher reporting in the HRS may be due to a difference in question wording between the two surveys that may have resulted in more borderline cases being included in the HRS estimate. For example, in the HRS, respondents are asked whether they have diabetes or high blood sugar, whereas in NHIS, the question only includes diabetes and "sugar diabetes." The heart disease lead-in question in the HRS specifically mentions myocardial infarction, angina, coronary heart disease and congestive heart failure. In NHIS this estimate is an aggregation of questions that ask about coronary heart disease, angina, and heart attack separately, plus a catch-all follow-up question about any kind of heart condition or disease other than the ones already mentioned. The prevalence of cancer in HRS is estimated by asking respondents about their history of cancer or malignancies with the exception of minor skin cancers. The NHIS cancer questions ascertain the prevalence of all types of cancer; however, for this analysis, non-melanoma skin cancers and skin cancers of unknown type were removed from the total estimate.

Figure 1 (below) illustrates a comparison of the combined number of health conditions (including hypertension, diabetes, heart disease, cancer, and stroke) among respondents age 55 or older in the HRS and NHIS, respectively, in 2002. When we sum the number of prevalent health conditions we see that the percentage reporting 3 or more health conditions is equivalent across the two studies. The percentage of HRS respondents reporting no conditions is smaller than in the NHIS; however many people use an index measure such as the number of health conditions or comorbidities as a dependent variable in their analyses and overall these would be comparable in both studies.

Figure 1. Number of Health Conditions Among Adults Age 55+ in 2002 - HRS vs. NHIS
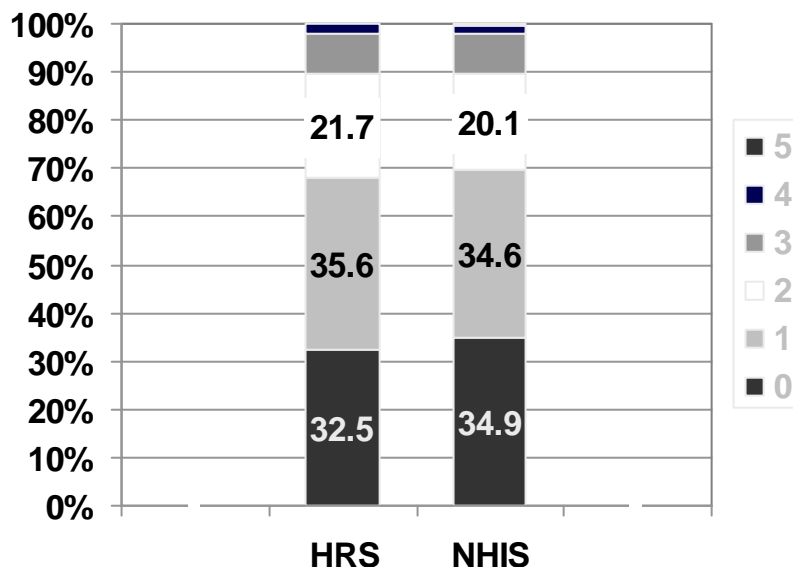
C. Previous Research Using the Health Conditions Measures

A number of published studies have examined health conditions using data from the HRS. A few of these studies are summarized below. A detailed reference list of publications using data from the HRS can be found on the HRS website at http://hrsweb.isr.umich.edu/biblio/index.html.

Health Disparities

Smith (1997) used data from the AHEAD study to examine the distribution of wealth among American households with a member at least 70 years old. As in other age groups, wealth is unevenly distributed among Americans aged 70 years and older. The households in the top 10th percentile of wealth distribution have 2,500 times as much wealth as those in the lowest 10th percentile. This wealth inequality is reflected in large racial and ethnic wealth deficits. Such wealth disparities, largely due to income, are the primary reason why older minority households have accumulated so little wealth compared to older White households. The findings confirm that current health status remains a powerful correlate of household wealth and that bequests motives for the elderly are congruent with the extreme wealth disparities

Hayward, Crimmins, Miles, & Yang (2000) used data from the first two waves of HRS to try to detect differences in "life without health problems" between different races to understand differences in mortality rates and quality of life. For example, these researchers examined 1) Do Blacks have a higher risk of acquiring chronic health impairments of all types? and 2) How do differences in social conditions produce differences in the prevalence of fatal chronic diseases among races? The researchers notice that Blacks have a lower chance of surviving to middle age then do Whites. Blacks have a far greater level of morbidity in middle age, as well as, chances in having multiple fatal disease conditions. The author's give possible reasons for their findings, with much of it based on social status and life events.

Blackwell, Hayward, & Crimmins (2001) examined whether childhood health has long-term and enduring consequences for chronic comorbidity. Their results supported the hypothesis that poor childhood health increases morbidity later in life in terms of cancer, lung disease, cardiovascular conditions, and arthritis even after controlling for adult and child socioeconomic status.

Dunlop, Manheim, Song, & Chang (2001) evaluated the prevalence of arthritis and activity limitations that resulted in a physician's visit or a joint replacement not associated with a hip fracture using data from the first wave of the AHEAD study. They concluded that Non-Hispanic black and Hispanic older adults report having arthritis at a higher frequency than non-Hispanic whites. Hispanics reported higher rates of limitations of activities of daily living compared with non-Hispanic whites with a comparable level of disease burden.

Wilson (2002) studied the inter-spousal correlation in health status (ISCIHS) among married couples in later life. Using data from the first wave of the HRS, they found a high correlation in health status between spouses, as well as evidence that the correlation is robust to alternative measures of health status. Their results indicated a high correlation even after controlling for age, education, income, and other socioeconomic and demographic determinants of health status, including behavioral risk factors. They concluded that marriage formation and decision making processes systematically affect health in

later life and that heretofore unidentified risk factors for disease and disability exist at the household level.

Wilson and Waddoups (2002) used data from four waves of the HRS to examine the impact of health status on marital dissolution for couples in late mid-life. They estimated the impact of different spousal health combinations on the probability of marital dissolution (as indicated by separation). They found evidence for what they referred to as the health mismatch hypothesis (marriages in which one partner has substantially better health than the other one are more likely to get divorced than couples who have similar health (whether good or bad)). However, this effect was only found among couples in which both couples report their marriages to be very satisfying. Among other couples, no effect is found. This suggests that health is of minor consequence for already unhappy couples, but health mismatches pose a significant risk of dissolution to happy couples within this age cohort, possibly because of the unexpected nature of poor health at a relatively young age.

Health Conditions and Cognition

Fultz, Ofstedal, Herzog, and Wallace (2003) examined the role of cognitive impairment and depressive symptoms on the functional outcomes of stroke and diabetes using data from the AHEAD study. Their results indicated that stroke, diabetes, cognitive impairment, and depressive symptoms each have strong independent effects on physical functioning.

Zelinski, Crimmins, Reynolds, & Seeman (1998) examined whether chronic medical conditions predict cognitive performance among older adults. Stroke, diabetes, and self-ratings of poor health were related to cognitive deficits. They found an interaction with age such that poorer performance on some cognitive tasks are more pronounced in younger old adults with high blood pressure and poor health ratings.

Costs of Informal Caregiving for Patients with Health Conditions

Hayman et al. (2001) sought to estimate the cost of informal caregiving for elderly cancer patients. Using data from the AHEAD study and controlling for differences in health and functional status, social support, and sociodemographics, they found a significantly higher rate of the probability of informal caregiving and more hours of care received among those receiving cancer treatment compared with those who did not have cancer or had cancer but were not receiving treatment. Results indicated that the incremental increase in caregiving time translates to an average yearly cost of $1200 per patient. These researchers concluded that informal caregiving costs are substantial and should be considered when estimating the cost of cancer treatment in the elderly.

In a similar study, Langa et al. (2002) studied informal caregiving time and costs among elderly individuals with diabetes. Using data from the AHEAD study, they found that those without diabetes received less informal care than those with diabetes, and those with diabetes who were taking insulin received more care than those with diabetes taking no medication or oral medication. Disabilities related to heart disease, stroke, and visual impairment were important predictors of diabetes-related informal care. The total cost of informal caregiving for elderly individuals with diabetes in the United States was between $3 and $6 billion per year, similar to previous estimates of the annual paid long-term care costs attributable to diabetes. They concluded that diabetes imposes a substantial burden on elderly individuals, their families, and society, both through increased rates of disability and the

significant time that informal caregivers must spend helping address the associated functional limitations.

Research Regarding specific Health Conditions:

Diabetes

Vijan, Hayward, & Langa (in press) examined the impact of diabetes on workforce participation. Results indicated that Diabetes is a significant predictor of self-rated disability, of not working due to health impairments, and of receiving Social Security Disability or VA disability. Individuals with diabetes also missed more work time than those without the disease. They concluded that diabetes has a profound economic impact in the U.S.

Wray, Blaum, Ofstedal, and Herzog (2004) used data from three waves of the HRS to determine whether diagnosis of diabetes predicted subsequent weight loss among relatively healthy by overweight adults, and whether whether socioeconomic factors affected that relationship. They found that overweight middle-aged adults were more likely to report losing at least 10 pounds if they had diabetes than if they did not, and this relationship was not related to socioeconomic status.

Arthritis

Yelin (1995) described the prevalence, incidence, and correlates of work disability among persons with musculoskeletal conditions (e.g., arthritis). Results indicated that individuals with musculoskeletal conditions musculoskeletal conditions have high rates of work disability, but given their level of impairment, are more likely to work than persons without musculoskeletal conditions. Yelin, Sonnebom, and Trupin (2000) sought to estimate the likelihood that persons aged 51 to 61 afflicted by musculoskeletal disorders will receive accommodations from their employers. Using data from the HRS, they found that among those reporting a musculoskeletal problem causing a disability and still employed, not even a fifth had received accommodations. The most common accommodations that employees are given are: an assistant, more breaks in a workday, changes in work schedule, and special equipment. Only those people that had someone assisting them with their work were more likely to be working 2 years later.

Heart Disease

Ueda, Shirakawa, & Goko (1997) examined the incidence of heart problems among the elderly in order to examine possible risk factors of heart disease, including hypertension, diabetes, alcohol consumption, smoking status, body mass index (BMI), and physical performance. Bivariate analysis results indicated that hypertension, diabetes, alcohol consumption, and physical performance all related to the incidence of heart problems among the elderly. However, hypertension and alcohol consumption do not show significance in multivariate analyses and therefore their effects as a risk factor on the incidence of heart disease are low. BMI only significantly indicated the risk of the incidence of heart problems in the multiple logistic regression analyses. Both diabetes and physical performance were statistically significant indicators of heart disease in both types of analyses, yet they show different direction of effects when demographic factors are added.

C. Missing Data

In general there is only a small amount of missing data on the health conditions measures. "Don't know" and "refused" codes were endorsed very infrequently; less than .01% of the respondents indicated that they didn't know or refused to answer the questions that were asked. As a result, issues regarding missing or incomplete data should not pose a significant problem for researchers using the health conditions data.

VI. Technicalities

A. Heart Condition Preload Error

Please note the following corrections to the heart condition variables in HRS 1998 and 2000. (This information is also posted on the HRS website under "Data Alert.")

1. 1998 - Correction to F1156 [B7. Heart Condition]

In the health status respondent-level data file (H98B_R) of the Final Core Data Release Version 1.0, the variable F1156 [B7. HEART CONDITION] has a data error. Specifically, there were a number of AHEAD respondents who reported having heart disease in 1993 or 1995 (and had not disputed the report as of 1995) and were miscoded on the 1998 preload variable for heart disease, F234 (i.e., coded 0 instead of 1 on F234). In a producing a later data release, a new variable was created (F1156A) to flag the cases that were miscoded.

The preload variable is what determines which version of the heart disease question (B7) is asked in the current wave. Those coded 1 on the preload variable are simply asked to confirm the prior report of heart disease: "Our records from your last interview in (date) show that you had a heart problem." Unless the R disputes this, the interviewer keys a value of 1 indicating that R still has heart disease. Those coded 0 on the preload variable were instead asked this version of the question: "Since your last interview in (date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems?" If they said no to this question, then they were coded 5 on F1156 and they were not asked any of the heart condition follow-up questions in 1998 (i.e., B7a – B7q).

To deal with this error, we created a new variable, F1156A, in which the 517 respondents who reported having heart disease in 1993 or 1995 and answered "No" to this question in 1998 were assigned a new value on F1156A (compared to F1156).

The variables used for this recode are D828 (heart disease status in 1995) and F234 (1998 preload for heart disease). Sample SAS code appears below to illustrate how this recode was created. 517 cases were changed from 5 on F1156 to 6 on F1156A. Frequencies before and after the correction are listed below. Note that this recode will result in a slight overestimate of the number and percent of respondents with heart disease in 1998, because if the 517 respondents had been asked to confirm their prior heart disease, some of them may have disputed it.

If you are interested in using the heart condition follow-up questions in any of your analyses, these are our recommendations: it is unlikely that respondents who had heart disease in the past but no incident report between 1995 and 1998 would respond 'yes' to follow-up questions B7d, B7i, B7kb, B7p, and B7q. Thus, respondents with a value of 6 on F1156 can be assigned values of 5 on F1162, F1168, F1171, F1174, and F1175. We do not recommend recoding any of the other follow-up question variables, as it less clear how respondents would have answered those questions.

```
==========================================================================

F1156      B7. HEART CONDITION
           Section: B            Level: Respondent         CAI Reference: Q1156
           Type: Numeric         Width: 1                  Decimals: 0

..............................................................
Corrected    Uncorrected
 (F1156A)      (F1156)

   4307          4307      1. YES
    179           179      3. [VOL] DISPUTES PREVIOUS WAVE RECORD
  16367         16885      5. NO
    518                    6. PRELOAD ERROR: Condition reported at prior wave but
                              said no to new event
     13            13      8. DK (don't know); NA (not ascertained)
                           9. RF (refused)
                             Blank. INAP (Inapplicable): [Q456:CS CONTINUE] IS (5);
                           [Q497:CS2b] IS (A) OR [Q542:CS15C2] IS (A) OR [Q518:CS11a] IS
                           (A)

==========================================================================
```

SAS Code for correcting this error:
```
****************************************************;
** Fixing Heart Disease Variable in HRS 98 Core **;
****************************************************;

***1995 data with HHID PN and D828;
Data Da95;
  set in95.a95b_r;
  keep hhid pn d828;
run;
Proc Sort out=da95;
        by hhid pn;
run;

***1998 preload data with HHID PN and F234;
Data Da98_pr;
  set in98.h98pr_r;
  keep hhid pn f234;
run;
Proc Sort out=da98_1;
        by hhid pn;
run;

***1998 data with HHID PN and F1156;
Data Da98_b;
  set in98.h98b_r;
  keep hhid pn f1156;
```

```
run;
Proc Sort out=da98_2;
         by hhid pn;
run;

***Merge data together using HHID and PN;
***retaining only respondents with data in 1998;
Data All;
  merge da95 da98_1 da98_2 (in=a);
  by hhid pn;
  if a;

  miscode=0;
  if d828 eq 1 and f234 eq 0 then miscode=1;

  F1156R = .;
    if miscode eq 1 and f1156 eq 5 then F1156R = 6;
    else F1156R = F1156;
run;

***Check frequencies after correction;
Proc Freq data=All;
         tables miscode f1156 f1156r miscode*f1156r f1156*f1156R / nocol
norow nopercent missing;
run;
```

2. 2000 - Correction to G1289 [B7. Heart Condition]

In the health status respondent-level data file (H00_B) of the Final Core Data Release Version 1.0, variable G1289 [B7. HEART CONDITION] has a data error. This is related to an error in 1998 for F1156. Specifically, there were a number of AHEAD respondents who reported having heart disease in 1993 or 1995 (and had not disputed the report as of 1995), who were miscoded on the 1998 preload variable for heart disease, F234 (i.e., coded 0 instead of 1 on F234). A new variable was created in the 1998 dataset that has a separate code value for respondents who were asked the incorrect question. However, you will need to apply your own changes to the 2000 data.

