



National Institute on Aging



Longitudinal Aging Data for Behavioral and Social Research

RIETI-RAND Symposium – “What Have We Learned from the Panel Data of the Elderly?”

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*Disclaimer – opinions are the author's and not necessarily those of the US
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Outline

- **Why** does NIA support longitudinal aging data?
- **How** does NIA support longitudinal aging data?
- **What** has come from NIA support of longitudinal aging data?

Why does NIA support longitudinal aging data?

- Agency mission to support aging-related research
- Recommendations from experts
- Achieve broader federal goals - provides insights to policymakers on critical topics such as Social Security, Medicare, etc.

National Institute on Aging - Mission

To improve the health and well-being of older Americans through research, and specifically, to:

- Support and conduct high-quality research on:
 - Aging processes
 - Age-related diseases
 - Special problems and needs of the aged
- Train and develop highly skilled research scientists from all population groups
- Develop and maintain state-of-the-art resources to accelerate research progress
- Disseminate information and communicate with the public and interested groups on health and research advances and on new directions for research.

NIA Strategic Plan (2007)

- Support the development of **population-based** data sets, especially from **longitudinal** studies, suitable for analysis of biological, behavioral, and social factors affecting health, well-being, and functional status through the life course.
- Support data **archiving** and **data sharing**, with adequate protections for confidentiality and privacy of research participants and their families.
- Support the development of **internationally harmonized** social and behavioral longitudinal data on aging to foster cross-national research.

NIA Division of Behavioral and Social Research (BSR)

- One of four divisions in NIA that provides grant support for research under the NIA mission (others are Aging Biology, Geriatrics and Clinical Gerontology, and Neuroscience)
- BSR supports basic social and behavioral research and research training on the processes of aging at both the individual and societal level.
- BSR fosters multidisciplinary research, at multiple levels from the genetic to comparisons across national boundaries, and at stages from basic through translational.
- BSR administers a grant program that includes behavioral and social longitudinal aging data studies (HRS, etc.)

Current Research Initiatives

- Economics of Retirement (R01), PA
- Family and Interpersonal Relationships in an Aging Context (R01), PA
- Subjective Well-Being: Advances in Measurement and Applications to Aging (R01), RFA
- Regional and International Differences in Health and Longevity at Older Ages (R01), RFA
- Social and Behavioral Research on the Elderly in Disasters (R01), PA

Support for Longitudinal Aging Data Development from Experts

- NIA relies on advice from experts on the direction of scientific programs.
 - 1987 Ad Hoc Advisory Panel on Data Collection Priorities
 - Several NAS/NRC Panels, such as NRC Report: Preparing for an Aging World (2001)
 - 2004 and 2008 National Advisory Council on Aging reviews of the Division of Behavioral and Social Research
 - 2007 Data Priorities for Behavioral and Social Research on Aging

1987 Ad Hoc Advisory Panel on Data Collection Priorities

- Existing data resources (such as Retirement History Study) did **not adequately** represent **minorities** and **women** and had ended.
- Other available data **focused narrowly** on health or economics and failed to reflect other important areas believed to influence the retirement process
- Aging research had become **multidisciplinary** – needed data on health, work/retirement, living arrangements and financial status
- Federal Interagency Forum on Aging Related Statistics agreed that a path to developing this data should include an **independent scientist/peer review** approach
- NIA commissioned papers and held several meetings regarding design and content – led to a **call for a longitudinal study on aging**

