

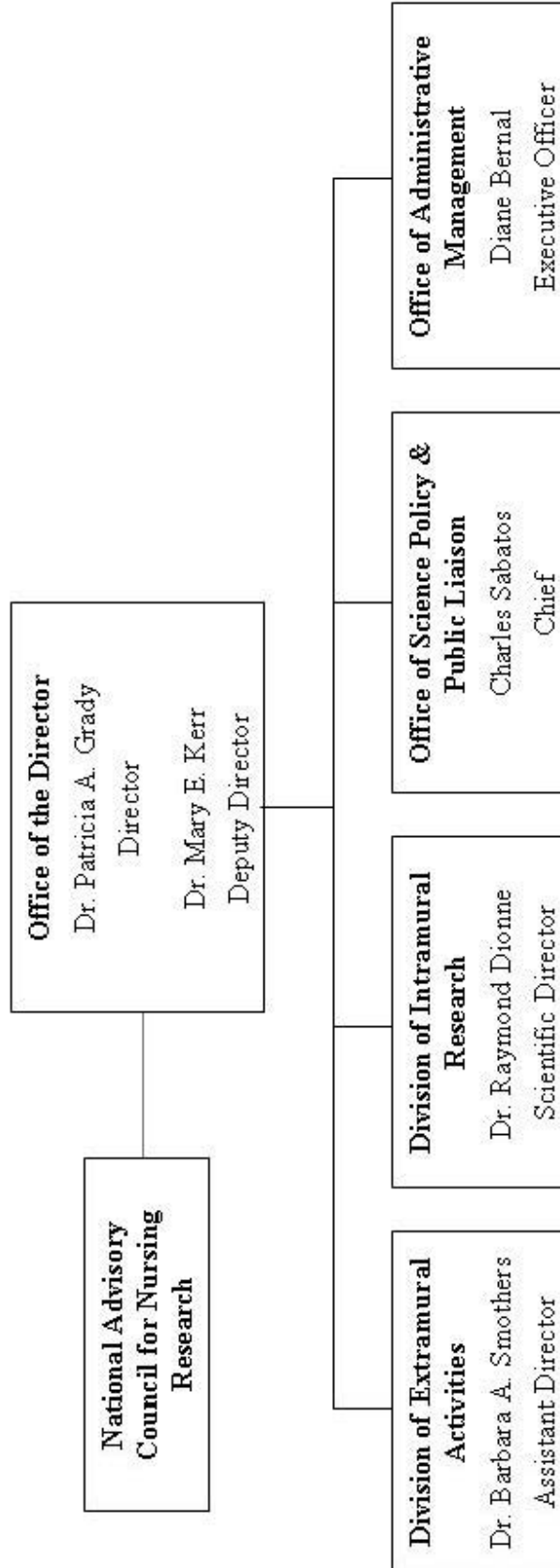
DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

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



**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 [\$138,729,000] *\$136,550,000*.

[Department of Health and Human Services Appropriation Act, 2006]

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

**Amounts Available for Obligation 1/**

Source of Funding	FY 2005 Actual	FY 2006 Appropriation	FY 2007 Estimate
Appropriation	\$139,198,000	\$138,729,000	\$136,550,000
Enacted Rescissions	(1,126,000)	(1,387,000)	0
Subtotal, Adjusted Appropriation	138,072,000	137,342,000	136,550,000
Real transfer under NIH Director's one-percent transfer authority for Roadmap	(873,000)	(1,227,000)	0
Comparative transfer from OD for NIH Roadmap	873,000	1,227,000	0
Subtotal, adjusted budget authority	138,072,000	137,342,000	136,550,000
Unobligated Balance, start of year	0	0	0
Unobligated Balance, end of year	0	0	0
Subtotal, adjusted budget authority	138,072,000	137,342,000	136,550,000
Unobligated balance lapsing	0	0	0
Total obligations	138,072,000	137,342,000	136,550,000

1/ Excludes the following amounts for reimbursable activities carried out by this account:  
FY 2005 - \$58,000    FY 2006 - \$58,000    FY 2007 - \$58,000

**Justification  
National Institute of Nursing Research**

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Authorizing Legislation: Section 301 of the Public Health Service Act, as amended.

