

DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

<u>FY 2005 Budget</u>	<u>Page No.</u>
Organization chart.....	2
Appropriation language.....	3
Amounts available for obligation	4
Justification narrative.....	5
Budget mechanism table.....	16
Budget authority by activity.....	17
Summary of changes.....	18
Budget authority by object.....	20
Salaries and expenses.....	21
Significant items in House, Senate and Conference Appropriation Committee Reports.....	22
Authorizing legislation.....	24
Appropriations history.....	25
Detail of full-time equivalent employment (FTE).....	26
Detail of positions.....	27
New Positions Requested.....	28

**National Institutes of Health
National Institute of Nursing Research
Organizational Structure**

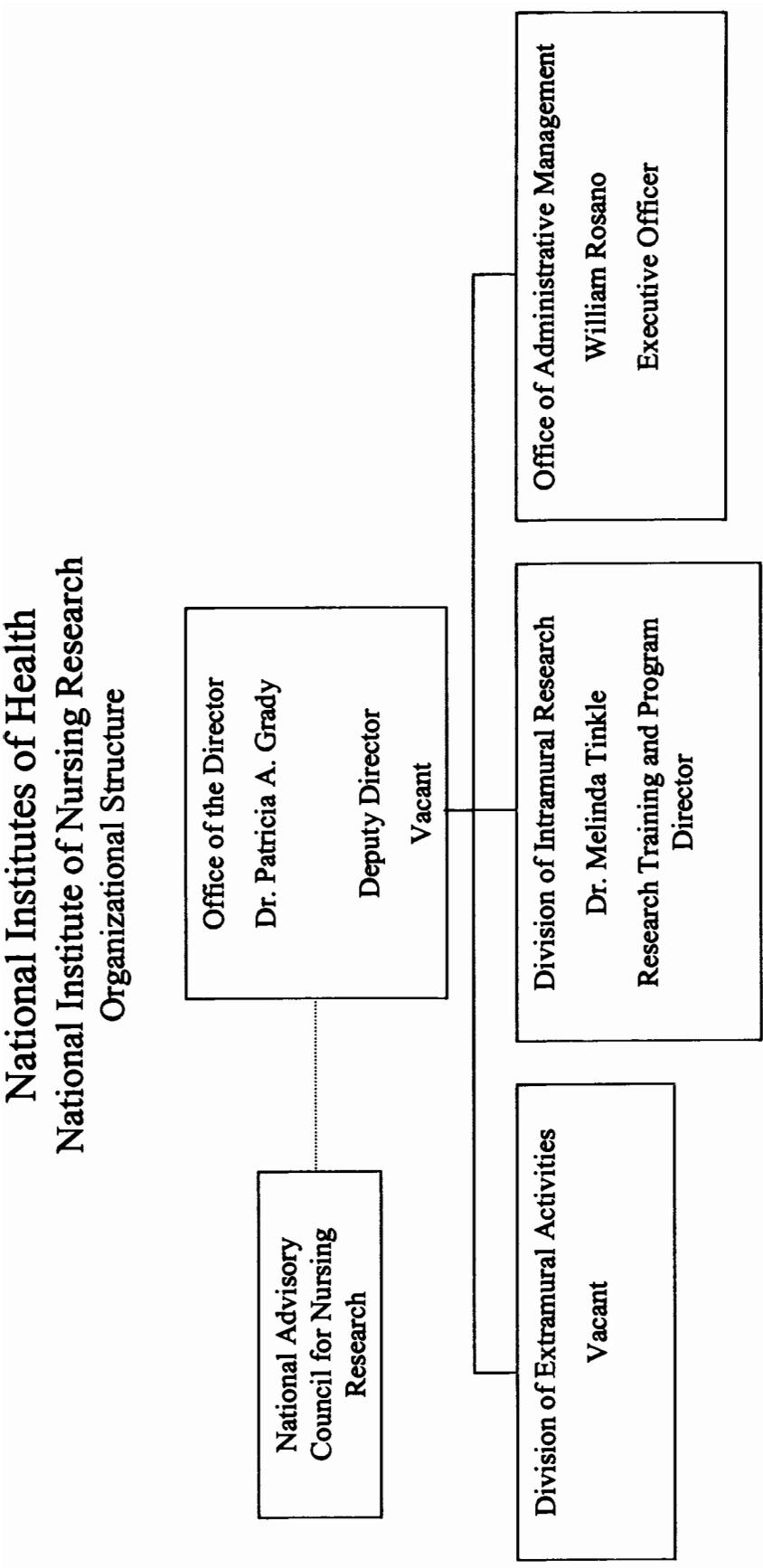
**National Advisory
Council for Nursing
Research**

**Office of the Director
Dr. Patricia A. Grady
Deputy Director
Vacant**

**Division of Extramural Activities
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Dr. Melinda Tinkle
Research Training and Program
Director**

**Office of Administrative Management
William Rosano
Executive Officer**



NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

*For carrying out section 301 and title IV of the Public Health Service Act with respect to nursing research [~~\$135,555,000~~]**\$139,198,000.***

[Department of Labor, Health and Human Services and Related Agencies Appropriations Act, as enacted by the Omnibus Consolidated Appropriations Act for Fiscal Year 2004]

**National Institutes of Health
National Institute of Nursing Research**

Amounts Available for Obligation 1/

Source of Funding	FY 2003 Actual	FY 2004 Final Conference	FY 2005 Estimate
Appropriation	\$131,438,000	\$135,555,000	\$139,198,000
Enacted Rescissions	(854,000)	(831,000)	---
Subtotal, Adjusted Appropriation	130,584,000	134,724,000	139,198,000
Comparative transfer from: Fogarty International Center for International Services Branch	0	0	0
Comparative transfer to NIBIB for Radiology Program	(1,000)	(1,000)	(0)
Comparative transfer to Buildings and Facilities	(23,000)	(22,000)	(0)
Comparative transfer to Office of the Director for program changes	(65,000)	(0)	(0)
Subtotal, adjusted budget authority	130,495,000	134,701,000	139,198,000
Unobligated Balance, start of year	0	0	0
Unobligated Balance, end of year	0	0	0
Subtotal, adjusted budget authority	130,495,000	134,701,000	139,198,000
Unobligated balance lapsing	(47,000)	---	---
Total obligations	130,448,000	134,701,000	139,198,000

1/ Excludes the following amounts for reimbursable activities carried out by this account:
FY 2003 - \$59,000; FY 2004 - \$61,000; FY 2005 - \$65,000

**Justification
National Institute of Nursing Research**

Authorizing Legislation: Section 301 and Title IV of the Public Health Service Act, as amended.
Reauthorizing legislation will be submitted.

Budget Authority: (dollars in thousands)

FY2003 Actual		FY2004 Estimate		FY2005 Estimate		Increase or Decrease	
FTE	BA	FTE	BA	FTE	BA	FTE	BA
42	\$130,495,000	41	\$134,701,000	41	\$138,865,000	0	\$4,164,000

This document provides justification for the FY2005 research activities of the National Institute of Nursing Research (NINR) including HIV/AIDS activities. A more detailed description of NIH-wide fiscal year 2005 HIV/AIDS activities can be found in the NIH section entitled "Office of AIDS Research (OAR)."