The heart disease preload variable is what determines which version of the heart disease question (B7) is asked in the current wave. Those coded 1 on the preload variable are simply asked to confirm their prior report of heart disease:

```
Our records from your last interview in (date) show that you had
a heart problem.
```

Unless the R disputes this, the interviewer keys a value of 1 indicating that R still has heart disease.

Those coded 0 on the preload variable are instead asked this version of the question:

```
Since your last interview in (date), has a doctor told you that
you have had a heart attack, have coronary heart disease, angina,
congestive heart failure, or other heart problems?
```

In 1998 if the R said no to this question, s/he was coded 5 on F1156 and asked the incorrect version of the B7 question in 2000 (G1289) as well.

To deal with this error, we recommend that the analyst create a new variable, G1289R, for which the 279 respondents who reported having heart disease in 1993 or 1995 and who answered "No" to G1289 in 2000 are assigned a value of 6. The variables used for this recode are D828 (heart disease status in 1995) and F234 (1998 preload for heart disease). Sample SAS code is provided below. You will want to provide equivalent statements if you are using another statistical software package. 279 cases will change from 5 on G1289 to 6 on G1289R. Frequencies before and after the correction are listed below.

Note that this recode will result in a slight overestimate of the number and percent of respondents with heart disease in 2000, because if the 279 respondents had been asked to confirm their prior heart disease, some of them might have disputed it.

If you are interested in using the heart condition follow-up questions in any of your analyses, these are our recommendations: It is unlikely that respondents who had heart disease in the past but no incident report between 1995 and 1998 would respond "Yes" to follow-up questions B7d, B7i, B7kb, B7p, and B7q. Thus, respondents with a value of 6 on G1289 can be assigned values of 5 on G1295, G1301, G1304, G1307, and G1308). We do not recommend recoding any of the other follow-up question variables, as it less clear how respondents would have answered those questions.

```
==============================================================================
G1289      B7. HEART CONDITION
           Section: B              Level: Respondent       CAI Reference: Q1289
           Type: Numeric           Width: 1                Decimals: 0

..............................................................................
Corrected   Uncorrected

   4375         4375      1. YES
      6            6      3. DISPUTES PREVIOUS WAVE RECORD, BUT NOW HAS CONDITION
    160          160      4. DISPUTES PREVIOUS WAVE RECORD, DOES NOT HAVE CONDITION
  14752        15031      5. NO
    279                   6. PRELOAD ERROR: Condition reported at prior wave but
said no to new event
      4            4      8. DK (don't know); NA (not ascertained)
      4            4      9. RF (refused)
                    Blank.

==============================================================================

***************************************************;
** Fixing Heart Disease Variable in HRS 2000 Core **;
***************************************************;

libname in95 'C:\HRS\1995ahd\core\sas';
libname in98 'C:\HRS\1998hrs\core\sas';
libname in00 'C:\HRS\2000hrs\core\sas';

***1995 data with HHID PN and D828;
Proc Sort data=in95.a95b_r(keep=hhid pn d828)
    out=da95;
    by hhid pn;
run;

***1998 preload data with HHID PN and F234;
```

```
Proc Sort data=in98.h98pr_r(keep=hhid pn f234)
    out=da98_1;
    by hhid pn;
run;

***2000 preload data with HHID PN and G234;
Proc Sort data=in00.h00pr_r(keep=hhid pn g234)
    out=da00_1;
    by hhid pn;
run;

***2000 data with HHID PN and G1289;
Proc Sort data=in00.h00b_r(keep= hhid pn g1289)
    out=da00_2;
    by hhid pn;
run;

***Merge data together using HHID and PN;
Data All;
    merge da95 da98_1 da00_1 da00_2(in=a);
    by hhid pn;
    if a;

    if d828 eq 1 and f234 eq 0 and g1289 eq 5 then g1289r = 6;
    else g1289r = g1289;
run;

***Check frequencies after correction;
Proc Freq data=all;
    tables g1289 g1289r / nocol norow nopercent missing;
run;
```

3. 1998 & 2000 Correction [B7. Heart Condition] as applied when calculating heart disease prevalence in this report.

```
***Fixing heart disease preload problem for AHD Rs in 1998;
***recode n=518 who said no to new event in 1998 as missing;
***carrying missing data option through 2000 (n=279) and 2002 (n=38);

miscode=0;
checkfh=.;
checkgh=.;
checkhh=.;
if D828 eq 1 and F234 eq 0 then miscode=1;
if miscode eq 1 and F1156 eq 5 then checkfh=1;
if miscode eq 1 and F1156 eq 5 then F1156=.;
if checkfh eq 1 and G1289 eq 5 then checkgh=1;
if checkfh eq 1 and G1289 eq 5 then G1289=.;
if checkfh eq 1 and G1289 ne 1 and HC036 eq 5 then checkhh=1;
if checkfh eq 1 and G1289 ne 1 and HC036 eq 5 then HC036=.;

drop miscode checkfh checkgh checkhh;
```

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APPENDIX A – Condition Prevalence Across Waves

The following tables present the prevalence of chronic disease conditions from 1992 – 2002 for the HRS Original Cohort. The Original cohort includes respondents who were between the ages of 51 and 61 in 1992 (born between 1931 and 1941).

Table 2. Frequency of Hypertension – HRS Original Cohort.

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	37.9	8845	41.8	8468	41.7	8097	44.1	7644	47.4	7339	51.5
Sex												
Male	4596	39.2	4101	42.8	3909	42.0	3734	43.8	3515	47.7	3352	51.3
Female	5165	36.7	4744	40.8	4559	41.4	4363	44.3	4129	47.1	3981	51.7
Race and Hispanic Ethnicity												
Hispanic	903	37.9	760	44.3	745	42.5	715	46.2	672	48.7	670	55.2
Non-Hispanic White	6972	35.6	6408	39.2	6164	39.2	5915	41.4	5589	45.0	5347	49.2
Non-Hispanic Black	1676	56.5	1480	60.8	1380	61.9	1299	65.1	1218	66.9	1156	69.9
Non-Hispanic Other	204	38.0	175	46.8	163	44.0	156	46.0	153	47.5	138	48.6

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 3. Frequency of Diabetes– HRS Original Cohort.

	1992 HRS		1994 HRS		1996 HRS		1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	9.9	8845	11.7	8468	12.3	8097	13.4	7644	14.7	7339	17.2
Sex												
Male	4596	10.2	4101	12.4	3909	13.0	3734	14.5	3515	15.8	3352	18.9
Female	5165	9.6	4744	11.2	4559	11.6	4363	12.5	4129	13.7	3981	15.8
Race and Hispanic Ethnicity												
Hispanic	903	14.6	760	18.9	745	19.1	715	21.6	672	23.8	670	27.7
Non-Hispanic White	6972	8.4	6408	9.9	6164	10.4	5915	11.3	5589	12.6	5347	15.1
Non-Hispanic Black	1676	17.6	1480	21.7	1380	23.0	1299	24.7	1218	25.4	1156	28.4
Non-Hispanic Other	204	12.6	175	14.0	163	13.4	156	15.8	153	14.7	138	16.2

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 4. Frequency of Cancer – HRS Original Cohort.

	1992 HRS		1994 HRS		1996 HRS		1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	5.6	8845	6.6	8468	7.5	8097	9.1	7644	10.6	7339	12.4
Sex												
Male	4596	3.2	4101	4.1	3909	5.1	3734	7.6	3515	9.0	3352	11.6
Female	5165	7.7	4744	8.8	4559	9.6	4363	10.4	4129	12.0	3981	13.2
Race and Hispanic Ethnicity												
Hispanic	903	4.2	760	5.8	745	6.1	715	7.4	672	8.8	670	9.8
Non-Hispanic White	6972	5.8	6408	6.8	6164	7.8	5915	9.4	5589	11.1	5347	13.1
Non-Hispanic Black	1676	4.6	1480	5.0	1380	5.9	1299	7.1	1218	8.0	1156	8.9
Non-Hispanic Other	204	5.3	175	6.1	163	8.0	156	10.9	153	9.3	138	9.4

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 5. Frequency of Lung Disease – HRS Original Cohort

	1992 HRS		1994 HRS		1996 HRS		1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	8.2	8845	9.9	8468	9.1	8097	9.1	7644	9.1	7339	10.2
Sex												
Male	4596	7.9	4101	9.5	3909	8.6	3734	8.3	3515	8.5	3352	9.4
Female	5165	8.5	4744	10.2	4559	9.5	4363	9.8	4129	9.7	3981	11.0
Race and Hispanic Ethnicity												
Hispanic	903	6.7	760	8.3	745	6.4	715	5.7	672	6.3	670	7.3
Non-Hispanic White	6972	8.5	6408	10.1	6164	9.5	5915	9.5	5589	9.5	5347	10.9
Non-Hispanic Black	1676	6.5	1480	9.1	1380	8.2	1299	8.3	1218	7.9	1156	7.6
Non-Hispanic Other	204	7.8	175	9.5	163	7.6	156	9.2	153	9.0	138	9.3

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 6. Frequency of Heart Disease – HRS Original Cohort

	1992 HRS		1994 HRS		1996 HRS		1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	12.6	8845	15.8	8468	16.1	8097	17.3	7644	18.8	7339	21.7
Sex												
Male	4596	15.0	4101	18.5	3909	18.4	3734	20.2	3515	22.6	3352	25.9
Female	5165	10.5	4744	13.3	4559	14.0	4363	14.8	4129	15.6	3981	18.2
Race and Hispanic Ethnicity												
Hispanic	903	9.1	760	13.0	745	11.5	715	13.0	672	14.3	670	15.1
Non-Hispanic White	6972	12.7	6408	15.8	6164	16.4	5915	17.7	5589	19.3	5347	22.4
Non-Hispanic Black	1676	14.1	1480	17.2	1380	17.2	1299	17.8	1218	18.6	1156	19.8
Non-Hispanic Other	204	12.6	175	14.2	163	14.5	156	16.7	153	17.5	138	25.6

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 7. Frequency of Stroke – HRS Original Cohort

	1992 HRS		1994 HRS		1996 HRS		1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	2.6	8845	3.0	8468	3.1	8097	3.8	7644	4.4	7339	4.6
Sex												
Male	4596	3.0	4101	3.4	3909	3.3	3734	4.3	3515	4.7	3352	5.0
Female	5165	2.2	4744	2.8	4559	2.9	4363	3.4	4129	4.0	3981	4.3
Race and Hispanic Ethnicity												
Hispanic	903	3.2	760	4.4	745	3.2	715	2.9	672	2.3	670	3.3
Non-Hispanic White	6972	2.3	6408	2.6	6164	2.7	5915	3.5	5589	4.0	5347	4.3
Non-Hispanic Black	1676	4.5	1480	5.5	1380	5.7	1299	6.6	1218	8.3	1156	8.0
Non-Hispanic Other	204	2.3	175	3.2	163	3.8	156	4.4	153	5.0	138	4.2

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 8. Frequency of Arthritis – HRS Original Cohort

| | 1992 | | 1994 | | 1996 | | 1998 | | 2000 | | 2002 | |
| | HRS | | HRS | | HRS | | HRS | | HRS | | HRS | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	37.4	8845	44.6	8468	48.2	8097	52.5	7644	56.0	7339	59.5
Sex												
Male	4596	30.6	4101	36.8	3909	40.6	3734	45.9	3515	49.0	3352	52.3
Female	5165	43.6	4744	51.7	4559	55.1	4363	58.3	4129	62.2	3981	65.7
Race and Hispanic Ethnicity												
Hispanic	903	35.9	760	44.8	745	46.1	715	49.4	672	55.7	670	56.7
Non-Hispanic White	6972	37.2	6408	44.1	6164	48.0	5915	52.4	5589	55.9	5347	59.7
Non-Hispanic Black	1676	40.9	1480	49.4	1380	53.0	1299	57.9	1218	60.1	1156	63.7
Non-Hispanic Other	204	33.4	175	41.2	163	42.2	156	44.3	153	45.8	138	46.4

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 9. Frequency of Psychiatric Conditions – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	10.9	8845	13.9	8468	13.6	8097	14.1	7644	14.2	7339	14.8
Sex												
Male	4596	8.0	4101	10.5	3909	9.8	3734	10.1	3515	9.7	3352	9.6
Female	5165	13.6	4744	17.0	4559	17.0	4363	17.7	4129	18.2	3981	19.3
Race and Hispanic Ethnicity												
Hispanic	903	15.1	760	22.4	745	19.4	715	18.5	672	18.8	670	19.7
Non-Hispanic White	6972	10.7	6408	13.5	6164	13.1	5915	13.8	5589	14.0	5347	14.7
Non-Hispanic Black	1676	10.4	1480	12.7	1380	13.2	1299	13.6	1218	13.6	1156	13.7
Non-Hispanic Other	204	8.8	175	10.9	163	11.6	156	13.3	153	12.1	138	10.7

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 10. Self-Rated Overall Health Status – HRS Original Cohort

| | 1992 | | 1994 | | 1996 | | 1998 | | 2000 | | 2002 | |
| | HRS | | HRS | | HRS | | HRS | | HRS | | HRS | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9761	20.1	8842	20.8	8465	21.1	8093	25.9	7640	23.0	7336	23.8
Sex												
Male	4596	19.2	4098	19.7	3907	20.1	3732	24.7	3512	22.5	3352	23.6
Female	5165	21.0	4744	21.7	4558	22.0	4361	27.0	4128	23.5	3978	24.0
Race and Hispanic Ethnicity												
Hispanic	903	37.0	760	44.7	745	42.5	715	45.5	672	44.2	670	45.5
Non-Hispanic White	6972	16.8	6406	17.0	6162	17.8	5912	22.4	5585	19.4	5346	20.1
Non-Hispanic Black	1676	35.7	1479	35.8	1380	33.5	1298	41.2	1218	38.6	1154	40.5
Non-Hispanic Other	204	21.9	175	24.2	162	25.7	156	26.8	153	22.9	138	22.7

Sample Ns are based on unweighted data; proportions are based on weighted data
Ns and percentages are based on those who reported being in Fair or Poor Health (on a rating scale of Excellent, Very Good, Good, Fair, or Poor)

Table 11. Frequency of Hypertension – AHEAD Original Cohort

	1993 AHEAD		1995 AHEAD		1998 AHEAD		2000 AHEAD		2002 AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7435	49.1	6296	51.6	5242	54.5	4337	57.4	3467	61.7
Sex										
Male	2906	43.6	2417	46.2	1953	48.8	1567	51.1	1220	55.0
Female	4529	52.9	3879	55.3	3289	57.9	2770	61.2	2247	65.4
Race and Hispanic Ethnicity										
Hispanic	418	50.8	341	52.1	294	56.6	259	60.7	201	61.7
Non-Hispanic White	5910	47.8	5053	50.4	4202	53.2	3476	56.1	2799	60.8
Non-Hispanic Black	1009	64.2	822	65.5	679	67.5	540	70.1	415	73.2
Non-Hispanic Other	68	44.8	67	45.9	67	56.6	62	55.3	47	62.0

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 12. Frequency of Diabetes – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7438	12.4	6296	13.8	5242	14.8	4337	15.1	3467	16.4
Sex										
Male	2906	13.6	2417	14.5	1953	15.6	1567	16.7	1220	17.8
Female	4532	11.7	3879	13.3	3289	14.3	2770	14.1	2247	15.6
Race and Hispanic Ethnicity										
Hispanic	417	21.4	341	23.3	294	25.9	259	22.5	201	23.8
Non-Hispanic White	5913	11.1	5053	12.5	4202	13.5	3476	14.1	2799	15.3
Non-Hispanic Black	1010	22.4	822	23.9	679	23.2	540	22.6	415	26.9
Non-Hispanic Other	68	15.0	67	15.7	67	15.7	62	15.6	47	13.1

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 13. Frequency of Cancer – AHEAD Original Cohort