Budget Authority:

FY 2005 Actual		FY 2006 Appropriation		FY 2007 Estimate		Increase or Decrease	
<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>
36	\$138,072,000	38	\$137,342,000	39	\$136,550,000	1	(\$792,000)

This document provides justification for the Fiscal Year 2007 activities of the National Institute of Nursing Research (NINR), including HIV/AIDS activities. A more detailed description of NIH-wide Fiscal Year 2007 HIV/AIDS activities can be found in the NIH section entitled “Office of AIDS Research (OAR).” Detailed information on the NIH Roadmap for Medical Research may be found in the overview section.

**Introduction**

The National Institute of Nursing Research (NINR) was created with the unique mission of establishing the scientific basis of care for all people, regardless of age, and without respect to disease or health status. Since its inception in 1986 as the National Center for Nursing Research, NINR has for twenty years supported a broad range of studies, many of which were groundbreaking and influential in the field of nursing research. For example, NINR-funded nurse scientists have shown that:

- A culturally-sensitive, educational, behavioral, and pharmacologic intervention delivered by a multidisciplinary health care team at the community level can help young urban African American men manage their hypertension.
- Hospital working conditions for nurses are important predictors of patient outcomes.
- A school-based program for helping children initiate healthy behaviors can help children improve their cardiovascular health and promises to provide health benefits that extend well into adulthood.
- A short, community-level self-management program for Spanish-speaking Hispanics with chronic conditions can improve elements of health status while reducing health care costs.
- Coping skills training and problem solving interventions can help improve both the metabolic management and quality of life for adolescents with type 1 diabetes.
- A transitional care model for discharge planning that employs Advance Practice Nurses to help bridge the gaps between hospital and home care improved health outcomes while providing significant cost savings.

Together these results demonstrate that nursing research is changing nursing practice, but more importantly, changing the lives of countless people every day.

In October, 2005, NINR began a year-long observance of its 20<sup>th</sup> anniversary by taking stock in these past advances with the purpose of identifying new research concepts that will be critical to future accomplishments in the multidisciplinary care picture of the future. In keeping with that strategy, in FY 2007 NINR seeks to advance nursing science within this changing environment by supporting a broad portfolio of investigator-initiated clinical and basic research projects across all stages of the human lifespan—from birth into adulthood, through old age—with special attention to issues at the end of life. With a focus on these four stages of life, the accompanying information highlights NINR's recent advances, new studies, and future plans.

### **The Early Years of Life – Healthy Infants to Healthy Children**

A healthy start is critical for a child's development. A major part of NINR's research portfolio focuses on the early years of life, from studying factors that result in healthy pregnancies, to researching disparities in child health. Our investigators continue to make rapid progress in these areas, and we will continue to emphasize child health research in FY 2007 and beyond.

**Science Advance: Getting a Good Night's Sleep may lead to Easier Labors and Deliveries for Pregnant Women.** Pregnant women often complain of sleep difficulties and fatigue, especially as they approach term, and sleep disturbances have been associated with adverse physical and psychological consequences in many populations. As part of a larger clinical study, NINR-funded scientists collected sleep data on women expecting their first child and in their last month of pregnancy. Participants wore a monitor on their wrist for two days to record activity patterns. They also completed a sleep log and questionnaires on their sleep quality. Women who slept less than 6 hours per night or who experienced frequent sleep disturbances during their pregnancy had significantly prolonged 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 suggest a need for women to get adequate sleep during their pregnancy.

