

DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH

Fiscal Year 2007 Budget Request

Witness appearing before the
Senate Subcommittee on Labor-HHS-Education Appropriations

Dr. Patricia A. Grady, Director
National Institute of Nursing Research

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Richard J. Turman, Deputy Assistant Secretary, Budget

Mr. Chairman and Members of the Committee:

I appreciate the opportunity to present the Fiscal Year (FY) 2007 President's budget request for the National Institute of Nursing Research (NINR). The FY 2007 budget includes \$136,550,000, a decrease of \$792,000 over the FY 2006 enacted level of \$137,342,000 comparable for transfers proposed in the President's request.

I am pleased to describe some of the exciting research of the National Institute of Nursing Research (NINR). NINR is charged with supporting research that establishes the scientific basis of quality patient care regardless of disease or health status. We fund research that affects individuals across the lifespan and all health care settings, especially the underserved.

NINR is currently celebrating the 20th anniversary of its establishment at NIH. We have used this occasion not only to take stock of our accomplishments, but more importantly, to look toward the future role of NINR's research in today's increasingly complex health care environment. We are faced with an aging population at a time when our Nation is experiencing a shortage of nurses. We are also in an era of new technologies, which demands that nurses be technologically-savvy and able to adapt these new methods to a variety of patient populations and settings. This dynamic health care environment provides many opportunities for nursing research to address a variety of challenges and improve health care for all patients.

Let me give you a few examples of how our research has improved lives and the promise it holds for the future.

HEALTHY MOTHERS AND HEALTHY CHILDREN

Sleep and Healthy Pregnancies. Women often complain of fatigue and difficulty sleeping during pregnancy, especially as they approach delivery. Researchers studied women who slept less than 6 hours per night or who experienced frequent sleep disturbances during their pregnancy. These women had significantly longer labors and were 3-4 times more likely to have a cesarean delivery than women who slept 7-8 hours a night with fewer disruptions. These results highlight the importance of adequate sleep during pregnancy, and suggest a need for care providers to stress better sleeping habits to their pregnant patients.

Children and Health Disparities. In FY 2007, NINR will solicit new intervention research proposals aimed at reducing health disparities among children. NINR is committed to reducing disparities in health care, but current research in this area often targets adults. Children who live in poverty have little access to health care, and these children are disproportionately from minority populations. NINR's effort to reduce disparities in child health will target such areas as: developing culturally-sensitive interventions to promote physical activity and healthy diets in children, reducing health risk factors in children that lead to poor health outcomes, and studying how gender and immigrant status affect child health and access to health care.

STAYING HEALTHY THROUGHOUT ADULTHOOD

Culturally-sensitive Diet Intervention. Diabetes is prevalent among rural African-Americans, and compliance with dietary self-management guidelines is often poor. In one study, NINR researchers tested a dietary intervention for diabetic African-Americans living in rural South Carolina. Through culturally-tailored classes that

taught healthy food choices and low-fat cooking techniques, participants successfully lowered their body weight and fat intake. Other community-based interventions that include culturally-relevant components show similar successes. These types of programs may be important tools in promoting health and reducing health disparities.

Heart Disease in Women. Heart disease, the number one cause of death in the U.S., is sometimes more difficult to diagnose in women than in men, because women can exhibit different symptoms of heart disease than men. Better ways of detecting heart disease are therefore needed. NINR investigators are currently developing and testing a new screening tool that could predict whether or not certain women are at risk for serious heart disease. The test takes into account the different symptoms that women with heart disease experience, and it factors in the diverse symptoms experienced by women of different races.

