

HRS/AHEAD Documentation Report

*Documentation of Health Behaviors and Risk Factors Measured
in the Health and Retirement Study (HRS/AHEAD)*

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February 2008

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I. Overview

There is growing recognition that the state of public health in the US is well below the optimum level that current medical technology can support in part because of individual behaviors that either contribute to risk of disease and ill health, or neglect of behaviors that would promote health (McGinnis, Williams-Russo, & Knickman, 2002). With the rapidly growing aging population in the U.S., identifying and understanding the myriad of factors that influence health in older age is important. Some of the factors that have become of particular research interest are modifiable health behaviors such as weight maintenance, smoking, drinking, exercising, and preventive health screenings. The two most important negative behaviors for population health are smoking, which is declining over time, and obesity, which is on the rise. Exercise and use of preventive care can contribute to better health. With adjustments in health policy and medical and educational interventions, these behaviors may be changed to improve health and reduce medical costs.

Recognizing the important role of health behaviors and risk factors with respect to issues of key importance to the HRS (health, employment, wealth, timing of retirement), the original designers of the HRS incorporated a set of core measures of health behaviors at the outset. These measures have been expanded over time. The health behaviors and risk factors that are covered in the HRS include:

- Cigarette smoking (current and past behavior)
- Alcohol consumption (current behavior and past drinking problems)
- Body mass index (derived from self-reports of height and weight)
- Exercise (current level)
- Preventive health screenings

The HRS, with its wealth of information on the resources and constraints on individuals and their families, its detailed cognitive assessments, and its longitudinal follow-up, is an ideal source for studying the determinants and consequences of health behaviors and risk factors. HRS is unique in the ability to study simultaneously the health and economic consequences of these behaviors. Because it is a large nationally representative study, it is also useful for policy forecasts and for studying population sub-groups. Researchers have begun to exploit the HRS to study trends, determinants, and consequences of health behaviors and risk factors. Selected findings from this literature are reviewed in Section V.B.

This report is organized as follows. Section II provides an inventory of the measures of health behaviors and risk factors that are covered in HRS, noting additions and changes that have occurred across waves. Special methodological issues that must be considered when using these data are covered in Section III. Section IV (and corresponding Tables 2-28) presents prevalence estimates and frequency counts for each of the health behavior and risk factor measures over time. Lastly, Section V addresses data quality by comparing HRS prevalence estimates with those from other surveys,

reviewing results from some of the studies that have used HRS data to study health behaviors and risk factors, and investigating the level of missing data for these measures.

II. Inventory of Measures and Cross –Wave Comparison

General health behavior and risk factor measures in HRS include: 1) cigarette smoking 2) alcohol consumption, 3) body mass index, 4) exercise, and 5) preventive health screenings (i.e. flu shot, cholesterol, mammogram, breast self-exam, pap smear, and prostate screening). Given the self-report survey method that is used to obtain data in the HRS combined with the limited interview time, HRS does a reasonably comprehensive job of assessing health behaviors.

This section provides a cross-wave summary of the health behavior and risk factor measures and highlights changes that have occurred across waves. A complete inventory of questions and question wording is provided in Appendix A.

Health conditions and other health related constructs used in the HRS have been documented elsewhere. 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. Smoking

Several measures of smoking status are asked in the HRS. The original battery, introduced in the 1992 wave of HRS, was adapted from the National Health Interview Survey.

Two smoking measures have been included in all waves – current smoking status and quantity currently smoked. In all waves except 1993 AHEAD, current smoking status was assessed by asking respondents:

Do you smoke cigarettes now?

In the 1993 wave of the AHEAD survey, respondents were asked about smoking status as follows:

How would you describe yourself; as a current smoker, as a former smoker, or as someone who never smoked?

To assess quantity smoked, the following question has been asked in all waves, starting with 1992 HRS:

About how many cigarettes or packs do you usually smoke in a day now?

In addition to current smoking status and amount currently smoked, the HRS includes several questions about smoking history. However, these questions have not been included in all waves. These questions are reviewed below.

Former smoking status was asked of new (baseline) respondents in the following waves: HRS 1992, AHEAD 1993, and all waves from HRS 1998 on. With the exception of the 1993 AHEAD, for which current and former status was asked in a single question (as shown above), former smoking status was ascertained by asking the following question of respondents who did not report being current smokers:

Have you ever smoked cigarettes?

The 1992 HRS also included questions to ascertain when former smokers stopped smoking and the quantity of cigarettes or packs smoked at the peak of consumption. The specific questions included in the 1992 wave are:

About how many years ago did you stop smoking?

When you were smoking the most, about how many cigarettes or packs did you smoke in a day?

Questions on smoking history were not asked again until 1998, at which point all new respondents who reported having ever smoked were asked the age, year, or number of years ago that they started smoking; the age, year, or number of years ago that they stopped smoking; and the quantity of cigarettes or packs smoked at the peak of consumption. These questions have been asked for new respondents in all subsequent waves.

Thus, with the exception of the 1992 HRS original cohort, for whom we have partial information on smoking history, respondents who entered the study prior to 1998 (i.e., the AHEAD original cohort, plus new spouses of the HRS and AHEAD cohort members who were first interviewed between 1994 and 1996) were not asked about their smoking history. To address this, starting in 2006, the smoking history questions are asked of respondents who had not received them in a prior wave. However, respondents in the original HRS and AHEAD cohorts who died or dropped out of the study prior to 2006 will be missing on these measures.

B. Alcohol Consumption

The HRS contains detailed questions on alcohol consumption. First, a measure of current drinking status is asked at every wave of the HRS. This question is:

Do you ever drink any alcoholic beverages such as beer, wine, or liquor?

At each wave, the HRS also measures amount of alcohol consumed, although the specific questions changed between HRS94 and AHEAD95. Up through HRS 1994, the following question was asked:

In general, do you have less than one drink a day, one to two drinks a day, three to four drinks a day, or five or more drinks a day?

Starting with 1995 AHEAD, the questions on quantity of alcohol consumed were expanded. From 1995 on, respondents were asked the following questions:

In the last three months, on average, how many days per week have you had any alcohol to drink?

In the last three months, on the days you drink, about how many drinks do you have?

In the last three months, on how many days have you had four or more drinks on one occasion?

In several waves of the HRS (1992, 1998, 2000, 2002, and 2004) the CAGE alcohol screening questionnaire (Mayfield, McLeod and Hall, 1974) was also asked in baseline interviews. This screening questionnaire is made up of the following four questions:

Have you ever felt that you should cut down on your drinking?

Have people ever annoyed you by criticizing your drinking?

Have you ever felt bad or guilty about drinking?

Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover?

The 1993 and 1995 waves of AHEAD included only the first of the CAGE questions.

C. Body Mass Index (BMI)

Body Mass Index (BMI) is used to measure height adjusted body weight. Height (measured in feet and inches) and weight (measured in pounds) are self-reported in the HRS and AHEAD. Height has generally been asked only in the baseline wave. The one exception to this is that height was asked in both 1992 and 1994 (though with slightly different questions) for all HRS respondents in those waves. The questions used were:

About how tall are you? (1992 wave)

How tall are you without shoes? (1994 wave)

For all other respondents, height was asked only in the baseline wave. Thus, AHEAD respondents were asked in 1993, CODA and War Baby respondents were asked in 1998, and new spouses were asked in the wave in which they entered the study. The 1992 version of the question shown above was used in all waves other than 1994.

Please note that the measurements for feet and inches are generally recorded in separate variables. However, in AHEAD 1993 both feet and inches were combined into a single variable (V306).

Given that height was only asked in the baseline wave, the calculation of BMI in follow-up waves will require the analyst to bring forward the height measure from the baseline wave. BMI can then be calculated as follows: weight in kilograms/height in meters². In AHEAD 1993, HRS staff created a Quetelet body mass index variable for user convenience.

Weight is asked of all respondents across all waves of the HRS and AHEAD. Weight is assessed by asking respondents:

About how much do you weigh?

Weight change is an important predictor of various health outcomes. For this reason, some questions that measure self-reported weight change were included. HRS respondents were first questioned about weight change in 1992 of the HRS. They were not asked about weight change again until 1996. AHEAD respondents were first asked about weight change in 1995. Starting in 1998, weight change has been measured in every wave. Respondents are questioned about their weight change one of two ways, depending on the wave:

About how much did you weigh a year ago?

Have you gained or lost 10 or more pounds in the last 2 years?

D. Exercise

The HRS asks about respondents exercise behaviors in various ways. In all waves from 1995 through 2002, respondents were asked the following question to assess their participation in vigorous types of exercise:

On average over the last 12 months have you participated in vigorous activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor.

Questions on exercise that were included in the 1992 and 1994 waves of HRS differentiated between vigorous and light physical activity (see Appendix A). The 1993 wave of AHEAD did not include a question on exercise.

The 1994 and 2002 waves of HRS contain experimental modules that include expanded series of questions related to physical types of activities among older adults (see questions W9201-W9206 for the 1994 wave and V305-V307 for the 2002 wave in Appendix A). The questions in the 2002 module were adopted from the English Longitudinal Study of Ageing (ELSA).

