Research Highlights
in the Demography and Economics of Aging

The Health and Retirement Study
Part I - History and Overview

SERIES OUTLINE

This issue of *Research Highlights* is the first in a three-part series on the Health and Retirement Study, or HRS. This issue, Part I, is an introductory overview of the history, purpose, and composition of HRS. Part II contains a broad selection of statistical findings from the 1998 HRS interviews. Part III looks at some of the many research topics that are being explored with HRS data and some of the diverse analytical approaches that can be applied to HRS data. Both the statistical findings in Part II and the research snapshots in Part III draw in part on an upcoming *HRS Databook*.

As the population ages, will families be prepared for the economic and health care needs of later life? How are people affected by major events of later life, such as retirement, declining health, and widowhood? How will potential reforms to Social Security and Medicare affect the circumstances of older Americans? What are the particular circumstances surrounding those in poverty, or those with chronic illnesses or functional disabilities? What influences people's decisions about when to retire, whether to work part-time at older ages, how much to save for retirement, what health and long-term care services to use, where to live, or what insurance to purchase? What are the major trends in health and economic circumstances among older Americans? These are some of the many questions that can be explored with the rich data resources in the Health and Retirement Study, or HRS.
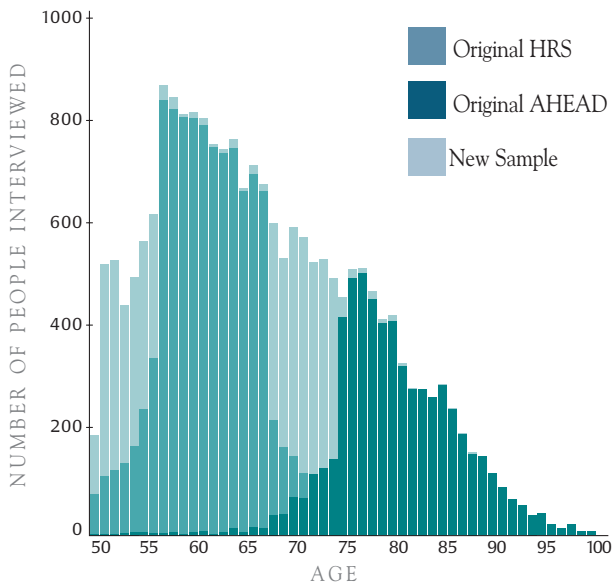
The HRS was initiated in 1992 by the National Institute on Aging (NIA) and has become the nation's leading data resource on the combined health and economic circumstances of Americans as they age. The project has involved survey interviews of over 25,000 older Americans – representing the diversity of economic conditions, racial and ethnic backgrounds, health, marital histories and family compositions, occupations and employment histories, living arrangements, and other aspects of life that exist in the population as a whole. These survey participants are being reinterviewed every two years, enabling researchers to follow the changing circumstances of Americans as they age and the implications of major events that take place in later life. These data are also helping policymakers respond to the needs of today's older Americans and prepare for the retirement years of the baby-boom generation in the decades ahead.

Survey Development

The HRS was developed initially as two distinct though closely related surveys. The first, referred to as the "original HRS," was administered initially in 1992 to a nationally representative sample of Americans between ages 51 and 61. In married couples, both spouses were interviewed (including spouses who were younger than 51 or older than 61). About 12,000 people participated in the 1992 HRS interviews. Since then, these same individuals have been reinterviewed in 1994, 1996, and 1998. A fifth follow-up survey is underway in 2000. By the time of the 2000 interviews, the original HRS population will have aged to between 59 and 69, a period of life when many move toward retirement. Thus the original HRS is a rich resource for exploring the relationships between health, economic circumstances, and the work and retirement decisions that people make as they age.

Figure 1: 1998 HRS Respondents, Age Distribution

NUMBER OF PEOPLE INTERVIEWED

Legend:
- Original HRS
- Original AHEAD
- New Sample

AGE

The other survey, referred to originally as the Survey of Asset and Health Dynamics Among the Oldest Old, or the "AHEAD" survey, was first administered in 1993 to a nationally representative sample of Americans age 70 and older. Again, in the case of married couples, interviews were conducted with both spouses. About 8,000 people were interviewed as part of the 1993 AHEAD survey. These individuals were reinterviewed in 1995 and 1998, and they too are part of the ongoing follow-up survey in 2000. At the time of the 1998 interviews, about 2,900 of the original AHEAD participants were still in their 70s, about 2,700 were in their 80s, and about 500 were in their 90s or older. About 1,900 had died. Thus the original AHEAD data are an important resource for exploring the health and economic circumstances of individuals as they evolve at older ages. It is also valuable in understanding how family circumstances are affected by declining health, death, and other transitions of later life.