	1993 AHEAD		1995 AHEAD		1998 AHEAD		2000 AHEAD		2002 AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7440	13.9	6296	16.0	5242	16.9	4337	18.2	3467	20.2
Sex										
Male	2908	15.4	2417	18.4	1953	20.3	1567	20.8	1220	25.5
Female	4532	13.0	3879	14.3	3289	14.8	2770	16.7	2247	17.2
Race and Hispanic Ethnicity										
Hispanic	418	9.8	341	8.5	294	7.7	259	9.3	201	9.1
Non-Hispanic White	5913	14.6	5053	16.9	4202	17.7	3476	19.1	2799	21.1
Non-Hispanic Black	1011	10.3	822	11.0	679	13.7	540	13.2	415	16.5
Non-Hispanic Other	68	2.3	67	3.5	67	10.9	62	13.5	47	10.3

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 14. Frequency of Lung Disease – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7438	11.9	6296	11.4	5242	11.8	4337	11.3	3467	10.6
Sex										
Male	2903	14.3	2417	13.6	1953	13.6	1567	13.6	1220	12.3
Female	4535	10.3	3879	9.9	3289	10.7	2770	9.9	2247	9.7
Race and Hispanic Ethnicity										
Hispanic	417	9.7	341	8.2	294	7.2	259	9.7	201	7.6
Non-Hispanic White	5912	12.4	5053	12.1	4202	12.6	3476	11.8	2799	11.4
Non-Hispanic Black	1011	7.0	822	5.7	679	5.5	540	6.3	415	4.4
Non-Hispanic Other	68	7.9	67	5.6	67	9.7	62	10.4	47	6.3

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 15. Frequency of Heart Disease – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7436	31.9	6296	34.3	4771	30.6	4088	35.4	3435	40.4
Sex										
Male	2905	36.2	2417	38.2	1738	35.7	1450	41.0	1205	48.3
Female	4531	29.1	3879	31.8	3033	27.6	2638	32.1	2230	36.0
Race and Hispanic Ethnicity										
Hispanic	418	24.1	341	25.9	276	23.3	249	24.6	199	28.5
Non-Hispanic White	5910	32.7	5053	35.3	3804	31.7	3272	36.5	2774	42.0
Non-Hispanic Black	1010	26.9	822	27.4	629	24.1	508	30.4	411	33.5
Non-Hispanic Other	68	24.2	67	27.6	62	24.0	59	22.8	46	15.5

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 16. Frequency of Stroke – AHEAD Original Cohort

	1993 AHEAD		1995 AHEAD		1998 AHEAD		2000 AHEAD		2002 AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7441	8.7	6296	9.8	5242	10.5	4337	10.5	3467	11.4
Sex										
Male	2907	9.6	2417	10.5	1953	10.8	1567	11.3	1220	12.1
Female	4534	8.0	3879	9.3	3289	10.3	2770	10.0	2247	11.0
Race and Hispanic Ethnicity										
Hispanic	418	7.3	341	7.5	294	10.0	259	9.5	201	9.5
Non-Hispanic White	5915	8.5	5053	9.7	4202	10.5	3476	10.5	2799	11.3
Non-Hispanic Black	1011	11.2	822	11.5	679	11.2	540	12.1	415	14.3
Non-Hispanic Other	67	5.0	67	6.4	67	8.2	62	5.3	47	9.9

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 17. Frequency of Arthritis – AHEAD Original Cohort

	1993[1]		1995		1998		2000		2002	
	AHEAD		**AHEAD**		**AHEAD**		**AHEAD**		**AHEAD**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Total	7437	24.7	6296	54.1	5242	62.7	4337	68.4	3467	71.4
Sex										
Male	2904	19.6	2417	46.8	1953	55.4	1567	61.8	1220	65.7
Female	4533	28.2	3879	59.0	3289	67.2	2770	72.4	2247	74.6
Race and Hispanic Ethnicity										
Hispanic	418	42.1	341	60.4	294	63.4	259	67.6	201	70.0
Non-Hispanic White	5910	22.6	5053	52.9	4202	61.9	3476	67.8	2799	71.1
Non-Hispanic Black	1011	38.3	822	64.5	679	72.0	540	76.5	415	77.1
Non-Hispanic Other	68	32.7	67	54.3	67	63.0	62	64.9	47	65.0

Sample Ns are based on unweighted data; proportions are based on weighted data
[1]The arthritis question asked in 1993 was significantly different from the question asked in later waves. Refer to the question concordance in Appendix A for detailed question wording.

Table 18. Frequency of Psychiatric Conditions – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		AHEAD	
	N	%	N	%	N	%	N	%	N	%
Total	7441	10.8	6296	11.5	5242	13.0	4337	12.2	3467	13.3
Sex										
Male	2906	8.5	2417	8.3	1953	9.0	1567	8.1	1220	8.0
Female	4535	12.3	3879	13.7	3289	15.5	2770	14.7	2247	16.3
Race and Hispanic Ethnicity										
Hispanic	418	15.7	341	16.2	294	19.7	259	21.2	201	19.8
Non-Hispanic White	5915	10.6	5053	11.1	4202	12.5	3476	11.5	2799	13.0
Non-Hispanic Black	1010	10.5	822	14.3	679	14.9	540	15.7	415	13.2
Non-Hispanic Other	68	9.7	67	9.5	67	14.9	62	12.6	47	15.2

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 19. Frequency of Overall Self-Rated Health Status – AHEAD Original Cohort

	1993 AHEAD		1995 AHEAD		1998 AHEAD		2000 AHEAD		2002 HRS	
	N	%	N	%	N	%	N	%	N	%
Total	7437	35.5	6294	34.2	5240	40.2	4335	36.4	3462	37.6
Sex										
Male	2907	34.7	2415	33.3	1953	41.1	1567	37.3	1219	37.8
Female	4530	36.0	3879	34.8	3287	39.6	2768	35.8	2243	37.5
Race and Hispanic Ethnicity										
Hispanic	418	49.9	341	43.9	294	55.7	259	54.0	201	51.9
Non-Hispanic White	5912	33.4	5051	32.5	4200	38.3	3475	34.2	2794	35.9
Non-Hispanic Black	1011	50.0	822	49.0	679	52.9	540	52.8	415	53.4
Non-Hispanic Other	66	36.3	67	28.0	67	47.8	61	28.8	47	26.8

Sample Ns are based on unweighted data; proportions are based on weighted data
Ns and percentages are based on those who reported being in Fair or Poor Health (on a rating scale of Excellent, Very Good, Good, Fair, or Poor)

Table 20. Frequency of Hypertension – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18506	47.6	17628	49.0	17154	51.7
Age						
55-64 yrs	7393	40.6	6488	41.8	5927	44.4
65-74 yrs	5757	50.8	5782	51.5	5947	54.1
75-84 yrs	3855	54.4	3867	56.9	3816	60.9
85+ yrs	1501	54.3	1491	57.4	1464	60.6
Sex						
Male	8043	45.6	7559	47.5	7280	50.2
Female	10463	49.1	10069	50.1	9861	53.0
Race and Hispanic Ethnicity						
Hispanic	1383	45.7	1358	46.2	1332	49.8
Non-Hispanic White	14201	46.0	13510	47.5	13003	50.2
Non-Hispanic Black	2563	63.2	2402	64.4	2318	68.2
Non-Hispanic Other	334	48.8	335	48.4	329	51.6

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 21. Frequency of Hypertension - HRS Respondents (55+ Years) by Age Group and Sex

	1998				2000				2002			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	45.6	10463	49.1	7559	47.5	10069	50.1	7280	50.2	9861	53.0
Age												
55-64 yrs	3325	41.1	4068	40.0	2831	43.6	3657	40.1	2509	46.1	3410	42.9
65-74 yrs	2664	49.5	3093	51.8	2645	50.2	3137	52.6	2708	52.3	3235	55.6
75-84 yrs	1571	49.9	2284	57.4	1598	51.7	2269	60.6	1598	56.7	2217	63.8
85+ yrs	483	42.7	1018	59.8	485	49.8	1006	61.1	465	49.9	999	65.9

Table 22. Frequency of Hypertension – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

	1998				2000				2002			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	45.6	10463	49.1	7559	47.5	10069	50.1	7280	50.2	9861	53.0
Race and Hispanic Ethnicity												
Hispanic	603	42.1	780	48.6	575	43.2	783	48.4	564	44.1	768	54.4
Non-Hispanic White	6277	44.9	7924	46.9	5899	47.0	7611	48.0	5619	49.7	7384	50.6
Non-Hispanic Black	989	56.3	1574	67.8	916	57.2	1486	69.4	873	62.2	1445	72.3
Non-Hispanic Other	152	45.5	182	51.4	150	45.2	185	51.1	145	42.9	184	58.3

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 23. Frequency of Diabetes – HRS Respondents (55+ Years)

	1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%
Total	18506	14.0	17628	14.7	17154	16.7
Age						
55-64 yrs	7393	12.0	6488	12.5	5927	14.9
65-74 yrs	5757	15.9	5782	16.8	5947	18.6
75-84 yrs	3855	15.5	3867	16.6	3816	18.8
85+ yrs	1501	12.3	1491	12.3	1464	12.1
Sex						
Male	8043	15.0	7559	15.8	7280	18.3
Female	10463	13.2	10069	13.9	9861	15.4
Race and Hispanic Ethnicity						
Hispanic	1383	21.4	1358	21.2	1332	25.4
Non-Hispanic White	14201	12.4	13510	13.2	13003	14.8
Non-Hispanic Black	2563	23.2	2402	24.1	2318	27.1
Non-Hispanic Other	334	15.6	335	14.9	329	20.6

Table 24. Frequency of Diabetes – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	15.0	10463	13.2	7559	15.8	10069	13.9	7280	18.3	9861	15.4
Age												
55-64 yrs	3325	12.8	4068	11.2	2831	13.2	3657	12.0	2509	16.2	3410	13.8
65-74 yrs	2664	17.5	3093	14.5	2645	18.3	3137	15.6	2708	20.7	3235	16.9
75-84 yrs	1571	16.1	2284	15.0	1598	17.9	2269	15.7	1598	20.5	2217	17.6
85+ yrs	483	12.9	1018	12.0	485	14.9	1006	10.9	465	13.7	999	11.3

Table 25. Frequency of Diabetes – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	15.0	10463	13.2	7559	15.8	10069	13.9	7280	18.3	9861	15.4
Race and Hispanic Ethnicity												
Hispanic	603	21.0	780	21.8	575	21.9	783	20.8	564	25.1	768	25.6
Non-Hispanic White	6277	14.0	7924	11.1	5899	14.7	7611	11.9	5619	16.9	7384	13.0
Non-Hispanic Black	989	20.1	1574	25.3	916	21.6	1486	25.9	873	25.6	1445	28.2
Non-Hispanic Other	152	14.6	182	16.4	150	16.1	185	13.9	145	22.2	184	19.4

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 26. Frequency of Cancer – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		**HRS**		**HRS**	
	N	**%**	**N**	**%**	**N**	**%**
Total	18506	11.8	17628	12.3	17154	13.4
Age						
55-64 yrs	7393	7.8	6488	8.0	5927	8.8
65-74 yrs	5757	12.5	5782	13.2	5947	14.3
75-84 yrs	3855	17.1	3867	17.8	3816	19.4
85+ yrs	1501	16.5	1491	17.6	1464	20.5
Sex						
Male	8043	11.6	7559	11.8	7280	13.1
Female	10463	11.9	10069	12.7	9861	13.6
Race and Hispanic Ethnicity						
Hispanic	1383	7.2	1358	7.0	1332	7.0
Non-Hispanic White	14201	12.5	13510	13.1	13003	14.2
Non-Hispanic Black	2563	8.6	2402	9.2	2318	10.7
Non-Hispanic Other	334	9.7	335	9.5	329	11.3

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 27. Frequency of Cancer – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	11.6	10463	11.9	7559	11.8	10069	12.7	7280	13.1	9861	13.6
Age												
55-64 yrs	3325	5.9	4068	9.5	2831	6.0	3657	9.8	2509	7.0	3410	10.4
65-74 yrs	2664	12.9	3093	12.2	2645	13.3	3137	13.2	2708	14.6	3235	14.1
75-84 yrs	1571	20.2	2284	15.0	1598	20.4	2269	16.0	1598	22.8	2217	17.1
85+ yrs	483	21.2	1018	14.2	485	20.6	1006	16.2	465	24.6	999	18.5

Table 28. Frequency of Cancer – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	11.6	10463	11.9	7559	11.8	10069	12.7	7280	13.1	9861	13.6
Race and Hispanic Ethnicity												
Hispanic	603	5.5	780	8.5	575	5.7	783	8.0	564	5.0	768	8.6
Non-Hispanic White	6277	12.2	7924	12.8	5899	12.3	7611	13.8	5619	13.8	7384	14.6
Non-Hispanic Black	989	10.4	1574	7.3	916	11.5	1486	7.6	873	12.7	1445	9.4
Non-Hispanic Other	152	12.3	182	7.7	150	11.9	185	7.4	145	13.7	184	9.5

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 29. Frequency of Lung Disease – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18506	9.6	17628	9.4	17154	9.6
Age						
55-64 yrs	7393	7.8	6488	7.7	5927	7.9
65-74 yrs	5757	9.9	5782	10.0	5947	10.9
75-84 yrs	3855	12.1	3867	11.4	3816	11.4
85+ yrs	1501	10.3	1491	10.7	1464	9.8
Sex						
Male	8043	9.5	7559	9.1	7280	9.2
Female	10463	9.6	10069	9.6	9861	10.0
Race and Hispanic Ethnicity						
Hispanic	1383	5.3	1358	6.5	1332	5.9
Non-Hispanic White	14201	10.2	13510	9.8	13003	10.2
Non-Hispanic Black	2563	6.8	2402	7.7	2318	8.1
Non-Hispanic Other	334	7.6	335	8.2	329	7.4

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 30. Frequency of Lung Disease – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	9.5	10463	9.6	7559	9.1	10069	9.6	7280	9.2	9861	10.0
Age												
55-64 yrs	3325	6.6	4068	8.9	2831	6.6	3657	8.7	2509	6.6	3410	9.0
65-74 yrs	2664	10.3	3093	9.5	2645	9.4	3137	10.6	2708	10.7	3235	11.1
75-84 yrs	1571	13.7	2284	11.1	1598	13.2	2269	10.1	1598	12.2	2217	10.9
85+ yrs	483	12.3	1018	9.3	485	13.4	1006	9.3	465	13.0	999	8.1

Table 31. Frequency of Lung Disease – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	9.5	10463	9.6	7559	9.1	10069	9.6	7280	9.2	9861	10.0
Race and Hispanic Ethnicity												
Hispanic	603	4.4	780	6.1	575	6.1	783	6.8	564	5.2	768	6.4
Non-Hispanic White	6277	10.2	7924	10.2	5899	9.5	7611	10.1	5619	9.8	7384	10.6
Non-Hispanic Black	989	6.0	1574	7.3	916	7.3	1486	8.0	873	6.9	1445	8.9
Non-Hispanic Other	152	7.9	182	7.4	150	9.8	185	6.9	145	8.8	184	6.3

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 32. Frequency of Heart Disease – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	17988	22.0	17349	22.9	17116	24.0
Age						
55-64 yrs	7392	14.9	6487	14.7	5927	15.1
65-74 yrs	5711	24.2	5764	24.4	5944	24.8
75-84 yrs	3510	29.1	3862	32.9	3791	36.3
85+ yrs	1375	36.4	1416	39.3	1454	41.9
Sex						
Male	7819	25.2	7439	26.2	7564	27.0
Female	10169	19.4	9910	20.3	9839	21.6
Race and Hispanic Ethnicity						
Hispanic	1364	15.5	1347	17.2	1329	16.9
Non-Hispanic White	13763	22.6	13281	23.5	12973	24.8
Non-Hispanic Black	2508	21.0	2367	22.3	2314	22.6
Non-Hispanic Other	328	19.0	331	20.4	328	19.5