INTRODUCTION

The National Institute of Nursing Research supports clinical and basic research that provides the scientific foundation upon which nurses and other health care professionals base their practice. NINR supports a broad scope of research studies that improve patient, family and community outcomes across the lifespan. NINR's science improves the quality of clinical care in all settings, from hospital to the home, and develops methods to promote healthy lifestyles and reduce risk for diseases and disability. Examples of NINR's research outcomes include: helping people manage symptoms and prevent complications of chronic disease; developing and testing methods to slow the progression of disease; improving diagnosis and treatment of disease by clarifying how disease presentation differs among patient groups; and enhancing understanding of the relationship between nurse staffing and surgical patient mortality. Ultimate outcomes of the science supported by NINR are a better quality of life for individuals, their families and caregivers, and the communities in which they live.

Overview Initiatives to be undertaken in FY2005 target important national health concerns: prevention and treatment of pediatric obesity; translating genetics/genomic research into clinical practice; self-management of chronic illness in understudied populations; managing clusters of symptoms in cancer and HIV/AIDS; reducing health disparities among minority and underserved women; and continuing NINR's leadership in end-of-life research with focus on improving quality of life near the end of life. All of these initiatives include collaboration with other Institutes and Centers across NIH, and with other agencies of the Department of Health and Human Services.

Research training is an important ongoing initiative of NINR. The nation's nursing shortage is compounded by a shortage of nursing faculty. NINR will continue efforts to increase the workforce of nurse investigators to conduct research and meet the need for nurse faculty.

The NINR intramural program has established a laboratory for symptom management and provides research training for individuals. Important contributions to knowledge in the past year from the NINR intramural program include new knowledge about muscle wasting in chronic disease, especially cancer, and clarification of the patterns of decline of function among people at the end of life. Graduates of NINR's Summer Genetics Institute have incorporated genetic knowledge into extramural settings across the country. They have been successful at publishing in the scientific literature, submitting research applications which capitalize on their new genetic knowledge, and integrating genetic content into university curricula. In addition, for the large population of potential investigators, the intramural program of NINR developed and maintains an online training program designed to increase the accessibility of high quality information that will help potential investigators submit successful research applications to NIH.

The Institute continues to have a close working relationship with scientists and clinicians in many disciplines, as well as with those in nursing practice, administration, and education. This year, NINR was the primary sponsor of a large national meeting entitled "Promoting Research Intensive Environments in Clinical Settings." The conference provided a forum for medical center professionals to grasp the potential of clinical research to enhance patient care, and to network with university-based investigators with the aim of enhancing opportunities for research. We anticipate more research applications from clinical settings and from partnerships between clinical settings and universities as a result of this national meeting.

The outcomes of NINR's HIV and AIDS-related research are innovative approaches to complex care problems. A number of studies have focused on how to improve quality of life by managing troublesome symptoms experienced by people with AIDS, particularly weight loss, fatigue, loss of appetite, chronic pain, bone loss and other metabolic changes. Methods have been developed and tested that help people with AIDS integrate complex medication regimens into their lives. Still other studies help poor and ethnic minority women with HIV/AIDS manage their disease. Some of these methods promise to reduce health care costs by substituting telephone interventions for visits to providers, while improving both patient motivation and adherence to drug regimens. A number of studies address prevention of infection with HIV, especially among adolescents and youth, and among minority youth and women in particular. NINR's ongoing studies also focus on quality of life among children with HIV. Another example of NINR's HIV research program is the mentoring of nursing faculty and nurse-midwives from Armenia, Thailand, and southern Africa, in order to develop HIV prevention and HIV-treatment research activities.

Story of Discovery: Successful High Blood Pressure Control in a Population at Risk

Affecting about 50 million adults in the U.S., high blood pressure is a major risk factor for coronary heart disease, stroke and heart failure. More than one quarter of the 50 million people affected by high blood pressure are not aware they have it.¹ The health disparities associated with high blood pressure are striking. There are 40 percent more African-Americans with high blood pressure than whites,² and its effects are more frequent and severe in the African-American population. For example, African-American men in particular may have a greater degree of organ damage from hypertension than whites, including heart enlargement, and reduced kidney function.^{3,4,5}

There are more drugs, non-drug interventions and well-tested plans of care available now that can control high blood pressure and decrease cardiovascular disease risk, although barriers may exist which hinder implementation of these approaches. There is evidence that sustained prevention and treatment success requires lifestyle interventions to prevent and control the disease, and to prevent or delay the complications related to high blood pressure.⁶ There is also evidence that successful high blood pressure control in populations with lower socioeconomic status requires more comprehensive, focused, and patient-centered interventions.⁷ Ethnic minority patients are more likely to have inadequate or marginal health literature available to them, a factor associated with worse health status and increased risk of hospitalization.⁸

Prevention and treatment success depend on sustained contact with a health care system that can support the individual and family efforts to attain and maintain control of high blood pressure. A comprehensive and coordinated design for delivering care and health-related information is particularly important if the individual and family are to make lifestyle changes to achieve control of high blood pressure. These lifestyle changes include increasing aerobic physical activity, maintaining a healthy weight, limiting consumption of alcohol for those who drink, and reducing salt and fats in a diet that includes more fruits and vegetables.

A decade-long program of progressively complex research has made significant strides toward translating into practice the large body of research about high blood pressure, health disparities, and the care needs of a targeted population. A research team designed a system of care which targets a population at great risk of high blood pressure and its complications. The latest study followed 309 African-American men for 36 months. These men were between 21 and 54 years of age, lived in inner city Baltimore, and had high blood pressure. Difficult social and economic issues were characteristic of the men who were largely unemployed and had very low income. At the start of the study, only 17 percent had achieved control of their high blood pressure.

A randomized clinical trial compared the effects of a more intensive intervention to a less intensive intervention. The more intensive intervention group of men had comprehensive, individualized care by a team comprised of a nurse practitioner, a community health worker, and a physician. Nurse practitioners saw the men in the more intensive group every one to three months and provided free medication according to a Joint National Committee VI treatment protocol, in collaboration with a primary care provider for those men who had one. The community health worker made at least one annual home visit to provide support with health matters and referrals to social services, job training, and housing. The physician was available for consultation with the nurse practitioner and participated in case discussions regarding care.

The less intensive group of men was referred to usual care in the community. Men in both the more intensive and the less intensive group were reminded of the importance of blood pressure control every six months by telephone call and at their annual research visit. Both groups of men received education about the benefits of controlling high blood pressure.

Among the remarkable findings was the success at retaining the men in care at 12, 24, and 36 months.

Excluding men who had died (11 percent of the sample at 36 months), were in jail, or moved out of state, the follow-up rate exceeded 90 percent for both groups. Both the more intensive intervention group of men and the less intensive group showed lowering of blood pressure, with greater success in the more intensive group. Compared to the 17 percent rate of high blood pressure control at the start of the study for both groups of men, blood pressure control was achieved with 44 percent of the more intensive group at 36 months and 31 percent in the less intensive group. Complications of high blood pressure were followed in both groups of men. Heart enlargement was slower in the more intensive group compared to the less intensive group at 36 months.