An integration and supplementation of the original HRS and AHEAD surveys occurred in 1998, and the consolidated project is now referred to collectively as the Health and Retirement Study, or HRS. Two new groups of survey participants were added in 1998, so that the HRS population is now fully representative of the U.S. population age 50 and older. The first addition consisted of people in the age group that falls between the original HRS and AHEAD

samples: those born between 1924 and 1930. The second addition consisted of people who are currently in their young and middle 50s. (Those who were in this age range in the original HRS are now in their late 50s and early 60s.) Figure 1 shows the number of people at each age in the consolidated 1998 survey. In the future, the plan is to continue to reinterview these participants every two years, and to continue to supplement the sample with groups of younger people as they reach their 50s. By doing this, the HRS will provide a long-term source of up-to-date data on the process of aging and how it is evolving over time. Figure 2 summarizes the years of HRS data that will be available for individuals in different age categories, as defined by their year of birth.

Survey Composition

■ **Economic Circumstances.** The HRS contains detailed information on the economic circumstances of older Americans, such as the sources and amounts of all income, and the composition and amounts of all assets. Entitlements to current and future benefits are also contained in the data, such as those provided through Social Security, Medicare, Medicaid, firm pension plans, and employer-sponsored health insurance. Data are also collected on transfers of assets within families, such as gifts and bequests, shared housing, or transfers of home ownership.

Figure 2: TIMELINE OF HRS INTERVIEWS

BIRTH YEAR OF HRS PARTICIPANTS		INTERVIEW YEAR												
		92	93	94	95	96	97	98	99	00	01	02	03	04
1890-1923	(Original AHEAD)		■		■			■		■		■		■
1924-1930	(New 1998 Sample)							■		■		■		■
1931-1941	(Original HRS)	■		■		■		■		■		■		■
1942-1947	(New 1998 Sample)							■		■		■		■
1948-1953	(New 2004 Sample)													■

■ **Health and Health Care.** The HRS contains information on chronic illness, functional ability, cognition, depression, and self-assessed health status. It contains information on health care utilization, including physician visits, hospitalizations, nursing home stays, surgeries, dental care, prescription drug use, the use of assistive devices (such as eyeglasses or walkers), and any caregiving services received. It contains data on health-related behaviors, including

smoking, alcohol use, and exercise. And data are collected on health and long-term care insurance coverage, out-of-pocket medical costs, and assistance with medical expenses received from others.

■ **Occupation and Employment.** Data are obtained on people's employment history, occupation, job characteristics, job mobility, work hours, attitudes toward retirement, employer-provided benefits (including pensions, health insurance, 401(k) plans, and other employer-sponsored saving programs), retirement benefits, and early retirement incentive offers.

■ **Housing and Living Arrangements.** Data are obtained on the type of housing structure in which people live, the ownership or financial arrangements associated with this housing, and any entry fee or association payments. Information is also collected on the relationships between people's living arrangements and the availability or use of long-term care services, such as nursing home residence, services offered to residents in other housing arrangements, or any special housing features for those who are physically impaired. Information is also collected on housing that is shared with children or others.

■ **Demographics and Family Relationships.** The HRS contains information on a range of standard demographic characteristics, such as age, racial or ethnic background, education, marital status and history, and family composition. Among married participants, detailed health and economic information is collected from both spouses. More general demographic and limited economic information is collected about parents, children and siblings. In addition, data are collected on the relationships between family members, and the extent of inter-generational support within families. Financial transfers, caregiving support, joint housing arrangements, and time spent with family members are all explored through the survey interviews.

Uses of HRS Data

The research team that designed the HRS made a number of important decisions about how many people to include in the survey, whether to survey the same people over time or to survey new participants, how often to conduct survey interviews, and what questions to include in the interviews. These decisions have been critical in enabling a diversity of uses of the data. Some of the applications made possible by these design decisions are summarized below:

■ **Analyses of Individual Aging.** The regular reinterviewing of participants in the HRS is a very deliberate aspect of the survey design. By interviewing the same people over time, one can follow the evolving circumstances of individuals as they age. For example, to what extent do people spend down their assets as they age? To what extent do people move in and out of the labor force? Does health decline gradually, or sporadically, or are there periods of both health deterioration and improvement? One can also see the circumstances leading up to major life transitions (such as retirement or health events), how people respond to those transitions, and the subsequent consequences of those transitions. Thus the HRS helps to understand the general questions of what happens to families as family members age in later life.