E. Health Screening

The health screening measures in the HRS ask respondents to report on medical tests or procedures that were performed in the last two years. Preventive health screenings are important to older persons, as prevention and early treatment of many of the diseases and illnesses associated with such screenings can reduce morbidity and mortality among these persons. The screenings included in the HRS are:

- 1) Prostate screening (male Rs only)
- 2) Mammogram (female Rs only)
- 3) Breast self-exam (female Rs only)
- 4) Cholesterol screening
- 5) Pap smear (female Rs only)
- 6) Flu shot

These measures were first asked of all respondents in 1995 of the AHEAD survey and 1996 of the HRS. They have been asked of new respondents in every wave since 1996, but are asked for only every other wave of respondents who were interviewed previously (reinterview respondents). Thus, the health screening measures are available for the full samples in 1995, 1996, 2000, and 2004.

F. Cross-Wave Comparisons

Although the question wording generally remained consistent across waves (with the exceptions noted above), 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 (where the health behavior questions are asked) 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.

G. Core vs. Exit interview

The HRS core survey is conducted with living respondents. This includes a survey of self-respondents, as well as proxy respondents (when a living respondent is not able to participate due to cognitive limitations or is unavailable 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. Some health behavior questions are asked of the proxy respondent to provide users with information about the health behavior measures in the core study, although it is important to note that only a subset of the health behavior measures are assessed in the exit survey. 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. 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 led 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 not 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 original HRS cohort, 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 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.

Age-eligibility changes across waves. See Table 1 for sample sizes of age-eligible respondents at each wave and for definitions of age eligibility at each wave. The table 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.

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
Definition	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

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

Only age-eligible respondents are included in the tabulations that appear in this report.

B. Objective vs. Self Reports of Body Mass Index

It is important to note that self-reported measures of weight are found to be predictive of health outcomes. However, this type of measurement may also result in underestimating BMI because people of short stature over report height and heavy individuals under report their weight (Black, Taylor, & Coster, 1998; Kuskowska-Wolk, Bergstrom, & Bostrom, 1992). Therefore, any correlation between body weight and various health outcomes is likely a conservative estimate.

IV. Prevalence Across Waves

Health behavior prevalence rates and means for BMI 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 B.

A. HRS Original Cohort (1992 – 2002)

Among the original HRS cohort members, prevalence rates for the health behaviors and health screenings are mixed, and show interesting patterns by age and gender.

Smoking - In regard to smoking (Table 2), the general trend at each wave is that there is a decrease in prevalence over time from 26.9% in 1992 to 16.0% in 2002. Men have a higher prevalence of smoking than women; however they are within 4 percentage points of each other at each wave. Non-Hispanic Black respondents have the highest prevalence of smoking at each wave.

Drinking - Table 3 presents results for prevalence of alcohol consumption in the original HRS cohort. From 1992 to 2002, drinking prevalence declined from 63.5% to 50.4%. The percentage of men who drank at each wave was approximately 15% greater than women. Non-Hispanic White respondents had a greater prevalence of drinking than other racial/ethnic groups.

Exercise - According to Table 4, the prevalence of exercise declined by approximately 5%, from 51.9% in 1992 to 46.5% in 2002. In general, participating in exercise is more common among non-Hispanic White individuals compared to non-Hispanic Black and Hispanic individuals.

Flu shot – Table 5 presents results of the prevalence of getting a flu shot in the original HRS cohort. Getting a flu shot is slightly more common for women than men, and both groups experienced nearly a 20% increase between 1996 and 2000. Non-Hispanic individuals classified as ‘Other’ race have the greatest prevalence of receiving a flu shot compared to non-Hispanic Black, White, and Hispanic individuals.

Cholesterol screening - According to Table 6, the prevalence of obtaining a cholesterol screening increased from 70.4% in 1996 to 77.7% in 2000.

Breast self exam – Breast self-exam prevalence rates in 2000 (presented in Table 7) experienced a modest increase over rates in 1996 (from 62.1% in 1996 to 65.2% in 2000). In 1996 Non-Hispanic Black women have the highest rate of breast self-exam (72.2%). In 2000, women who are classified as Non-Hispanic Other have the highest rate (74.5%).

Mammograms - The prevalence of mammograms increased from 71.6% in 1996 to 77.4% in 2000. Hispanic women had lower prevalence rates of mammograms relative to other racial/ethnic groups.

Pap smear – Table 9 presents results of papanicolaou (pap) smear prevalence. Overall rates remained relatively stable between 1996 and 2000 with rates of 67.9% and 68.8%,

respectively. Non-Hispanic White women had the highest prevalence rate in 1996 (68.5%). In 2000, women classified as Non-Hispanic Other had the highest prevalence (75.8%).

Prostate screening - The prevalence of prostate screening (see Table 10) increased from 65.1% in 1996 to 75.3% in 2000. Hispanic men had the lowest rates of prostate screening in both years.

BMI – From 1992 to 2002, total mean BMI increased from 27.0 to 27.7 in the original HRS cohort. Males and females experienced comparable increases in BMI over this time period. Non-Hispanic Black individuals consistently had the highest BMI compared to other racial/ethnic groups.

Obesity cut-point – The mean obesity cut-point (Body Mass Index of greater than or equal to 30) across all time points remained fairly consistent. The lowest mean was 33.8 (in 1994) and the highest mean was 34.5 (in 2000 and 2002). Women consistently have the higher mean level of obesity compared to men across all time points. Non-Hispanic Black individuals consistently had the highest mean level of obesity compared to other racial/ethnic groups.

B. AHEAD Original Cohort (1993 – 2002)

Health behavior prevalence rates among the original AHEAD respondents are presented in Tables 13 through 22. In general, a similar pattern of findings exists for AHEAD respondents compared to the original HRS cohort. However, the mean BMI among the AHEAD original cohort across all waves is lower than that of the HRS original cohort.

Smoking - In regard to smoking (Table 13), there is a decrease in prevalence over time for the original AHEAD cohort, from 9.8% in 1993 to 4.2% in 2002. In terms of gender, in early waves men have higher smoking rates than women, but by 2002 the rates were about equal for both men and women. Non-Hispanic Black and Hispanic individuals generally had a higher prevalence of smoking compared to other racial and ethnic groups.

Drinking – When reviewing Table 14, we can see that the overall drinking prevalence declines by over 10% between 1993 and 2002. Drinking is more common among men than women. Non-Hispanic White individuals had a higher rate of drinking compared to the other racial and ethnic groups.

Exercise – As shown in Table 15, exercise prevalence decreases from 31.3% in 1995 to 27.5% in 2002. Men consistently had a higher prevalence of exercise compared to women. Participating in exercise is more common among non-Hispanic White individuals compared to the other racial and ethnic groups.

Flu shot - Table 16 presents results of the prevalence of getting a flu shot in the original AHEAD cohort. Between 1995 and 2000, rates increased from 68.2% to 77.2%. Men

are more likely to get a flu shot than women. Non-Hispanic White individuals had a higher prevalence of receiving a flu shot and non-Hispanic Black individuals had the lowest prevalence rate.

Cholesterol screening – As shown in Table 17, the prevalence of obtaining a cholesterol screening increases from 73.7% in 1995 to 76.7% in 2000. In 1995 there was no gender difference in the prevalence of cholesterol screening, but in 2000 men were more likely than women to be screened. Hispanic and non-Hispanic White individuals had the highest prevalences for receiving screening compared to the other race and ethnic groups.

Breast self exam – Breast self exam rates (Table 18) decreased slightly between 1995 and 2000, from 50.9% to 48.3%. Non-Hispanic Black women experienced the greatest reduction in the prevalence of breast self exams compared to other racial/ethnic groups.

Mammogram - As presented in Table 19, the overall prevalence rates for mammograms in the original AHEAD cohort increased from 54.9% in 1995 to 59.7% in 2000. Women classified as non-Hispanic Other had the largest increase in the prevalence rate of having the procedure (from 39.9% in 1995 to 59.2% in 2000) compared to the other racial and ethnic groups.

Pap smear - Table 20 presents the prevalence of having a papanicolaou (Pap) smear for women in the original AHEAD cohort. Between 1995 and 2000, overall rates decreased slightly from 42.5% to 41.1%. Women classified as non-Hispanic Other had the lowest prevalence rates of Pap smears compared to the other race and ethnic groups. In 1995 Non-Hispanic Black women had the highest prevalence rate of the procedure (48.5%). In 2000 Hispanic women had the highest prevalence rate (47.7%).

Prostate screening - The prevalence of prostate screening (see Table 21) increases slightly over time from 73.4% in 1995 to 75.2% in 2000. Non-Hispanic White men have the highest prevalence of having an examination (74.8% in 1995 and 76.7% in 2000) compared to other racial and ethnic groups. In contrast, men who are classified as non-Hispanic Other have the lowest prevalence of undergoing the examination (54.4% in 1995 and 62.1 in 2000).