Basic research was generated by this program of research over the years. For example, an office- or clinic-based urinary test for the albumin-creatinine ratio was found to predict left ventricular hypertrophy (heart enlargement) in these inner city African-American men.

The success of the novel treatment team can be attributed to their high degree of cultural competence and the synthesis and translation of research into a program of care for the targeted population of African-American urban men. The team offered a comprehensive, coordinated program that included supportive home visits and counseling, as well as educational and behavioral components, to improve adherence to treatment and appropriate use of health care services.

SCIENCE ADVANCES

Substantial growth is reflected in the research findings achieved with NINR support.

Women's Early Warning Signs of Heart Attack: The diagnosis and subsequent treatment of disease depend upon well-informed patients who understand what symptoms are important to report to clinicians, and upon skilled clinicians who can search for specific symptoms and history in order to render a proper diagnosis. For decades, clinicians have understood the classic signs of a heart attack to be crushing chest pain that radiates to the left arm and/or jaw.

More than 500 women discharged from hospitals with a diagnosis of heart attack were evaluated for the signs and symptoms they experienced up to a month before their heart attack and soon after. Although nearly 95 percent said they knew they had new or different symptoms in the month prior to their heart attack, only 30 percent of the women had chest pain and more than 40 percent did not experience chest pain at all. These women delayed seeking treatment because they did not know the pattern of signs and symptoms associated with heart attacks in women.

The women reported their patterns of symptoms and signs for the month before the heart attack: fatigue (70 percent of the women), sleep disturbance (nearly 50 percent), shortness of breath (42 percent). Within a month of the heart attack, symptoms included shortness of breath (59 percent), weakness (54 percent), and fatigue (43 percent). Armed with this knowledge, women will be more likely to report for health care. Clinicians, also, will be more likely to look for these signs and symptoms, and generate the diagnosis of impending heart attack with greater frequency.

Parent Training in Home Visits Improve Newborn Outcomes: Infant mortality rates in the U.S.A. have been improving, but rates for African-Americans remain twice that for Caucasians. An intervention was designed for low income pregnant minority women. African-American and Mexican- American mothers from low-income, inner-city neighborhoods were provided with prenatal care and post-natal follow-up monitoring. Home visits were made within two weeks after delivery, and visits or phone calls continued on a monthly basis for a year after the delivery. Home visits were made by a lay health advocate and/or a nurse; the latter performed formal evaluations of the infants' and mothers' health at the home visits.

At one year, mothers better documented infant immunizations and demonstrated more appropriate parenting expectations. Their infants had higher mental development scores than infants from a non-intervention control group. Mothers also showed improved mastery of daily living skills and play with their infants. Intervention during pregnancy with follow-up during early infancy enhances outcomes and saves costly health care for both mothers and infants.

Improving Patient Outcomes after Hospitalization: Patients who have been hospitalized are at risk for costly, long hospital stays, and re-hospitalization with complications. A specific organizational change following initial discharge from the hospital was found effective at improving these potential outcomes in five different patient populations.

Over the last decade, research has developed and tested an organizational model of "transitional care." Diverse groups of patients were evaluated using the transitional care models, in which advanced practice nurses provide supplemental care to the patient groups. Women after a cesarean birth, very low birth weight infants, women during a high-risk pregnancy, and older adults with common medical and surgical reasons for admission comprised the patients studied. Nurses identified more than 150,000 patient problems among these diverse patient groups during the periods of care they provided during and after hospitalization.

The research revealed that medical treatment and procedures took less nurse time than counseling, health teaching, surveillance, and case management. Patient groups with more nurse time and contacts per patient showed the greatest improvements in both patient outcomes and cost savings. Outcomes were dramatic despite the low tech, but highly skilled interventions used by the advanced practice nurses with the five patient groups. For example, both length of initial hospitalization, rates of hospital re-admission, and patient care costs were reduced among the patients receiving care under the transitional care model. The research provides direction for future organizational change in hospitals and among health plans that pay for care, in order to provide the continuity of care, teaching, counseling, and surveillance provided by the nurses across patient groups.

Simple Water Filtration Reduces Cholera in Bangladesh: Cholera is a waterborne disease that strikes in epidemics, causing thousands of deaths each year. The disease occurs primarily in underdeveloped countries. The World Health Organization reports the number of countries affected

continues to increase, including incidence now in sixteen Latin American nations.

Many villages in Bangladesh depend upon surface water from ponds or rivers for home use, since water treatment facilities are usually lacking. Treating water by boiling is expensive and impractical. Villagers in sixty five villages were trained in the use of triple-folded cloth from old saris, which even poor women wear as head coverings and shawls, to filter the surface water as it was being drawn into containers. The filtration reduces the number of organisms in the filtered water below the level that transmits disease.

Villages using the sari cloth filtration comprised about 133,000 people. A 48 percent reduction in cholera cases was noted compared to control areas in rural Bangladesh. When cholera did occur, those villagers had visited non-study villages and drank unfiltered water. Implementing this research into the lives of an impoverished population was easily accomplished.

NIH ROADMAP

Re-engineering the Clinical Research Enterprise and specifically interdisciplinary research within Research Teams of the Future are key to the NINR research agenda. These NIH Roadmap elements fit well and complement the separately generated NINR Research Themes for the Future.

Re-engineering the Clinical Research Enterprise: Most of NINR's funded research is clinical in nature, in that it focuses on patients, families, and even communities. NINR's investigators also use their unique clinical insights to bring research questions to the laboratory. The research questions focus on barriers that interfere with people's abilities to attain and maintain health. NINR investigators are uniquely positioned to translate research findings into clinical practice of many health providers, into non-traditional settings, into standards of care, and into regulatory and certification requirements. NINR research is often developed in partnership with communities where new knowledge must be implemented to achieve the overarching goals of *Healthy People 2010*: to improve quality and years of healthy life and to reduce health disparities.

Specifically, the NIH Roadmap initiative on Re-engineering the Clinical Research Enterprise has framed NINR's support of a national conference held in late 2003 at NIH. The conference, "*Promoting Research Intensive Environments in Clinical Settings*," was designed to create and sustain partnerships between academic researchers and qualified potential investigators in hospitals and other health care settings. We have identified that the research activities now routine at universities are largely unrealized in academic medical centers where different rewards, payment mechanisms, and other barriers exist to the conduct of innovative research. NINR's conference, in collaboration with the Department of Veterans Affairs and three prestigious national nursing organizations, enabled clinical investigators to identify resources and strategies needed to help develop and sustain research-supportive environments in clinical settings. NINR designed the agenda to include non-traditional settings of nursing home and community-based

settings in the mix of investigators who attended this conference.

Moving quickly to make the NIH Roadmap come alive for NINR's scientific community, the Institute convened a number of groups to develop a product, "NINR's Research Themes for the Future," which builds bridges between NINR's current and future initiatives and the NIH Roadmap initiatives.