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 33. Frequency of Heart Disease – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	7819	25.2	10169	19.4	7439	26.2	9910	20.3	7564	27.0	9839	21.6
Age												
55-64 yrs	3325	17.6	4067	12.5	2831	17.4	3656	12.2	2509	17.0	3410	13.3
65-74 yrs	2655	28.6	3056	20.7	2644	29.1	3120	20.5	2708	29.6	3232	20.7
75-84 yrs	1396	35.0	2114	25.2	1506	38.8	2176	28.8	1586	42.3	2204	32.1
85+ yrs	443	38.3	932	35.5	458	43.0	958	37.4	461	46.5	993	39.6

Table 34. Frequency of Heart Disease – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	7819	25.2	10169	19.4	7439	26.2	9910	20.3	7564	27.0	9839	21.6
Race and Hispanic Ethnicity												
Hispanic	598	17.3	766	14.1	574	17.8	773	16.7	564	16.0	765	17.5
Non-Hispanic White	6077	26.3	7686	19.6	5793	27.4	7488	20.4	5607	28.6	7366	21.8
Non-Hispanic Black	973	19.9	1535	21.7	905	21.9	1482	22.5	870	21.0	1444	23.7
Non-Hispanic Other	149	21.7	179	16.8	148	22.9	183	18.3	144	20.6	184	18.7

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 35. Frequency of Stroke – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18506	6.3	17628	6.1	17154	6.2
Age						
55-64 yrs	7393	3.2	6488	3.5	5927	3.7
65-74 yrs	5757	6.6	5782	5.9	5947	5.7
75-84 yrs	3855	9.6	3867	10.0	3816	9.8
85+ yrs	1501	13.9	1491	11.6	1464	14.0
Sex						
Male	8043	6.7	7559	6.5	7280	6.5
Female	10463	6.0	10069	5.8	9861	5.9
Race and Hispanic Ethnicity						
Hispanic	1383	5.2	1358	4.8	1332	5.1
Non-Hispanic White	14201	6.2	13510	6.0	13003	6.0
Non-Hispanic Black	2563	8.3	2402	9.2	2318	9.1
Non-Hispanic Other	334	6.1	335	3.6	329	4.4

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 36. Frequency of Stroke – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	6.7	10463	6.0	7559	6.5	10069	5.8	7280	6.5	9861	5.9
Age												
55-64 yrs	3325	3.6	4068	2.9	2831	3.8	3657	3.3	2509	3.8	3410	3.6
65-74 yrs	2664	7.8	3093	5.7	2645	6.7	3137	5.2	2708	6.4	3235	5.0
75-84 yrs	1571	10.2	2284	9.2	1598	11.1	2269	9.1	1598	11.7	2217	8.6
85+ yrs	483	14.0	1018	13.8	485	11.7	1006	11.5	465	12.7	999	14.6

Table 37. Frequency of Stroke – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	6.7	10463	6.0	7559	6.5	10069	5.8	7280	6.5	9861	5.9
Race and Hispanic Ethnicity												
Hispanic	603	5.4	780	5.1	575	6.2	783	3.7	564	5.1	768	5.2
Non-Hispanic White	6277	6.5	7924	5.9	5899	6.2	7611	5.7	5619	6.4	7384	5.7
Non-Hispanic Black	989	9.8	1574	7.4	916	10.6	1486	8.3	873	9.6	1445	8.8
Non-Hispanic Other	152	7.2	182	5.1	150	3.3	185	3.8	145	3.3	184	5.3

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 38. Frequency of Arthritis – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18506	54.3	17628	56.9	17154	58.2
Age						
55-64 yrs	7393	47.4	6488	47.4	5927	48.7
65-74 yrs	5757	56.2	5782	60.8	5947	62.6
75-84 yrs	3855	61.3	3867	66.2	3816	67.8
85+ yrs	1501	67.4	1491	69.8	1464	71.7
Sex						
Male	8043	46.9	7559	49.1	7280	50.2
Female	10463	60.2	10069	63.3	9861	64.7
Race and Hispanic Ethnicity						
Hispanic	1383	50.5	1358	52.9	1332	53.7
Non-Hispanic White	14201	54.2	13510	56.8	13003	58.5
Non-Hispanic Black	2563	59.7	2402	62.2	2318	61.7
Non-Hispanic Other	334	49.7	335	51.8	329	51.4

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 39. Frequency of Arthritis – HRS Respondents (55+ Years) Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	46.9	10463	60.2	7559	49.1	10069	63.3	7280	50.2	9861	64.7
Age												
55-64 yrs	3325	40.2	4068	53.8	2831	39.7	3657	54.4	2509	40.7	3410	56.0
65-74 yrs	2664	49.7	3093	61.5	2645	53.3	3137	67.0	2708	55.2	3235	68.9
75-84 yrs	1571	55.0	2284	65.6	1598	60.6	2269	70.1	1598	62.2	2217	71.5
85+ yrs	483	57.9	1018	71.9	485	61.2	1006	74.1	465	62.1	999	76.4

Table 40. Frequency of Arthritis – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	46.9	10463	60.2	7559	49.1	10069	63.3	7280	50.2	9861	64.7
Race and Hispanic Ethnicity												
Hispanic	603	39.6	780	58.9	575	41.3	783	61.7	564	42.0	768	63.1
Non-Hispanic White	6277	47.4	7924	59.7	5899	49.7	7611	62.7	5619	51.1	7384	64.5
Non-Hispanic Black	989	49.1	1574	66.8	916	50.6	1486	70.2	873	49.9	1445	69.9
Non-Hispanic Other	152	43.0	182	55.2	150	42.9	185	59.3	145	41.6	184	58.9

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 41. Frequency of Psychiatric Conditions – HRS Respondents (55+ Years)

| | 1998 | | 2000 | | 2002 | |
| | HRS | | HRS | | HRS | |
	N	%	N	%	N	%
Total	18506	13.3	17628	13.8	17154	15.0
Age						
55-64 yrs	7393	14.4	6488	15.6	5927	17.1
65-74 yrs	5757	12.3	5782	12.7	5947	13.6
75-84 yrs	3855	13.0	3867	12.7	3816	13.4
85+ yrs	1501	12.8	1491	10.9	1464	13.4
Sex						
Male	8043	9.4	7559	9.5	7280	10.3
Female	10463	16.4	10069	17.2	9861	18.8
Race and Hispanic Ethnicity						
Hispanic	1383	17.0	1358	18.3	1332	17.5
Non-Hispanic White	14201	13.2	13510	13.6	13003	15.1
Non-Hispanic Black	2563	12.5	2402	12.6	2318	13.2
Non-Hispanic Other	334	12.1	335	11.2	329	15.2

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 42. Frequency of Psychiatric Conditions – HRS Respondents (55+ Years) by Age Group and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	9.4	10463	16.4	7559	9.5	10069	17.2	7280	10.3	9861	18.8
Age												
55-64 yrs	3325	9.9	4068	18.4	2831	10.9	3657	19.9	2509	11.6	3410	22.0
65-74 yrs	2664	9.2	3093	14.9	2645	8.4	3137	16.2	2708	9.1	3235	17.2
75-84 yrs	1571	8.6	2284	16.0	1598	8.9	2269	15.3	1598	9.6	2217	16.0
85+ yrs	483	9.9	1018	14.1	485	7.7	1006	12.5	465	7.6	999	16.2

Table 43. Frequency of Psychiatric Conditions – HRS Respondents (55+ Years) by Race/Ethnicity and Sex

| | 1998 | | | | 2000 | | | | 2002 | | | |
| | Male | | Female | | Male | | Female | | Male | | Female | |
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8043	9.4	10463	16.4	7559	9.5	10069	17.2	7280	10.3	9861	18.8
Race and Hispanic Ethnicity												
Hispanic	603	11.4	780	21.3	575	13.9	783	21.6	564	10.5	768	23.1
Non-Hispanic White	6277	9.3	7924	16.3	5899	9.3	7611	17.1	5619	10.3	7384	19.0
Non-Hispanic Black	989	9.2	1574	14.7	916	9.5	1486	14.9	873	10.0	1445	15.4
Non-Hispanic Other	152	9.8	182	13.9	150	6.4	185	15.2	145	9.9	184	19.2

Sample Ns are based on unweighted data; proportions are based on weighted data
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 44. Frequency of Overall Self-Rated Health Status – HRS Respondents (55+ Years)

	1998 HRS		2000 HRS		2002 HRS	
	N	%	N	%	N	%
Total	18500	30.8	17621	26.4	17144	26.4
Age						
55-64 yrs	7391	24.9	6485	21.4	5924	21.9
65-74 yrs	5755	30.3	5780	25.1	5945	25.0
75-84 yrs	3853	38.6	3865	34.1	3814	33.2
85+ yrs	1501	45.4	1491	39.4	1461	41.7
Sex						
Male	8041	29.8	7556	25.1	7278	25.2
Female	10459	31.5	10065	27.4	9853	27.4
Race and Hispanic Ethnicity						
Hispanic	1383	47.6	1358	43.6	1332	43.2
Non-Hispanic White	14196	28.0	13504	23.5	12995	23.5
Non-Hispanic Black	2562	44.5	2402	40.4	2316	40.5
Non-Hispanic Other	334	33.8	334	27.8	329	29.5

Sample Ns are based on unweighted data; proportions are based on weighted data
Ns and percentages are based on those who reported being in Fair or Poor Health (on a rating scale of Excellent, Very Good, Good, Fair, or Poor)

Table 45. Frequency of Overall Self-Rated Health Status – HRS Respondents (55+ Years) by Age Group and Sex

	1998				2000				2002			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8041	29.8	10459	31.5	7556	25.1	10065	27.4	7278	25.2	9853	27.4
Age												
55-64 yrs	3324	23.3	4067	26.4	2829	19.8	3656	22.8	2509	20.4	3407	23.3
65-74 yrs	2663	30.6	3092	29.9	2644	24.6	3136	25.5	2707	24.8	3234	25.2
75-84 yrs	1571	39.3	2282	38.1	1598	35.0	2267	33.5	1598	34.3	2215	32.4
85+ yrs	483	47.3	1018	44.5	485	36.7	1006	40.8	464	37.4	997	43.8

Table 46. Frequency of Overall Self-Rated Health Status HRS Respondents (55+ Years) by Race/Ethnicity and Sex

	1998				2000				2002			
	Male		Female		Male		Female		Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	8041	29.8	10459	31.5	7556	25.1	10065	27.4	7278	25.2	9853	27.4
Race and Hispanic Ethnicity												
Hispanic	603	42.2	780	51.7	575	39.5	783	46.7	564	37.8	768	47.4
Non-Hispanic White	6275	27.7	7921	28.3	5896	22.6	7608	24.2	5617	22.9	7378	23.9
Non-Hispanic Black	989	44.0	1573	44.9	916	39.3	1486	41.2	873	36.2	1443	43.5
Non-Hispanic Other	152	28.9	182	37.7	150	25.1	184	30.1	145	26.7	184	31.7

Sample Ns are based on unweighted data; proportions are based on weighted data

Ns and percentages are based on those who reported being in Fair or Poor Health (on a rating scale of Excellent, Very Good, Good, Fair, or Poor)
Race and ethnicity information is not available for all respondents. As a result, the sum of Ns across race/ethnic groups does not equal the total N.

Table 47. Frequency of Hypertension – NHIS Respondents (55+ Years)

	1998		2000		2002	
	NHIS		NHIS		NHIS	
	N	%	N	%	N	%
Total	10070	45.9	10059	47.1	9837	48.7
Sex						
Male	4074	42.5	4059	44.6	3950	47.5
Female	5996	48.5	6000	49.1	5887	49.6
Age						
55-64 yrs	3736	38.7	3879	39.8	3977	41.2
65-74 yrs	3408	48.2	3241	50.2	2967	52.9
75-84 yrs	2282	54.5	2305	56.0	2223	56.8
85+ yrs	644	51.9	634	51.1	670	54.8
Race and Hispanic Ethnicity						
Hispanic	946	40.5	1038	42.9	1005	45.0
Non-Hispanic White	7718	44.5	7575	45.7	7475	47.6
Non-Hispanic Black	1174	62.9	1232	62.5	1131	62.6
Non-Hispanic Other	232	44.9	214	50.4	226	45.8

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 48. Frequency of Diabetes – NHIS Respondents (55+ Years)

| | 1998 | | 2000 | | 2002 | |
| | NHIS | | NHIS | | NHIS | |
	N	%	N	%	N	%
Total	10070	12.2	10059	13.2	9837	14.4
Sex						
Male	4074	12.0	4059	14.6	3950	16.3
Female	5996	12.4	6000	12.0	5887	12.9
Age						
55-64 yrs	3736	10.8	3879	11.2	3977	12.5
65-74 yrs	3408	14.0	3241	15.7	2967	17.0
75-84 yrs	2282	13.0	2305	13.9	2223	16.2
85+ yrs	644	8.8	634	10.3	670	9.5
Race and Hispanic Ethnicity						
Hispanic	946	19.8	1038	20.6	1005	21.0
Non-Hispanic White	7718	10.7	7575	11.5	7475	13.1
Non-Hispanic Black	1174	19.9	1232	22.9	1131	21.8
Non-Hispanic Other	232	15.8	214	12.9	226	15.1

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 49. Frequency of Cancer – NHIS Respondents (55+ Years)

	1998		2000		2002	
	NHIS		NHIS		NHIS	
	N	%	N	%	N	%
Total	10070	12.4	10059	13.1	9837	14.1
Sex						
Male	4074	11.7	4059	12.7	3950	14.9
Female	5996	12.9	6000	13.4	5887	13.4
Age						
55-64 yrs	3736	8.6	3879	7.8	3977	8.7
65-74 yrs	3408	13.7	3241	13.9	2967	16.2
75-84 yrs	2282	16.6	2305	20.5	2223	20.5
85+ yrs	644	17.0	634	20.5	670	21.3
Race and Hispanic Ethnicity						
Hispanic	946	5.8	1038	6.8	1005	6.7
Non-Hispanic White	7718	13.5	7575	14.1	7475	15.7
Non-Hispanic Black	1174	8.5	1232	8.9	1131	7.9
Non-Hispanic Other	232	4.3	214	9.2	226	5.4

Sample Ns are based on unweighted data; proportions are based on weighted data
Does not include non-melanoma skin cancers

Table 50. Frequency of Heart Disease – NHIS Respondents (55+ Years)

	1998		2000		2002	
	NHIS		NHIS		NHIS	
	N	%	N	%	N	%
Total	10070	25.8	10059	24.4	9837	24.8
Sex						
Male	4074	28.0	4059	27.5	3950	28.3
Female	5996	24.1	6000	21.8	5887	21.9
Age						
55-64 yrs	3736	17.0	3879	16.2	3977	17.0
65-74 yrs	3408	28.2	3241	26.4	2967	26.2
75-84 yrs	2282	35.7	2305	34.8	2223	35.0
85+ yrs	644	41.3	634	35.3	670	41.3
Race and Hispanic Ethnicity						
Hispanic	946	17.8	1038	18.0	1005	17.7
Non-Hispanic White	7718	26.9	7575	25.4	7475	26.1
Non-Hispanic Black	1174	23.1	1232	22.5	1131	20.4
Non-Hispanic Other	232	21.1	214	14.6	226	20.4

Sample Ns are based on unweighted data; proportions are based on weighted data
Includes coronary heart disease, angina, myocardial infarction, and other heart conditions.