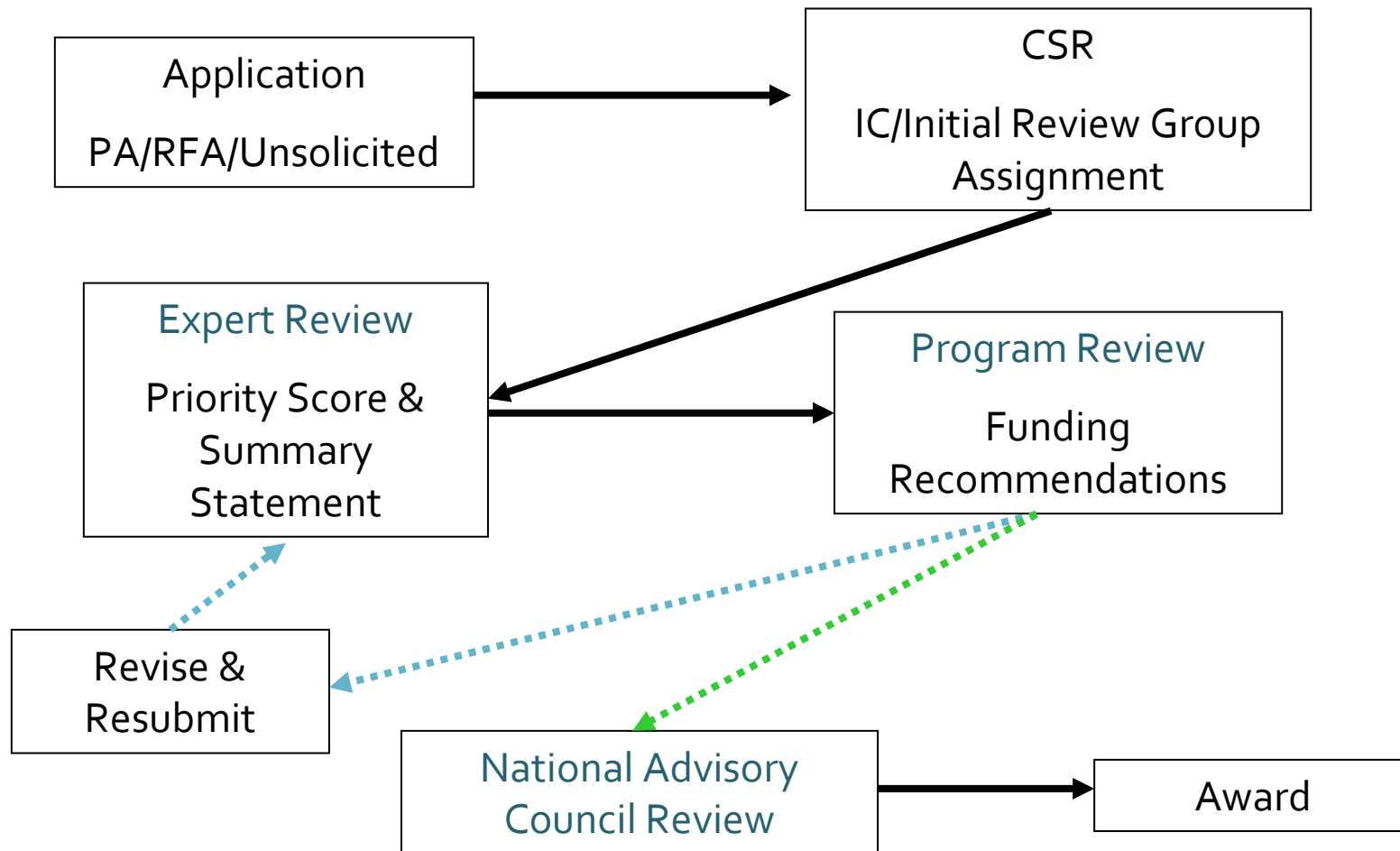
Research to Inform Policy

- Longitudinal cross-nationally comparable population data to support research on critical policy issues
 - Effects of economic crisis on health, finances & well-being
 - Social Security and Medicare reform (retirement ages, Part D, ACA/CLASS, etc.)
 - Distributional issues & disparities (minority populations)

How does NIA support longitudinal aging data?