**Improving Interventions for Young Cancer Patients and Preparing them for Life After Cancer.** There have been great advances in pediatric cancer care in the past quarter century. Research has transformed cancer in children from being a highly fatal disease to one that can be successfully treated in many cases.<sup>1</sup> However, much work remains. In FY 2007, NINR will begin a new initiative that seeks to improve pediatric cancer outcomes and prepare young cancer survivors and their families for long-term survivorship. The initiative will focus on a few key points in a cancer patient's experience with the disease: detection, intervention, the return to the community, and preparing for long-term survivorship. Specific issues to be addressed include: understanding how physicians communicate information to young patients and their families and how that information impacts the decisions they make regarding treatment; developing biobehavioral interventions for patients and family members to help them cope with the cancer treatment experience; researching the effect of chemotherapy on a child's ability to learn; and developing interventions to promote resiliency in young cancer survivors.

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<sup>1</sup> National Center for Health Statistics. Health, United States, 2004 with Chartbook on Trends in the Health of Americans. Hyattsville, Maryland, 2004.

**Examining the Effects of Post Traumatic Stress Disorder on Childbearing.** Post Traumatic Stress Disorder (PTSD) is a debilitating anxiety disorder that occurs following a traumatic event. Events that trigger PTSD can include situations in which the afflicted person witnessed a violent event or was personally assaulted or threatened with physical violence. Women are more likely to develop PTSD than men.<sup>2</sup> To date, there is little research on the effects of PTSD on childbearing, but preliminary data suggest that PTSD is associated with several unwanted pregnancy outcomes. NINR-funded investigators are undertaking a series of studies, involving hundreds of pregnant women, that should provide better evidence as to whether or not PTSD is associated with adverse pregnancy outcomes. Results from these studies could be used to develop better guidelines for physicians and nurses who are caring for expectant mothers afflicted with PTSD.

**Science Advance: Omega-3 Fatty Acid Supplements Improve the Function of Blood Vessels in Children with High Lipid Levels.** Studies have shown that diets high in fish, which are rich in omega-3 fatty acids, are associated with a decreased risk for coronary artery disease. Omega-3 fatty acids are important components of cells, and they may play an important role in maintaining blood pressure and healthy vascular function. However, typical Western diets tend to be deficient in these nutrients. Children with high levels of lipids in their blood due to genetics were enrolled in a clinical trial to study the effects of diet and omega-3 fatty acid supplementation on blood lipid levels and vascular function. The children received capsules containing docosahexaenoic acid (DHA), an omega-3 fatty acid. While diet alone had no significant effect on blood lipid levels, DHA supplementation increased DHA levels an average of 250%, and improved the balance of DHA with other blood lipids. In addition, DHA supplementation resulted in a significant increase in blood flow in certain blood vessels. These results indicate that DHA may improve vascular function in children with high levels of blood lipids, which could help to delay the early development of heart disease.

**Preventing Obesity in Primary Care Settings.** The rapidly growing problem of obesity in the U.S. has been well-documented. Obesity contributes to a large number of growing health problems, including heart disease, hypertension, and diabetes. Combating the obesity epidemic and its consequences is a Department-wide priority, and is featured prominently in Secretary Leavitt's 500-Day plan. Obesity in young children can lead to a lifetime of health problems. Instilling and maintaining healthy habits at an early age are critical to ultimately ending this epidemic. The best opportunities to educate children and their families on healthy living are not always clear, but several groups of NINR-investigators have initiated studies on the effectiveness of new interventions done in primary care practices for at-risk children and their parents. Primary care practices are in key positions to identify and intervene with children at risk for obesity but generally lack the training and tools to do so. Expected outcomes of these interventions are healthier eating, increased physical activity, and reduced body-mass indices. Another group of NINR-funded investigators is testing a new intervention in primary care settings focused on overweight adolescent females. This intervention is innovative in that it is adapted solely for the unique needs of adolescent females, and includes elements focused on mood regulation and eating disorders.

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<sup>2</sup> Davidson JR: Trauma: the impact of post-traumatic stress disorder. *Journal of Psychopharmacology* 14 (2 Suppl 1): S5-S12, 2000.