Interdisciplinary Research Teams of the Future: NINR's science has a history of multi-disciplinary and interdisciplinary research. Research questions often are drawn from the interface of biologic and behavioral science. For example, in the Story of Discovery, the pathophysiology of hypertension was integrated with clinical medicine, the science of organizational change, and with insights drawn from behavioral science about the motivators of personal health behaviors.

The NINR Research Themes for the Future will guide the development of areas of research opportunity for NINR into the near future. These themes already have an underpinning of interdisciplinary research. For example, enhancing the use of technology in community-based care settings, incorporating communities into approaches to reduce health disparities, and promotion of health by changing lifestyle behaviors are all areas of science which require the contributions of many disciplines.

The NIH Roadmap initiatives encourage more interdisciplinary research of a level and type not seen before. NINR investigators published more than half of the entire body of investigator publications in non-nursing journals in FY2003. This demonstrates not only that many disciplines value NINR research, but also that this volume of multidisciplinary publications is a powerful predictor of successful interdisciplinary research and interdisciplinary practice.

INITIATIVES

NINR has compelling opportunities for additional funding resources in FY2005 to develop and expand research to increase the knowledge base of many health professionals and improve the quality of life and advance the health status of patients and families. These initiatives have been developed in an extensive public process which generated *NINR Research Themes for the Future*.

Prevention Strategies to Decrease Obesity in Infants and Young Children: Pediatric and adolescent obesity is a compelling public health problem. Research must address behavioral and social science as well as the biology of obesity. NINR will solicit research applications that target minority populations at risk for obesity, as well as children in underserved populations (such as in rural areas). NINR already supports studies on pediatric and adolescent behavior change.

Genetics and Genomics in Translational Research: To integrate and further stimulate advances in nursing research, genetics, genetic technology, and genomics, we will focus on interactions between gene, environment and behavior, especially health promotion behavior.

Research applications are expected to address the outcomes of genetic education and counseling, and the ramifications of genetic testing on health, including lifestyle changes and risk reduction. The initiative is novel, since it integrates biobehavioral, biological, and molecular science into nursing research.

Improving Quality of Life Near the End of Life: NINR is the lead Institute at NIH in end of life research. This area of science requires better methods and instruments, and culturally appropriate interventions that improve decision-making and communication at end of life. NINR's prior research has contributed important findings in symptom management at end of life, an area of science which is being integrated rapidly into standards of care in order to improve patient satisfaction and quality of life. New techniques to manage pain and other symptoms will emerge, and new behavioral approaches to improve caregiver-patient lives at the end of life.

Chronic Disease Self-Management in Understudied Populations: Self-management is the primary method people use to improve their life with chronic disease. Chronic disease is generally lifelong in duration, rarely curable completely, and requires careful monitoring and adjustment of activities of daily living to maintain stability and avoid complications. Research applications are likely to test in minority populations the set of self-management interventions (e.g., coping skills training, cognitive training) that are effective for mainstream populations. Several understudied populations are at risk for poor health outcomes: those who are geographically isolated, unemployed/uninsured, homeless, migrants, the oldest old, those with disabilities, and the poor.

Measurement of Symptom Clusters in Cancer and HIV/AIDS: Insights from clinical practice are that symptoms rarely occur alone. Treatment of those symptoms, however, historically has focused on single symptoms, one at a time. This initiative will characterize symptom clusters, their impact on patient outcomes, and explore how they can be managed. Symptom clusters will be studied in a variety of diseases and in relation to a number of factors such as age, gender, type or stage of disease, and medical treatment. We anticipate finding pathways by which one symptom in a cluster influences other symptoms.

Reducing Health Disparities among Minority and Underserved Women: There are a number of sociocultural factors which influence the health of minority and underserved women. This initiative complements NINR's prior and current research on reducing health disparities, most recently including an initiative on decreasing low birth weight among minority women. The initiative extends that research by focusing on women's health issues other than reproduction. Research applications are likely to measure physiological, socioeconomic, emotional, environmental, cultural, and genetic factors that influence major health indicators.

OTHER AREAS OF INTEREST

Addressing the Nursing Shortage: A shortage of nurse investigators pre-dates the current national nursing shortage. Recommendations to increase the nation's nurse investigators were included in both

the 1994 and the 2000 recommendations of the National Research Council's reports on the nation's needs for biomedical and behavioral research scientists. Since nurse investigators form the backbone of university faculty in schools of nursing across the country, the shortage of nurse investigators compromises the nation's ability to produce adequate numbers of nurses. To respond to this need, NINR has collaborated with universities across the country to rapidly develop fast-track baccalaureate-to-doctoral programs across the country. NINR also revised the mechanism used to support post-master's predoctoral research training, in order to provide funding support for the baccalaureate-to-doctoral research trainees in these fast-track programs.

Diversifying Opportunities in the Nursing Research Infrastructure: The availability of an informed and well prepared research workforce is essential to the development of science upon which health professions base their practice. NINR will continue to increase the nation's numbers of nurse investigators through a variety of methods, including our Centers program, selected research training mechanisms, and career development awards. The NINR-funded Core Centers, for example, have leveraged their funds to extend research and research training opportunities to individuals at each of the core center locations. In addition, seventeen Nursing Partnership Centers to Reduce Health Disparities have been created in collaboration with the National Center on Minority Health and Health Disparities. These centers represent partnerships between eight research-experienced universities and nine minority serving institutions. The Partnership Centers are expected to increase the amount of health disparities research undertaken at the universities, as well as increase the number of minority nurse investigators.

NINR will continue to offer research career development awards, including the mentored and mid-career patient-oriented awards that help individuals obtain research training at various stages of their research careers. Special efforts to provide research training for minority investigators will continue as well, such as the mentored research scientists awards for minority investigators and research supplemental awards for under-represented minorities. NINR will also fund postdoctoral training in laboratories on the NIH campus.

NINR's plans and initiatives are developed in collaboration with scientists and clinicians across the country, with guidance from its National Advisory Council for Nursing Research. Our initiatives are based on an understanding of the relationship between research and practice, and how changing practice depends not only on dissemination of research findings, but on a systematically built dialogue between researchers and the clinicians who implement the research.

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2. Burt V, Whelton P, Roccella E, et al: Prevalence of hypertension in the U.S. adult population: results from the third national health and nutrition examination survey, 1988-1991. Hypertension 25:305-313, 1995.
3. Devereux RB, Okin PM, Roman MJ: Pre-clinical cardiovascular disease and surrogate end-points in hypertension: does race influence target organ damage independent of blood pressure? Ethn Dis 8:138-148, 1998.
4. Coresh J, Jaar B: Further trends in the etiology of end-stage renal disease in African Americans. Curr Opin Nephrol Hypertens 6:243-249, 1997.