- Cooperative grant with expert monitoring committee and federal interaction (HRS)
- Support from federal partners (HRS)
- Research “networks” & distribution mechanisms to support HRS and cross-national research

Expert Review Informs Grant Process



HRS – a Cooperative Agreement

- Expert advice and NIA objectives informed the design of the solicitation for HRS
- Cooperative agreement supports ongoing review/monitoring
 - NIA program staff
 - Expert Data Monitoring Committee - experts covering scientific areas of study that provide advice to NIA and HRS about development of survey

Support from Federal Partners

- US Social Security Administration
 - Provides co-funding for study, including enhanced face-to-face interviews, consumption data, minority sample expansion, enhanced public-use files.
 - Administrative data on earnings and benefits
- US Center for Medicare and Medicaid Services (CMS) provides administrative claims data

Innovative Survey of Aging

- Nationally representative, population based sample of those 50+ (and spouses) beginning in 1992. Respondents receive biennial follow-up data collection (N~20,000 per wave) from 1992-2010. 9 waves of publicly available data to date, 10th wave currently ongoing. New cohorts added every six years identified
- Administrative data linkages (Social Security & Medicare)
- Expanded Minority Sample in 2010
- Psychosocial questionnaire
- Consumption & Time-Use
- Enhanced F-T-T: Physical performance measures (grip strength, puff test, timed walk, balance); Anthropometry (height, weight, waist); Blood pressure & Blood spots (A1c, cholesterol, CRP)
- DNA sample to support genotyping of the full sample.

Initiative on Cross-National Research and Data Harmonization

- Cross-national research provides many unique opportunities and challenges
 - Successes such as Gruber/Wise and Banks et al.
 - Challenges – comparability issues
- Objective: encourage innovative cross-national research with HRS
- Approach: Improve research infrastructure
 - Support planning grants to improve comparability
 - Support network to foster harmonization and cross-national research

Distribution/Dissemination

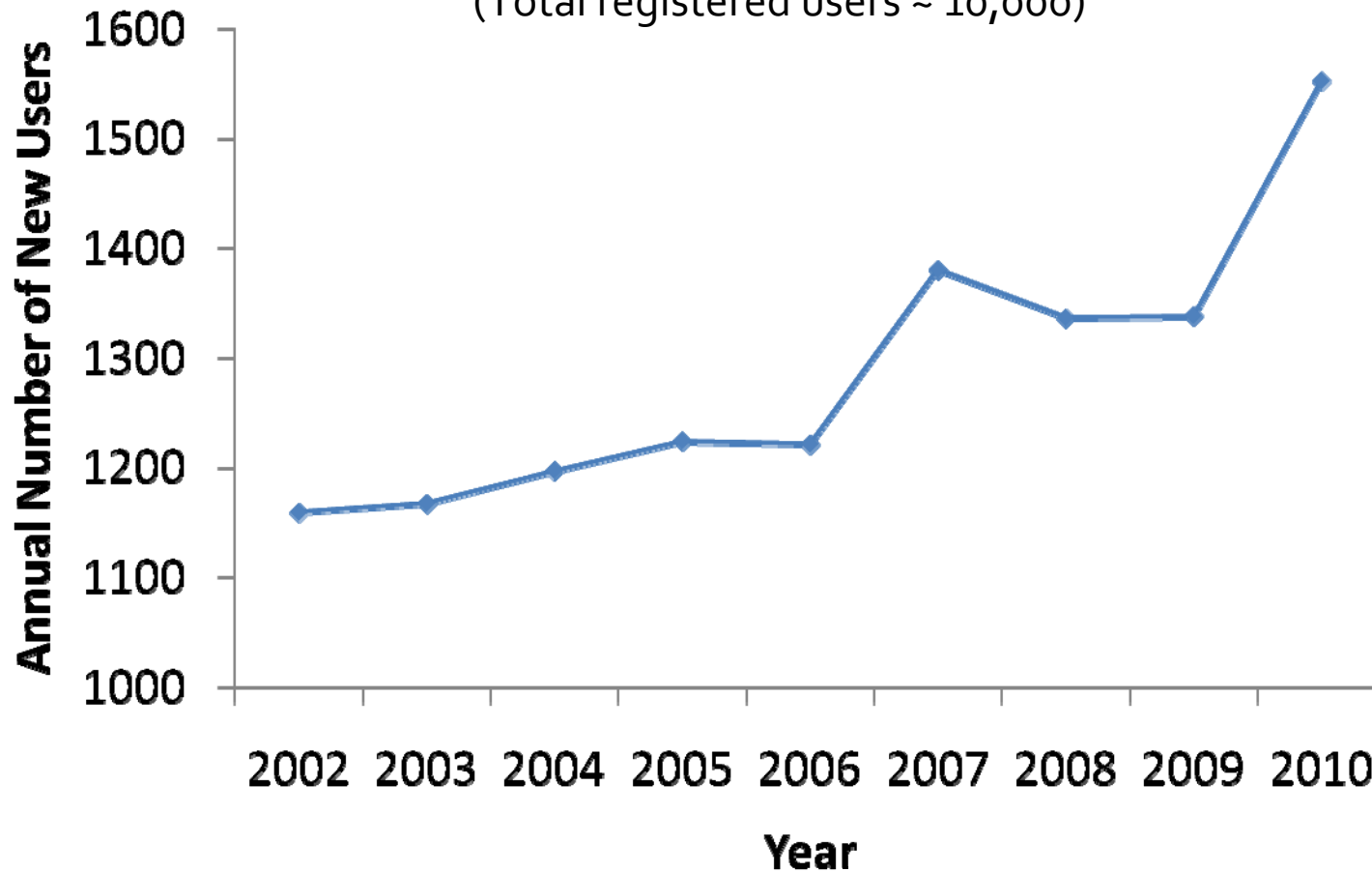
- RAND HRS is an easy-to-use version of data from eleven waves of the Health and Retirement Study (<http://hrsonline.isr.umich.edu/modules/meta/rand/index.html>)
- RAND Survey Meta Data Repository is a collection of international HRS-family survey data to support cross-national research (<https://mmicdata.rand.org/megametadata/>).
 - It includes a digital library of survey questions
 - a search engine for finding comparable questions across the surveys
 - set of identically defined variables for cross-country analysis.

