

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

Fiscal Year 2005 Budget Request

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Statement by

Dr. Patricia A. Grady

Director, National Institute of Nursing Research

on the

Fiscal Year 2005 President's Budget Request

for the National Institute of Nursing Research

Mr. Chairman and Members of the Committee:

The fiscal year 2005 budget includes \$139.198 million, an increase of \$4.497 million over the comparable FY 2004 appropriation level.

I am pleased to be here today to discuss the activities of the National Institute of Nursing Research (NINR). NINR supports research that converges well with NIH's top priorities and activities. Our research emphases are also reflected in the NIH Roadmap, the strategy to accelerate scientific discoveries and take new approaches to make them more rapidly available to patients. NINR's scientific community is excited about the opportunities within the current and future NIH Roadmap initiatives. NINR is already supporting important interdisciplinary research training and interdisciplinary research, including community-based research. NINR's scientific community has been alerted to the procedural changes that need to take place in order to capitalize on the NIH Roadmap initiatives; their enthusiasm predicts a high level of support for the Roadmap.

From its inception, NINR has emphasized interdisciplinary research teamwork and clinical and translational research, which are prominently featured in the Roadmap agenda. Our studies address national health problems head on. We have moved from an acute to a chronic disease focus, with emphasis on older people, who are living longer with illness and want the highest quality of life possible. We promote ethnically and culturally sensitive research and are aggressively pursuing research on health disparities, devoting about 20 percent of our budget to this area of science.

## **CONTROL OF HIGH BLOOD PRESSURE IN YOUNG INNER-CITY AFRICAN-AMERICAN MEN**

A good example of a program of research that improves health care disparities in a vulnerable African-American population is located a short distance from here – East Baltimore. The number of people with hypertension nationally is 40 percent higher for African-Americans than for Caucasians, and there is more severe disease impact among African-Americans that can include heart enlargement and kidney dysfunction. The Johns Hopkins School of Nursing conducted this unique hypertension study, targeting a high-risk population of hypertensive young African-American men between 21 and 54 years of age who are generally considered underserved by the healthcare system. At the study's start, only 17 percent had control of their blood pressure, but after three years, 44 percent of the men receiving the intensive form of a carefully designed community-based intervention attained control of their blood pressure. In some cases, the study represented the first time the study participants experienced formal healthcare. Of special significance is that 90 percent of the young men were retained in the study for the entire three-year period. A key to this success was the culturally appropriate, multidisciplinary research team approach that involved nurse practitioners, community health workers, and physicians. Among the lessons learned from this research is the need to modify healthcare for vulnerable populations like this one in Baltimore – health care that involves home visits that offer educational and behavioral counseling to supplement visits to the clinics, and addresses factors beyond the disease itself, such as reducing substance abuse and obesity.

## **HEALTH OF MINORITY, INNER CITY NEWBORNS IMPROVED BY NURSE HOME VISITS**

Another example of a health disparity is infant mortality, with rates for African-Americans twice those of Caucasians. Researchers tested a carefully designed intervention tailored to the risks of the populations studied to help close this health disparity gap. Findings after one year of the project indicate that the health outcomes of

both mother and infant were improved, and costly health care was avoided. The intervention involved focusing on low-income, pregnant African-American and Mexican-American mothers from the inner city, who received a program of planned prenatal care and post-natal monitoring with teaching and counseling at each encounter. Home visits made by a team of trained community residents and led by a nurse were an important feature, and the mothers received monthly phone calls for a year after their babies were delivered. The effects of the program varied by race and ethnicity. For African-Americans, findings indicated that mothers had more realistic expectations of their parenting role and were able to document the immunization of their infants. Their infants' mental development scores were higher than the control group. Mexican-American mothers showed improved skills in dealing with everyday life and in playing with their infants. This research and previous studies indicate that home visits by a nurse-health advocate team are among the most successful interventions in improving maternal and infant health – even for inner city, low-income minority families. The key is to implement culturally sensitive interventions that are intensive and adequately staffed and funded.

### **WOMEN'S EARLY WARNING SIGNS OF HEART ATTACK**

Although heart disease is the number one cause of death in both genders, far less is known by physicians and by women themselves about how women experience the disease. Research focusing on women's symptoms prior to heart attack found that women have different early warnings of heart attack than men have. Of note is that most clinicians consider chest pain as the most significant symptom for both sexes. Yet in this study the most prevalent symptom was reported to be unusual fatigue (70 percent), followed by sleep disturbance (48 percent), and shortness of breath (42 percent). Fewer than a third of the women reported chest pain or discomfort. Even during the heart attack, 43 percent did not experience chest pain. Clearly, women's symptoms appear to be different from men's. This underscores the importance of

women and clinicians, both, recognizing early warning signs of impending heart attack in women, so that they can prevent it or ease its effects.

### **CHOLERA REDUCED BY LOW TECH WATER FILTRATION**

A growing global problem faced by developing nations is the availability of healthy drinking water, a most basic need for life and health. Cholera is carried by untreated surface water and kills thousands of people around the world by causing severe vomiting and diarrhea. The World Health Organization reports that the number of countries with cholera is increasing. In our own hemisphere, cholera incidence is now increasing in 16 Latin American nations. Researchers in Bangladesh have found a simple preventive technique that works and may be transferable to other countries. Inexpensive and widely available cotton sari cloth, when folded four to eight times, creates a filter small enough to remove most plankton, where cholera bacteria often live. In 65 villages with 133,000 inhabitants, the number of cholera cases was almost cut in half when people filtered their water with the sari cloth. Cultural barriers were not an issue, and about 90 percent of the rural study participants followed the filtering procedure. When cholera did occur, those villagers had drunk unfiltered water at villages not participating in the study. The sari filtering technique could work just as well using other types of inexpensive cloth filters if replicated in countries where cholera is widespread.