Table 51. Frequency of Stroke – NHIS Respondents (55+ Years)

	1998		2000		2002	
	NHIS		NHIS		NHIS	
	N	%	N	%	N	%
Total	10070	6.5	10059	6.2	9837	6.3
Sex						
Male	4074	7.6	4059	6.6	3950	6.7
Female	5996	5.6	6000	5.8	5887	6.0
Age						
55-64 yrs	3736	3.9	3879	3.3	3977	3.4
65-74 yrs	3408	6.9	3241	6.5	2967	6.3
75-84 yrs	2282	10.2	2305	10.3	2223	10.8
85+ yrs	644	8.9	634	11.0	670	12.1
Race and Hispanic Ethnicity						
Hispanic	946	5.9	1038	6.0	1005	5.3
Non-Hispanic White	7718	6.3	7575	5.9	7475	6.3
Non-Hispanic Black	1174	8.8	1232	9.0	1131	7.3
Non-Hispanic Other	232	5.4	214	7.0	226	5.7

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 52. Frequency of Joint Pain or Aching – NHIS Respondents (55+ Years)

	1998		2000		2002	
	NHIS		NHIS		NHIS	
	N	%	N	%	N	%
Total	10070	48.3	10059	46.8	9837	44.8
Sex						
Male	4074	42.5	4059	41.1	3950	40.0
Female	5996	53.0	6000	51.4	5887	48.8
Age						
55-64 yrs	3736	43.7	3879	43.5	3977	42.2
65-74 yrs	3408	50.2	3241	48.2	2967	45.8
75-84 yrs	2282	52.9	2305	49.1	2223	48.5
85+ yrs	644	54.5	634	54.8	670	47.4
Race and Hispanic Ethnicity						
Hispanic	946	43.4	1038	40.1	1005	40.4
Non-Hispanic White	7718	49.2	7575	47.6	7475	44.9
Non-Hispanic Black	1174	47.1	1232	46.7	1131	51.1
Non-Hispanic Other	232	37.4	214	39.1	226	34.1

Sample Ns are based on unweighted data; proportions are based on weighted data
12-month prevalence asked in 1998 and 2000; 30-day prevalence asked in 2002

Table 53. Frequency of Overall Self-Rated Health Status – NHIS Respondents (55+ Years)

	1998 NHIS		2000 NHIS		2002 NHIS	
	N	%	N	%	N	%
Total	10070	23.0	10059	22.6	9837	23.5
Sex						
Male	4074	21.5	4059	22.4	3950	23.6
Female	5996	24.1	6000	22.8	5887	23.4
Age						
55-64 yrs	3736	18.4	3879	18.3	3977	19.2
65-74 yrs	3408	24.1	3241	22.5	2967	23.6
75-84 yrs	2282	28.2	2305	29.3	2223	29.6
85+ yrs	644	31.5	634	30.7	670	33.6
Race and Hispanic Ethnicity						
Hispanic	946	33.8	1038	33.8	1005	33.9
Non-Hispanic White	7718	20.7	7575	20.2	7475	21.2
Non-Hispanic Black	1174	36.8	1232	37.2	1131	36.8
Non-Hispanic Other	232	24.3	214	20.5	226	22.1

Sample Ns are based on unweighted data; proportions are based on weighted data
Ns and percentages are based on those who reported being in Fair or Poor Health (on a rating scale of Excellent, Very Good, Good, Fair, or Poor)

Table 54. Frequency of Hypertension – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	NHIS	HRS	NHIS	HRS	NHIS
	%	%	%	%	%	%
Total	47.6	45.9	49.0	47.1	51.7	48.7
Age						
55-64 yrs	40.6	38.7	41.8	39.8	44.4	41.2
65-74 yrs	50.8	48.2	51.5	50.2	54.1	52.9
75-84 yrs	54.4	54.5	56.9	56.0	60.9	56.8
85+ yrs	54.3	51.9	57.4	51.1	60.6	54.8

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 55. Frequency of Diabetes – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	NHIS	HRS	NHIS	HRS	NHIS
	%	%	%	%	%	%
Total	14.0	12.2	14.7	13.2	16.7	14.4
Age						
55-64 yrs	12.0	10.8	12.5	11.2	14.9	12.5
65-74 yrs	15.9	14.0	16.8	15.7	18.6	17.0
75-84 yrs	15.5	13.0	16.6	13.9	18.8	16.2
85+ yrs	12.3	8.8	12.3	10.3	12.1	9.5

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 56. Frequency of Cancer – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	NHIS	HRS	NHIS	HRS	NHIS
	%	%	%	%	%	%
Total	11.8	12.4	12.3	13.1	13.4	14.1
Age						
55-64 yrs	7.8	8.6	8.0	7.8	8.8	8.7
65-74 yrs	12.5	13.7	13.2	13.9	14.3	16.2
75-84 yrs	17.1	16.6	17.8	20.5	19.4	20.5
85+ yrs	16.5	17.0	17.6	20.5	20.5	21.3

Sample Ns are based on unweighted data; proportions are based on weighted data
Does not include non-melanoma skin cancers

Table 57. Frequency of Heart Disease – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	NHIS	HRS	NHIS	HRS	NHIS
	%	%	%	%	%	%
Total	22.0	25.8	22.9	24.4	24.0	24.8
Age						
55-64 yrs	14.9	17.0	14.7	16.2	15.1	17.0
65-74 yrs	24.2	28.2	24.4	26.4	24.8	26.2
75-84 yrs	29.1	35.7	32.9	34.8	36.3	35.0
85+ yrs	36.4	41.3	39.3	35.3	41.9	41.3

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 58. Frequency of Stroke – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	**NHIS**	**HRS**	**NHIS**	**HRS**	**NHIS**
	%	**%**	**%**	**%**	**%**	**%**
Total	6.3	6.5	6.1	6.2	6.2	6.3
Age						
55-64 yrs	3.2	3.9	3.5	3.3	3.7	3.4
65-74 yrs	6.6	6.9	5.9	6.5	5.7	6.3
75-84 yrs	9.6	10.2	10.0	10.3	9.8	10.8
85+ yrs	13.9	8.9	11.6	11.0	14.0	12.1

Sample Ns are based on unweighted data; proportions are based on weighted data

Table 59. Frequency of Arthritis or Joint Pain – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	**NHIS**	**HRS**	**NHIS**	**HRS**	**NHIS**
	%	**%**	**%**	**%**	**%**	**%**
Total	54.3	48.3	56.9	46.8	58.2	44.8
Age						
55-64 yrs	47.4	43.7	47.4	43.5	48.7	42.2
65-74 yrs	56.2	50.2	60.8	48.2	62.6	45.8
75-84 yrs	61.3	52.9	66.2	49.1	67.8	48.5
85+ yrs	67.4	54.5	69.8	54.8	71.7	47.4

Sample Ns are based on unweighted data; proportions are based on weighted data
In the NHIS, 12-month prevalence of joint pain or aching is asked in 1998 and 2000;
30-day prevalence asked in 2002

Table 60. Frequency of Overall Self-Rated Health Status – HRS vs. NHIS Respondents (55+ Years)

	1998		2000		2002	
	HRS	NHIS	HRS	NHIS	HRS	NHIS
	%	%	%	%	%	%
Total	30.8	23.0	26.4	22.6	26.4	23.5
Age						
55-64 yrs	24.9	18.4	21.4	18.3	21.9	19.2
65-74 yrs	30.3	24.1	25.1	22.5	25.0	23.6
75-84 yrs	38.6	28.2	34.1	29.3	33.2	29.6
85+ yrs	45.4	31.5	39.4	30.7	41.7	33.6

APPENDIX B - Health Condition Question Concordance Across Waves

Hypertension Questions

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	B6	B3	B6a	B3	B3	B3	B3	C005
Medication	B6a	-	B6b	B3a	B3a	B3a	B3a	C006
Hypertension at present	B6b	-	B6c	-	-	-	-	-
Weight/diet	-	-	-	B3b	B3b	B3b	B3b	C007
Hypertension under control	-	-	-	B3c	B3c	B3c	B3c	C008
Better/worse/same	-	-	-	B3d	B3d	B3d	B3d	C009

Hypertension Variables

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	V325	V215	W328	D781	E781	F1109	G1238	HC005
Medication	V326	-	W329	D782	E782	F1110	G1239	HC006
Hypertension at present	V327	-	W330	-	-	-	-	-
Weight/diet	-	-	-	D783	E783	F1111	G1240	HC007
Hypertension under control	-	-	-	D784	E784	F1112	G1241	HC008
Better/worse/same	-	-	-	D785	E785	F1113	G1242	HC009

HRS 92
- B6. Has a doctor ever told you that you have high blood pressure or hypertension? (V325)
- B6a. Are you taking medication for your blood pressure now? (V326)
- B6b. Do you have high blood pressure or hypertension at the present time? (V327)

AHEAD 93
- B3. Has a doctor ever told you that you have high blood pressure or hypertension? (V215)

HRS 94
- B6a. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension?* (W328)
- B6b. Are you taking medication for your blood pressure now? (W329)
- B6c. Do you have high blood pressure or hypertension at the present time? (W330)

* Prevalent cases from HRS 92 were not asked B6a-B6c.

AHEAD 95
- B3. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension? (D781)
- B3a. In order to lower your blood pressure, are you now taking any medication? (D782)
- B3b. In order to lower your blood pressure, have you lost weight or followed a special diet (since previous wave interview date / in the last two years)? (D783)
- B3c. Is your blood pressure generally under control? (D784)
- B3d. Compared to when we interviewed you in (previous wave interview date), is your high blood pressure better, worse, or is it about the same as it was then? (D785)

HRS 96
- B3. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension? (E781)
- B3a. In order to lower your blood pressure, are you now taking any medication? (E782)
- B3b. In order to lower your blood pressure, have you lost weight or followed a special diet (since previous wave interview date / in the last two years)? (E783)
- B3c. Is your blood pressure generally under control? (E784)
- B3d. Compared to when we interviewed you in (previous wave interview date), is your high blood pressure better, worse, or is it about the same as it was then? (E785)

HRS 98
- B3. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension? (F1109)
- B3a. In order to lower your blood pressure, are you now taking any medication? (F1110)
- B3b. In order to lower your blood pressure, have you lost weight or followed a special diet (since previous wave interview date / in the last two years)? (F1111)
- B3c. Is your blood pressure generally under control? (F1112)
- B3d. Compared to when we interviewed you in (previous wave interview date), is your high blood pressure better, worse, or is it about the same as it was then? (F1113)

HRS 2000
- B3. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension? (G1238)
- B3a. In order to lower your blood pressure are you now taking any medication? (G1239)
- B3b. In order to lower your blood pressure, have you lost weight or followed a special diet (since previous wave interview date / in the last two years)? (G1240)
- B3c. Is your blood pressure generally under control? (G1241)
- B3d. Compared to when we interviewed you in (previous wave interview date), is your high blood pressure better, worse, or is it about the same as it was then? (G1242)

HRS 2002

- C005. Since we last talked to you, has a doctor told you that you have high blood pressure or hypertension? (HC005)
- C006. In order to lower your blood pressure are you now taking any medication? (HC006)
- C007. In order to lower your blood pressure, have you lost weight or followed a special diet (since previous wave interview date / in the last two years)? (HC007)
- C008. Is your blood pressure generally under control? (HC008)
- C009. Compared to when we last interviewed you in (previous wave interview date), is your high blood pressure better, worse, or is it about the same as it was then? (HC009)

Diabetes Questions

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	B7	B4	B7	B4	B4	B4	B4	C010
Year diagnosed	B7a	-	-	-	-	-	-	-
Hospitalization	B7b	-	B7a	-	-	-	-	-
Diabetes at present	B7c	-	B7b	-	-	-	-	-
Seen doctor	B7d	-	B7c	-	-	-	-	-
Diet	B8a	-	B8a	B4d	B4d	B4d	B4y1c	C014
Weight loss	B8b	-	B8b	B4c	B4c	B4c	B4c	C013
Oral medication	B8c	B4a	B8c	B4a	B4a	B4a	B4a	C011
Insulin	B8d	B4b	B8d	B4b	B4b	B4b	B4b	C012
Under control	-	-	-	B4e	B4e	B4e	B4e	C015
Better/worse/same	-	-	-	B4f	B4f	B4f	B4f	C016
Kidney trouble	-	-	-	B4g	B4g	B4g	B4g	C017

Diabetes Variables

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	V328	V219	W331	D788	E788	F1116	G1245	HC010
Year diagnosed	V329	-	-	-	-	-	-	-
Hospitalization	V330	-	W332	-	-	-	-	-
Diabetes at present	V331	-	W333	-	-	-	-	-
Seen doctor	V332	-	W334	-	-	-	-	-
Diet	V333	-	W335	D792	E792	F1120	G1251	HC014
Weight loss	V334	-	W336	D791	E791	F1119	G1250	HC013
Oral medication	V335	V223	W337	D789	E789	F1117	G1248	HC011
Insulin	V336	V224	W338	D790	E790	F1118	G1249	HC012
Under control	-	-	-	D793	E793	F1121	G1252	HC015
Better/worse/same	-	-	-	D794	E794	F1122	G1255	HC016
Kidney trouble	-	-	-	D795	E795	F1123	G1256	HC017

HRS 92
- B7. Has a doctor ever told you that you have diabetes or high blood sugar? (V328)
- B7a. In what year was that first diagnosed? (V329)
- B7b. Have you ever been hospitalized because of your diabetes or high blood sugar? (V330)
- B7c. Do you have diabetes now? (V331)
- B7d. During the last 12 months, have you seen a doctor for your diabetes? (V332)
- B8a-B8d. Are you now using any of the following to treat or control your diabetes:
  - A special diet? (V333)
  - Weight loss? (V334)
  - Medication that you swallow? (V335)
  - Insulin injection? (V336)

AHEAD 93
- B4. Do you have diabetes? (V219)
- B4a. Are you now using medication that you swallow to treat or control your diabetes? (V223)
- B4b. Are you now using insulin injections? (V224)

HRS 94
- B7. Since we last talked to you, has a doctor told you that you have diabetes or high blood sugar?* (W331)
- B7a. Have you been hospitalized because of your diabetes or high blood sugar? (W332)
- B7b. Do you have diabetes now? (W333)
- B7c. During the last 12 months, have you seen a doctor for your diabetes? (W334)
- B8a-B8d. Are you now using any of the following to treat or control your diabetes:
  - A special diet? (W335)
  - Weight loss? (W336)
  - Medication that you swallow? (W337)
  - Insulin injection? (W338)

* Prevalent cases from HRS 92 were not asked B7-B8d.