What has come from NIA support of longitudinal aging data?

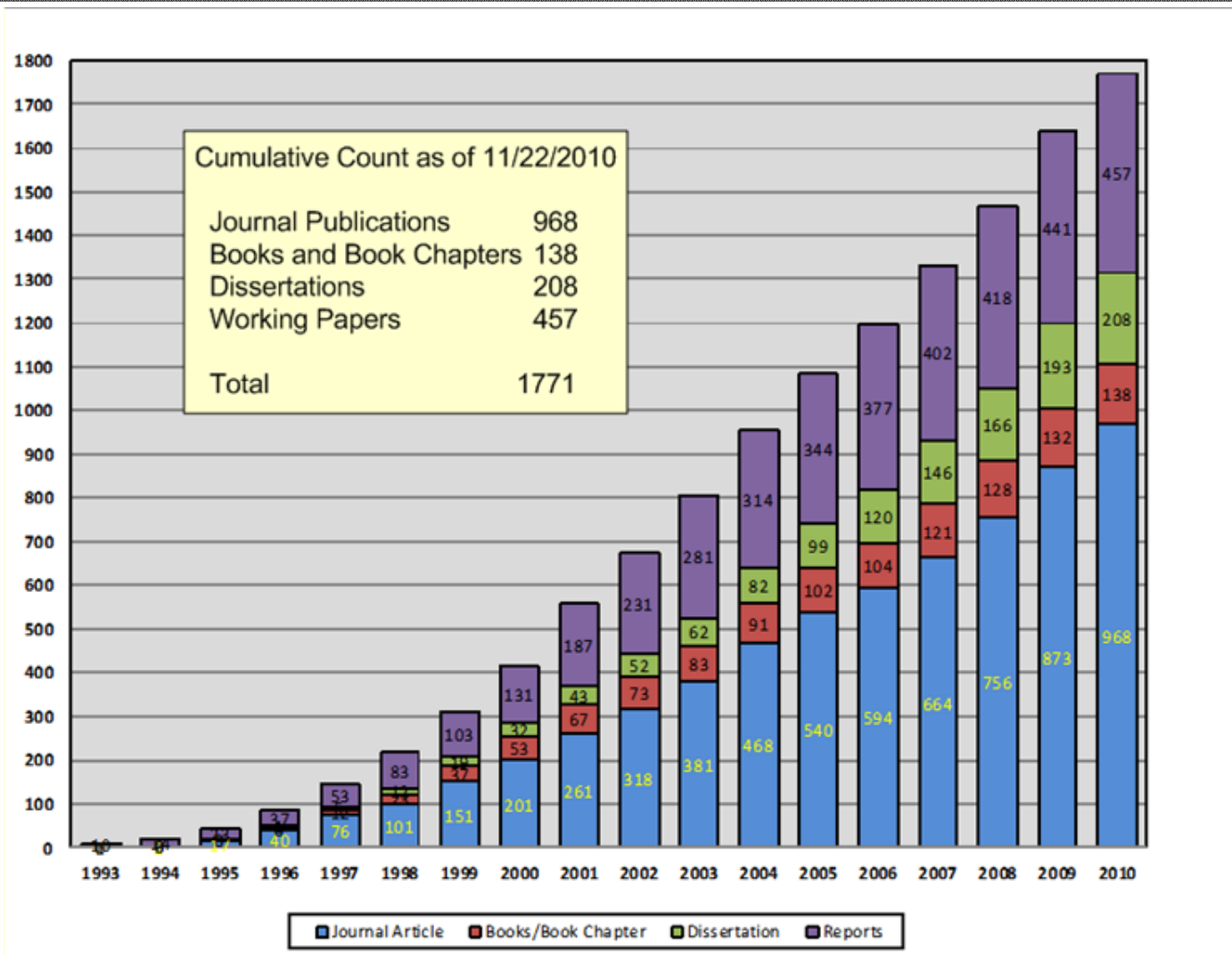
- Productive research resource that has supported the NIA mission
 - Enabled innovative aging research
 - Major resource for young investigators
- Supports broader interests of the federal government
 - Used by several federal agencies
 - Several findings of policy interest

Growing User Community

New Registered Users Of HRS Data
(Total registered users ~ 10,000)



Scientific Productivity of HRS



Significant Contributions to Science and Policy

- Covering many topical areas across several disciplines including:
 - Medicare/Health Insurance
 - Social Security/Retirement
 - Pensions/Saving
 - End of Life Decisions
 - Expectations
- Several examples in this Symposium
- Comprehensive Online Bibliography:
<http://hrsonline.isr.umich.edu/index.php?p=biblio>

Tracking a New Prescription Drug Program

- Medicare program expanded to include a prescription drug benefit, Medicare Part D (2006).
- Unlike Medicare Parts A and B, Part D requires most beneficiaries had to make an active choice about participation and select a plan from a menu of choices.
- Research showing that many choices could discourage enrollment as well as the cognitive demands of a complex insurance decision raised the potential for low program enrollment.
- HRS research showed that enrollment in Part D among those without drug coverage in 2004 was high; about 50%–60% of this group had Part D coverage in 2006. Only 7% of senior citizens lacked drug coverage in 2006 compared with 24% in 2004.
- Demand for prescription drugs was the most important determinant of the decision to enroll in Part D among those with no prior coverage.
- Many of those who remained without coverage in 2006 reported that they did not use prescribed medicines, and the majority had relatively low out-of-pocket spending.
- The results suggest that, for the most part, Medicare beneficiaries seem to have been able to make economically rational decisions about Part D enrollment despite the complexity of the program.