### **Easing the Transition to Breast or Bottle Feeding for Preterm Infants with BPD.**

Bronchopulmonary dysplasia (BPD), a condition in which a preterm baby has difficulty breathing because its lungs do not work properly, often requires that an infant remain in the hospital for a longer time than other preterm infants. BPD affects 5,000 to 10,000 babies annually in the U.S.<sup>3</sup> Frequently, a baby's ability to transition away from tube feeding to breast or bottle feeding signifies its readiness to leave the hospital. However, the methods and criteria used to guide and assess this transition vary from nursery to nursery. NINR-funded investigators are testing an experimental feeding intervention, previously shown to be effective with healthy preterm infants, on BPD-afflicted infants. If successful, this intervention could become a standard practice in many nurseries, reducing the length of hospital stays, as well as the associated healthcare costs.

**Reducing Health Disparities among Children.** NINR is committed to reducing, and ultimately eliminating, health disparities. Currently, research often targets health disparities in adults, but few health disparity studies focus on children. Millions of children live in poverty, with reduced or no access to good healthcare, and these children are disproportionately minorities. In FY 2007, NINR will solicit new nursing intervention research proposals aimed at reducing health disparities among children. This initiative will target such areas as: studying how gender and immigrant status affect children's health and access to health care, developing interventions to reduce risk factors for poor health outcomes, and developing culturally-sensitive interventions to promote physical activity and healthy diets among children. Nursing interventions that target all levels of healthcare, from individuals, to providers, to communities, will receive a special focus.

### **Staying Healthy Throughout Adulthood**

NINR not only funds research to help nurses and other health professionals better attend to ill patients, but, equally as important, we also explore how to provide the best guidance on maintaining healthy lifestyles before problems develop. NINR investigators are at the forefront of developing new techniques and interventions that will help all people stay healthy throughout their adult lives. Our research spans a wide range of topics, from designing new tests for heart disease, to finding better ways to measure pain, to studying interventions for combating obesity.

**Science Advance: Culturally-sensitive Dietary Program Helps Rural, Diabetic African-Americans Lose Weight and Decrease their Fat Intake.** African-Americans living in rural areas have a high prevalence of diabetes, and tend to have poor compliance with dietary self-management. NINR-supported investigators tested a new dietary intervention with a group of African-Americans living in rural areas of South Carolina with type 2 diabetes. The intervention consisted of a series of classes focused on preparing healthy, low-fat foods, and practical and culturally compatible strategies for reducing the use of fats. In addition to classes, the intervention included discussion groups involving peers and health professionals, and telephone follow-up. Participants successfully lowered their dietary fat intake and their body weight, and showed a slight improvement in glucose control and lipid levels. Meanwhile, members of a control group who received only a referral to a local diabetes program maintained their usual

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<sup>3</sup> National Heart, Lung, and Blood Institute, Disease Conditions Index, [www.nhlbi.nih.gov/health/dci/index.html](http://www.nhlbi.nih.gov/health/dci/index.html), Last Viewed 11/2/05.



high-fat diet and gained weight. This program demonstrates the effectiveness of culturally-sensitive interventions in decreasing risk factors and improving the health of people suffering from health disparities.

**Problems with Obesity and Co-morbidities in the Physically Disabled.** Millions of Americans suffer from chronic conditions that limit their mobility. However, physical inactivity is closely associated with obesity. Obesity rates are rising rapidly in the U.S. population as a whole. As might be expected, the obesity rate is higher among disabled people than among people without disabilities.<sup>4</sup> Obesity causes well-known health problems in non-disabled people, but it may pose an even larger threat to people with disabilities because of secondary health effects. New research is needed to assess the true extent of this risk, and to determine ways to reduce obesity rates in the disabled population. In FY 2007, NINR will expand its previous strong commitments in the areas of disability and obesity research to address this pressing need. Areas of interest will include: adapting culturally-sensitive obesity prevention strategies that have worked with non-disabled people for use with disabled people, assessing the association between reduced mobility and obesity in disabled people, and assessing the increased risk for secondary health effects posed by obesity in the disabled population that may not be present for non-disabled people. Co-morbidities were identified as a major public health risk in Healthy People 2010, and this initiative has the potential to address this significant public health priority.