BMI – Between 1993 and 2002 the average BMI declined from 25.3% to 24.9% (Table 22). Men (compared to women) have a higher BMI across all time points. Non-Hispanic Black individuals have the highest mean BMI compared to the other racial/ethnic groups.

Obesity cut-point – The mean obesity cut-point (Body Mass Index of greater than or equal to 30) across all time points remained fairly consistent. The lowest mean was 33.0 (in 1998) and the highest mean was 33.3 (in 1993). Women consistently have the higher mean level of obesity compared to men across all time points.

C. HRS/AHEAD (1998 – 2002)

Tables 22 through 28 show prevalence results for the same set of health behaviors and risk factors 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/ethnicity.

V. Evaluation of Data Quality

A. Benchmarking Against Other Surveys

One way to evaluate the quality of data on health behaviors 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) and National Health and Nutrition Examination Survey (NHANES) for comparison because they are well-cited, nationally representative self-report health surveys 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. For more information about the NHIS, please see <http://www.cdc.gov/nchs/about/major/nhis/hisdesc.htm>.

The main purpose of the NHANES survey is to monitor trends in the prevalence of various diseases and risk factors, and study relationships between them. As with the NHIS, the NHANES is conducted by the National Center for Health Statistics (NCHS). In the early 1960's these data were collected periodically. Starting in 1995, they have been collected annually. The NHANES data are collected via in home interviews on approximately 7,000 people. In addition, a subsample of about 5,000 people receive a

health examination. The health examinations are typically carried out in mobile examination centers. The target population for the NHANES is the U.S. civilian, noninstitutionalized population of all ages. The NHANES is based on a stratified, multistage, probability sample. For more information about the NHANES, please see <http://www.cdc.gov/nchs/nhanes.htm>.

Tables 29-31 compare prevalence estimates obtained in HRS, NHANES, and NHIS. Tables 32-36 provide prevalence estimates of flu shots, cholesterol screenings, BSEs, mammograms and pap smears in the HRS and NHIS. These are the measures and surveys with these particular comparable measures. In general, these tables illustrate that there is a high degree of correspondence between prevalence estimates obtained in the three studies, providing evidence of external validity for the health behavior measures in the HRS.

B. Previous Research Using the HRS Measures

A number of published studies have examined the determinants and consequences of health behaviors and risk factors using data from the HRS and AHEAD. Findings from some 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>.

Obesity

Studies using HRS have confirmed and broadened some familiar findings about obesity, and brought to light some others. Obesity contributes to disease and disability (Clark & Mungai, 1997; Clark et al., 1997; Clark, Stump, & Wolinsky, 1998; Damush, Stump & Clark, 2002; Himes, 2000; Jenkins, 2004a, 2004b), as well as to health care costs (Sturm, Ringel & Andreyeva, 2004). Minority groups and women have greater problems with obesity and/or its consequences (Clark et al., 1996; Himes, 1999; Wray & Blaum, 2001; Jenkins et al., 2003). Obesity is associated with number of children, for both men and women (Weng et al., 2004). The obesity problem is growing: there was substantial gain in average weight of middle-aged adults during the 1990s (He & Baker, 2004). Even with strong motivation, maintaining weight loss is difficult (Notwehr & Stump, 2000). The health literature has not paid much attention to the economic consequences of obesity, but based on HRS these appear to be substantial, at least for women (Fonda et al., 2004).

Smoking

Numerous researchers have taken advantage of the multidisciplinary and longitudinal character of HRS to study smoking behavior. As with obesity, smoking contributes to disease, disability and health care costs (Lahiri and Song, 2000; Ostbye et al., 2002; Ostbye & Taylor, 2004). An important link connecting health risks to health behaviors is the awareness of the level of risk. HRS questions on subjective probabilities of survival have been used to show that smokers know, but underestimate their relative

risk (Schoenbaum, 1997; Smith, Taylor & Sloan, 2001). Smoking cessation appears to be responsive to health shocks and mediated by education and by involvement of spouse (Kahn, 1998; Wray et al., 1998; Smith et al., 2001; Sloan et al., 2003; Franks, Pienta & Wray, 2002). Consequently, smoking status is not a random experiment, and analyses of health outcomes due to smoking should ideally take into account the self-selection of smoking status, which the multidisciplinary longitudinal structure of HRS supports (Lahiri & Song, 2000; Ostbye, Taylor & Sang-Hyuk, 2002).

Alcohol consumption

Negative effects of excessive alcohol consumption and a history of problem drinking have been documented using HRS, including increased risk of onset of functional impairment and depression, as well as increased risk of occupational injury (Zwerling et al., 1996; Ostermann & Sloan, 2001; Perreira & Sloan, 2002). The purportedly beneficial effects of moderate consumption have not been studied extensively with HRS, though there is some evidence for it in relation to functional limitation and disability (Kutty, 2000; Ostermann & Sloan, 2001). As with smoking, alcohol consumption is responsive to health shocks and other major life events. Hospitalization and disease onset led to a reduction in alcohol consumption, whereas retirement and widowhood resulted in increased consumption (Perreira & Sloan, 2001).

Exercise

Research on exercise using the HRS is more sparse, but several studies have investigated the determinants and consequences of exercise. Research on the determinants of exercise have found significant positive effects of both early life and adult socioeconomic status, as measured by parents' education, own education, and economic resources (He and Baker, 2005; Wray, Alwin and McCammon, 2005). Longitudinal analyses of consequences have shown exercise to have beneficial effects on subsequent functional status and disability (Ostbye, Taylor, Krause, and Scoyoc, 2002; Reynolds and Silverstein, 2003; Jenkins, 2004; Feinglass et al., 2005), as well as survival (Richardson, Kriska, Lantz, and Hayward, 2004).

Preventive health behaviors

The use of preventive care and screening is another important determinant of health that has been studied using HRS, particularly the relationship between preventive medical use and insurance status (Baker et al., 2001; Taylor, van Scoyoc & Hawley, 2002; McWilliams, Zaslavsky, Mearam, and Ayanian, 2003). In the area of women's health, HRS has been used to study mammography and Pap smears (Taylor, van Scoyoc & Hawley, 2002; Ostbye, Greenburg, Taylor and Lee, 2003). Influenza vaccination is important for elders of both genders and an area of racial disparity (Ostbye, Taylor, Lee, Greenberg, and Van Scoyoc, 2003). Health status has mixed effects on the use of preventive care (Wu, 2003).

C. Missing Data

In general the level of missing data on the health behavior and risk factor measures is very low. “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 most of the questions that were asked. Exceptions to this are weight and height and certain health screening questions (particularly cholesterol) where “Don’t know” and “refused” were indicated in less than 3% of the responses. As a result, issues regarding missing or incomplete data should not pose a significant problem for researchers using the health behavior and risk factor measures.

Acknowledgements

The authors would like to thank Eric Danowski for his assistance in preparing the tables.

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APPENDIX A – Health Behavior Question Concordance Across Waves

Height-Weight Questions

	HRS 92	AHD 93	HRS 94	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Current Weight	B41	B22	B45	B22	B22	B22	B22	C139
Height in Inches		B23						
Current Height Feet	B43		B45a	B22D	B22D	B22D	B22D	C141
Current Height Inches	B43		B45a	B22E	B22E	B22E	B22E	C142
Quetelet Body Mass Index		B23						
Current weight compared 1 year ago	B42							
Weight Change				B22A	B22A	B22A	B22A	C140

Height-Weight - Available Questions and Variables

HRS 92

- B41. About how much do you weigh (pounds)? (V515)
- B42. About how much did you weigh a year ago (pounds)? (V516)
- B43. About how tall are you (feet)? (V517)
- B43. About how tall are you (inches)? (V518)

AHD 93

- B22. About how much do you weigh? (V304)
- B23. About how tall are you (feet and inches)? (V306)
- B23. QUETELET BODY MASS INDEX (BMI)

HRS 94

- B45. About how much do you weigh (pounds)? (W462)
- B45a. How tall are you without shoes (feet)? (W463)
- B45a. How tall are you without shoes (inches)? (W464)

AHD 95

- B22. About how much do you weigh (pounds)? (D954)
- B22A. Have you gained or lost 10 or more pounds in the last 2 years? (D955)
- B22D. About how tall are you (feet)? (D958)
- B22E. About how tall are you (inches)? (D959)

HRS 96

- B22. About how much do you weigh (pounds)? (E954)
- B22A. Have you gained or lost 10 or more pounds in the last 2 years? (E955)
- B22D. About how tall are you (feet)? (E958)
- B22E. About how tall are you (inches)? (E959)

HRS 98

- B22. About how much do you weigh (pounds)? (F1291)
- B22A. Have you gained or lost 10 or more pounds in the last 2 years? (F1292)
- B22D. About how tall are you (feet)? (F1295)
- B22E. About how tall are you (inches)? (F1296)

HRS 00

- B22. About how much do you weigh (pounds)? (G1425)
- B22A. Have you gained or lost 10 or more pounds in the last 2 years? (G1426)
- B22D. About how tall are you (feet)? (G1428)
- B22E. About how tall are you (inches)? (G1429)