### **THE NINR ROLE IN THE NIH ROADMAP**

Last year, NINR developed what we call Research Themes for the Future, which represent NINR priorities over the next five plus years. These themes blend well with the NIH Roadmap overall, especially in two areas – Interdisciplinary Research Teams of the Future, and Re-engineering the Clinical Research Enterprise. In the first area, NINR has considerable experience carrying out interdisciplinary team research projects. In FY 2003, more than half of NINR investigator publications appeared in non-nursing journals. This underscores the promise of future successful interdisciplinary research

and practice collaborations. It also indicates that many other disciplines value nursing research findings. In the area of improving the clinical research enterprise, most of NINR's research is clinical in nature and can bring research questions to the laboratory from the clinical researcher's perspective. Investigators also translate research findings into the clinical practice of healthcare providers and develop partnerships with communities to speed new scientific knowledge into mainstream health regimens. Late last year, NINR supported a national conference to promote research-intensive environments in clinical settings, including academic medical centers and those that are nontraditional as far as research is concerned, such as nursing homes and community-level health enterprises. The goal was to create partnerships between academic researchers and potential investigators in these settings to develop resources and ease barriers to innovative research.

To make the Roadmap a reality for nurse researchers, since the Roadmap will not be business as usual, but business as usual plus, NINR recently convened an implementation meeting with interdisciplinary experts from across the country. The meeting addressed ways to intersect NINR's themes and priorities with those of the Roadmap, as well as suggestions for new Roadmap directions that reflect the expertise of nursing research. Since NINR has always stressed interdisciplinary research, we look forward to increased participation in the Roadmap.

## **INITIATIVES**

Looking ahead to our FY 2005 initiatives, reduction of obesity, a major public health issue, is certainly on the NINR agenda. Pediatric and adolescent obesity is particularly disturbing in and of itself, because it forewarns of future poor health. We plan to target minority populations at risk for obesity and children who are underserved – for example, those in rural areas. Research will address biological, behavioral and social science factors leading to or perpetuating obesity.

Our genetics initiative is novel for NINR, since it involves incorporating behavioral, biological and molecular science into nursing research. Our focus will be on the interactions between genes, environment and behavior, including health

promotion behavior. We will also assess the results of genetic education and counseling, and the effects of genetic testing on health, including lifestyle changes and the reduction of risks for disease.

Increased attention is required to build the knowledge base for effective end of life care. NINR is the lead Institute at NIH for end-of-life research. The research agenda we have identified for better healthcare management at this final stage of people's lives includes improved methodology, instruments, communication, and interventions that helped making choices. Previously published NINR-funded research findings on symptom management are already being integrated into standards of care. Further study is taking place to develop new behavioral approaches to improve the lives of patients and their caregivers and to devise new techniques to improve management of pain.

Self-management has become the most basic way people can improve their lives when they are living with long-lasting, incurable chronic illness. Successful self-management interventions tested in mainstream populations, such as how to improve coping skills and how to maintain and improve cognitive functioning, will be tested in populations with special needs: the unemployed, homeless, very old, impoverished, disabled, or geographically isolated.

Another initiative involves symptom management. Traditionally, clinical practice treats symptoms one symptom at a time. Yet symptoms rarely occur alone—they occur in clusters. NINR plans to support research that will identify and describe groups of symptoms in HIV/AIDS and cancer patients by determining these clusters' effects on the patient, and developing interventions to manage the multiple symptoms. In addition to assisting how one symptom impacts the others in a cluster, we will consider the effects of age, treatment, gender, and type and stage of disease.

NINR will expand on past and current research initiatives that focus on minority and underserved women's health, such as health disparities and reduction of low birth weight among minority women. The new initiative will focus on other aspects of women's health outside of reproduction, which in the past was frequently the central

focus of women's health research by investigators of many disciplines.

### **INCREASING THE NUMBER OF NURSE INVESTIGATORS**

The well documented and current shortage of nurses was preceded by a significant shortage of nurse researchers. The shortage of nurse researchers also means fewer nursing faculty to train future nurses and to conduct research that provides the scientific base for healthcare practice. In confronting this issue, NINR continues to collaborate with universities nationwide to rapidly develop baccalaureate-to-doctoral fast-track programs. This is in response to one of the recommendations of the National Research Council four years ago, which urged preparation of more nurse researchers more quickly. NINR revised the predoctoral training mechanism to enable nurses to enroll in the many fast-track doctoral programs in nursing which accept baccalaureate-to-doctoral students. NINR has been responsive to the National Research Council's recommendation, and the nursing community has also responded by rapidly developing these baccalaureate-to-doctoral programs all over the nation.

NINR supports Developmental and Core Centers to stimulate research and research training opportunities. Creating partnerships and leveraging funds is a hallmark of those Centers. We also initiated 17 Nursing Partnership Centers to Reduce Health Disparities, in collaboration with the National Center on Minority Health and Health Disparities. These Centers partner eight research-intensive universities with nine minority-serving institutions. As a result of this program, we expect health disparities research to expand and the number of minority nurse investigators to increase.

NINR will continue to offer career development awards, and we will make a special effort to train minority investigators through mentored research scientist awards and research supplemental awards. NINR's small but growing intramural research

program is initiating a graduate partnership program with universities across the country this year and continues to support postdoctoral training opportunities on the

NIH campus.

In closing, the upcoming year contains new opportunities to configure scientific research in new ways. NINR and the nursing research community look forward to participation in the NIH Roadmap initiative and in other research that directly impacts the improvement of people's health.

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