**Science Advance: Women are less Likely than Men to Seek Immediate Treatment for, and Make Behavioral Changes After, a Heart Attack.** Rapid treatment after a heart attack is critical for survival and long-term recovery, but many women who are heart attack victims delay seeking treatment. NINR-funded investigators interviewed women who recently had survived heart attacks and found that they delayed seeking treatment for a variety of reasons, several of which involved not initially realizing they were having a heart attack. Another group of NINR-funded scientists interviewed both men and women who had recently had heart attacks. They found that women were less likely to make changes to their diet or exercise routines, changes that could prevent future heart attacks. A possible reason for this failure is that women were less likely to attribute the cause of their heart attack to poor diet and exercise than men. These findings indicate that men and women differ in what they believe caused their illness, which may influence their behavior once they have recovered. Findings such as these can help healthcare providers develop tools to teach women how to recognize the symptoms of a heart attack, the importance of seeking rapid treatment, the causes of a heart attack, and the behavior changes necessary to prevent a re-occurrence.

**Developing a New Test for Heart Disease in Diverse Groups of Women.** Diagnosing coronary heart disease in women is challenging, because women often experience different symptoms than men. The vast majority of women do experience certain symptoms prior to a serious coronary event, but there are significant racial differences in the type of symptoms that occur. NINR investigators are developing and testing a new survey for women for its ability to predict whether or not they are at risk for serious heart disease. This new test takes into account the multiple symptoms that women with heart disease may experience, as well as the diverse symptoms displayed by women of different races.

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<sup>4</sup> Centers for Disease Control and Prevention. State-specific prevalence of obesity among adults with disabilities – eight states and the District of Columbia, 1998-1999. *MMWR* 51(36): 805-808, 2002.

**Symptom Management: Developing a Better Way to Measure Pain.** Acute pain left untreated may lead to chronic pain,<sup>5</sup> which can reduce the quality of life of the person affected. Unfortunately, acute pain remains a very difficult symptom to measure accurately and consistently. A team of NINR-funded investigators is developing an advanced tool for assessing acute pain that may prove more accurate than existing measures, and which will standardize pain measurements to allow comparisons of pain among different groups of patients. Better ways of measuring pain are critical to improving symptom management, patient care, and patient quality of life. Over the years, NINR has devoted a large amount of effort to symptom management, and it continues to be a top priority.

**New Technologies Aid People with Chronic Diseases.** In recent years, new technology has led to rapid improvements in devices that have allowed people with chronic diseases such as diabetes to better care for themselves, or that make the job of informal caregiving easier. These devices now, or soon will, include those that can monitor blood pressure, blood glucose, or heart rate at home, and then record and/or transmit this information to a nurse or physician over the phone or Internet. Considering the increasing number of individuals living with chronic diseases in the U.S., the potential use of such devices could alleviate a large strain on our healthcare system. However, few studies are available on whether patients will accept new technologies or use them on a regular basis. Research is also needed to determine the effectiveness of these technologies as interventions for a number of diseases. In FY 2007, NINR will begin an initiative to improve our knowledge in these areas. Special attention will be paid to examining the role of age, gender, education, and socioeconomic status on the use of new technology. New technology holds great promise for the future of chronic disease intervention; the key is ensuring that all patients have access to this technology and are willing and able to use it.