HRS 02

- C139. About how much do you weigh (pounds)? (HC139)
- C140. Have you gained or lost 10 or more pounds in the last 2 years? (HC140)
- C141. About how tall are you (feet)? (HC141)
- C142. About how tall are you (inches)? (HC142)

Smoking Questions

	HRS 92	AHD 93	HRS 94	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Current Status	B35A	B19	B40	B20	B20	B20	B20	C117
Ever Smoked	B35	B19				B20-1	B20-1	C116
Start Smoking: Age						B20C	B20C	C120
Start Smoking: Year						B20C2	B20C2	C121
Start Smoking: Years Ago						B20C3	B20C3	C122
Quit Smoking: Years Ago	B35C					B20E	B20E1	C125
Quit Smoking: Year						B20E2	B20E2	C126
Quit Smoking: Age						B20E3	B20E3	C127
Highest Quantity Smoked: IMP	B35D							
Cigarettes/Day Currently	B35B	B19A	B40A	B20A	B20A	B20A	B20A	C118
Packs/Day Currently				B20B	B20B*	B20B	B20B	C119
Most Cigarettes/Day						B20D	B20D	C123
Most Packs/Day						B20E	B20E	C124

Smoking – Available Questions and Variables

HRS 92

- B35A. Do you smoke cigarettes now? (V502)
- B35. Have you ever smoked? (V501)
- B35C. About how many years ago did you stop smoking? (V504)
- B35B. About how many cigarettes or packs do you usually smoke in a day now? (V503)
- B35D. When you were smoking the most, about how many cigarettes or packs did you smoke in a day? (V505)

AHD 93

- B19. How would you describe yourself; as a current smoker, as a former smoker, or as someone who has never smoked? (V298)
- B19A. About how many cigarettes or packs do you usually smoke in a day now? (V299)

HRS 94

- B40. Do you smoke cigarettes now? (W452)
- B40A. About how many cigarettes or packs do you usually smoke in a day now? (W453)

AHD 95

- B20. Do you smoke cigarettes now? (D942)
- B20A. About how many CIGARETTES or packs do you usually smoke in a day now? (D943)
- B20B. About how many cigarettes or PACKS do you usually smoke in a day now? (D944)

HRS 96

- B20. Do you smoke cigarettes now? (E942)
- B20A. About how many CIGARETTES or packs do you usually smoke in a day now? (E943)
- B20B. About how many cigarettes or PACKS do you usually smoke in a day now? (E944)

HRS 98

- B20. Do you smoke cigarettes now? (F1267)
- B20-1. Have you ever smoked cigarettes? (F1266)
- B20C. About how old were you when you started smoking? (F1271)
- B20C2. About what year did you start smoking? (F1272)
- B20C3. About how many years ago did you start smoking? (F1273)
- B20E. About how many years ago did you stop smoking? (F1278)
- B20E2. About what year did you stop smoking? (F1279)
- B20E3. About how old were you when you stopped smoking? (F1280)
- B20A. About how many CIGARETTES or packs do you usually smoke in a day now? (F1268)

- B20B. About how many cigarettes or PACKS do you usually smoke in a day now? (F1269)
- B20D. When you were smoking the most, about how many CIGARETTES or packs did you usually smoke in a day? (F1275)
- B20E. When you were smoking the most, about how many cigarettes or PACKS did you usually smoke in a day? (F1276)

HRS 00

- B20. Do you smoke cigarettes now? (G1400)
- B20-1. Have you ever smoked cigarettes? (G1399)
- B20C. About how old were you when you started smoking? (G1404)
- B20C2. About what year did you start smoking? (G1405)
- B20C3. About how many years ago did you start smoking? (G1406)
- B20E1. About how many years ago did you stop smoking? (G1411)
- B20E2. About what year did you stop smoking? (G1412)
- B20E3. About how old were you when you stopped smoking? (G1413)
- B20A. About how many CIGARETTES or packs do you usually smoke in a day now? (G1401)
- B20B. About how many cigarettes or PACKS do you usually smoke in a day now? (G1402)
- B20D. When you were smoking the most, about how many CIGARETTES or packs did you usually smoke in a day? (G1408)
- B20E. When you were smoking the most, about how many cigarettes or PACKS did you usually smoke in a day? (G1409)

HRS 02

- C116. Have you ever smoked cigarettes? (HC116)
- C117. Do you smoke cigarettes now? (HC117)
- C120. About how old were you when you started smoking? (HC120)
- C121. About what year did you start smoking? (HC121)
- C122. About how many years ago did you start smoking? (HC122)
- C125. About how many years ago did you stop smoking? (HC125)
- C126. About what year did you stop smoking? (HC126)
- C127. About how old were you when you stopped smoking? (HC127)
- C118. About how many CIGARETTES or packs do you usually smoke in a day now? (HC118)
- C119. About how many cigarettes or PACKS do you usually smoke in a day now? (HC119)
- C123. When you were smoking the most, about how many CIGARETTES or packs did you usually smoke in a day? (HC123)
- C124. When you were smoking the most, about how many cigarettes or PACKS did you usually smoke in a day? (HC124)

Alcohol Consumption Questions

	HRS 92	AHD 93	HRS 94	HRS 94 (module)	AHD 95	HRS 96	HRS 98	HRS 00	HRS 00 (module)	HRS 02
Currently Drink EtOH	B36	B20	B41		B21	B21	B21	B21	M9-4	C128
Drink Past								B21D0		C134
Drinks/Day	B36A	B20A	B41A		B21B	B21B	B21B	B21B	M9-4A	C130
Drink-# Days/Week					B21A	B21A	B21A	B21A		C129
Binge Drinking					B21C	B21C	B21C	B21C		C131
Define Drink								B21C1		
Felt Should Cut	B37A	B21			B21D		B21D	B21D		C135
Others Criticize	B37B						B21E	B21E		C136
Felt Bad About	B37C						B21F	B21F		C137
Drink for Nerve	B37D						B21G	B21G		C138
FREQ EAT EtOH				W9254						
FREQ UNIT Alc.				W9255						

Drinking - Available Questions and Variables

HRS 92

- B36. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (V506)
- B36A. In general, do you have less than one drink a day, one to two drinks a day, three to four drinks a day, or five or more drinks a day? (V507)
- B37A. Have you ever felt you should cut down on your drinking? (V508)
- B37B. Have people ever annoyed you by criticizing your drinking? (V509)
- B37C. Have you ever felt bad or guilty about drinking? (V510)
- B37D. Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover? (V511)

AHD 93

- B20. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (V301)
- B20A. In general, do you have less than one drink a day, one to two drinks a day, three to four drinks a day, or five or more drinks a day? (V302)
- B21. At any time in your life, have you ever felt that you should cut down on drinking? (V303)

HRS 94

- B41. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (W456)
- B41A. In general, do you have less than one drink a day, one to two drinks a day, three to four drinks a day, or five or more drinks a day? (W457)
- W9254. About how often during the last three months did you eat/drink alcohol including liquor, beer or wine? (W9254)
- W9255. [Indicates unit of time] (W9255)

AHD 95

- B21. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (D949)
- B21A. In the last three months, on average, how many days per week have you had any alcohol to drink? (For example, beer, wine or any drink containing liquor) (D950)
- B21B. In the last three months, on the days you drink, about how many drinks do you have? (D951)
- B21C. In the last three months, on how many days have you had four or more drinks on one occasion? (D952)
- B21D. Have you ever felt that you should cut down on drinking? (D953)

HRS 96

- B21. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (E949)
- B21A. In the last three months, on average, how many days per week have you had any alcohol to drink? (For example, beer, wine or any drink containing liquor) (E950)
- B21B. In the last three months, on the days you drink, about how many drinks do you have? (E951)
- B21C. In the last three months, on how many days have you had four or more drinks on one occasion? (E952)

HRS 98

- B21. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (F1282)
- B21A. In the last three months, on average, how many days per week have you had any alcohol to drink? (For example, beer, wine or any drink containing liquor) (F1283)
- B21B. In the last three months, on the days you drink, about how many drinks do you have? (F1284)
- B21C. In the last three months, on how many days have you had four or more drinks on one occasion? (F1285)
- B21D. Have you ever felt that you should cut down on your drinking? (F1287)
- B21E. Have people ever annoyed you by criticizing your drinking? (F1288)
- B21F. Have you ever felt bad or guilty about drinking? (F1289)
- B21G. Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover? (F1290)

HRS 00

- B21. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (G1415)
- B21A. In the last three months, on average, how many days per week have you had any alcohol to drink? (For example, beer, wine or any drink containing liquor) (G1416)
- B21B. In the last three months, on the days you drink, about how many drinks do you have? (G1417)
- B21C. In the last three months, on how many days have you had four or more drinks on one occasion? (G1418)
- B21C1. What do you consider a drink - that is, when you say that on the days that you drink, you have about *NUMBER OF DRINKS (B21b)* [drink, what is that drink/drinks, what are each of those drinks]: a can or bottle of beer or ale; a glass of wine; a shot of spirits; a small glass of sherry or liqueur; or what? (G1419)
- B21D0. Have you ever drunk alcoholic beverages? (G1420)
- M9-4. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (G6952)
- M9-4A. In general, do you have less than one drink a day, one to two drinks a day, three to four drinks a day, or five or more drinks a day? (G6953)
- B21D. Have you ever felt you should cut down on your drinking? (G1421)
- B21E. Have people ever annoyed you by criticizing your drinking? (G1422)
- B21F. Have you ever felt bad or guilty about drinking? (G1423)
- B21G. Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover? (G1424)

