



# Research Highlights

## in the Translation of Social and Behavioral Science

November 2009

## Roybal Centers for Applied Research

### Enhancing Our Later Years by Bringing Scientific Discoveries Into Our Everyday Lives

Collectively, we are growing older at an astonishing rate. By 2030, the number of older Americans is expected to more than double to 71 million. In other words, one in five of us will soon be age 65 or over. A variety of everyday skills and activities become increasingly challenging as we age—ranging from negotiating the stairs to problem solving, decision making, and managing our health. At the heart of the National Institute on Aging Roybal Centers Program are efforts to discover the strategies that help us remain independent as we age, enhance our physical environment to better adapt to our needs in our later years, understand the role that community-based providers play to ensure that we benefit from the latest in aging research, and develop methods for

forecasting our future needs so we can prepare for a happy, healthy, and independent old age.

Authorized by Congress in 1992, the program is the namesake of former House Select Committee on Aging Chair Edward R. Roybal (1916-2005). The Roybal Centers Program is designed to move promising social and behavioral basic research findings into programs, tools, practices, and policies that will improve the lives of older adults and the ability of society to adapt to an aging population. As scientific discoveries make their way into our homes, our communities, and our everyday lives, we can look forward not just to living longer but to living well.

### **Roybal Centers: Building a Better Research Infrastructure**

The Roybal Centers are credited with building a research infrastructure that enhances the productivity of relevant basic research and existing projects, and accelerates the development of new ideas or applications (including successful grant funding from other sponsors). The Centers facilitate collaborations among academic researchers and commercial interests and recruitment of new researchers to aging and/or translational research, and provide a context for assembling multidisciplinary teams to solve practical problems. Researchers at Roybal Centers publish their findings in scholarly journals but also contribute to outreach activities with patients, their families, healthcare professionals, policymakers, and the public at large.

Whether promoting physical activity for older adults, developing tools to identify older adults at risk for automobile crash involvement, extending the traditional university-based “smart” home to a community of seniors’ homes, designing simulation models to objectively assess healthcare reform proposals, or improving survey data to better understand and document the experience of aging, Roybal Centers are working to improve the quality of life for older Americans and their families and to help them navigate the complexities of their daily lives with confidence.

## 13 Roybal Centers Awarded – 2009

The 13 Roybal Centers focus on the following topics: Health and mobility; disease and pain management; decision making and behavior change; and better data, measurement, and forecasting.

### Health and Mobility

#### **Midwest Roybal Center for Health Promotion and Translation**

**University of Illinois at Chicago**

**Principal Investigator: Susan Hughes, D.S.W.**

[ihrp.uic.edu/center/center-research-health-and-aging](http://ihrp.uic.edu/center/center-research-health-and-aging)

Effective health promotion programs that help older adults make behavior changes to improve functioning, quality of life, and their independence in the community are available. However, participation in these programs by minority older adults is very low. This Center continues to test, build, and share evidence about health promotion interventions with an increasing emphasis on adapting effective programs to older underserved minority adults, especially Latinos. It is currently disseminating two evidence-based programs that have been developed and tested with Roybal funding. *Fit and Strong!* is a low-cost exercise/health behavior change program found to be effective for older adults with osteoarthritis, the most common chronic condition and the primary cause of disability in older adults. It provides 60 minutes of exercise and 30 minutes of education three times a week for 8 weeks. The focus is on making exercises easy to do, developing individual routines, and reinforcing new behaviors. This program can significantly reduce lower back, hip, knee, ankle, and

foot stiffness and pain and enhance maintenance of physical activity in older adults for up to 1 year. The program has won two national awards and, in collaboration with the National Arthritis Foundation, is now being advanced in seven States. The second program, *Health Matters*, is a physical activity and nutrition health education program for older adults with developmental disabilities and is being offered in 16 States as well as Ireland and Australia.