**HIV/AIDS Prevention and Treatment: Culture and Young People.** Great strides have been made in the past 25 years in treatment and prevention strategies to combat the spread of HIV/AIDS in the U.S. However, many populations in the U.S. and around the world have not benefited from these developments, and this is especially true for young people. One possible reason for such disparities is the influence of cultural differences on the effectiveness of prevention and treatment strategies. In September, 2005, NINR sponsored a workshop on the influence of cultural differences on HIV/AIDS treatment and prevention strategies for young people. In FY 2007, NINR will begin a new initiative based on the findings from this workshop, taking advantage of our expertise in research that combines the biological and behavioral aspects of diseases. Areas of research interest include: developing prevention/treatment interventions to help young people infected with HIV/AIDS that take into account the cultural differences of those infected; determining the influence of cultural differences on how young people view living with HIV/AIDS and how these differences affect their views on preventing the spread of the disease; and examining challenges in transferring successful interventions across cultures, especially to other parts of the world.

### **Understanding Aging and Caring for the Elderly**

Most adults will suffer from some adverse effects of the aging process. NINR-funded scientists are working to better understand these health effects and to develop interventions to ease the

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<sup>5</sup> Perkins, F.M. and H. Kehlet: Chronic pain as an outcome of surgery. *Anesthesiology* 93: 1123-33, 2000.

burdens they cause. NINR also devotes significant attention to elderly patients and the informal caregivers that care for them. Caring for the elderly, especially those with advanced illnesses, can be difficult and stressful for both the patient and caregiver. NINR scientists are actively developing better tools and techniques to make caregiving easier for everyone involved.

**Science Advance: Racial differences in Depression among Caregivers of Dementia Patients.** Informal family caregivers provide most of the care for the nearly 3 million older adults with a dementia disorder who live at home. Most often the caregiver is an elderly spouse whose own health may also be compromised. A survey of over 2,000 female caregivers of elderly veterans with dementia found that almost one-third of the women had significant depressive symptoms. Caucasian caregivers were almost twice as likely to be depressed as African-American caregivers. Factors linked to depression in caregivers included low financial resources, minimal social support, and poor personal health. Among those with depressive symptoms, less than one in five were taking antidepressants, with Caucasians twice as likely as African-Americans to be taking such medications. These results suggest that caregivers of dementia patients should receive routine screening and treatment for depression, and that better efforts are needed to make some caregivers aware of the potential benefits of antidepressant therapy.

**Using Technology to Improve the Self-care of Patients with Heart Failure.** As healthcare costs continue to rise, there is an ongoing need for innovative ways to deliver high-quality medical care at a lower cost. Health professionals have designed telehealth-based programs that allow patients with certain conditions to care for themselves at home, while communicating with their providers by phone or over the internet, and patients can learn about their condition through interactive training exercises on their own computer. However, the effectiveness of such interventions has not been well-studied. NINR-funded investigators have initiated a new study to test the effects of a telehealth, self-care intervention for elderly patients with heart failure. The researchers will gather answers on a number of questions: Are these interventions more effective than traditional home visits? Are elderly patients willing to use these new techniques? Are these interventions cost-effective? Findings from these studies could help clinicians make better use of technology in self-care, leading to a higher quality of life for the patients, and lower healthcare costs for consumers.

**Science Advance: Depression Linked to Low Cholesterol in Postmenopausal Women not on Hormone Therapy.** Some studies have associated low cholesterol levels with an increase in depression, anxiety, and aggression, an elevated risk of death from accidents, violence, or suicide, and a lower level of social support. Low cholesterol may have a biological link to the function of the neurotransmitter serotonin, and decreased serotonin function has also been associated with the drop in estrogen associated with menopause. Scientists followed 70 postmenopausal women, a third of whom were receiving hormone replacement therapy (HRT), to study the relationship between depressive symptoms and cholesterol and lipid levels. Of the women studied, 10% had a low cholesterol level, 37% had a normal level, and 53% had a high level. The average depression score for the women was low, and was not related to receiving HRT. However, for women not on HRT, increased depressive symptoms were related to lower levels of cholesterol. This finding suggests that HRT may serve to buffer the effects of low cholesterol levels on depression in otherwise healthy postmenopausal women.