HRS 02

- C128. Do you ever drink any alcoholic beverages such as beer, wine or liquor? (HC128)
- C129. In the last three months, on average, how many days per week have you had any alcohol to drink? (For example, beer, wine or any drink containing liquor) (HC129)
- C130. In the last three months, on the days you drink, about how many drinks do you have? (HC130)
- C131. In the last three months, on how many days have you had four or more drinks on one occasion? (HC131)
- C134. Have you ever drunk alcoholic beverages? (HC134)
- C135. Have you ever felt you should cut down on your drinking? (HC135)

- C136. Have people ever annoyed you by criticizing your drinking? (HC136)
- C137. Have you ever felt bad or guilty about drinking? (HC137)
- C138. Have you ever taken a drink first thing in the morning to steady your nerves or get rid of a hangover? (HC138)

Exercise Questions

	HRS 92	AHD 93	HRS 94	HRS 94 (module)	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02	HRS 02 (module)
Heavy House Work: IMP	B40									
Light Physical	B38		B42							
Amount Light Physical			B42A							
Heavy Physical	B39		B43			B19Q	B19Q	B19Q	C115	
Amount Heavy Physical			B43A							
Light Physical FREQ				W9201						
Light Physical UNIT				W9202						
Type 1 Light Physical				W9203						
Type 2 Light Physical				W9204						
Length Light Physical				W9205						
Per Light Physical				W9206						
ELSA Physical Activity										V305
ELSA Moderate Activity										V306
ELSA Mild Activity										V307

Exercise – Available Questions and Variables

HRS 92

- B38. The next few questions are about exercise. Looking at the answer categories at the bottom of page 1, how often do you participate in light physical activity--such as walking, dancing, gardening, golfing, bowling, etc.? (Would you say 3 or more times a week, 1 or 2 times a week, 1 to 3 times a month, less than once a month, or never?) (V512)
- B39. How often do you participate in vigorous physical exercise or sports -- such as aerobics, running, swimming, or bicycling? (Would you say 3 or more times a week, 1 or 2 times a week, 1 to 3 times a month, less than once a month, or never?) (V513)
- B40. How often do you do heavy housework like scrubbing floors or washing windows? (V514)

HRS 94

- B42. The next few questions are about physical activities. Please tell me how often you participate in light physical activity--such as walking, dancing, gardening, golfing, bowling, etc? (W458)
- B42A. Was that per week, month, year, day or what? (W459)
- B43. How often do you participate in vigorous physical activity or sports--such as heavy housework, aerobics, running, swimming, or bicycling? (V460)
- B43A. Was that per week, month, year, day or what? (W461)
- W9201. Please tell me how often you do light physical activity--such as walking, dancing, gardening, golfing, or bowling? [TIMES/FREQUENCY] (W9201)
- W9202. Please tell me how often you do light physical activity--such as walking, dancing, gardening, golfing, or bowling? [PER/UNIT] (W9202)
- W9203. What kind of light physical activity do you do the most often? (W9203)
- W9204. What kind of light physical activity do you do the second most often? (W9204)
- W9205. Each time you [FILL FROM 0-1a], about how long do you spend doing it? [FREQUENCY] (W9205)
- W9206. Each time you [FILL FROM 0-1a], about how long do you spend doing it? [UNIT] (W9206)

AHD 95

- B19Q. On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor. (D934)

HRS 96

- B19Q. On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor. (E934)

HRS 98

- B19Q. On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor. (F1262)

HRS 00

- B19Q. On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor. (G1395)

HRS 02

- C115. On average over the last 12 months have you participated in vigorous physical activity or exercise three times a week or more? By vigorous physical activity, we mean things like sports, heavy housework, or a job that involves physical labor. (HC115)
- V305. We would like to know the type and amount of physical activity involved in your daily life. How often do you take part in sports or activities that are vigorous, such as running or jogging, swimming, cycling, aerobics or gym workout, tennis, or digging with a spade or shovel: more than once a week, once a week, one to three times a week, or hardly ever or never? (HV305)
- V306. And how often do you take part in sports or activities that are moderately energetic such as, gardening, cleaning the car, walking at a moderate pace, dancing, floor or stretching exercises : more than once a week, once a week, one to three times a week, or hardly ever or never? (HV306)
- V307. And how often do you take part in sports or activities that are mildly energetic, such as vacuuming, laundry, home repairs: more than once a week, once a week, one to three times a week, or hardly ever or never? (HV307)

Preventive Health Behavior Questions

	AHD 95	HRS 96	HRS 98	HRS 00	HRS 02
Prostate Screening	B19K	B19K	B19K	B19K	C114
Mammogram	B19G	B19G	B19G	B19G	C112
Breast Self-Exams	B19F	B19F	B19F	B19F	C111
Cholesterol Screening	B19C	B19C	B19C	B19C	C110
Pap Smear	B19H	B19H	B19H	B19H	C113
Flu Shot	B19B	B19B	B19B	B19B	C109

Preventive Health Behavior – Available Questions and Variables

AHD 95

- B19K. An examination of your prostate to screen for cancer? (D929)
- B19G. Did you have a mammogram or x-ray of the breast to search for cancer in the last two years? (D926)
- B19F. Do you check your breasts for lumps monthly? (D925)
- B19C. A blood test for cholesterol? (D920)
- B19H. A pap smear? (D927)
- B19B. A flu shot? (D919)

HRS 96

- B19K. An examination of your prostate to screen for cancer? (E929)
- B19G. Did you have a mammogram or x-ray of the breast to search for cancer in the last two years? (E927)
- B19F. Do you check your breasts for lumps monthly? (E926)
- B19C. A blood test for cholesterol? (E925)
- B19H. A pap smear? (E928)
- B19B. A flu shot? (E924)

HRS 98

- B19K. An examination of your prostate to screen for cancer? (F1257)
- B19G. Did you have a mammogram or x-ray of the breast to search for cancer in the last two years? (F1255)
- B19F. Do you check your breasts for lumps monthly? (F1254)
- B19C. A blood test for cholesterol? (F1253)
- B19H. A pap smear? (F1256)
- B19B. A flu shot? (F1252)

HRS 00

- B19K. An examination of your prostate to screen for cancer? (G1390)
- B19G. Did you have a mammogram or x-ray of the breast to search for cancer in the last two years? (G1388)
- B19F. Do you check your breasts for lumps monthly? (G1387)
- B19C. A blood test for cholesterol? (G1386)
- B19H. A pap smear? (G1389)
- B19B. A flu shot? (G1385)

HRS 02

- C114. An examination of you prostate to screen for cancer? (HC114)
- C112. Did you have a mammogram or x-ray of the breast to search for cancer in the last two years? (HC112)
- C111. Do you check your breasts for lumps monthly? (HC111)
- C110. A blood test for cholesterol? (HC110)
- C113. A pap smear? (HC113)
- C109. A flu shot? (HC109)

APPENDIX B – Health Behavior Prevalence Across Waves

The following tables present the prevalence of health behaviors 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. Prevalence of Current Smoking – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9766	26.9	8820	24.0	8632	22.0	8230	19.8	7770	17.8	7522	16.0
Sex												
Male	4596	28.4	4086	25.7	3938	23.8	3777	20.8	3557	18.9	3422	17.1
Female	5170	25.6	4734	22.5	4694	20.5	4453	18.9	4213	16.9	4100	14.9
Race and Hispanic Ethnicity												
Hispanic	905	25.2	760	21.7	812	21.1	732	17.0	688	16.3	691	13.6
Non-Hispanic White	6980	26.5	6407	24.0	6207	21.7	6012	19.8	5685	17.5	5500	15.8
Non-Hispanic Black	1677	31.4	1478	26.1	1440	25.4	1327	21.5	1242	21.3	1190	19.1
Non-Hispanic Other	204	25.6	175	22.4	173	20.4	159	21.1	155	19.6	141	15.5

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

Table 3. Prevalence of Drinking – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9766	63.5	8820	58.0	8449	54.6	8229	52.5	7770	51.2	7521	50.4
Sex												
Male	4596	70.4	4085	65.8	3895	63.0	3777	60.7	3557	59.8	3422	58.7
Female	5170	57.2	4735	50.9	4554	47.0	4452	45.4	4213	43.8	4099	43.3
Race and Hispanic Ethnicity												
Hispanic	905	52.3	760	44.0	744	42.2	732	39.3	688	40.8	691	36.5
Non-Hispanic White	6980	66.1	6408	61.1	6162	57.7	6011	55.9	5686	54.5	5500	53.6
Non-Hispanic Black	1677	53.9	1477	44.8	1380	41.0	1327	36.3	1241	33.9	1189	36.1
Non-Hispanic Other	204	46.6	175	42.6	163	37.4	159	41.1	155	42.2	141	38.7