#### **Roybal Center for Translational Research on Aging and Mobility**

**University of Alabama at Birmingham**

**Principal Investigator: Karlene Ball, Ph.D.**

[www.uab.edu/roybal](http://www.uab.edu/roybal)

Nearly 20 percent of people age 65+ have difficulty with their mobility. Mobility restrictions and adverse outcomes such as falls, injuries, and crash involvement while driving are associated with underlying impairments, all of which can limit social, psychological, and economic well-being of older adults. For over 15 years, this Center has focused on identifying at-risk individuals and developing new interventions to enhance mobility, health, productivity, and quality of life. To identify older drivers who are more likely to be involved in a car crash, researchers at this Roybal Center developed a test of visual information processing called the Useful Field of View (UFOV® test). Unlike standard clinical vision tests, UFOV measures deficits in visual attention that predict problems with driving and mobility. Compared to UFOV, measures of eye health, visual sensory function, and global mental status are relatively poor at differentiating older drivers who have crashes and those who do not. In fact, UFOV's ability to predict which older drivers will have crashes is unprecedented in research on crash risk in older adults. As a result of this growing body of research, a significant number of hospitals and senior centers around the world have updated their driver rehabilitation practices. To date, the Center's research has contributed to improvements in the assessment of driving ability, training of older adult drivers, and driving safety. As the research base has expanded, the Center has forged strong collaborative





partnerships with private industry, community organizations, and State agencies. The Center's continuing long-range goals include supporting research that evaluates the impact of visual, cognitive, and educational interventions on diverse measures of mobility and independence.

### ***Northwest Roybal Center (NRC) University of Washington***

**Principal Investigator: Linda Teri, Ph.D.**

As the numbers of older adults with cognitive problems requiring care in this country increase, the need for effective treatments to help them and those who provide care becomes critical. The mission of this newly formed Center is to improve the health, well-being, quality of life, and productivity of older adults with cognitive impairment, those who are at risk for such impairments, and their caregivers. Center research incorporates the full continuum of environments in which adults reside and receive care, including private homes, retirement communities, assisted-living residences, adult family homes, and skilled nursing facilities; and does so with interdisciplinary and interagency partnerships among researchers, practitioners, and consumers to ensure that promising avenues of research are translated into the community expeditiously and effectively.

## **Disease and Pain Management**

### ***Center for Translational Research on Chronic Disease Self-Management Indiana University***

**Principal Investigators: Christopher Callahan, M.D.  
and Daniel O. Clark, Ph.D.**

[medicine.iupui.edu/IUCAR/roybal/](http://medicine.iupui.edu/IUCAR/roybal/)

Researchers are highlighting the important role of older people in managing their own illnesses as a way to decrease health services costs and reduce health disparities. The primary objective of this Center is to foster research that improves support and education for self-management among older adults cared for by generalist physicians. The Center's research seeks to clarify the cultural and social determinants of self-management and holds the potential to enhance and inform home- and community-based interventions tailored to the preferences of patients and designed to improve patient-provider communications. Translations of the Center's findings to clinical practice include a cognitive care clinic, a lifestyle self-management program operating in seven community health centers, and a model academic-community partnership to facilitate translation to clinical practice in an urban public health system. New endeavors focus on development of a program to prevent or postpone cognitive decline, evaluation of the social factors that may prevent planned transitions out of nursing homes, support for patient-provider decision making regarding complex preventive health services, and expansion of an interactive video-conferencing project that promotes physical activity in older adults.

### ***Cornell-Columbia Institute for Translational Research on Aging (C-CITRA)***

**Cornell University and Columbia University**

**Principal Investigators: M. Carrington Reid, M.D.,  
Ph.D. and Karl A. Pillemer, Ph.D.**

[www.citra.org](http://www.citra.org)

Persistent pain is a costly and frequently disabling disorder in later life. Effective solutions to the problem of later life pain require moving basic behavioral and social science and medical research findings more rapidly into programs, practices, and policies targeting

older adults. This Center takes advantage of its collaboration with an extensive community health and social service agency network based in the diverse multicultural environment of New York City. It builds on the Center's experience in applying theory and research in the area of social integration and isolation, with increasing focus on addressing barriers to establishing successful pain management programs, particularly self-management programs and strategies. The Center also is testing new techniques to facilitate translational research in aging. The findings of this interdisciplinary geriatric, mental health, and social science research center will be translated into treatments, intervention programs, and policies to improve clinical practice and pain management, with the goal of improving the health and well-being of older adults who suffer from or are at increased risk for pain.