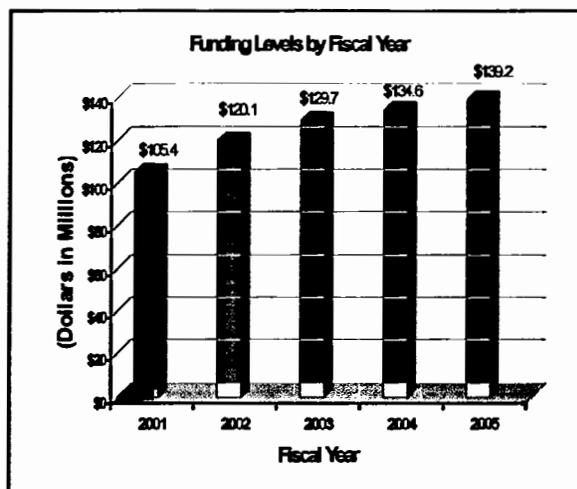
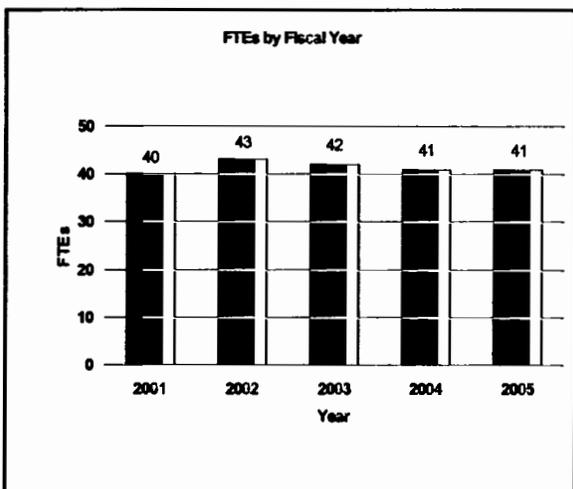
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6. He J, Whelton PK, Appel LJ: Long-term effects of weight loss and dietary sodium reduction on incidence of hypertension. Hypertension 35:544-549, 2000.
7. Krieger J, Collier C, Song L, Martin D: Linking community-based blood pressure measurement to clinical care: a randomized controlled trial of outreach and tracking by community health workers. Am J Public Health 89:856-861, 1999.
8. Baker DW, Gazmararian JA, Williams MV, Scott T, Parker RM, Green D, Ren J, Peel J: Functional health literacy and the risk of hospital admission among Medicare managed care enrollees. Am J Public Health 92:1278-1283, 2002.

Budget Policy

The Fiscal Year 2005 budget request for the NINR is \$139,198,000, an increase of \$4,164,00 3.3 percent over the FY 2004 Final Conference Level. Also included in the FY 2005 request is NINR's support for the trans-NIH Roadmap initiatives, estimated at 0.63% of the FY 2005 budget request. This Roadmap funding is distributed through the mechanisms of support, consistent with the anticipated funding for the Roadmap initiatives. A full description of this trans-NIH program may be found in the NIH Overview.

A five year history of FTEs and Funding Levels for NINR are shown in the graphs below. Note that the Fiscal Year 2001 FTE figure is not comparable to the figures in the succeeding years due to NIH's consolidation of its Human Resources function in FY 2003.

NIH's highest priority is the funding of medical research through research project grants (RPGs). Support for RPGs allows NIH to sustain the scientific momentum of investigator-initiated research while providing new research opportunities. The FY 2005 NIH request provides for an aggregate



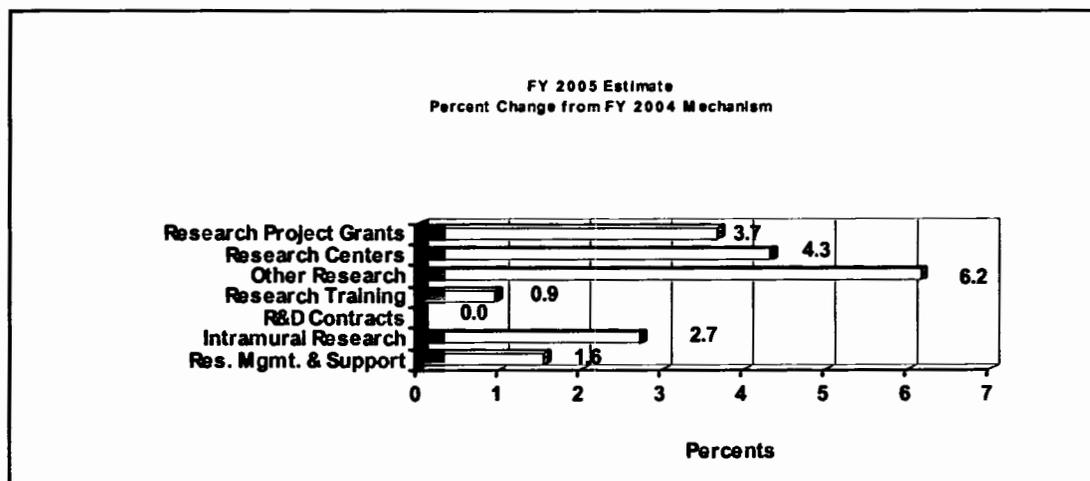
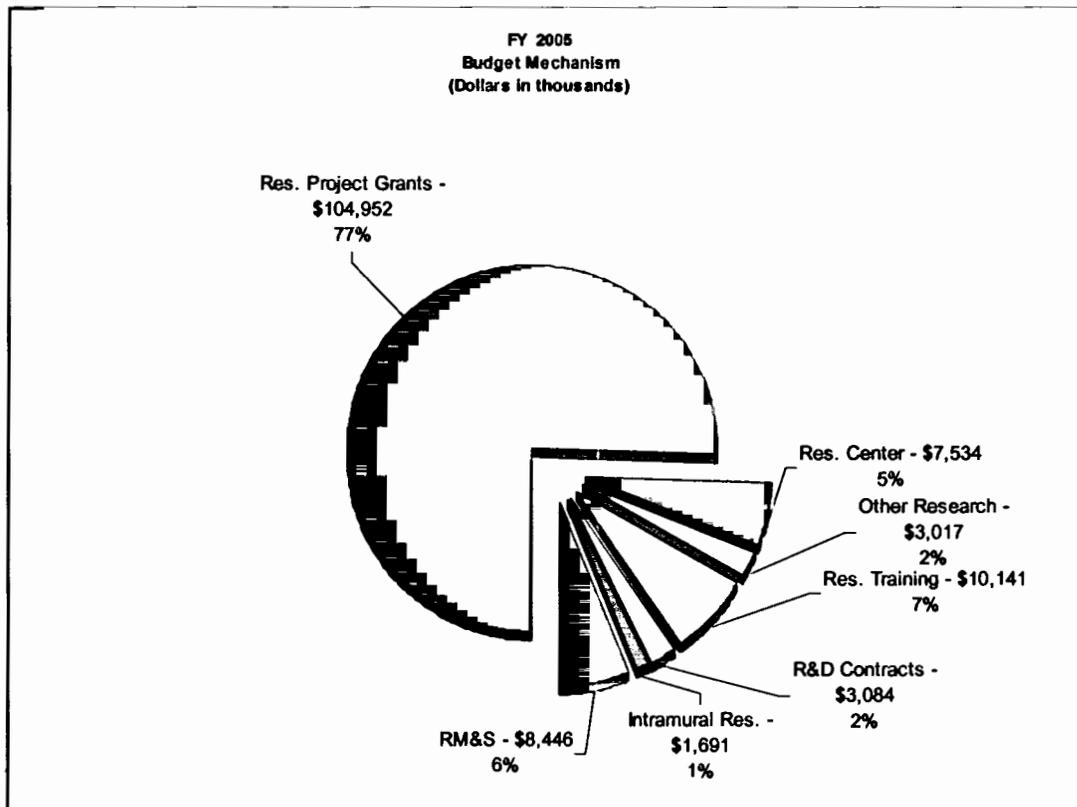
1.3 percent increase in average cost for Research Project Grants, consistent with general inflation as estimated by the Gross Domestic Product deflator. The NINR is providing an average cost increase of 1.9 percent for direct recurring costs in noncompeting continuation awards. Competing RPGs are based on an average cost increase of 1 percent.