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

Table 4. Prevalence of Exercise – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	%	N	%	N	%	N	%	N	%	N	%
Total	9766	51.9	10201	21.1	8447	51.2	8227	48.1	7770	48.1	7518	46.5
Sex												
Male	4596	56.7	4807	22.9	3896	56.4	3776	52.2	3558	52.8	3421	52.8
Female	5170	47.5	5394	19.3	4551	46.6	4451	44.6	4212	44.1	4097	41.2
Race and Hispanic Ethnicity												
Hispanic	905	31.6	957	19.2	744	40.5	732	41.8	688	42.0	691	36.3
Non-Hispanic White	6980	55.5	7276	21.5	6160	53.0	6010	50.0	5685	49.7	5497	48.7
Non-Hispanic Black	1677	37.4	1753	17.6	1380	43.3	1327	38.6	1242	40.3	1189	37.0
Non-Hispanic Other	204	46.6	215	26.3	163	52.3	158	43.0	155	44.6	141	42.0

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

Table 5. Prevalence of Flu Shot – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	8441	37.7	7764	56.4
Sex				
Male	3893	35.5	3553	53.7
Female	4548	39.7	4211	58.6
Race and Hispanic Ethnicity				
Hispanic	743	31.6	687	47.0
Non-Hispanic White	6157	39.0	5683	58.3
Non-Hispanic Black	1378	29.9	1239	46.4
Non-Hispanic Other	163	44.2	155	60.2

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

Table 6. Prevalence of Cholesterol Screening – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	8431	70.4	7744	77.7
Sex				
Male	3889	68.8	3547	78.1
Female	4542	71.8	4197	77.4
Race and Hispanic Ethnicity				
Hispanic	741	68.1	688	76.3
Non-Hispanic White	6150	70.9	5667	77.7
Non-Hispanic Black	1377	68.8	1235	78.1
Non-Hispanic Other	163	67.0	154	81.1

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

Table 7. Prevalence of Breast Self Examination – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	4543	62.1	4206	65.2
Sex				
Male	0	0	0	0
Female	4543	62.1	4206	65.2
Race and Hispanic Ethnicity				
Hispanic	416	52.3	375	59.8
Non-Hispanic White	3220	61.5	3001	65.4
Non-Hispanic Black	823	72.2	748	65.7
Non-Hispanic Other	84	65.2	82	74.5

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

Table 8. Prevalence of Mammogram – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	4550	71.6	4207	77.4
Sex				
Male	0	0	0	0
Female	4550	71.6	4207	77.4
Race and Hispanic Ethnicity				
Hispanic	416	62.6	375	74.0
Non-Hispanic White	3229	72.5	3001	77.8
Non-Hispanic Black	821	72.4	749	77.4
Non-Hispanic Other	84	66.6	82	75.7

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

Table 9. Prevalence of Pap Smear – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	4545	67.9	4205	68.8
Sex				
Male	0	0	0	0
Female	4545	67.9	4205	68.8
Race and Hispanic Ethnicity				
Hispanic	416	62.7	375	68.8
Non-Hispanic White	3223	68.5	3001	68.6
Non-Hispanic Black	822	67.9	747	68.6
Non-Hispanic Other	84	61.8	82	75.8

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

Table 10. Prevalence of Prostate Examination – HRS Original Cohort

	1996		2000	
	HRS		HRS	
	N	%	N	%
Total	3886	65.1	3541	75.3
Sex				
Male	3886	65.1	3541	75.3
Female	0	0	0	0
Race and Hispanic Ethnicity				
Hispanic	328	47.7	312	64.5
Non-Hispanic White	2927	67.1	2673	76.2
Non-Hispanic Black	552	59.8	483	74.7
Non-Hispanic Other	79	60.3	73	74.7

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

Table 11. BMI Means – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Total	9765	27.0	8721	27.1	8041	27.3	7665	27.4	7113	27.6	6806	27.7
Sex												
Male	4595	27.2	4072	27.3	3730	27.5	3532	27.6	3261	27.7	3102	27.9
Female	5170	26.8	4649	26.9	4311	27.1	4133	27.3	3852	27.5	3704	27.6
Race and Hispanic Ethnicity												
Hispanic	905	27.8	753	27.9	673	28.0	626	28.0	585	28.2	575	28.4
Non-Hispanic White	6980	26.8	6336	26.8	5910	27.1	5661	27.2	5266	27.4	5047	27.5
Non-Hispanic Black	1676	28.5	1459	28.8	1306	29.0	1231	29.1	1124	29.2	1059	29.4
Non-Hispanic Other	204	25.7	173	25.7	152	25.4	147	25.7	138	25.8	125	26.1

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

Table 12. BMI 30+ (Obesity Cut-point) Means – HRS Original Cohort

	1992		1994		1996		1998		2000		2002	
	HRS		HRS		HRS		HRS		HRS		HRS	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Total	2335	34.1	2183	33.8	2090	34.0	2166	34.0	2658	34.5	2643	34.5
Sex												
Male	985	33.3	958	33.1	913	33.4	960	33.3	1460	34.3	1452	34.5
Female	1350	34.6	1225	34.5	1177	34.6	1206	34.6	1198	34.7	1191	34.6
Race and Hispanic Ethnicity												
Hispanic	254	33.9	224	33.5	204	33.4	215	33.9	224	34.4	247	33.9
Non-Hispanic White	1460	33.9	1394	33.7	1374	33.9	1428	33.9	1865	34.4	1835	34.5
Non-Hispanic Black	584	34.8	536	34.8	489	34.8	488	34.8	531	35.0	522	35.1
Non-Hispanic Other	37	34.5	29	34.4	23	34.8	35	34.0	38	33.9	39	34.5

Sample Ns are based on unweighted data; proportions are based on weighted data 2The following tables present the prevalence of health behaviors from 1993 – 2002 for the AHEAD Original Cohort.

Table 13. Prevalence of Smoking – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		HRS	
	N	%	N	%	N	%	N	%	N	%
Total	7386	9.8	6265	7.4	5352	6.7	4448	5.5	3556	4.2
Sex										
Male	2881	12.0	2398	8.1	2050	7.6	1664	5.7	1295	4.1
Female	4505	8.3	3867	6.9	3302	6.1	2784	5.4	2261	4.3
Race and Hispanic Ethnicity										
Hispanic	396	11.2	326	10.6	308	9.1	276	6.6	214	6.2
Non-Hispanic White	5911	9.5	5050	6.9	4273	6.4	3546	5.3	2860	4.0
Non-Hispanic Black	1011	12.5	822	10.9	700	8.7	560	7.2	433	5.8
Non-Hispanic Other	68	5.0	67	6.2	71	6.8	66	6.1	49	6.0

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

Table 14. Prevalence of Drinking – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		HRS	
	N	%	N	%	N	%	N	%	N	%
Total	7389	46.2	6265	40.0	5352	37.9	4447	35.4	3555	35.2
Sex										
Male	2883	55.4	2398	49.8	2050	48.7	1664	45.0	1294	44.9
Female	4506	40.0	3867	33.4	3302	31.0	2783	29.4	2261	29.5
Race and Hispanic Ethnicity										
Hispanic	396	31.1	326	22.7	308	17.2	276	13.4	214	12.4
Non-Hispanic White	5914	48.8	5050	42.3	4273	40.5	3545	38.3	2859	38.0
Non-Hispanic Black	1011	26.0	822	23.6	700	20.8	560	17.5	433	17.7
Non-Hispanic Other	68	30.8	67	20.1	71	23.6	66	17.6	49	19.3

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

Table 15. Prevalence of Exercise – AHEAD Original Cohort

	1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		HRS	
	N	%	N	%	N	%	N	%
Total	6264	31.3	5348	31.0	4448	30.4	3556	27.5
Sex								
Male	2399	38.2	2047	37.5	1665	36.6	1295	35.5
Female	3865	26.6	3301	26.9	2783	26.5	2261	22.8
Race and Hispanic Ethnicity								
Hispanic	326	18.4	308	25.8	276	21.2	214	17.2
Non-Hispanic White	5050	32.5	4271	32.4	3545	31.8	2860	28.9
Non-Hispanic Black	821	23.3	699	19.8	561	19.6	433	17.6
Non-Hispanic Other	67	28.4	70	20.5	66	24.3	49	24.3

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

Table 16. Prevalence of Flu Shot – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	6250	68.2	4432	77.2
Sex				
Male	2394	70.2	1659	81.1
Female	3856	66.9	2773	74.7
Race and Hispanic Ethnicity				
Hispanic	324	60.4	274	68.8
Non-Hispanic White	5040	70.3	3536	79.1
Non-Hispanic Black	819	50.1	556	62.0
Non-Hispanic Other	67	51.8	66	67.6

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

Table 17. Prevalence of Cholesterol Screening – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	6161	73.7	4385	76.7
Sex				
Male	2369	73.8	1647	81.2
Female	3792	73.7	2738	73.8
Race and Hispanic Ethnicity				
Hispanic	324	77.4	273	82.1
Non-Hispanic White	4974	74.4	3495	77.2
Non-Hispanic Black	798	67.6	551	71.4
Non-Hispanic Other	65	58.1	66	59.6