## Decision Making and Behavior Change

### ***Roybal Center on Advancing Decision Making in Aging (CADMA)*** **Stanford University**

**Principal Investigators: Alan Garber, M.D., Ph.D. and Laura Carstensen, Ph.D.**

<http://healthpolicy.stanford.edu/research/2178>

Recent research on decision making about complex or emotionally charged issues suggests that decisions are often systematically biased, miscalculating the probabilities of diseases and underestimating cumulative risks to health. As a result, people may make choices that leave them worse off financially, emotionally, or physically. Tools to assist people facing complex choices are both important and generally lacking. CADMA facilitates research that explores how older Americans make decisions that affect their health and well-being. The goal is to develop and implement practical tools that will help people make informed, effective decisions. CADMA is an interdisciplinary and interdepartmental effort, drawing collaborators from the fields of health policy, geriatrics, economics, medical informatics, psychology, and business. This Center investigates the roles that age-related changes in emotion and cognition play in decision making, especially surrounding complex topics, such as choice



of health plans, and sensitive topics, such as end-of-life care. It also focuses on decision making processes that influence day-to-day choices that affect health and well-being, such as decisions about exercise and diet, and develops and evaluates support mechanisms that may help patients and providers make decisions during or before medical visits, such as integrating computer-based decision support tools with electronic medical records. New pilot studies focus on the consequences of compulsory genetic screening, the use of immersive virtual reality to aid long-term planning, and the financial implications of health plan choices.

### ***Roybal Center for Financial Decision Making*** **RAND Corporation**

**Principal Investigator: Arie Kapteyn, Ph.D.**

[www.rand.org/labor/roybalfd](http://www.rand.org/labor/roybalfd)

The focus of this Center is on assessing preferences of older adults and how they collect information, interpret alternatives, consider risks and probabilities, align decisions to their preferences, and balance their present and future interests. Through the American Life Panel, RAND researchers are surveying biweekly up to 3,000 respondents age 18 or older on the Internet with indepth questions that focus on information-gathering habits, interpretation of options (as a function of how the options are presented), preferences, and cognitive skills. Questions are

presented using visual aids, and online investment games are used to study how people make financial decisions. Respondents can participate using devices like PDAs, Smart phones, and WebTVs from almost anywhere in the world. To supplement and enrich the substantial capacity in Internet interviewing, a specialized qualitative research facility supports researchers in conducting focus groups and/or individual interviews in financial and economic decision making. The goal of the Center is not only to gain a better understanding of how people make financial decisions but also to use the research results to develop and test tools to improve decision making.

***PENN CMU Roybal Center on Behavioral Economics and Health***

***University of Pennsylvania (PENN) and Carnegie Mellon University (CMU)***

**Principal Investigators: Kevin Volpp, M.D., Ph.D. and George Loewenstein, Ph.D.**

[www.med.upenn.edu/ldichi](http://www.med.upenn.edu/ldichi)

Behavioral economics has contributed to our understanding of human motivation and behavior, but these insights have not systemically been applied to health behavior and healthcare delivery. The new PENN CMU Roybal Center conducts studies that foster the translation of approaches from behavioral economics to the improvement of healthcare behaviors and healthcare delivery for older adults. The Center seeks to shift the focus from disease intervention to disease prevention via novel, randomized controlled trials in “real-world” settings that focus on improving blood sugar control for diabetics, weight control, exercise, and mental acuity exercises. These studies, along with the Center’s work with public- and private-sector entities to design, test, and implement scalable interventions, have the potential to improve the health of large populations of patients.

***Behavior Change in Health and Saving National Bureau of Economic Research***

**Principal Investigator: David Laibson, Ph.D.**

Saving for retirement has become an increasingly complex and consequential activity as responsibility for saving for retirement falls heavily on individuals. This new Roybal Center extends research on success-

ful financial decision making to choices about health behavior and the development of new interventions that improve health outcomes and financial well-being while reducing costs. A particular goal is to translate to the health domain the behavioral interventions that have been successfully applied to the area of retirement savings. Using innovative studies that involve the collaboration of employers and other commercial interests, the Center is investigating how institutional and policy interventions affect behavior. The experimental interventions supported by the Center cover a range of health-related behaviors (e.g., adherence to prescription drugs, regular checkups), multiple aspects of financial behavior, a diversity of channels through which behavior can be influenced (including physician offices, the workplace, the community, health insurers, and government), and a range of intervention methods.



## ***Roybal Center for Translational Research on Aging***

**Harvard University**

**Principal Investigator: Nicholas Christakis, M.D., Ph.D., M.P.H.**

Complex social network structures play an important role in individual health through social engagement, support, and norms, and the location of individuals in social networks has long been recognized as important for the transmission of information, resources, and influence. Since improving the health of one person in a social network is likely to inspire health improvements in others to whom the initial person is connected, this new Center focuses on the social network underpinnings of some of the most pressing problems facing the health and well-being



of older people in the United States today, such as obesity and cancer. It will use a variety of novel methods, including large observational studies of networked populations and online experiments that take advantage of the fact that the Internet has revolutionized the way people engage in the social world. The results of this research may be translated into concrete recommendations for helping people improve health behaviors and well-being, as well as into policy recommendations for government policymakers and other stakeholders.