**Developing Interventions to Prevent Elder Abuse in Native American Communities.** Abuse of the elderly is an issue of concern in all cultures, and the Native American community is no exception. However, due to the unique and diverse cultural characteristics the Native American population, there is little information available on the extent of elder abuse in these communities or on ways of preventing it from occurring. A team of NINR-funded investigators has initiated a pilot study to better understand the community and family structures of one Native American community, and to determine the prevalence and perceptions of elder abuse within this group. These scientists will use this knowledge to design and implement interventions that seek to prevent elder mistreatment by improving communication within families. The culturally-sensitive interventions designed in this study can then be tested and applied to other Native American communities, raising awareness of elder abuse and improving the ability of all tribes to eliminate this serious problem.

**Comprehensive Intervention to Improve Quality of Nursing Home Care.** Providing seniors with adequate nursing home care is a critical national issue. NINR-funded scientists have launched a study to test a new approach to transforming poorly performing nursing home staffs. These investigators have developed a comprehensive intervention that incorporates clinical and management approaches developed in previous studies by multiple investigators. The intervention seeks to improve quality of care, decision-making processes, leadership commitment, and in the end, resident outcomes. The intervention focuses on all levels of the nursing home system, including owners, administrators, and clinical staff. The effectiveness of the intervention is being measured by analyzing the health and quality of life of the residents, as well as costs and staff retention. New and innovative interventions such as this may ultimately allow seniors to receive a higher standard of nursing home care.

### **Caring for Patients at the End of Life**

Improving a patient's end-of-life experience is a major focus of NINR research. NINR is the designated lead NIH institute for end-of-life research. The Institute also funds research that focuses on improving the quality of life and reducing the burdens of caregivers for patients at the end of life. NINR investigators are committed to developing new tools and interventions that will allow the terminally ill, whether very young or very old, and their loved ones to experience the end of life in as much comfort and with as much dignity as possible.

In FY 2005, NINR sponsored the NIH State-of-the-Science Conference on Improving End-of-Life Care, along with NIH's Office of Medical Applications of Research. This conference addressed the current state of end-of-life care and proposed important new directions for end-of-life research. Attendees found that while end-of-life science has made great strides in the past several years, much still needs to be done. Key conclusions to emerge from the conference included: the rapid increase in older adults facing the need for end-of-life care requires the development of research infrastructure to better examine end-of-life issues; enhanced communication between patients, families and providers is crucial to end-of-life care; and that improved outcome measures are needed to better conduct end-of-life research. Findings from this conference will guide NINR's end-of-life research initiatives in FY 2007 and beyond.

## **Featured Science Advance: Exploring Relationships During the End-of-life Experience**

### End-of-Life Research at NINR

NINR funds projects that span all aspects of end-of-life care, focusing on the three parties involved in most end-of-life experiences: the patient, the family caregivers, and the attending clinicians. Understanding the role each party plays in a patient's last days, and how the parties interact with one another, is critical for improving the end-of-life experience. In the last few years, several new studies in end-of-life research have begun to shed light on the complex relationships among these three groups.

### The Patient Experience

Understanding the experiences, care preferences, and priorities of the dying patient are critical to improving end-of-life care. In one study, scientists explored dying patients' feelings in their final days. Most family caregivers reported that their dying family member had at least mild pain, and almost all experienced suffering, as death approached. The most significant worries of the decedents were worry about loss of independence, including concerns about the loss of body function, dependence on others, becoming a burden, and loss of quality of life. Another researcher, who interviewed a group of terminal cancer patients, found that, regardless of their beliefs in an afterlife, those with a sense of spiritual well-being had reduced feelings of depression, hopelessness, the desire to hasten death, and had more positive social support than those who reported a lower degree of spirituality. In a survey asking nurses about the quality of patient death experiences, they gave the highest rating for those patients who had someone with them at the time of death, those who were removed from life support, or those who died quickly from trauma or other causes.