■ **Analyses of Trends Over Time.** The HRS is also a rich resource for exploring health and economic trends in the population as a whole. For example, one can compare the characteristics and behavior of 61-year-olds in 1992 with the characteristics and behavior of 61-year-olds in 1998. Do people now have more or fewer financial assets than in previous years? Are people more or less likely to work? Are people more or less likely to be caring for an aging parent or providing childcare for a grandchild? What are the trends in age-adjusted health and functional ability? To what extent are smoking, nutrition, and fitness behaviors changing? This use of the survey depends less on following individuals as they age, relying instead on comparisons of similarly situated individuals at different points in time. However, even these analyses benefit by following the same people over time because one can compare the process of aging today with the process of aging in the past.

- **Inequality and Diversity.** Another important aspect of the survey population is its representativeness of the population as a whole. Thus one can explore the enormous diversity of individual circumstances and not just the circumstances of the "average" or "typical" person. For example, what are the financial resources of those in the lowest 10 percent of the population, and how do they compare with those at the median, or with those in the highest 10 percent? How do circumstances vary by racial or ethnic background, or by gender? What happens to those people who suffer a heart attack, and how is it different from those who develop diabetes or arthritis or cancer? What are the differences in circumstances between married and unmarried people, and between those with and without children. What are the differences between those who retire young, those who retire at typical ages, and those who continue working? Much of the richness of the HRS is in the exploration of this diversity. It also enables targeted analyses of those in society who may be particularly vulnerable.

- **Forecasting the Future.** Part of the motivation for the HRS was to help prepare for the anticipated aging of the population over the next several decades. The HRS can provide insights into what aging in America will be like ten, twenty, or thirty years into the future. Suppose, for example, that one wants a description of people who will be in their 70s and 80s in the year 2020. These people are already part of the HRS today – in their 50s and 60s. How are they different from those who were in their 50s and 60s twenty years ago, and are in their 70s and 80s today? These are the kinds of comparisons that can be made to better forecast the future. For instance, researchers know that people in their 70s and 80s will be more highly educated in the future, that they will have received better childhood medical care (due to increasing immunization rates), that they will have fewer children as potential caregivers (due to lower fertility rates), and that they will have more diverse family histories (due to increased divorce and remarriage). All of these demographic changes have implications for the health and economic circumstances of older people.

- **Causality.** Another critical motivation for the survey design was to support analyses of what causes things to happen as they do. For example, it is interesting that many Americans choose to retire at young ages. But a critical question for policy is why people retire young and whether their behavior would change under different circumstances. The availability of data on the health, economic, and family circumstances of people leading up to retirement is critical to understanding these motivations. Many other questions of causality can also be addressed with HRS data. What are the circumstances that cause some older Americans to fall into poverty? What factors lead some smokers to quit smoking, while others continue? What factors lead some people to leave large bequests and others none? Why do people with similar functional ability choose different living arrangements and different forms of care? How does the availability of employer-provided health insurance or "Medigap" insurance affect decisions,

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such as retirement or the use of medical services? The collection of a wide range of information on families and the regular follow-up interviews of how circumstances change are critical aspects of the HRS, enabling analyses of why things happen as they do and how each part of life relates to other parts of life.

- **Policy Simulation.** Based on the analyses of causality described above, one can also use HRS data for simulations of what might happen under different policy provisions. For example, what will happen to decisions about work at older ages as the earnings test on Social Security benefits is eliminated? What would happen to retirement decisions if the age of eligibility for Social Security benefits were increased from age 62 to age 65? What would happen to the economic circumstances of widows, if Social Security survivorship benefits were increased? What would happen to prescription drug use if Medicare implemented a new prescription drug benefit? What would happen to saving rates if the contribution limits on Individual Retirement Accounts were raised? The HRS provides an important resource for analyzing the likely implications of aging-related policy reforms.

Survey Innovations

- **Experimental Modules.** Since there are operational and financial limits to the number of questions that can be asked and answered in a population survey, a number of experimental modules have been added for randomly selected subgroups of HRS participants. These experimental modules have served as a means of exploring narrower research questions and as a way to test new survey ideas. Some of the experimental modules implemented to date have explored physiological capacity, memory and reasoning, personality, quality of life, employment opportunities, parental wealth, activities and time use, nutrition, medical directives, living wills, retirement expectations and planning, sleep, and functional ability.