Advancement in medical research is dependent on maintaining the supply of new investigators with new ideas. In the Fiscal Year 2005 request, NINR will support 267 pre- and postdoctoral trainees in full-time training positions. Stipend levels for pre-doctoral and post-doctoral recipients supported through the Ruth L. Kirschstein National Research Service Awards will remain at FY 2004 levels.

The Fiscal Year 2005 request includes funding for 35 research centers, 32 other research grants, including 31 clinical career awards, and 13 R&D contracts. Intramural Research and Research Management and Support receive increases to support increased pay and estimated inflationary increases in FY 2005.

NINR will allocate at least \$500,000 in support of an NICHD-led Obesity Initiatives in FY 2005. This will be an RFA focused on prevention and treatment of obesity in children in primary care settings.

The mechanism distribution by dollars and percent change are displayed below:



National Institute of Nursing Research

Budget Mechanism - Total

MECHANISM	FY 2003 Actual		FY 2004 Final Conference		FY 2005 Estimate		2004/2005 % Change	Avg. Cost % Change
	No.	Amount	No.	Amount	No.	Amount		
Research Grants:								
Research Projects:								
Noncompeting	182	\$67,312,000	201	\$72,059,000	195	\$70,964,000	-1.5	
Administrative supplements	(6)	213,000	(6)	218,000	(6)	250,000	14.7	
Full funded	21	3,115,000	21	3,192,000	21	3,224,000	1.0	
Single year	79	24,837,000	69	22,853,000	82	27,524,000	20.4	
Renewal	13	5,271,000	11	4,975,000	14	6,019,000	21.0	
New	60	19,061,000	52	17,368,000	62	20,990,000	20.9	
Supplements	6	505,000	6	510,000	6	515,000	1.0	
Subtotal, competing	100	27,952,000	90	26,045,000	103	30,748,000	18.1	3.2
Subtotal, RPGs	282	95,477,000	291	98,322,000	298	101,982,000	3.7	
SBIR/STTR	10	2,968,000	11	3,220,000	11	3,323,000	3.2	
Subtotal, RPGs	292	98,445,000	302	101,542,000	309	105,285,000	3.7	
Research Centers:								
Specialized/comprehensive	35	6,895,000	35	7,164,000	35	7,446,000	3.9	
Clinical research	0	0	0	0	0	0	0.0	
Biotechnology	0	0	0	58,000	0	88,000	51.7	
Comparative medicine	0	0	0	0	0	0	0.0	
Research Centers in Minority Institutions	0	0	0	0	0	0	0.0	
Subtotal, Centers	35	6,895,000	35	7,222,000	35	7,534,000	4.3	
Other Research:								
Research careers	31	2,547,000	31	2,652,000	31	2,792,000	5.3	
Cancer education	0	0	0	0	0	0	0.0	
Cooperative clinical research	0	0	0	0	0	0	0.0	
Biomedical research support	0	0	0	0	0	0	0.0	
Minority biomedical research support	0	0	0	3,000	0	3,000	0.0	
Other	1	739,000	1	187,000	1	222,000	18.7	
Subtotal, Other Research	32	3,286,000	32	2,842,000	32	3,017,000	6.2	
Total Research Grants	359	108,626,000	369	111,606,000	376	115,836,000		
Research Training:								
Individual awards	80	2,164,000	80	2,240,000	80	2,255,000	0.7	
Institutional awards	185	7,543,000	186	7,807,000	187	7,866,000	1.0	
Total, Training	265	9,707,000	266	10,047,000	267	10,141,000	0.9	
Research & development contracts (SBIR/STTR)	13	2,599,000	13	3,085,000	13	3,084,000	0.0	
	(0)	(0)	(0)	(0)	(0)	(0)		
Intramural research								
FTEs	3	1,522,000	3	1,646,000	3	1,691,000	2.7	
Research management and support	39	8,041,000	38	8,317,000	38	8,446,000	1.6	
Cancer prevention & control	0	0	0	0	0	0	0.0	
Construction	0	0	0	0	0	0	0.0	
Total, N	42	130,495,000	41	134,701,000	41	139,198,000	3.3	
(RoadMap Support)		(0)		(463,000)		(876,000)		
(Clinical Trials)		(1,849,000)		(1,870,000)		(1,900,000)		

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Budget Authority by Activity
(dollars in thousands)

ACTIVITY	FY 2003 Actual		FY 2004 Final Conference		FY 2005 Estimate		Change	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
	<u>Extramural Research:</u>		\$120,932		\$124,738		\$129,061	
Subtotal, Extramural research		120,932		124,738		129,061		4,323
Intramural research	3	1,522	3	1,646	3	1,691	0	45
Res. management & support	39	8,041	38	8,317	38	8,446	0	129
Total	42	130,495	41	134,701	41	139,198	0	4,497

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Summary of Changes

FY 2004 Final Conference		\$134,701,000	
FY 2005 Estimated Budget Authority		139,198,000	
Net change		4,497,000	
CHANGES	FY 2004 Budget Base		Change from Base
	FTEs	Budget Authority	FTEs Budget Authority
A. Built-in:			
1. Intramural research:			
a. Within grade increase		\$492,000	\$6,000
b. Annualization of January 2004 pay increase		492,000	5,000
c. January 2005 pay increase		492,000	6,000
d. One less day of pay		492,000	(2,000)
e. Payment for centrally furnished services		278,000	8,000
f. Increased cost of laboratory supplies, materials, and other expenses		876,000	13,000
Subtotal			36,000
2. Research Management and Support:			
a. Within grade increase		3,606,000	65,000
b. Annualization of January 2004 pay increase		3,606,000	37,000
c. January 2005 pay increase		3,606,000	42,000
d. One less day of pay		3,606,000	(14,000)
e. Payment for centrally furnished services		1,032,000	31,000
f. Increased cost of laboratory supplies, materials, and other expenses		3,679,000	57,000
Subtotal			218,000
Subtotal, Built-in			254,000