## **Data, Measurement, and Forecasting**

### ***Princeton Center for Research on Experience and Wellbeing***

**Princeton University**

**Principal Investigators: Alan Krueger\*, Ph.D., Angus Deaton, Ph.D. and Daniel Kahneman, Ph.D. (emeritus)**

[www.princeton.edu/chw](http://www.princeton.edu/chw)

There is growing evidence that subjective measures of physical and emotional health do not always accurately reflect reality. Therefore, the overall objectives of this Center are to develop new methods for the measurement of well-being and health in both developed and developing countries and to use them to better understand and document the experience of aging. Center researchers are analyzing how different circumstances, such as chronic disease or widowhood, and different situations, such as working or socializing, affect quality of life and how this changes over a person's life. This will require introducing important psychological and social components to the American Time Use Survey, a national survey that collects information on how Americans spend their time. It is also intended to provide data for a proposed National Well-Being Account, which is similar to the gross domestic product measure. The newly developed ability to more accurately assess the activities, emotions, and symptoms of peoples' everyday lives has wide application for policy, social science, and medical research and has the potential to inform and enhance new interventions and comparative research across time or countries.

\*Angus Deaton is leading the Center while Alan Krueger is completing his term as Assistant Treasury Secretary for Economic Policy that began in May 2009.

### ***Oregon Roybal Center for Translational Research on Aging***

**Oregon Health & Science University**

**Principal Investigator: Jeffrey Kaye, M.D.**

[www.orcatech.org](http://www.orcatech.org)

People lose their independence as they age for two key reasons: Mental decline and loss of mobility. Technology is likely to be a key factor in enabling older adults to live independently and at home until the end of life. The Center seeks to enhance the quality of life and

health of older people while reducing the cost of health-care through continued development of new independent living technologies and creation of research infrastructure to support aging in place. Research is facilitated through partnerships with industry and academic collaborations and building an evidence base for technologies supporting successful aging. The Center's "Living Laboratory" in Portland, Oregon, assesses older adults' activities in their homes. Sensors on walls and doorways and appliances monitor participants for early signs of mental decline, such as changes in walking speed or activity patterns, which can indicate the onset of Alzheimer's disease. Unlike other approaches, the "Living Laboratory" allows participants' activities to be studied continuously and unobtrusively. The approach generates a tremendous amount of data that provide a more complete view of how older adults function in their homes. These data will be used to identify behavioral markers of disease that eventually translate into products and services that help older people maintain their mental acuity and, thereby, their independence. The Center has over 40 public- and private-sector partners to help make the "Living Laboratory" a reality in people's lives, including Intel, SpryLearning, Pacific Retirement Services, Willamette View, AARP, the Oregon Health & Science University Biomedical Engineering Point-of-Care Laboratory, and the Layton Aging & Alzheimer's Disease Center at Oregon Health & Science University.

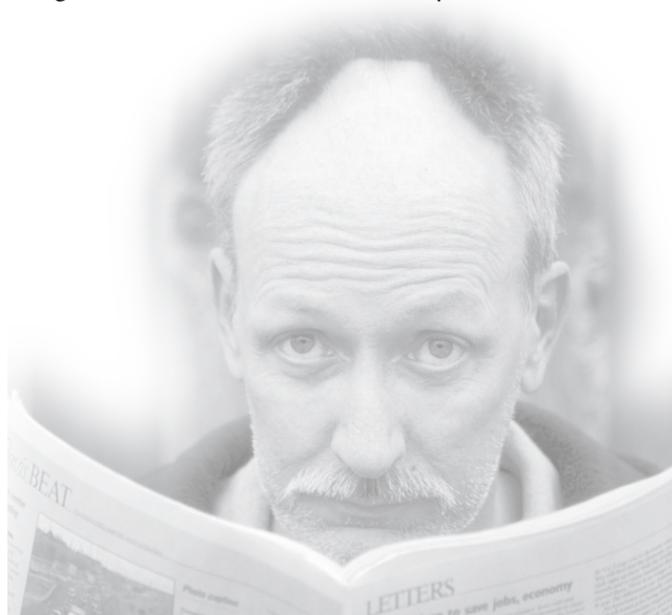


***Roybal Center for Health Policy Simulation  
University of Southern California and  
RAND Corporation***

**Principal Investigator: Dana Goldman, Ph.D.**

[www.rand.org/labor/roybalhp](http://www.rand.org/labor/roybalhp)