UNDERSTANDING AGING AND CARING FOR THE ELDERLY

Improving Self-management for the Elderly. The aging American population has tremendous implications for our health care system. Better tools are needed to prevent and treat the health problems experienced by the elderly in a cost-effective manner. Improving self-management strategies is one way to decrease hospital and long-term care costs. Health professionals have developed telehealth programs that allow elderly patients to monitor and manage their symptoms at home by communicating with their providers over the phone or the internet. However, the effectiveness of telehealth interventions has not been well-studied. NINR investigators are currently testing a self-management telehealth intervention for patients with heart failure. The investigators will study questions such as: Is the intervention more

effective than traditional methods of treatment? Are elderly patients willing to use the new technology? Do these techniques save money? Findings from these studies may help providers better use technology in self-management. This could ultimately lead to a higher quality of life for patients, and lower health care costs for consumers.

Caregivers and Depression. An aging population also means that an increasing number of spouses and children will be caring for their infirm partners or parents. In addition to significant economic and societal costs¹, caregiving may also have serious negative health impacts. Caregiving can often be a stressful and time-consuming experience for those who take on the responsibility. NINR has funded a wide range of studies to analyze the burdens experienced by caregivers and develop methods to alleviate these burdens. One group of NINR researchers surveyed over 2,000 female caregivers of elderly veterans with dementia and found that over one-third of the caregivers exhibited symptoms of depression. However, less than one in five of those with depression were using antidepressants; Caucasians were twice as likely as African-Americans to be taking such medications. These results suggest that caregivers should be routinely screened for depression and that better efforts may be needed to educate informal caregivers about the potential benefits of antidepressant therapy.

PATIENTS AND FAMILIES AT THE END OF LIFE

The final stage of life is a challenging time for everyone involved, from the patient, to attending physicians and nurses, and to bereaved family and friends. NINR is the lead NIH institute for end-of-life research. We are charged with finding ways to improve end-of-life care for all involved and ensure that patients experience death with

¹ Langa KM, Chernew ME, Kabeto MU, Herzog AR, Ofstedal MB, Willis RJ, Wallace RB, Mucha LM, Straus WL, Fendrick AM, National Estimates of the Quantity and Cost of Informal Caregiving for the Elderly with Dementia. *J Gen Intern Med* 16: 770-778, 2001.

as much dignity and comfort as possible. We fund research on such topics as: better management of symptoms prior to death; improving communication between doctors, patients, and family members; and examining factors that influence end-of-life decision-making. NINR researchers continue to make important findings in these areas.

Communicating with Families at the End of Life. One study found that physicians in intensive care units often fail in communicating with family members when discussing the withholding or withdrawal of care from a dying patient. Problems included failures to listen to the concerns or address the emotions of the family members. Physicians also failed to properly explain the uses and purpose of palliative care or the ethical basis for deciding to remove life-prolonging therapies. A better awareness of these gaps can help physicians and nurses improve their communication skills for talking to families in difficult times.

NURSING SHORTAGES AND TRAINING NURSE RESEARCHERS

The current aging of our population comes at a time when the supply of nurses in the U.S. cannot meet the demand. In addition, new advances in medical technology require a more technologically-savvy nursing workforce. There was a shortage of approximately 168,000 registered nurses in the U.S. in 2003, and this shortage is expected to top 1 million by 2020. The field of nursing research is experiencing the effects of this shortage. Fewer nurses mean fewer nurse researchers, and that means fewer nursing faculty.

NINR continues to fund innovative initiatives to train new nurse researchers. Our Nursing Partnership Centers to Reduce Health Disparities partner research-

intensive universities with minority-serving institutions to increase the number of researchers from underserved populations. We also continue to collaborate with universities on training students in fast-track baccalaureate-to-doctoral programs to speed the process of developing new nurse scientists and faculty.

NINR AND THE NIH ROADMAP

NINR has incorporated two key themes of the NIH Roadmap into its research agenda: *Interdisciplinary Research Teams of the Future* and *Re-engineering the Clinical Research Enterprise*. Historically, NINR has maintained a focus on interdisciplinary research, but increased collaborations made possible by the Roadmap have fully introduced nursing science to the rest of the scientific community. They have also enabled nurse scientists to expand the breadth of their own work. Because of the strongly clinical emphasis of the NINR research portfolio, the Roadmap's clinical research initiatives are ideally suited to NINR. We will actively pursue Roadmap initiatives that seek to develop new technologies to measure patient symptoms and quality of life, and others that strive to develop skilled clinical investigators with strong multidisciplinary backgrounds.