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Summary of Changes--continued

CHANGES	FY 2004 Budget Base		Change from Base	
	No.	Amount	No.	Amount
B. Program:				
1. Research project grants:				
a. Noncompeting	201	\$72,277,000	(6)	(\$1,063,000)
b. Competing	90	26,045,000	13	4,703,000
c. SBIR/STTR	11	3,220,000	0	103,000
Total	302	101,542,000	7	3,743,000
2. Research centers	35	7,222,000	0	312,000
3. Other research	32	2,842,000	0	175,000
4. Research training	266	10,047,000	1	94,000
5. Research and development contracts	13	3,085,000	13	(1,000)
Subtotal, extramural				4,323,000
6. Intramural research	<u>FTEs</u> 3	1,646,000	<u>FTEs</u> 0	9,000
7. Research management and support	38	8,317,000	0	(36,000)
8. Cancer control and prevention	0	0	0	0
9. Construction		0		0
Subtotal, program		134,701,000		4,296,000
Total changes	41		0	4,550,000

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Budget Authority by Object

	FY 2004 Final Conference	FY 2005 Estimate	Increase or Decrease	Percent Change
Total compensable workyears:				
Full-time employment	41	41	0	0.0
Full-time equivalent of overtime & holiday hours	0	0	0	0.0
Average ES salary	\$139,660	\$142,453	\$2,793	2.0
Average GM/GS grade	11.9	11.9	0.0	0.0
Average GM/GS salary	\$73,033	\$74,494	\$1,461	2.0
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$0	\$0	\$0	0.0
Average salary of ungraded positions	105,398	107,506	2,108	2.0
	FY 2004 Final Conference	FY 2005 Estimate	Increase or Decrease	Percent Change
OBJECT CLASSES				
Personnel Compensation:				
11.1 Full-Time Permanent	\$2,765,000	\$2,866,000	\$101,000	3.7
11.3 Other than Full-Time Permanent	404,000	418,000	14,000	3.5
11.5 Other Personnel Compensation	14,000	15,000	1,000	7.1
11.7 Military Personnel	0	0	0	0.0
11.8 Special Personnel Services Payments	152,000	153,000	1,000	0.7
Total, Personnel Compensation	3,335,000	3,452,000	117,000	3.5
12.1 Civilian Personnel Benefits	763,000	791,000	28,000	3.7
12.2 Military Personnel Benefits	0	0	0	0.0
13.0 Benefits for Former Personnel	0	0	0	0.0
Subtotal, Pay Costs	4,098,000	4,243,000	145,000	3.5
21.0 Travel & Transportation of Persons	167,000	167,000	0	0.0
22.0 Transportation of Things	12,000	12,000	0	0.0
23.1 Rental Payments to GSA	0	0	0	0.0
23.2 Rental Payments to Others	12,000	12,000	0	0.0
23.3 Communications, Utilities & Miscellaneous Charges	50,000	50,000	0	0.0
24.0 Printing & Reproduction	80,000	70,000	(10,000)	-12.5
25.1 Consulting Services	157,000	156,000	(1,000)	-0.6
25.2 Other Services	1,050,000	1,013,000	(37,000)	-3.5
25.3 Purchase of Goods & Services from Government Accounts	7,130,000	7,200,000	70,000	1.0
25.4 Operation & Maintenance of Facilities	12,000	13,000	1,000	8.3
25.5 Research & Development Contracts	34,000	36,000	2,000	5.9
25.6 Medical Care	0	0	0	0.0
25.7 Operation & Maintenance of Equipment	42,000	43,000	1,000	2.4
25.8 Subsistence & Support of Persons	0	0	0	0.0
25.0 Subtotal, Other Contractual Services	8,425,000	8,461,000	36,000	0.4
26.0 Supplies & Materials	100,000	105,000	5,000	5.0
31.0 Equipment	104,000	101,000	(3,000)	-2.9
32.0 Land and Structures	0	0	0	0.0
33.0 Investments & Loans	0	0	0	0.0
41.0 Grants, Subsidies & Contributions	121,653,000	125,977,000	4,324,000	3.6
42.0 Insurance Claims & Indemnities	0	0	0	0.0
43.0 Interest & Dividends	0	0	0	0.0
44.0 Refunds	0	0	0	0.0

National Institute of Nursing Research

Salaries and Expenses

OBJECT CLASSES	FY 2004 Final Conference	FY 2005 Estimate	Increase or Decrease	Percent Change
Personnel Compensation:				
Full-Time Permanent (11.1)	\$2,765,000	\$2,866,000	\$101,000	3.7
Other Than Full-Time Permanent (11.3)	404,000	418,000	14,000	3.5
Other Personnel Compensation (11.5)	14,000	15,000	1,000	7.1
Military Personnel (11.7)	0	0	0	0.0
Special Personnel Services Payments (11.8)	152,000	153,000	1,000	0.7
Total Personnel Compensation (11.9)	3,335,000	3,452,000	117,000	3.5
Civilian Personnel Benefits (12.1)	763,000	791,000	28,000	3.7
Military Personnel Benefits (12.2)	0	0	0	0.0
Benefits to Former Personnel (13.0)	0	0	0	0.0
Subtotal, Pay Costs	4,098,000	4,243,000	145,000	3.5
Travel (21.0)	167,000	167,000	0	0.0
Transportation of Things (22.0)	12,000	12,000	0	0.0
Rental Payments to Others (23.2)	12,000	12,000	0	0.0
Communications, Utilities and Miscellaneous Charges (23.3)	50,000	50,000	0	0.0
Printing and Reproduction (24.0)	80,000	70,000	(10,000)	-12.5
Other Contractual Services:				
Advisory and Assistance Services (25.1)	157,000	156,000	(1,000)	-0.6
Other Services (25.2)	1,050,000	1,013,000	(37,000)	-3.5
Purchases from Govt. Accounts (25.3)	7,130,000	7,200,000	70,000	1.0
Operation & Maintenance of Facilities (25.4)	12,000	13,000	1,000	8.3
Operation & Maintenance of Equipment (25.7)	42,000	43,000	1,000	2.4
Subsistence & Support of Persons (25.8)	0	0	0	0.0
Subtotal Other Contractual Services	8,391,000	8,425,000	34,000	0.4
Supplies and Materials (26.0)	100,000	105,000	5,000	5.0
Subtotal, Non-Pay Costs	8,812,000	8,841,000	29,000	0.3
Total, Administrative Costs	12,910,000	13,084,000	174,000	1.3

NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

SIGNIFICANT ITEMS IN HOUSE, SENATE, AND CONFERENCE APPROPRIATIONS COMMITTEE REPORTS

FY 2005 House Appropriations Committee Report Language (H. Rpt. 108-188)

Item

Health disparities - The seventeen new nursing partnership centers to reduce health disparities are of special interest to the Committee. NINR's goal to bring together research-intensive schools of nursing and minority serving schools of nursing into partnerships to promote health disparities research and to expand the number of minority nurse researchers is commendable. The Committee looks forward to learning more about this creative approach (p. 81).