AHEAD 95
- B4. Since we last talked to you, has a doctor told you that you have diabetes or high blood sugar? (D788)
- B4a. In order to treat or control your diabetes, are you now taking medication that you swallow? (D789)
- B4b. Are you using insulin shots or a pump? (D790)
- B4c. In order to treat or control your diabetes, have you lost weight (since previous wave interview date / in the last two years)? (D791)
- B4d. Are you following a special diet? (D792)
- B4e. Is your diabetes generally under control? (D793)
- B4f. Compared to when we interviewed you last in (previous wave interview date), has your diabetes gotten better, worse, or stayed about the same? (D794)
- B4g. Has your diabetes caused you to have trouble with your kidneys or protein in your urine? (D795)

HRS 96
- B4. Since we talked last, has a doctor told you that you have diabetes or high blood sugar? (E788)
- B4a. In order to treat or control your diabetes, are you now taking medication that you swallow? (E789)
- B4b. Are you now using insulin shots or a pump? (E790)
- B4c. In order to treat or control your diabetes, have you lost weight (since previous wave interview date / in the last two years)? (E791)
- B4d. Are you following a special diet? (E792)
- B4e. Is your diabetes generally under control? (E793)
- B4f. Compared to when we interviewed you last in (previous wave interview date), has your diabetes gotten better, worse, or stayed about the same? (E794)
- B4g. Has your diabetes caused you to have trouble with your kidneys or protein in your urine? (E795)

HRS 98
- B4. Since we talked last, has a doctor told you that you have diabetes or high blood sugar? (F1116)

- B4a. In order to treat or control your diabetes, are you now taking medication that you swallow? (F1117)
- B4b. Are you now using insulin shots or a pump? (F1118)
- B4c. In order to treat or control your diabetes, have you lost (since previous wave interview date / in the last two years)? (F1119)
- B4d. Are you following a special diet? (F1120)
- B4e. Is your diabetes generally under control? (F1121)
- B4f. Compared to when we interviewed you last, has your diabetes gotten better, worse, or stayed about the same? (F1122)
- B4g. Has your diabetes caused you to have trouble with your kidneys or protein in your urine? (F1123)

HRS 2000
- B4. Since we talked last, has a doctor told you that you have diabetes or high blood sugar? (G1245)
- B4a. In order to treat or control your diabetes, are you now taking medication that you swallow? (G1248)
- B4b. Are you now using insulin shots or a pump? (G1249)
- B4c. In order to treat or control your diabetes, have you lost weight (since previous wave interview date / in the last two years)? (G1250)
- B4y1c. Are you following a special diet? (G1251)
- B4e. Is your diabetes generally under control? (G1252)
- B4f. Compared to when we interviewed you last, has your diabetes gotten better, worse, or stayed about the same? (G1255)
- B4g. Has your diabetes caused you to have trouble with your kidneys or protein in your urine? (G1256)

HRS 2002
- C010. Since we last talked to you, has a doctor told you that you have diabetes or high blood sugar? (HC010)
- C011. In order to treat or control your diabetes, are you now taking medication that you swallow? (HC011)
- C012. Are you now using insulin shots or a pump? (HC012)
- C013. In order to treat or control your diabetes, have you lost weight (since previous wave interview date / in the last two years)? (HC013)
- C014. Are you following a special diet? (HC014)
- C015. Is your diabetes generally under control? (HC015)
- C016. Compared to when we interviewed you last, has your diabetes gotten better, worse, or stayed about the same? (HC016)
- C017. Has your diabetes caused you to have trouble with your kidneys or protein in your urine? (HC017)

Cancer Questions

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	B9	B5	B9	B5	B5	B5	B5	C018
New cancer	-	-	B9a	B5e	B5e	B5e	B5e	C024
# of cancers	B9a	-	B9b	B5f	B5f	B5f	B5f	C025
Month/year of diagnosis	B10 (yr)	-	B10 (yr)	B5j-k	B5j-k	B5j-k	B5j-k	C028-C029
Organ/part of body	B11	B5a	B11	-	-	-	-	-
Seen doctor (yes/no)	B12	-	B12	B5a	B5a	B5a	B5a	C019
Treatment	-	-	-	B5b	B5b	B5b	B5b	C020
Chemo/meds	B13a	B5b	B13	B5c	B5c	B5c	B5c	C021
Surgery/biopsy	B13b	B5b	B13	B5c	B5c	B5c	B5c	C021
Radiation/x-ray	B13c	B5b	B13	B5c	B5c	B5c	B5c	C021
Other treatment	B13d	B5b	B13	B5c	B5c	B5c	B5c	C021
Better/worse/same	-	-	-	B5d	B5d	B5d	B5d	C023
Cancer spread	-	-	-	B5h	B5h	B5h	B5h	C027

Cancer Variables

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	V337	V225	W339	D801	E801	F1129	G1262	HC018
New cancer	-	-	W340	D806	E806	F1134	G1267	HC024
# of cancers	V338	-	W341	D807	E807	F1135	G1268	HC025
Month/year of diagnosis	V339/V346	-	W342/ W352	D813-D814	E813-E814	F1141-F1142	G1274-G1275	HC028-HC029
Organ/part of body	V340/V347	V231	W343/ W353	-	-	-	-	-
Seen doctor (yes/no)	V341/V348	-	W344/ W354	D802	E802	F1130	G1263	HC019
Treatment	-	-	-	D803	E803	F1131	G1264	HC020
Chemo/meds	V342/V349	V232A1-A4	W345-W351/ W355-	D804M1-M4	E804M1-M4	F1132M1-M4	G1265M1-M4	HC021M1-M4

			W361					
Surgery/biopsy	V343/V350	V232A1-A4	W345-W351	D804M1-M4	E804M1-M4	F1132M1-M4	G1265M1-M4	HC021M1-M4
Radiation/x-ray	V344/V351	V232A1-A4	W345-W351	D804M1-M4	E804M1-M4	F1132M1-M4	G1265M1-M4	HC021M1-M4
Other treatment	V345/V352	V232A1-A4	W345-W351	D804M1-M4	E804M1-M4	F1132M1-M4	G1265M1-M4	HC021M1-M4
Better/worse/same	-	-	-	D805	E805	F1133	G1266	HC023
Cancer spread	-	-	-	D812	E812	F1140	G1273	HC027

Cancer - Available Questions

HRS 92
- B9. Has a doctor ever told you that you have cancer or a malignant tumor of any kind except skin cancer? (V337)
- B9a. How many such cancers have you had? (V338)
- B10. In what year was your most recent/next most recent cancer diagnosed? (V339/V346)
- B11. In which organ or part of your body did this cancer occur? (V340/V347)
- B12. During the last 12 months, have you seen a doctor about this cancer? (V341/V348)
- B13a-B13d. During the last 12 months, what sort of treatments have you received for this cancer? (reported for only/most recent cancer as well as second most recent cancer)
  - Chemotherapy/medication (V342/V349)
  - Surgery or biopsy (V343/V350)
  - Radiation/x-ray (V344/V351)
  - Other (V345/V352)

AHEAD 93
- B5. Has a doctor ever told you that you have cancer or a malignant tumor, excluding minor skin cancers? (V225)
- B5a. In which organ or part of your body did your most recent cancer start? (V231)
- B5b. During the last 12 months, what sort of treatments have you received for cancer? (V232A1 – V232A4)
  - Chemotherapy/medication
  - Surgery or biopsy
  - Radiation/x-ray
  - Other
  - None

HRS 94
- B9. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor of any kind except skin cancer?* (W339)
- B9a. (Since previous wave interview date / In the last two years), has your doctor told you that you have a new cancer? (W340)
- B9b. How many such cancers have you had? (W341)
- B10. In what year was your most recent/second most recent cancer diagnosed? (W342/W352)
- B11. In which organ or part of your body did this cancer occur? (W343/W353)
- B12. During the last 12 months, have you seen a doctor about this cancer? (W344/W354)
- B13. During the last two years, what sort of treatments have you received for this cancer? (reported for only/most recent cancer as well as second most recent cancer) (W345-W351/W355-W361)
  - Chemotherapy/medication
  - Surgery or biopsy
  - Radiation/x-ray
  - Other

* Prevalent cases from HRS 92 were not asked B9 and unless they reported a new cancer in B9a were not asked B9b-B13.

AHEAD 95

- B5. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (D801)
- B5a. (Since previous wave interview date / In the last two years), have you seen a doctor about your cancer? (D802)
- B5b. Are you now receiving treatment for cancer? (D803)
- B5c. (Since previous wave interview date / During the last two years), what sort of treatments have you received for cancer? (D804M1-D804M4)
  - o Chemotherapy or medication
  - o Surgery or biopsy
  - o Radiation/x-ray
  - o Medication/treatment for symptoms
  - o Other
- B5d. Since (previous wave interview date), has the cancer gotten worse, better, or stayed about the same? (D805)
- B5e. Since (previous wave interview date), has a doctor told you that you had a new cancer or malignant tumor, excluding minor skin cancer? (D806)
- B5f. How many different cancers have you had? (D807)
- B5h. Has your cancer/ have any of your cancers spread? (D812)
- B5j-B5k. In what month and year was your (most recent) cancer diagnosed? (D813-D814)

HRS 96

- B5. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (E801)
- B5a. (Since previous wave interview date / In the last two years), have you seen a doctor about your cancer? (E802)
- B5b. Are you now receiving treatment for cancer? (E803)
- B5c. (Since previous wave interview date / During the last two years), what sort of treatments have you received for cancer? (E804M1-E804M4)
  - o Chemotherapy or medication
  - o Surgery or biopsy
  - o Radiation/x-ray
  - o Medication/treatment for symptoms
  - o Other
- B5d. Since (previous wave interview date), has the cancer gotten worse, better, or stayed about the same? (E805)
- B5e. Since (previous wave interview date), has a doctor told you that you had a new cancer or malignant tumor, excluding minor skin cancer? (E806)
- B5f. How many different cancers have you had? (E807)
- B5h. Has your cancer/ have any of your cancers spread? (E812)
- B5j-B5k. In what month and year was your (most recent) cancer diagnosed? (E813-E814)

HRS 98

- B5. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (F1129)
- B5a. (Since previous wave interview date / In the last two years), have you seen a doctor about your cancer? (F1130)
- B5b. Are you now receiving treatment for cancer? (F1131)
- B5c. (Since previous wave interview date / During the last two years), what sort of treatments have you received for cancer? (F1132M1-F1132M4)
  - o Chemotherapy or medication
  - o Surgery or biopsy
  - o Radiation/x-ray
  - o Medication/treatment for symptoms
  - o Other

- B5d. Since (previous wave interview date), has the cancer gotten worse, better, or stayed about the same? (F1133)
- B5e Since (previous wave interview date), has a doctor told you that you had a new cancer or malignant tumor, excluding minor skin cancer? (F1134)
- B5f. How many different cancers have you had? (F1135)
- B5h. Has your cancer/ have any of your cancers spread? (F1140)
- B5j.-B5k. In what year and month was your (most recent) cancer diagnosed? (F1141-F1142)

HRS 2000
- B5. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (G1262)
- B5a. (Since previous wave interview date / In the last two years), have you seen a doctor about your cancer? (G1263)
- B5b. (Since previous wave interview date / During the last two years), have you received any treatment for cancer?** (G1264)
- B5c. (Since previous wave interview date / During the last two years), what sort of treatments have you received for cancer? (G1265M1-G1265M4)
    - Chemotherapy or medication
    - Surgery or biopsy
    - Radiation/x-ray
    - Medication/treatment for symptoms
    - Other
- B5d. Since (previous wave interview date), has the cancer gotten worse, better, or stayed about the same? (G1266)
- B5e. Since (previous wave interview date), has a doctor told you that you had a new cancer or malignant tumor, excluding minor skin cancer? (G1267)
- B5f. How many different cancers have you had? (G1268)
- B5h. Has your cancer/ have any of your cancers spread? (G1273)
- B5j.-B5k. In what year and month was your (most recent) cancer diagnosed? (G1274-G1275)

HRS 2002
- C018. Since we last talked to you, has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancer2? (HC018)
- C019. (Since previous wave interview date / In the last two years), have you seen a doctor about your cancer? (HC019)
- C020. (Since previous wave interview date / During the last two years), have you received any treatment for cancer?** (HC020)
- C021. (Since previous wave interview date / During the last two years), what sort of treatments have you received for cancer? (HC021M1-HC021M4)
    - Chemotherapy or medication
    - Surgery or biopsy
    - Radiation/x-ray
    - Medication/treatment for symptoms
    - Other
- C023. Since (previous wave interview date), has the cancer gotten worse, better, or stayed about the same? (HC023)
- C024. Since (previous wave interview date), has a doctor told you that you had a new cancer or malignant tumor, excluding minor skin cancer? (HC024)
- C025. How many different cancers have you had? (HC025)
- C027. Has your cancer/ have any of your cancers spread? (HC027)
- C028-C029. In what year and month was your (most recent) cancer diagnosed? (HC028-HC029)

** In 2002 and 2002 the questions regarding treatment refers to any treatment in the last two years or since the previous wave interview rather than current treatment as had been asked in earlier waves (B5b / C020).

Chronic Lung Disease Questions

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	B15	B6	B14	B6	B6	B6	B6	C030
Medication	B15a	-	B14a	B6b	B6b	B6b	B6b	C032
Short of breath	B15b	-	B14b	-	-	-	-	-
Wheezing/coughing	B15c	-	B14c	-	-	-	-	-
Limit activities	B15d	B6a	B14d	B6f	B6f	B6f	B6f	C035
Better/worse/same	-	-	-	B6a	B6a	B6a	B6a	C031
Oxygen	-	-	-	B6c	B6c	B6c	B6c	C033
Phys/resp therapy	-	-	-	B6d	B6d	B6d	B6d	C034

Chronic Lung Disease Variables

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	V401	V235	W362	D818	E818	F1146	G1279	HC030
Medication	V402	-	W363	D823	E823	F1151	G1284	HC032
Short of breath	V403	-	W364	-	-	-	-	-
Wheezing/coughing	V404	-	W365	-	-	-	-	-
Limit activities	V405	V238	W366	D826	E826	F1154	G1287	HC035
Better/worse/same	-	-	-	D819	E819	F1147	G1280	HC031
Oxygen	-	-	-	D824	E824	F1152	G1285	HC033
Phys/resp therapy	-	-	-	D825	E825	F1153	G1286	HC034

HRS 92
- B15. Not including asthma, has a doctor ever told you that you have chronic lung disease such as chronic bronchitis or emphysema? (V401)
- B15a. Are you taking medication or other treatments for your lung condition? (V402)
- B15b. Are you sometimes short of breath because of your lung condition? (V403)
- B15c. Do you sometimes have wheezing or persistent cough, or bring up phlegm because of your lung condition? (V404)
- B15d. Does your condition limit your usual activities such as household chores or going to work? (V405)

AHEAD 93
- B6. Not including asthma, has a doctor ever told you that you have chronic lung disease such as chronic bronchitis or emphysema? (V235)
- B6a. Does your condition limit your usual activities such as household chores? (V238)

HRS 94
- B14. Not including asthma, has a doctor ever told you (since previous wave interview date / during the last two years) that you have chronic lung disease such as chronic bronchitis or emphysema??* (W362)
- B14a. Are you taking medication or other treatments for your lung condition? (W363)
- B14b. Are you sometimes short of breath because of your lung condition? (W364)
- B14c. Do you sometimes have wheezing or persistent cough, or bring up phlegm because of your lung condition? (W365)
- B14d. Does your condition limit your usual activities such as household chores or going to work? (W366)

* Prevalent cases from HRS 92 were not asked B14-B14d.