- **Expectations.** The decisions that people make as they age are influenced by their circumstances today, by what has happened to them in the past, and by what they expect to happen in the future. Most surveys have focused on measuring current circumstances and, to at least some extent, on what people can remember about the past. An exciting innovation in the HRS is the exploration of people's future expectations as well. Thus the HRS contains information on how long people expect to work in the future, the likelihood that they will live until particular ages in the future, the likelihood of giving major financial assistance to family members in the future, the likelihood of leaving an inheritance and the amount of that inheritance, the likelihood of entering a nursing home, and the likelihood of moving to a new home or living arrangement. Exploratory analysis of these data suggests that people's expectations have an important predictive value in explaining what people will actually do in the future, and an important influence on the decisions that people make today.

- **Income and Asset Measurement.** Many surveys of income and assets have been limited by participants who either refuse to answer these financial questions or who feel inadequately knowledgeable to answer them. Many surveys have also missed major components of assets or income, or obtained biased measurements. Using innovative methodologies and inclusive definitions of income and assets, the HRS has made major advances in both of these areas. A technique known as "bracketing" has been used to minimize the number of non-responses to income and asset questions. Bringing together questions about certain assets (such as stocks and bonds) and the income obtained from those assets has also been important in providing more accurate survey responses to these questions. Finally, the traditional measurement of income and wealth has been integrated in the HRS with detailed data on Social Security, pensions, and other future entitlements. Because these programs represent a major component of the financial circumstances of older Americans, their effective integration with other income and asset categories has been a critical innovation of the HRS project.

Survey Linkages

Despite the comprehensive content of the HRS surveys, there remain limitations in what can be learned from population interviews. To address some of these limitations, the HRS has asked the permission of participants to link their interview responses to selected other data resources.

DATA SECURITY AND CONFIDENTIALITY

The HRS is managed with primary attention to protecting the confidentiality of survey participants. Detailed geographic data, and detailed data on occupation and industry are eliminated from the publicly available data files. Linked data are also restricted from public use. Highly restrictive contractual arrangements have been made with the administrative agencies providing linked data in order to protect the confidentiality of HRS respondents, their administrative records, and their employers. The use of data with detailed geographic, industry, or occupational information, or any linked data, requires researchers to develop and implement state-of-the-art policies and procedures for data security. The release of these restricted-access HRS data files is managed by the Survey Research Center at the University of Michigan, subject to their strict standards for data protection.

These linkages provide more detailed and elaborate information in particular areas than would ever be possible through the survey interviews alone.

- **Social Security Records.** The Social Security Administration keeps detailed records on the past employment and earnings of most Americans. For those who have initiated Social Security payments, detailed records are also available on Social Security benefits paid, including

those paid through the Disability (DI) or Supplemental Security Income (SSI) programs. By linking these records to the interview responses of HRS participants, researchers gain significantly more detailed data in these areas. While this detail may be excessive for answering some research questions, it is critical to understanding the inter-relationships between health and economic circumstances, public and private retirement policies, and the work and retirement decisions that people make as they age.

■ **Medicare Records.** Through its administration of the Medicare program, the Health Care Financing Administration keeps detailed claims records on the medical services received by essentially all Americans age 65 or older. These records include comprehensive information on hospital stays, outpatient services, all physician services, home health care, and hospice care. The HRS is developing a number of detailed measures of health and medical care based on these Medicare claims records. When linked to the HRS interview data, this supplementary information will provide far more detail on the health circumstances and medical treatments received by HRS participants. Among many topics relating to health and health care, the Medicare records will enhance research on the implications of health changes, the influence of health-related behaviors on health, the relationships between health and economic circumstances as they evolve jointly over the course of later life, and the influence of supplementary insurance on medical care decisions.

■ **Employer Surveys and Related Data.** The data from the HRS interviews have also been supplemented with information obtained directly from employers. For example, detailed information has been collected from employers on the provisions of their pension plans. While most pension-eligible workers have some idea of the benefits available through their pension plan, they are generally not knowledgeable about the detailed provisions of their plans. By linking HRS interview data with actual information on the pension plan provisions, one gains more information on the contribution of the pension to economic circumstances and the effects of the pension structure on work and retirement decisions. The HRS is also linked to data on employer-sponsored health insurance plans and to firm financial data from Dun and Bradstreet.

Contributions to Research

The HRS is increasingly recognized as a leading national resource for studying the health and economic circumstances of older Americans. Findings from the HRS have appeared in reports by the Congressional Budget Office and the President's Council of Economic Advisors, and in background materials for the G-7 economic meetings in 1998. The HRS is also being used as a model for data collection on older people in other regions of the world. There are over 2000 registered users of the HRS, and several hundred studies have been completed based on HRS data. Both figures are growing rapidly as the availability of HRS data becomes more widely known.

REFERENCES

Several hundred studies have been completed using HRS data. Some of these studies appear in the following edited volumes, which are devoted largely to research based on the HRS.

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