Levy, Helen and David Weir (2009), "Take-up of Medicare Part D: Results From the Health and Retirement Study," *The Journals of Gerontology; Series B; Psychological Sciences and Social Sciences* 65(4): 492-501

Retirement Security After the Financial Crisis

- Dow Jones Industrial Average peaked at 14,164 in October 2007, declined 43 percent to just below 8,000 by April 2009 and recovered to above 9,500 by September 2009 (a decline of one-third from its earlier high).
- 2006 total stock holdings of the Early Boomer cohort average 15.2 percent of total wealth. This greatly limited their direct exposure to the decline in the stock market
- An examination of the distribution of pension and Social Security wealth by wealth decile shows the share of total wealth held in stocks rises from 1.5 percent in the lowest decile, to 22.6 percent in the highest (excluding the top 1 percent of wealth holding households). As a result, on average, even those in the highest wealth decile exhibit limited exposure to the stock market decline.
- Near-retirement generation is more likely than younger generations to have a defined benefit plan as a primary pension, which also cushions the decline in wealth due to a stock market decline. DB plans covering the Early Boomer population account for almost two thirds of their total pension wealth.
- In part because of the limited effect of the stock market decline on the near-retirement-population, the effect of the decline on retirements is likely to be very limited.
- When account is taken of involuntary job loss and limited opportunities for employment at pay comparable to that received on a long-term job, retirements may be accelerated as a result of the stock market decline and recession rather than deferred.

Gustman, A. & T. Steinmeier (2010), "What the Stock Market Decline Means for the Financial Security and Retirement Choices of the Near-Retirement Population," *Journal of Economic Perspectives* 24(1): 161-182.

Cognition and Sepsis – “Science for Free”

- Is there a change in cognitive impairment and physical functioning among patients who survive severe sepsis, controlling for their pre-sepsis functioning?
- Formed a prospective cohort of 1,194 patients (516 survivors) hospitalized for severe sepsis
- Compared cognitive and functional ability collected pre- and post-hospitalization to 4,517 other individuals who had survived a non-sepsis hospitalization.
- Prevalence of moderate to severe cognitive impairment was 10.6 percentage points higher in sepsis survivors than controls as well as an increase in the number of functional limitations
- Declines were still detectable at least 8 years post-hospitalization.
- First demonstration in a prospective cohort that sepsis in an older (and representative) population is associated with persistent new cognitive impairment and functional disability.

Iwashyna, T. J., Ely, E. W., Smith, D. M. & Langa, K. M. (2010). Long-term cognitive impairment and functional disability among survivors of Severe Sepsis. *JAMA*, 304(16). 1787-1794.

End of Life Decision-Making

- More than one-quarter of older adults who died between 2000 and 2006 in the US required medical decision-making at the end of life but lacked the capacity to make those decisions (may require surrogate decision-making prior to death).
- Majority of elderly individuals who needed surrogate decision-making (67%) had an advanced directive, which is a great increase in the use of these documents over previously reported data.
- Those who authored advance directives (both living wills and durable powers of attorney) received end-of-life care that was strongly associated with their stated preferences.
- Relevant to end-of-life decision-making that arose during discussions of health care reform.

Silveira MJ, Kim SY, Langa KM. (2010). Advance directives and outcomes of surrogate decision making before death. *NEJM*, 362(13):1211-8.

Policy Research Resource for Federal Agencies

- HRS data used by several US federal agencies for analysis including:
 - Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE) – policy research support for DHHS secretary
 - Congressional Budget Office - Primary congressional agency charged with reviewing congressional budgets and other legislative initiatives with budgetary implications.
 - Office of Management and Budget (OMB)
 - Social Security Administration
 - Department of Treasury
 - Federal Reserve Board
 - Government Accountability Office (GAO) - Investigative arm of Congress charged with examining matters relating to the receipt and payment of public funds.

Summary

- HRS was the result of NIA soliciting a longitudinal aging study based on significant feedback from the research community
- HRS and NIA continue to engage experts to improve the study
- HRS is a public good for conducting innovative multidisciplinary research
- Significant research contributions have been made with HRS by academic and federal researchers