The purpose of this Center is to develop better models to understand the consequences of the lifetime burden of chronic diseases, advances against cancers, drug pricing, and social forces on health, health spending, and healthcare delivery. The Center builds upon a large body of research at RAND, including a multiyear effort to identify and forecast the consequences of medical breakthroughs over the next 30 years that would most affect the future health of and healthcare spending on older people. Research directions include understanding the relationship between health status and lifetime spending, modeling the consequences to society of Alzheimer's disease as well as its most promising interventions, understanding the consequences of less prevalent but no less important diseases, and studying prescription drugs and Medicare Part D coverage. The goal of the Center is to develop and apply models and simulation tools that advance our understanding of the influence of demographic, technological, clinical, and social trends on the health status and health expenditures of older Americans. The Center occupies an important niche providing essential data for government agencies to plan for future healthcare costs.

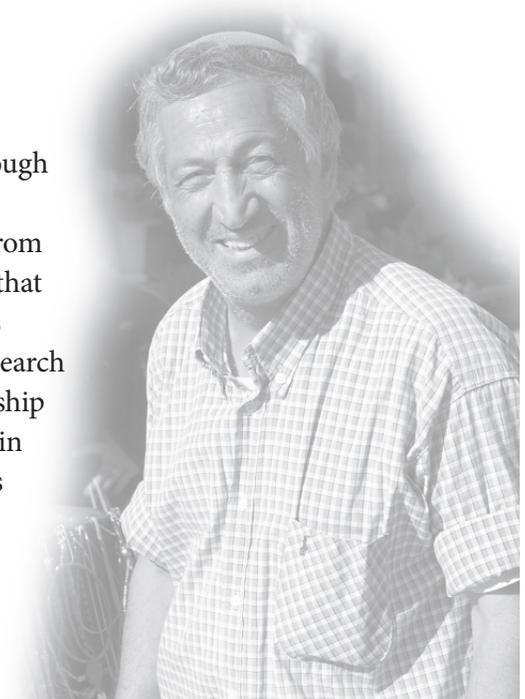


## What Are the Roybal Centers?

The Roybal Centers for Translational Research in the Behavioral and Social Sciences of Aging are supported by the National Institute on Aging (NIA) with cofunding from the National Institutes of Health Office of Behavioral and Social Sciences Research, the Agency for Healthcare Research and Quality, the Social Security Administration, and the National Institute on Disability and Rehabilitation Research, Department of Education. The Roybal Centers, which have grown from 6 in 1992 to 13 in 2009, seek to disseminate and increase the use of research results that benefit older Americans. They are complemented by other NIA-supported efforts in translational research and are intended to stimulate broadly based multidisciplinary research that improves the health, well-being, and productivity of older adults. Within this broad theme, the Roybal Centers span the spectrum of translational research—from designing and implementing intervention programs to disseminating research results to developing models for use in policymaking. Since their inception, the Roybal Centers have made myriad prominent contributions to aging research. Four major areas of accomplishment since 2003 include building research infrastructure to accelerate the development of new ideas and applications; adopting intervention programs, tools, and technologies; establishing community partnerships; and developing shared resources.

## What Is the National Institute on Aging?

As a part of the National Institutes of Health in the Department of Health and Human Services, the National Institute on Aging (NIA) seeks to improve the health and well-being of older Americans through efforts to understand the aging process and to extend healthy life. The NIA conducts and supports research on all aspects of aging—from investigating basic questions about cellular and molecular changes that occur as people age to the demographic and economic implications of an aging society. The NIA's Division of Behavioral and Social Research focuses on how people and families change with aging, the relationship between older people and social institutions, and population aging in the United States and around the world. Applied research programs funded by the NIA encourage rapid translation of research findings into practical information that physicians and the public can use to benefit the health of older people. Ongoing special initiatives also address critical issues of older adult health and healthcare, such as health disparities and Alzheimer's disease.



### NIA PROGRAM

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For more information on the Roybal Centers and to learn about funding opportunities in the social and behavioral sciences at the NIA, visit the NIA Web site at [www.nia.nih.gov](http://www.nia.nih.gov). Materials for consumers are also available through the Web site or by calling the NIA Information Center, 1-800-222-2215.