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

Table 18. Prevalence of Self-Breast Exam – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	3832	50.9	2757	48.3
Sex				
Male	0	0	0	0
Female	3832	50.9	2757	48.3
Race and Hispanic Ethnicity				
Hispanic	200	44.8	175	44.1
Non-Hispanic White	3051	50.7	2179	48.5
Non-Hispanic Black	544	56.7	369	48.3
Non-Hispanic Other	37	37.2	34	42.2

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

Table 19. Prevalence of Mammogram – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	3838	54.9	2754	59.7
Sex				
Male	0	0	0	0
Female	3838	54.9	2754	59.6
Race and Hispanic Ethnicity				
Hispanic	201	58.9	173	55.8
Non-Hispanic White	3059	54.5	2178	60.1
Non-Hispanic Black	542	59.1	367	56.7
Non-Hispanic Other	38	39.9	36	59.2

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

Table 20. Prevalence of Pap Smear – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	3819	42.5	2750	41.1
Sex				
Male	0	0	0	0
Female	3819	42.5	2750	41.1
Race and Hispanic Ethnicity				
Hispanic	198	48.3	174	47.7
Non-Hispanic White	3048	41.8	2175	40.8
Non-Hispanic Black	537	48.5	365	43.0
Non-Hispanic Other	38	35.9	36	32.4

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

Table 21. Prevalence of Prostate Examination – AHEAD Original Cohort

	1995		2000	
	AHEAD		AHEAD	
	N	%	N	%
Total	2382	73.4	1654	75.2
Sex				
Male	2382	73.4	1654	75.2
Female	0	0	0	0
Race and Hispanic Ethnicity				
Hispanic	123	59.6	98	67.8
Non-Hispanic White	1962	74.8	1344	76.7
Non-Hispanic Black	272	65.3	183	64.2
Non-Hispanic Other	28	54.4	30	62.1

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

Table 22. BMI Means – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		HRS	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Total	7314	25.3	6203	25.1	5141	25.0	4231	25.0	3383	24.9
Sex										
Male	2869	25.5	2387	25.5	1930	25.4	1539	25.5	1197	25.3
Female	4445	25.1	3816	24.8	3211	24.7	2692	24.7	2186	24.6
Race and Hispanic Ethnicity										
Hispanic	384	26.4	315	26.2	284	25.5	245	25.9	185	25.8
Non-Hispanic White	5881	25.1	5023	24.9	4138	24.9	3418	24.9	2758	24.7
Non-Hispanic Black	983	26.7	800	26.6	655	26.1	509	26.1	395	26.0
Non-Hispanic Other	66	25.8	65	25.7	64	25.4	59	25.0	45	24.9

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

Table 23. BMI 30+ (Obesity cut-point) Means – AHEAD Original Cohort

	1993		1995		1998		2000		2002	
	AHEAD		AHEAD		AHEAD		AHEAD		HRS	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Total	972	33.3	820	33.2	659	33.0	554	33.1	445	33.2
Sex										
Male	294	32.8	263	32.7	204	32.7	199	32.7	153	32.7
Female	678	33.6	557	33.4	455	33.1	355	33.4	292	33.4
Race and Hispanic Ethnicity										
Hispanic	73	33.5	59	33.9	43	33.4	46	32.1	34	32.7
Non-Hispanic White	666	33.3	581	33.0	463	32.9	395	33.1	313	33.2
Non-Hispanic Black	222	33.3	170	33.7	143	33.1	103	33.7	91	33.6
Non-Hispanic Other	11	34.5	10	33.7	10	34.1	10	33.7	7	33.2

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

Table 24. Prevalence of Smoking – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18465	15.8	16735	14.0	15299	12.5
Sex						
Male	8014	17.2	7205	15.2	6549	13.9
Female	10451	14.7	9530	13.1	8750	11.4
Age						
55-64 yrs	7376	22.7	6991	20.0	6817	17.8
65-74 yrs	5741	14.7	5298	12.5	4927	10.6
75-84 yrs	3850	7.6	3394	6.3	2837	4.8
85+ yrs	1498	3.2	1052	2.2	718	0.9
Race and Hispanic Ethnicity						
Hispanic	1379	15.2	1284	13.0	1195	12.1
Non-Hispanic White	14193	15.3	12860	13.5	11757	12.1
Non-Hispanic Black	2559	19.8	2276	18.4	2062	16.1
Non-Hispanic Other	334	19.0	315	17.9	285	14.1

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

Table 25. Prevalence of Drinking – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18463	48.5	16734	46.5	15297	45.9
Sex						
Male	8013	57.4	7206	55.6	6548	54.7
Female	10450	41.4	9528	39.3	8749	39.1
Age						
55-64 yrs	7375	54.3	6991	51.9	6816	51.5
65-74 yrs	5740	50.1	5298	47.5	4927	45.2
75-84 yrs	3850	39.9	3393	36.8	945	36.0
85+ yrs	1498	30.8	1052	29.2	718	30.9
Race and Hispanic Ethnicity						
Hispanic	1379	32.7	1284	33.0	1195	29.8
Non-Hispanic White	14192	51.6	12860	49.7	11756	49.2
Non-Hispanic Black	2558	32.0	2275	29.2	2061	29.9
Non-Hispanic Other	334	39.7	315	33.7	285	32.9

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

Table 26. Prevalence of Exercise – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	%	N	%	N	%
Total	18458	42.7	16734	42.6	15292	40.6
Sex						
Male	8009	47.9	7208	48.3	6546	47.7
Female	10449	38.5	9526	38.1	8746	35.0
Age						
55-64 yrs	7373	48.7	6992	48.5	6812	46.6
65-74 yrs	5741	44.9	5296	43.9	4925	40.8
75-84 yrs	3847	34.5	3394	32.6	2837	29.4
85+ yrs	1497	18.7	1052	20.8	718	16.7
Race and Hispanic Ethnicity						
Hispanic	1379	39.4	1283	36.8	1195	31.0
Non-Hispanic White	14189	43.9	12859	44.0	11751	42.3
Non-Hispanic Black	2558	34.1	2277	34.1	2061	31.4
Non-Hispanic Other	332	38.9	315	40.2	285	39.8

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

Table 27. BMI Means – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	MEAN	N	MEAN	N	MEAN
Total	18131	26.6	16412	27.0	14955	27.1
Sex						
Male	7941	26.9	7131	27.8	6472	28.0
Female	10190	26.4	9281	26.4	8483	26.5
Age						
55-64 yrs	7248	27.5	6845	28.1	6658	28.2
65-74 yrs	5645	26.8	5221	27.1	4835	27.1
75-84 yrs	3770	25.3	3312	25.3	2766	25.2
85+ yrs	1468	23.8	1034	23.9	696	23.5
Race and Hispanic Ethnicity						
Hispanic	1330	27.3	1235	27.7	1145	27.8
Non-Hispanic White	13972	26.4	12659	26.8	11536	26.9
Non-Hispanic Black	2501	28.2	2207	28.7	1995	28.8
Non-Hispanic Other	328	26.4	311	26.6	279	26.8

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

Table 28. BMI 30+ (Obesity cut-point) Means – HRS Respondents (55+ Years)

	1998		2000		2002	
	HRS		HRS		HRS	
	N	MEAN	N	MEAN	N	MEAN
Total	3913	33.9	4349	34.3	4170	34.4
Sex						
Male	1623	33.3	2219	34.0	2112	34.2
Female	2290	34.5	2130	34.7	2058	34.6
Age						
55-64 yrs	1991	34.3	2381	34.8	2412	34.7
65-74 yrs	1263	33.8	1414	34.0	1313	34.1
75-84 yrs	531	33.0	472	33.1	332	33.2
85+ yrs	128	32.6	82	33.4	50	33.3
Race and Hispanic Ethnicity						
Hispanic	338	33.8	352	34.3	775	35.0
Non-Hispanic White	2702	33.8	3119	34.2	2970	34.3
Non-Hispanic Black	808	34.8	810	35.1	357	34.1
Non-Hispanic Other	65	34.8	68	34.8	68	34.7

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

TABLE 29. Prevalence of Smoking – HRS cohort, NHIS cohort, and NHANES cohort (age 55+)