AHEAD 95
- B6. Since we last talked to you, has a doctor told you that you have chronic lung disease, such as chronic bronchitis or emphysema? (D818)
- B6a. Since then, has this condition gotten better, worse, or stayed about the same? (D819)
- B6b. Are you now taking medication or other treatment for your lung condition? (D823)
- B6c. Are you receiving oxygen for your lung condition? (D824)
- B6d. Are you receiving physical or respiratory therapy for your lung condition? (D825)
- B6f. Does your lung condition limit your usual activities, such as household chores or work? (D826)

HRS 96
- B6. Since last we talked to you, has a doctor told you that you have chronic lung disease, such as chronic bronchitis or emphysema? (E818)
- B6a. Since then, has this condition gotten better, worse, or stayed about the same? (E819)
- B6b. Are you now taking medication or other treatment for your lung condition? (E823)
- B6c. Are you receiving oxygen for your lung condition? (E824)
- B6d. Are you receiving physical or respiratory therapy for your lung condition? (E825)
- B6f. Does your lung condition limit your usual activities, such as household chores or work? (E826)

HRS 98
- B6. Since we last talked to you, has a doctor told you that you have chronic lung disease, such as chronic bronchitis or emphysema? (F1146)
- B6a. Since then, has this condition gotten better, worse, or stayed about the same? (F1147)
- B6b. Are you now taking medication or other treatment for your lung condition? (F1151)
- B6c. Are you receiving oxygen for your lung condition? (F1152)
- B6d. Are you receiving physical or respiratory therapy for your lung condition? (F1153)
- B6f. Does your lung condition limit your usual activities, such as household chores or work? (F1154)

HRS 2000
- B6. Since we last talked to you, has a doctor told you that you have chronic lung disease, such as chronic bronchitis or emphysema? (G1279)
- B6a. Since then, has this condition gotten better, worse, or stayed about the same? (G1280)

- B6b. Are you now taking medication or other treatment for your lung condition? (G1284)
- B6c. Are you receiving oxygen for your lung condition? (G1285)
- B6d. Are you receiving physical or respiratory therapy for your lung condition? (G1286)
- B6f. Does your lung condition limit your usual activities, such as household chores or work? (G1287)

HRS 2002
- C030. Since we last talked to you, has a doctor told you that you have chronic lung disease, such as chronic bronchitis or emphysema? (HC030)
- C031. Since then, has this condition gotten better, worse, or stayed about the same? (HC031)
- C032. Are you now taking medication or other treatment for your lung condition? (HC032)
- C033. Are you receiving oxygen for your lung condition? (HC033)
- C034. Are you receiving physical or respiratory therapy for your lung condition? (HC034)
- C035. Does your lung condition limit your usual activities, such as household chores or work? (HC035)

Coronary Heart Disease Questions

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	B16	B7	B15 (1-2)	B7	B7	B7	B7	C036
MI	B16a	B7a	B15a	B7d	B7d	B7d	B7d	C040
Year (or month) of last MI	B16b (yr)	-	B15b (yr)	B7g, B7y	B7g, B7y	B7g-h	B7g-h	C043-C044
Angina	B17	B7b	B16	B7i	B7i	B7i	B7i	C045
Medications	B17a	-	B16a	B7a, B7f, B7j	B7a, B7f, B7j	B7a, B7f, B7j	B7a, B7f, B7j	C037, C042, C046
CHF	B18	-	B17	B7k	B7kb	B7kb	B7kb	C048
CHF-related hospitalization	-	-	-	B7m	B7m	B7m	B7m	C049
CHF - meds	B18a	-	B17a	B7n	B7n	B7n	B7n	C050
CHF - symptoms	B18b	-	B17b	-	-	-	-	-
Seen Doctor	B19	-	B18	B7b, B7e	B7b, B7e	B7b, B7e	B7b, B7e	C038, C041
Angiogram / angioplasty	B20	-	B19	B7p	B7p	B7p	B7p	C051
Heart surgery	B21	-	B20	B7q	B7q	B7q	B7q	C052
Better/worse/same	-	-	-	B7c	B7c	B7c	B7c	C039
Limiting activities	-	-	-	B8k	B7ka	B7ka	B7ka	C047

Coronary Heart Disease Variables

	HRS 92	AHD 93	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	V406	V242	W367, W368	D828	E828	F1156	G1289	HC036
MI	V407	V244	W369	D834	E834	F1162	G1295	HC040
Year (or month) of last MI	V408	-	W370	D838-D839	E838-E839	F1166-F1167	G1299-G1300	HC043-HC044
Angina	V409	V245	W371	D840	E840	F1168	G1301	HC045
Medications	V410	-	W372	D829, D837, D841	E829, E837, E841	F1157, F1165, F1169	G1290, G1298, G1302	HC037, HC042, HC046
CHF	V411	-	W373	D843	E843	F1171	G1304	HC048
CHF-related hospitalization	-	-	-	D844	E844	F1172	G1305	HC049
CHF - meds	V412	-	W374	D845	E845	F1173	G1306	HC050

CHF - symptoms	V413	-	W375	-	-	-	-	-
Seen doctor	V414	-	W376	D830, D836	E830, E836	F1158, F1164	G1291, G1297	HC038, HC041
Angiogram / angioplasty	V415	-	W377	D846	E846	F1174	G1307	HC051
Heart surgery	V416	-	W378	D847	E847	F1175	G1308	HC052
Better/worse/same	-	-	-	D831	E831	F1159	G1292	HC039
Limiting activities	-	-	-	D842	E842	F1170	G1303	HC047

Coronary Heart Disease – Available Questions

HRS 92
- B16. Has a doctor ever told you that you had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems? (V406)
- B16a. Did you have a heart attack or myocardial infarction? (V407)
- B16b. In what year did you have your (last) heart attack or myocardial infarction? (V408)
- B17. Do you currently have any angina or chest pains due to your heart? (V409)
- B17a. Are you taking or carrying any medications because of your chest pain? (V410)
- B18. Has a doctor ever told you that you have congestive heart failure? (V411)
- B18a. Are you taking any medications for this? (V412)
- B18b. Does your congestive heart failure sometimes cause you to be weak or short of breath? (V413)
- B19. During the last 12 months, have you seen a doctor for any of your heart problems? (V414)
- B20. Have you ever had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty)? (V415)
- B21. Have you ever had surgery on your heart? (V416)

AHEAD 93
- B7. Has a doctor ever told you that you had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems? (V242)
- B7a. Have you had a heart attack in the past five years? (V244)
- B7b. Have you recently had an angina or chest pains due to your heart? (V245)

HRS 94
- B15 (1). Last time we spoke with you, you told us about (wave 1 heart problem). Since (previous wave interview date), has your doctor told you that you had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?* (W367)
- B15(2). (Since previous wave interview date), has your doctor told you that you had a heart attack, coronary heart disease, angina, congestive heart failure, or other heart problems?* (W368)
- B15a. Did you have a heart attack or myocardial infarction? (W369)
- B15b. In what year did you have your (most recent) heart attack or myocardial infarction? (W370)
- B16. Do you currently have any angina or chest pains due to your heart? (W371)
- B16a. Are you taking or carrying any medications because of your chest pain? (W372)
- B17. (Since previous wave interview date), has a doctor told you that you have congestive heart failure? (W373)
- B17a. Are you taking any medications for this? (W374)
- B17b. Does your congestive heart failure sometimes cause you to be weak or short of breath? (W375)
- B18. During the last 12 months, have you seen a doctor for any of your heart problems? (W376)
- B19. Have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty)? (W377)
- B20. Have you had surgery on your heart? (W378)

* Prevalent cases from HRS 92 were asked B15(1); others were asked B15(2).

AHEAD95

- B7. Since your interview in (previous wave interview date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems? (D828)
- B7a. Are you now taking or carrying medication for your heart problem? (D829)
- B7b. (Since previous wave interview date/In the last two years), have you seen a doctor for your heart problem? (D830)
- B7c. Since (previous wave interview date), has this condition gotten better, worse, or stayed about the same? (D831)
- B7d. Have you had a heart attack or myocardial infarction (since previous wave interview date/in the past two years)? (D834)
- B7e. (Since we talked to you last), have you seen a doctor in connection with your heart attack? (D836)
- B7f. Are you now taking medication because of your heart attack? (D837)
- B7g. and B7y. In what month and year was your (most recent) heart attack? (D838-D839)
- B7i. (Since previous wave interview date/In the last two years), have you had any angina or chest pains due to your heart? (D840)
- B7j. Are you now taking or carrying medications because of angina or chest pain? (D841)
- B8k. Are you limiting your usual activities because of your angina? (D842)
- B7k. (Since previous wave interview date/In the last two years), has a doctor told you that you have congestive heart failure? (D843)
- B7m. (Since previous wave interview date/In the past two years), have you been admitted to the hospital overnight because of congestive heart failure? (D844)
- B7n. Are you taking any medication for congestive heart failure? (D845)
- B7p. (Since previous wave interview date/In the past two years), have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty? (D846)
- B7q. (Since previous wave interview date/In the past two years), have you had surgery on your heart? (D847)

HRS 96

- B7. Since (previous wave interview date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems? (E828)
- B7a. Are you now taking or carrying medication for your heart problem? (E829)
- B7b. (Since previous wave interview date/In the last two years), have you seen a doctor for your heart problem? (E830)
- B7c. Since (previous wave interview date), has this condition gotten better, worse, or stayed about the same? (E831)
- B7d. Have you had a heart attack or myocardial infarction (since previous wave interview date/in the past two years)? (E834)
- B7e. (Since we talked to you last), have you seen a doctor in connection with your heart attack? (E836)
- B7f. Are you now taking or carrying medication because of your heart attack? (E837)
- B7g and B7y. In what month and year was your (most recent) heart attack? (E838-E839)
- B7i. (Since previous wave interview date/In the last two years), have you had any angina or chest pains due to your heart? (E840)
- B7j. Are you now taking or carrying medications because of angina or chest pain? (E841)
- B7ka. Are you limiting your usual activities because of your angina? (E842)
- B7kb. (Since previous wave interview date/In the last two years), has a doctor told you that you have congestive heart failure? (E843)
- B7m. (Since previous wave interview date/In the past two years), have you been admitted to the hospital because of congestive heart failure? (E844)
- B7n. Are you taking or carrying any medication for congestive heart failure? (E845)
- B7p. (Since previous wave interview date/In the past two years), have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries? (cardiac catheterization, coronary angiogram or angioplasty) (E846)
- B7q. (Since previous wave interview date/In the past two years), have you had surgery on your heart? (E847)

- B7. Since (previous wave interview date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems? (F1156)
- B7a. Are you now taking or carrying medication for your heart problem? (F1157)
- B7b. (Since previous wave interview date/In the last two years), have you seen a doctor for your heart problem? (F1158)
- B7c. Since (previous wave interview date), has this condition gotten better, worse, or stayed about the same? (F1159)
- B7d. (Since previous wave interview date/In the past two years), have you had a heart attack or myocardial infarction? (F1162)
- B7e. Since we talked to you last, have you seen a doctor in connection with your heart attack? (F1164)
- B7f. Are you now taking or carrying medication because of your heart attack? (F1165)
- B7g.-B7h. In what year and month was your (most recent) heart attack? (F1166-F1167)
- B7i. (Since previous wave interview date/In the last two years), have you had any angina or chest pains due to your heart? (F1168)
- B7j. Are you now taking or carrying medications because of angina or chest pain? (F1169)
- B7ka. Are you limiting your usual activities because of your angina? (F1170)
- B7kb. (Since previous wave interview date/In the last two years), has a doctor told you that you have congestive heart failure? (F1171)
- B7m. (Since previous wave interview date/In the past two years), have you been admitted to the hospital overnight because of congestive heart failure? (F1172)
- B7n. Are you taking or carrying any medication for congestive heart failure? (F1173)
- B7p. (Since previous wave interview date/In the past two years), have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty)? (F1174)
- B7q. (Since previous wave interview date/In the past two years), have you had surgery on your heart? (F1175)

HRS 2000
- B7. Since (previous wave interview date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems? (G1289)
- B7a. Are you now taking or carrying medication for your heart problem? (G1290)
- B7b. (Since previous wave interview date/In the last two years), have you seen a doctor for your heart problem? (G1291)
- B7c. Since (previous wave interview date), has this condition gotten better, worse, or stayed about the same? (G1292)
- B7d. (Since previous wave interview date/In the past two years), have you had a heart attack or myocardial infarction? (G1295)
- B7e. Since we talked to you last, have you seen a doctor in connection with your heart attack? (G1297)
- B7f. Are you now taking or carrying medication because of your heart attack? (G1298)
- B7g-B7h. In what year and month was your (most recent) heart attack? (G1299-G1300)
- B7i. (Since previous wave interview date/In the last two years), have you had any angina or chest pains due to your heart? (G1301)
- B7j. Are you now taking or carrying medications because of angina or chest pain? (G1302)
- B7ka. Are you limiting your usual activities because of your angina? (G1303)
- B7kb. (Since previous wave interview date/In the last two years), has a doctor told you that you have congestive heart failure? (G1304)
- B7m. (Since previous wave interview date/In the past two years), have you been admitted to the hospital overnight because of congestive heart failure? (G1305)
- B7n. Are you taking or carrying any medication for congestive heart failure? (G1306)
- B7p. (Since previous wave interview date/In the past two years), have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty)? (G1307)
- B7q. (Since previous wave interview date/In the past two years), have you had surgery on your heart? (G1308)

- C036. Since (previous wave interview date), has a doctor told you that you have had a heart attack, have coronary heart disease, angina, congestive heart failure, or other heart problems? (HC036)
- C037 Are you now taking or carrying medication for your heart problem? (HC037)
- C038. (Since previous wave interview date/In the last two years), have you seen a doctor for your heart problem? (HC038)
- C039. Since (previous wave interview date), has this condition gotten better, worse, or stayed about the same? (HC039)
- C040. (Since previous wave interview date/In the last two years), have you had a heart attack or myocardial infarction? (HC040)
- C041. (Since then have/Have) you seen a doctor in connection with your heart attack? (HC041)
- C042. Are you now taking or carrying medication because of your heart attack? (HC042)
- C043-C044. In what year and month was your (most recent) heart attack? (HC043-HC044)
- C045. (Since previous wave interview date/In the last two years), have you had any angina or chest pains due to your heart? (HC045)
- C046. Are you now taking or carrying medications because of angina or chest pain? (HC046)
- C047. Are you limiting your usual activities because of your angina? (HC047)
- C048. (Since previous wave interview date/In the last two years), has a doctor told you that you have congestive heart failure? (HC048)
- C049. (Since previous wave interview date/In the last two years), have you been admitted to the hospital overnight because of congestive heart failure? (HC049)
- C050 Are you taking or carrying any medication for congestive heart failure? (HC050)
- C051. (Since previous wave interview date/In the last two years), have you had a special test or treatment of your heart where tubes were inserted into your veins or arteries (cardiac catheterization, coronary angiogram or angioplasty)? (HC051)
- C052. (Since previous wave interview date/In the last two years), have you had surgery on your heart? (HC052)

Stroke Questions

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	B22	B8	B21	B9	B9	B9	B9	C053
Month/year of last stroke	B22a (yr)	-	B21a (yr)	B9m-n	B9m-n	B9m-n	B9m-n	C063-C064
Remaining problems	B22b	B8a	B21b	B9b	B9b	B9b	B9b	C055
Seen doctor (yes/no)	B22c	-	B21c	B9a	B9a	B9a	B9a	C054
Medications	B22d	-	B21d	B9g	B9g	B9g	B9g	C060
Arms and legs	-	-	-	B9c	B9c	B9c	B9c	C056
Speaking or swallowing	-	-	-	B9d	B9d	B9d	B9d	C057
Vision	-	-	-	B9e	B9e	B9e	B9e	C058
Thinking/finding words	-	-	-	B9f	B9f	B9f	B9f	C059
Receiving therapy	-	-	-	B9h	B9h	B9h	B9h	C061
Another stroke	-	-	-	B9j	B9j	B9j	B9j	C062

Stroke Variables

	HRS 92	**AHD 93**	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	V417	V252	W379	D848	E848	F1176	G1309	HC053
Month/year of last stroke	V418	-	W380	D859-D860	E859-E860	F1187-F1188	G1320-G1321	HC063-HC064
Remaining problems	V419	V254	W381	D851	E851	F1179	G1312	HC055
Seen doctor (yes/no)	V420	-	W382	D850	E850	F1178	G1311	HC054
Medications	V421	-	W383	D856	E856	F1184	G1317	HC060
Arms and legs	-	-	-	D852	E852	F1180	G1313	HC056
Speaking or swallowing	-	-	-	D853	E853	F1181	G1314	HC057
Vision	-	-	-	D854	E854	F1182	G1315	HC058
Thinking/finding words	-	-	-	D855	E855	F1183	G1316	HC059
Receiving therapy	-	-	-	D857	E857	F1185	G1318	HC061
Another stroke	-	-	-	D858	E858	F1186	G1319	HC062

HRS 92
- B22. Has a doctor ever told you that you had a stroke? (V417)
- B22a. In what year did you last have a stroke? (V418)
- B22b. Do you still have any remaining health problems because of your stroke, such as muscle weakness or difficulty speaking? (V419)
- B22c. During the last 12 months, have you seen a doctor because of your stroke? (V420)
- B22d. Are you taking any medications because of your stroke and its complications? (V421)

AHEAD 93
- B8. Has a doctor ever told you that you had a stroke? (V252)
- B8a. Do you still have any remaining health problems because of your stroke? (V254)

HRS 94
- B21. Since (previous wave interview date), has a doctor told you that you had a stroke?* (W379)
- B21a. In what year did you have a stroke? (W380)
- B21b. Do you still have any remaining health problems because of your stroke, such as muscle weakness or difficulty speaking? (W381)
- B21c. During the last 12 months, have you seen a doctor because of your stroke? (W382)
- B21d. Are you taking any medications because of your stroke and its complications? (W383)

* Prevalent cases from HRS 92 were not asked B21-B21d.