CONCLUSION

In conclusion, NINR continues to discover effective approaches to meeting the challenges of today's dynamic health care environment, while looking ahead to meet the health care needs of tomorrow. We will strive to improve the quality of care and quality of life for all individuals, especially the underserved, regardless of age or disease. We will also train the next generation of leaders in nursing research. The past

twenty years have demonstrated the power of nursing research. The future holds endless opportunities.

Thank you, Mr. Chairman. I will be happy to answer any questions that the Committee might have.

PATRICIA A. GRADY, PHD, RN, FAAN

DIRECTOR, NATIONAL INSTITUTE OF NURSING RESEARCH

Dr. Patricia A. Grady was appointed Director, NINR, on April 3, 1995. She earned her undergraduate degree in nursing from Georgetown University in Washington, DC. She pursued her graduate education at the University of Maryland, receiving a master's degree from the School of Nursing and a doctorate in physiology from the School of Medicine.

An internationally recognized stroke researcher, Dr. Grady's scientific focus has primarily been in stroke, with emphasis on arterial stenosis and cerebral ischemia. She was elected to the Institute of Medicine in 1999 and is a member of several scientific organizations, including the Society for Neuroscience, the American Academy of Nursing, and the American Neurological Association. She is also a fellow of the American Heart Association Stroke Council.

In 1988, Dr. Grady joined the NIH as an extramural research program administrator in the National Institute of Neurological Disorders and Stroke (NINDS) in the areas of stroke and brain imaging. Two years later, she served on the NIH Task Force for Medical Rehabilitation Research, which established the first long-range research agenda for the field of medical rehabilitation research. In 1992, she assumed the responsibilities of NINDS Assistant Director. From 1993 to 1995, she was Deputy Director and Acting Director of NINDS. Dr. Grady served as a charter member of the NIH Warren Grant Magnuson Clinical Center Board of Governors.

Before coming to NIH, Dr. Grady held several academic positions and served concurrently on the faculties of the University of Maryland School of Medicine and School of Nursing.

Dr. Grady has published numerous articles and papers on hypertension, cerebrovascular permeability, vascular stress, and cerebral edema. She is an editorial board member of the major stroke journals. Dr. Grady lectures and speaks on a wide range of topics, including future directions in nursing research, developments in the neurological sciences, and federal research opportunities.

Dr. Grady has been recognized with several prestigious honors and awards for her leadership and scientific accomplishments, including being named the inaugural Rozella M. Schlotfeld distinguished lecturer at Case Western Reserve University and receiving the honorary degree of Doctor of Public Service from the University of Maryland. In addition to being named the Excellence in Nursing Lecturer by the American Heart Association, Dr. Grady also received the first Centennial Achievement Medal from the Georgetown University School of Nursing and Health Studies. In the past year, she has received Doctor of Science, *Honoris Causa* awards from Thomas Jefferson University and the Medical University of South Carolina, as well as the Second Century Award for Excellence in Health Care from Columbia University.

Dr. Grady is a past recipient of the NIH Merit Award and received the Public Health Service Superior Service Award for her exceptional leadership.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

OFFICE OF BUDGET

RICHARD J. TURMAN

Mr. Turman is the Deputy Assistant Secretary for Budget, HHS. He joined federal service as a Presidential Management Intern in 1987 at the Office of Management and Budget, where he worked as a Budget Examiner and later as a Branch Chief. He has worked as a Legislative Assistant in the Senate, as the Director of Federal Relations for an association of research universities, and as the Associate Director for Budget of the National Institutes of Health. He received a Bachelor's Degree from the University of California, Santa Cruz, and a Masters in Public Policy from the University of California, Berkeley.