	HRS 1998		HRS 2000		HRS 2002		NHIS 1998		NHIS 2000		NHIS 2002		NHANES 1999		NHANES 2001	
Total	18465	15.8	16735	14.0	15299	12.5	9989	15.4	9975	15.8	9718	13.9	274	14.6	277	13.4
Sex																
Male	8014	17.2	7205	15.2	6549	13.9	4041	16.5	4021	17.3	3893	15.1	159	16.8	163	15.1
Female	10451	14.7	9530	13.1	8750	11.4	5948	14.6	5954	13.8	5825	12.9	115	12.6	114	12.1
Age																
55-64 yrs	7376	22.7	6991	20.0	6817	17.8	3700	22.0	3847	22.9	3937	19.7	133	20.1	145	19.9
65-74 yrs	5741	14.7	5298	12.5	4927	10.6	3387	14.4	3216	13.7	2928	11.9	100	14.0	90	11.9
75-84 yrs	3850	7.6	3394	6.3	2837	4.8	2262	7.2	2286	7.2	2200	7.3	37	7.4	36	6.1
85+ yrs	1498	3.2	1052	2.2	718	0.9	640	3.2	626	4.5	653	2.3	4	2.2	6	1.5
Race and Hispanic Ethnicity																
Mexican American													56	10.8	45	15.4
Hispanic	1379	15.2	1284	13.0	1195	12.1	937	14.8	1032	14.3	1000	11.4	12	9.9	17	27.8
Non-Hispanic White	14193	15.3	12860	13.5	11757	12.1	7668	15.2	6402	14.8	7385	13.9	135	14.7	137	11.8
Non-Hispanic Black	2559	19.8	2276	18.4	2062	16.1	1153	19.5	1217	18.2	1110	16.5	66	20.0	71	19.8
Non-Hispanic Other	334	19.0	315	17.9	285	14.1	231	11.0	214	16.4	223	11.8	5	9.1	7	15.1

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

TABLE 30. Prevalence of Drinking – HRS cohort, NHIS cohort, and NHANES cohort (age 55+)

	HRS 1998		HRS 2000		HRS 2002		NHIS 1998		NHIS 2000		NHIS 2002		NHANES 1999		NHANES 2001	
Total	18463	48.5	16734	46.5	15297	45.9	9935	51.5	9914	49.1	9680	52.6	1051	62.4	1109	63.1
Sex																
Male	8013	57.4	7206	55.6	6548	54.7	4018	68.48	3995	66.3	3875	67.6	664	75.5	698	79.9
Female	10450	41.4	9528	39.3	8749	39.1	5917	37.9	5954	37.5	5805	40.4	387	50.7	411	49.6
Age																
55-64 yrs	7375	54.3	6991	51.9	6816	51.5	3674	57.5	3821	56.7	3920	59.3	406	70.8	415	69.3
65-74 yrs	5740	50.1	5298	47.5	4927	45.2	3374	51.7	3191	48.7	2919	50.8	382	61.3	358	61.0
75-84 yrs	3850	39.9	3393	36.8	945	36.0	2251	45.0	2280	42.1	2186	44.9	214	48.9	259	56.2
85+ yrs	1498	30.8	1052	29.2	718	30.9	636	28.9	622	30.1	655	37.1	49	43.8	77	49.1
Race and Hispanic Ethnicity																
Mexican American													245	56.6	161	57.5
Hispanic	1379	32.7	1284	33.0	1195	29.8	927	43.3	1030	41.0	993	41.0	59	54.1	26	42.7
Non-Hispanic White	14192	51.6	12860	49.7	11756	49.2	7641	53.6	7459	52.2	7363	55.3	566	64.7	739	66.6
Non-Hispanic Black	2558	32.0	2275	29.2	2061	29.9	1139	41.5	1212	38.6	1104	40.1	164	52.9	168	52.2
Non-Hispanic Other	334	39.7	315	33.7	285	32.9	228	38.2	213	40.4	220	40.4	17	48.2	15	32.4

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

TABLE 31. BMI Means – HRS cohort, NHIS cohort, and NHANES cohort (age 55+)

	HRS 1998		HRS 2000		HRS 2002		NHIS 1998		NHIS 2000		NHIS 2002		NHANES 1999		NHANES 2001	
Total	18131	26.6	16412	27.0	14955	27.1	9760	26.6	9639	26.9	9357	27.3	1961	27.5	2078	27.7
Sex																
Male	7941	26.9	7131	27.8	6472	28.0	4008	26.9	3968	27.2	3842	27.6	983	27.4	1018	27.6
Female	10190	26.4	9281	26.4	8483	26.5	5752	26.4	5671	26.7	5515	26.9	978	27.5	1060	27.7
Age																
55-64 yrs	7248	27.5	6845	28.1	6658	28.2	3607	27.4	3715	27.64	3767	28.0	656	28.2	678	28.7
65-74 yrs	5645	26.8	5221	27.1	4835	27.1	3319	26.7	3115	27.11	2832	27.6	674	27.7	644	27.8
75-84 yrs	3770	25.3	3312	25.3	2766	25.2	2219	25.5	2212	25.8	2129	26.1	477	26.3	538	26.2
85+ yrs	1468	23.8	1034	23.9	696	23.5	615	23.8	597	24.4	629	24.1	154	24.3	218	25.1
Race and Hispanic Ethnicity																
Mexican American													434	28.0	299	27.6
Hispanic	1330	27.3	1235	27.7	1145	27.8	911	27.6	988	27.8	929	27.6	106	28.0	70	26.2
Non-Hispanic White	13972	26.4	12659	26.8	11536	26.9	7498	26.4	7269	26.7	7137	27.1	1045	27.2	1304	27.7
Non-Hispanic Black	2501	28.2	2207	28.7	1995	28.8	1127	28.2	1173	28.4	1078	29.1	333	29.2	353	29.0
Non-Hispanic Other	328	26.4	311	26.6	279	26.8	224	24.9	209	25.0	213	24.9	43	27.0	52	25.2

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

TABLE 32. Prevalence of Flu shot – HRS and NHIS cohorts (age 55+)

	HRS 2000		NHIS 1998	
Total	16687	64.4	9929	52.4
Sex				
Male	7186	63.0	4026	49.9
Female	9501	65.5	5903	54.5
Age				
55-64 yrs	6965	50.5	3672	36.7
65-74 yrs	5289	73.2	3375	60.1
75-85 yrs	3389	78.0	2253	67.3
85+ yrs	1044	73.9	629	67.4
Race and Hispanic Ethnicity				
Hispanic	1273	52.4	924	38.4
Non-Hispanic White	12841	66.9	7638	55.0
Non-Hispanic Black	2261	50.3	1139	38.1
Non-Hispanic Other	312	59.9	228	51.2

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

TABLE 33. Prevalence of Cholesterol Screening – HRS and NHIS cohorts (age 55+)

	HRS 2000		NHIS 1998	
Total	16609	77.4	9250	90.0
Sex				
Male	7160	78.5	3769	89.3
Female	9449	76.6	5481	90.5
Age				
55-64 yrs	6951	75.3	3499	88.5
65-74 yrs	5272	80.8	3188	92.1
75-85 yrs	3359	79.2	2041	90.8
85+ yrs	1027	66.2	522	83.6
Race and Hispanic Ethnicity				
Hispanic	1272	76.8	852	81.6
Non-Hispanic White	12774	77.7	7172	91.1
Non-Hispanic Black	2251	75.8	1012	86.4
Non-Hispanic Other	312	75.6	214	85.8

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

TABLE 34. Prevalence of Breast Self Exam – HRS and NHIS cohorts (age 55+)

	HRS 2000		NHIS 1998	
Total	9478	60.1	5760	87.8
Sex				
Male	0	0	0	0
Female	9478	60.1	5760	87.8
Age				
55-64 yrs	3840	64.0	2013	91.7
65-74 yrs	2878	64.9	1931	88.2
75-85 yrs	2059	51.7	1381	83.7
85+ yrs	701	34.9	435	76.9
Race and Hispanic Ethnicity				
Hispanic	729	56.8	531	79.3
Non-Hispanic White	7195	59.9	4407	89.1
Non-Hispanic Black	1385	64.1	698	85.5
Non-Hispanic Other	169	59.3	124	76.3

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

TABLE 35. Prevalence of Mammogram – HRS and NHIS cohorts (age 55+)

	HRS 2000		NHIS 1998	
Total	9477	72.5	5766	84.2
Sex				
Male	0	0	0	0
Female	9477	72.5	5766	84.2
Age				
55-64 yrs	3840	77.3	2014	87.7
65-74 yrs	2880	77.0	1936	85.9
75-85 yrs	2054	64.4	1385	80.2
85+ yrs	703	41.8	431	67.8
Race and Hispanic Ethnicity				
Hispanic	727	69.6	532	79.3
Non-Hispanic White	7195	72.5	4411	85.2
Non-Hispanic Black	1384	74.5	699	80.0
Non-Hispanic Other	171	70.8	124	77.2

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

TABLE 36. Prevalence of Pap Smear – HRS and NHIS cohorts (age 55+)

	HRS 2000		NHIS 1998	
Total	9466	59.6	5755	92.7
Sex				
Male	0	0	0	0
Female	9466	59.6	5755	92.7
Age				
55-64 yrs	3837	70.8	2013	96.8
65-74 yrs	2876	60.7	1935	93.4
75-85 yrs	2052	45.6	1379	88.2
85+ yrs	701	24.3	428	79.8
Race and Hispanic Ethnicity				
Hispanic	727	62.8	525	84.6
Non-Hispanic White	7189	59.1	4402	93.6
Non-Hispanic Black	1380	61.2	704	91.6
Non-Hispanic Other	170	63.8	124	83.8

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