AHEAD 95
- B9. Since (previous wave interview date), has a doctor told you that you have had a stroke? (D848)
- B9a. (Since previous wave interview date/In the past two years), have you seen a doctor because of this or any other stroke? (D850)
- B9b. Do you still have any remaining problems because of your stroke(s)? (D851)
- B9c. Do you have weakness in your arms and legs, or decreased ability to move or use them? (D852)
- B9d. Difficulty speaking or swallowing? (D853)
- B9e. Difficulty with your vision? (D854)
- B9f. Difficulty in thinking or finding the right words to say? (D855)
- B9g. Are you now taking any medications because of your stroke or its complications? (D856)
- B9h. Are you receiving physical or occupational therapy because of your stroke or its complications? (D857)
- B9j. Since (previous wave interview date), has a doctor told you that you had another stroke? (D858)
- B9m.-B9n. In what month and year was your (most recent) stroke? (D859-D860)

HRS 96
- B9. Since (previous wave interview date), has a doctor told you that you have had a stroke? (E848)
- B9a. (Since previous wave interview date/In the past two years), have you seen a doctor because of this or any other stroke? (E850)
- B9b. Do you still have any remaining problems because of your stroke(s)? (E851)
- B9c. Do you have weakness in your arms and legs, or decreased ability to move or use them? (E852)
- B9d. Difficulty speaking or swallowing? (E853)
- B9e. Difficulty with your vision? (E854)
- B9f. Difficulty in thinking or finding the right words to say? (E855)
- B9g. Are you now taking any medications because of your stroke or its complications? (E856)
- B9h. Are you receiving physical or occupational therapy because of your stroke or its complications? (E857)
- B9j. Since (previous wave interview date), has a doctor told you that you had another stroke? (E858)
- B9m-B9n. In what month and year was your (most recent) stroke? (E859-E860)

HRS 98
- B9. Since (previous wave interview date), has a doctor told you that you have had a stroke? (F1176)

- B9a. (Since previous wave interview date/In the past two years), have you seen a doctor because of this or any other stroke? (F1178)
- B9b. Do you still have any remaining problems because of your stroke(s)? (F1179)
- B9c. Do you have weakness in your arms and legs, or decreased ability to move or use them? (F1180)
- B9d. Difficulty speaking or swallowing? (F1181)
- B9e. Difficulty with your vision? (F1182)
- B9f. Difficulty in thinking or finding the right words to say? (F1183)
- B9g. Are you now taking any medications because of your stroke or its complications? (F1184)
- B9h. Are you receiving physical or occupational therapy because of your stroke or its complications? (F1185)
- B9j. Since (previous wave interview date), has a doctor told you that you had another stroke? (F1186)
- B9m.-B9n. In what month and year was your (most recent) stroke? (F1187-F1188)

HRS 2000
- B9. Since (previous wave interview date), has a doctor told you that you have had a stroke? (G1309)
- B9a. (Since previous wave interview date/In the past two years), have you seen a doctor because of this or any other stroke? (G1311)
- B9b. Do you still have any remaining problems because of your stroke(s)? (G1312)
- B9c. Do you have weakness in your arms and legs, or decreased ability to move or use them? (G1313)
- B9d. Difficulty speaking or swallowing? (G1314)
- B9e. Difficulty with your vision? (G1315)
- B9f. Difficulty in thinking or finding the right words to say? (G1316)
- B9g. Are you now taking any medications because of your stroke or its complications? (G1317)
- B9h. Are you receiving physical or occupational therapy because of your stroke or its complications? (G1318)
- B9j. Since (previous wave interview date), has a doctor told you that you had another stroke? (G1319)
- B9m.-B9n. In what month and year was your (most recent) stroke? (G1320-G1321)

HRS 2002
- C053. Since we last talked to you, has a doctor told you that you have had a stroke? (HC053)
- C054. (Since previous wave interview date/In the last two years),, have you seen a doctor because of this or any other stroke? (HC054)
- C055. Do you still have any remaining problems because of your stroke(s)? (HC055)
- C056. Do you have weakness in your arms and legs, or decreased ability to move or use them? (HC056)
- C057. Difficulty speaking or swallowing? (HC057)
- C058. Difficulty with your vision? (HC058)
- C059. Difficulty in thinking or finding the right words to say? (HC059)
- C060. Are you now taking any medications because of your stroke or its complications? (HC060)
- C061. Are you receiving physical or occupational therapy because of your stroke or its complications? (HC061)
- C062. Since (previous wave interview date), has a doctor told you that you had another stroke? (HC062)
- C063-C064. In what month and year was your (most recent) stroke? (HC063-HC064)

Psychiatric/Psychological Problems Questions

	HRS 92	**AHD 93***	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	B23	B9	B23	B10	B10	B10	B10	C065
Problems in last year	B24	B9a	-	-	-	-	-	-
Psych treatment	B24a	-	B23a	B10b	B10b	B10b	B10b	C067
Medications	B24b	-	B23b	B10c	B10c	B10c	B10c	C068
Better/worse/same	-	-	-	B10a	B10a	B10a	B10a	C066
Memory-related disease	-	-	-	-	-	B10d	B10d	C069

Psychiatric/Psychological Problems Variables

	HRS 92	**AHD 93***	**HRS 94***	**AHD 95**	**HRS 96**	**HRS 98**	**HRS 00**	**HRS 02**
Doctor diagnosis	V422	V259	W384	D861	E861	F1189	G1322	HC065
Problems in last year	V423	V260	-	-	-	-	-	-
Psych treatment	V424	-	W385	D863	E863	F1191	G1324	HC067
Medications	V425	-	W386	D864	E864	F1192	G1325	HC068
Better/worse/same	-	-	-	D862	E862	F1190	G1323	HC066
Memory-related disease	-	-	-	-	-	F1193	G1326	HC069

HRS 92
- B23. Has a doctor ever told you that you had emotional, nervous, or psychiatric problems? (V422)
- B24. During the last 12 months, have you had any emotional, nervous, or psychiatric problems? (V423)
- B24a. Do you now get psychiatric or psychological treatment for your problems? (V424)
- B24b. Do you now use tranquilizers, antidepressants, or pills for nerves? (V425)

AHEAD 93
- B9. Have you ever seen a doctor for emotional, nervous, or psychiatric problems?* (V259)
- B9a. Have you had any of these problems in the last 12 months? (V260)

* Note this question asks whether the respondent has seen a doctor for this condition not whether a doctor has told them they have the condition. This differs from the wording of similar questions in other waves.

HRS 94
- B23. Since (previous wave interview date), have you had or has a doctor told you that you have any
- emotional, nervous, or psychiatric problems?* (W384)
- B23a. Do you now get psychiatric or psychological treatment for your problems? (W385)
- B23b. Do you now use tranquilizers, sleeping pills, antidepressants, or pills for nerves? (W386)

* Prevalent cases from HRS 92 were not asked B23-B23d.

AHEAD 95
- B10. Since (previous wave interview date), have you had or has a doctor told you that you have any emotional, nervous, or psychiatric problems? (D861)
- B10a. Have these problems gotten better, worse, or stayed about the same? (D862)
- B10b. Do you now get psychiatric or psychological treatment for your problems? (D863)
- B10c. Do you now take tranquilizers, antidepressants, or pills for nerves? (D864)

HRS 96
- B10. Since (previous wave interview date), have you had or has a doctor told you that you have any emotional, nervous, or psychiatric problems? (E861)
- B10a. Have these problems gotten better, worse, or stayed about the same? (E862)
- B10b. Do you now get psychiatric or psychological treatment for your problems? (E863)
- B10c. Do you now take tranquilizers, antidepressants, or pills for nerves? (E864)

HRS 98
- B10. Since (previous wave interview date), have you had or has a doctor told you that you have any emotional, nervous, or psychiatric problems? (F1189)
- B10a. Since (previous wave interview date), have these problems gotten better, worse, or stayed about the same? (F1190)
- B10b. Do you now get psychiatric or psychological treatment for your problems? (F1191)
- B10c. Do you now take tranquilizers, antidepressants, or pills for nerves? (F1192)
- B10d. Has a doctor ever told you that you have a memory-related disease? (F1193)

HRS 2000
- B10. Since (previous wave interview date), have you had or has a doctor told you that you have any emotional, nervous, or psychiatric problems? (G1322)
- B10a. Since (previous wave interview date), have these problems gotten better, worse, or stayed about the same? (G1323)
- B10b. Do you now get psychiatric or psychological treatment for your problems? (G1324)
- B10c. Do you now take tranquilizers, antidepressants, or pills for nerves? (G1325)
- B10d. Since we last talked to you, has a doctor told you that you have a memory-related disease? (G1326)

- C065. Since we last talked to you, have you had or has a doctor told you that you have any emotional, nervous, or psychiatric problems? (HC065)
- C066. Since (previous wave interview date), have these problems gotten better, worse, or stayed about the same? (HC066)
- C067. Do you now get psychiatric or psychological treatment for your problems? (HC067)
- C068. Do you now take tranquilizers, antidepressants, or pills for nerves? (HC068)
- C069. Since we last talked to you, has a doctor told you that you have a memory-related disease? (HC069)

Arthritis Questions

	HRS 92	AHD 93*	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	B25	B10	B24	B11	B11	B11	B11	C070
Joint pain, swelling	B25a	-	B24a	B11c	B11c	B11c	B11c	C073
Medications	B25b	-	B24b	B11d	B11d	B11d	B11d	C074
Seen doctor	B25c	-	B24c	B11b	B11b	B11b	B11b	C072
Better/worse/same	-	-	-	B11a	B11a	B11a	B11a	C071
Limit activities	-	-	-	B11e	-	B11e	B11e	C075
Surgery	-	-	-	B11f	-	B11f	B11f	C076
Which joint	-	-	-	B11g	-	B11g	B11g	C077M1-M3

Arthritis Variables

	HRS 92	AHD 93*	HRS 94*	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Doctor diagnosis	V426	V265	W387	D866	E866	F1194	G1327	HC070
Joint pain, swelling	V427	-	W388	D869	E869	F1197	G1330	HC073
Medications	V428	-	W389	D870	E870	F1198	G1331	HC074
Seen doctor	V429	-	W390	D868	E868	F1196	G1329	HC072
Better/worse/same	-	-	-	D867	E867	F1195	G1328	HC071
Limit activities	-	-	-	D871	-	F1199	G1332	HC075
Surgery	-	-	-	D872	-	F1200	G1333	HC076
Which joint	-	-	-	D875M1-M2	-	F1203M1-M3	G1336M1-M3	HC077M1-M3

HRS 92

- B25. Have you ever had, or has a doctor ever told you that you have, arthritis or rheumatism? (V426)
- B25a. Do you sometimes have pain, stiffness, or swelling in your joints? (V427)
- B25b. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (V428)
- B25c. During the last 12 months, have you seen a doctor specifically for your arthritis or rheumatism? (V429)

AHEAD 93

- B10. During the last 12 months, have you seen a doctor specifically for arthritis or rheumatism?* (V265)

* Note this question asks whether the respondent has seen a doctor for this condition not whether a doctor has told them they have the condition. This differs from the wording of similar questions in other waves.

HRS 94

- B24. Since (previous wave interview date), have you had, or has a doctor told you that you have, arthritis or rheumatism?* (W387)
- B24a. Do you sometimes have pain, stiffness, or swelling in your joints? (W388)
- B24b. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (W389)
- B24c. During the last 12 months, have you seen a doctor specifically for your arthritis or rheumatism? (W390)

* Prevalent cases from HRS 92 were not asked B24-B24c.

AHEAD 95

- B11. Since (previous wave interview date), have you had or has a doctor told you that you have arthritis or rheumatism? (D866)
- B11a. Has this arthritis gotten better, worse, or stayed about the same? (D867)
- B11b. (Since previous wave interview date/In the past two years), have you seen a doctor specifically for your arthritis or rheumatism? (D868)
- B11c. Do you sometimes have pain, stiffness, or swelling in your joints? (D869)
- B11d. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (D870)
- B11e. Does your arthritis sometimes limit your usual activities? (D871)
- B11f. Have you had surgery or any joint replacement because of arthritis since we last talked to you? (D872)
- B11g. Which joint was that? (D875M1-D875M2)
    - Hip(s)
    - Knee(s)
    - Other

HRS 96

- B11. Since (previous wave interview date), have you had or has a doctor told you that you have, arthritis or rheumatism? (E866)
- B11a. Has this arthritis gotten better, worse, or stayed about the same? (E867)
- B11b. (Since previous wave interview date/In the past two years), have you seen a doctor specifically for your arthritis or rheumatism? (E868)
- B11c. Do you sometimes have pain, stiffness, or swelling in your joints? (E869)
- B11d. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (E870)
- B11e. Does your arthritis sometimes limit your usual activities? (E871)
- B11f. Have you had surgery or any joint replacement because of arthritis since we last talked to you? (E872)
- B11g. Which joint was that? (E875M1-E875M3)
    - Hip(s)
    - Knee(s)
    - Other

HRS 98

- B11. Since (previous wave interview date), have you had or has a doctor told you that you have arthritis or rheumatism? (F1194)
- B11a. Since (previous wave interview date), has this arthritis gotten better, worse, or stayed about the same? (F1195)
- B11b. (Since previous wave interview date/In the past two years), have you seen a doctor specifically for your arthritis or rheumatism? (F1196)
- B11c. Do you sometimes have pain, stiffness, or swelling in your joints? (F1197)
- B11d. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (F1198)
- B11e. Does your arthritis sometimes limit your usual activities? (F1199)
- B11f. (Since previous wave interview date/In the last two years), have you had surgery or any joint replacement because of arthritis? (F1200)
- B11g. Which joint was that? (F1203M1-F1203M3)
    o Hip(s)
    o Knee(s)
    o Hand/Wrist Area
    o Ankle/Foot Area
    o Shoulder
    o Spine
    o Other

HRS 2000

- B11. Since (previous wave interview date), have you had or has a doctor told you that you have arthritis or rheumatism? (G1327)
- B11a. Since (previous wave interview date), has this arthritis gotten better, worse, or stayed about the same? (G1328)
- B11b. (Since previous wave interview date/In the past two years), have you seen a doctor specifically for your arthritis or rheumatism? (G1329)
- B11c. Do you sometimes have pain, stiffness, or swelling in your joints? (G1330)
- B11d. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (G1331)
- B11e. Does your arthritis sometimes limit your usual activities? (G1332)
- B11f. (Since previous wave interview date/In the last two years), have you had surgery or any joint replacement because of arthritis? (G1333)
- B11g. Which joint was that? (G1336M1-G1336M3)
    o Hip(s)
    o Knee(s)
    o Hand/Wrist Area
    o Ankle/Foot Area
    o Shoulder
    o Spine
    o Other

HRS 2002

- C070. Since we last talked to you, have you had or has a doctor told you that you have arthritis or rheumatism? (HC070)
- C071. Since (previous wave interview date), has this arthritis gotten better, worse, or stayed about the same? (HC071)
- C072. (Since previous wave interview date/In the last two years), have you seen a doctor specifically for your arthritis or rheumatism? (HC072)
- C073. Do you sometimes have pain, stiffness, or swelling in your joints? (HC073)
- C074. Are you currently taking any medication or other treatments for your arthritis or rheumatism? (HC074)
- C075. Does your arthritis sometimes limit your usual activities? (HC075)
- C076. (Since previous wave interview date/In the last two years), have you had surgery or any joint replacement because of arthritis? (HC076)

- C077M1-C077M3. Which joint was that? (HC077M1-HC077M3)
  - Hip(s)
  - Knee(s)
  - Hand/Wrist Area
  - Ankle/Foot Area
  - Shoulder
  - Spine
  - Other