Action taken or to be taken

NINR is pleased with the progress of this initiative, which is jointly sponsored by NINR and the National Center for Minority Health and Health Disparities. The seventeen Center directors convened at NINR in the fall of 2003 to discuss progress, learn how common problems were resolved, and build relationship across all centers. Pilot studies within each of the Centers are progressing, and hold promise for more fully developed research studies-to-come. The Centers are able to capitalize on research opportunities in the environment of members of each of the partnerships.

Item

Nursing interventions for psychiatric populations - The Committee urges NINR to continue to partner with NIMH and with psychiatric nursing to: (1) build the capacity to address research questions in treating psychiatric populations, and (2) stimulate research that develops and tests interventions for individuals with co-existing medical and mental illnesses. Such interventions are important given the high prevalence of mental illness, the burden of mental disorders on patients and their families, and the primary role assumed by nurses in providing psychiatric services in diverse settings and systems of care (p. 81).

Action taken or to be taken

NINR and NIMH reported last year on the progress of the mentorship program for psychiatric-mental health nurses. This program used an NIMH-developed model to link psychiatric-mental health nurses with research mentors, and implement a plan of mentored development with the respective mentors which resulted in a mock review of research applications in March 2003. The nurses then revised their applications for the next application deadline. We are awaiting review of the applications to evaluate the effectiveness of the program. At the National Advisory Council for Nursing Research in January 2004 NINR will be discussing an area of research opportunity which focuses on research to promote and maintain physical health of persons with psychiatric disorders or cognitive impairment. The key staff and elected officials of psychiatric nursing organizations have been invited to attend this Advisory

Council to hear and offer comment during the discussion.

Item

Self-management - The Committee encourages NINR to continue its strong focus on self-management for patients who live with chronic illness. Advancing knowledge of technological innovations that help people manage their own health and promote their quality of life is a key area for research (p. 82).

Action taken or to be taken

NINR has extended the scope of its self-management research by developing a new Area of Research Opportunity for FY2005: Chronic Disease Self-Management in Understudied Populations. Areas of Research Opportunity become stimuli for the research community to submit applications in the new area. In this case, NINR anticipates receiving applications that examine self-management across chronic diseases and conditions, and among those who experience health disparities. The growing body of self-management studies will be enhanced by this latest stimulus to the research community.

FY 2005 Senate Appropriations Committee Report Language (S. Rpt. 108-181)

Item

Nursing Interventions for Psychiatric Populations - The Committee commends the mentorship program established by NINR in collaboration with the National Institute of Mental Health (NIMH) to prepare mental health nurse scientists. The Committee urges NINR to continue to partner with NIMH and with psychiatric nursing to: (1) build the capacity to address research questions in treating psychiatric populations, and (2) stimulate research that develops and tests interventions for individuals with co-existing medical and mental illnesses. Such interventions are crucial given the high prevalence of mental illness, the burden of mental disorders on patients and their families, and the critical role assumed by nurses in providing psychiatric services in diverse settings and systems of care. (p. 145)

Action taken or to be taken

Please refer to page 22 of this document for the response of the National Institute of Nursing Research to this significant item regarding nursing interventions for psychiatric populations.

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2004 Amount Authorized	2004 Final Conference	2005 Amount Authorized	2005 Budget Estimate
Research and Investigation	Section 301	42§241	Indefinite		Indefinite	
Research	Section 41B	42§285b	Indefinite	\$124,654,000	Indefinite	\$129,057,000
National Research Service Awards	Section 487(d)	42§288	a/	10,047,000	b/	10,141,000
Total, Budget Authority				134,701,000		139,198,000

a/ Amounts authorized by Section 301 and Title IV of the Public Health Act.

b/ Reauthorizing legislation will be submitted.

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation ^{1/}
1996	\$50,159,000 ^{2/}	\$55,831,000	\$49,497,000	\$55,831,000
Rescission				(17,000)
1997	51,951,000	45,231,000	53,936,000	59,743,000
1998	55,692,000	56,950,000	59,443,000	48,043,000
1999	62,229,000 ^{3/}	68,198,000	69,834,000	69,834,000
Rescission				(46,000)
2000	65,335,000	76,204,000	90,000,000	90,000,000
Rescission				(478,000)
2001	84,714,000	102,312,000	106,848,000	104,370,000
Rescission				(20,000)
2002	117,686,000	116,773,000	125,659,000	120,451,000
Rescission				(23,000)
2003	129,768,000	131,438,000	131,438,000	131,438,000
Rescission				(854,000)
2004	134,579,000	134,579,000	135,579,000	135,555,000
Rescission				(831,000)
2005	139,198,000			

^{1/} Reflects enacted supplementals, rescissions, and reappropriations.

^{2/} Excludes enacted administrative reduction of \$22,000.

^{3/} Reflects a decrease of \$187,000 for the budget amendment for bioterrorism.

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Detail of Full-Time Equivalent Employment (FTEs)

OFFICE/DIVISION	FY 2003 Actual	FY 2004 Final Conference	FY 2005 Estimate
Office of the Director (includes FTEs from the Office of Science Policy & Public Liaison and the Office of Administration Management)	15	15	15
Associate Director for Scientific Programs and Division on Extramural Activities	24	23	23
Division of Intramural Research	3	3	3
Total	42	41	41
FTEs supported by funds from Cooperative Research and Development Agreements			
	(0)	(0)	(0)
FISCAL YEAR	Average GM/GS Grade		
2001	11.0		
2002	12.4		
2003	11.8		
2004	11.9		
2005	11.9		

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

Detail of Positions

GRADE	FY 2003 Actual	FY 2004 Final Conference	FY 2005 Estimate
ES-6			
ES-5			
ES-4	1	1	1
ES-3			
ES-2			
ES-1	1	1	1
Subtotal	2	2	2
Total - ES Salary	\$273,842	\$279,319	\$284,905
GM/GS-15	3	3	3
GM/GS-14	12	13	13
GM/GS-13	3	4	4
GS-12	7	7	7
GS-11	2	2	2
GS-10	2	2	2
GS-9	3	3	3
GS-8	2	2	2
GS-7	3	3	3
GS-6			
GS-5	1	1	1
GS-4			
GS-3			
GS-2			
GS-1			
Subtotal	38	40	40
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General			
Director Grade			
Senior Grade			
Full Grade			
Senior Assistant Grade			
Assistant Grade			
Subtotal	0	0	0
Ungraded	4	4	4
Total permanent positions	39	40	40
Total positions, end of year	44	46	46
Total full-time equivalent (FTE) employment, end of year	42	41	41
Average ES level	ES-3	ES-3	ES-3
Average ES salary	\$136,921	\$139,660	\$142,453
Average GM/GS grade	11.8	11.9	11.9
Average GM/GS salary	\$71,601	\$73,033	\$74,494

**NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research**

New Positions Requested

	FY 2005		
	Grade	Number	Annual Salary
Senior Advisor to Institute Director	AD-601 Title 42	1	\$110,000
Staff Scientist (IR)	GS-601-14	1	90,000
Total Requested		2	