### The Caregiver Experience

It is also important to understand the experiences of family and friends who care for their loved ones as death approaches. One study found that many caregivers of the recently deceased were emotionally or physically drained, felt confined, or had sleep difficulties. Although almost all of the decedents had health insurance, caregivers reported financial burdens from having to alter job hours or move to a new home, and from out-of-pocket expenses for medications, transportation, equipment, and paid assistants. In a study by another group of scientists, most family caregivers involved in a decision to remove care from a loved one revealed that strain in the process led to guilt, uncertainty, regret, and anger. However, caregivers who accepted their role and believed they were doing the right thing felt that they had learned from the process and had grown closer to other family members.

### Communications with Healthcare Professionals

Often, a patient's and family's views on the end-of-life care experience are strongly influenced by their discussions with the doctors and nurses providing care. One research team found that most family members are highly satisfied with discussions regarding life support for the patient, and that they sensed little conflict with the clinicians. However, family members were more satisfied when they were given more time to ask questions and express concerns during the meetings. In addition, in almost a third of these discussions, analysts identified "missed opportunities" by clinicians to address the concerns of family members, including: failures to listen, failures to acknowledge and address emotions, and failures to explain the tenets of medical ethics or palliative care. Another study found that for family members who did report conflict with the clinicians, major areas of concern included the need for clinicians to give accurate, consistent information in lay terms; to be honest and frank; and to listen to their concerns. Caregivers stated that if clinicians had listened to them, unwanted treatment could have been avoided.

### The Future

NINR will continue to sponsor innovative research that will lead to better clinical practices for healthcare professionals and new coping strategies for patients and families. The death of a loved one is never an easy time, but a better understanding of the events and personal interactions involved in end-of-life situations will lead to more comfortable experiences for everyone involved. Improving the way patients, families, and clinicians communicate with each other in a patient's dying days is critical to easing the burdens of these difficult times. The NINR-sponsored work discussed here has laid critical groundwork for these improvements.

## **NIH Roadmap**

NINR has a leadership role in the Interdisciplinary Research Roadmap initiative; our Institute Director is a co-chair of the initiative's working group. This initiative seeks to promote increased collaboration among researchers from different fields of biomedical science. Participating in this initiative has strongly benefited NINR. Collaborations with experts from fields outside of nursing research have increased the visibility of our investigators, and have increased awareness of the scientific contributions of nursing research. Our investigators have gained insights into new research that have allowed them to expand the breadth of their own work into areas not previously associated with nursing research. Conversely, outside investigators have become exposed to the important research conducted by nurse scientists in areas such as symptom management and disease prevention.

NINR also participates in the PROMIS (Patient-Reported Outcomes Information System) initiative under the Roadmap's "Re-engineering the Clinical Research Enterprise" theme. This initiative seeks to develop new technologies to improve the assessment of clinical outcomes. A goal of PROMIS is to develop a set of standardized, computer-based tests for the clinical research community to use in assessing symptoms. Measuring symptoms and other self-reported outcomes is essential for assessing the quality of life of such groups as patients with chronic illnesses, caregivers of patients with debilitating or terminal illnesses, or patients facing the natural decline associated with aging. This initiative is ideally suited to NINR's mission. Our portfolio is largely clinical in nature, which is unique among the NIH institutes, and much of our science depends on accurately assessing quality of life and symptoms such as pain and fatigue. New tools and technologies derived from this initiative will improve the ability of our investigators to conduct rigorous research in clinical settings.

Finally, NINR participates in the Clinical Research Training initiatives, also under the "Re-engineering the Clinical Research Enterprise" theme. The goal of these initiatives is to develop a highly skilled workforce of clinical investigators who have strong backgrounds in multidisciplinary clinical research. NINR is actively involved in the trans-NIH Clinical Research Workforce Training Committee, and the transition of the Roadmap clinical training initiatives to the NIH's new Clinical and Translational Science Awards. Because of NINR's clinical emphasis and focus on fostering multidisciplinary collaborations, this program strongly benefits the Institute. Nurses have been the recipients of predecessors of these awards, and active participants as mentors, trainees, and scholars within these initiatives.

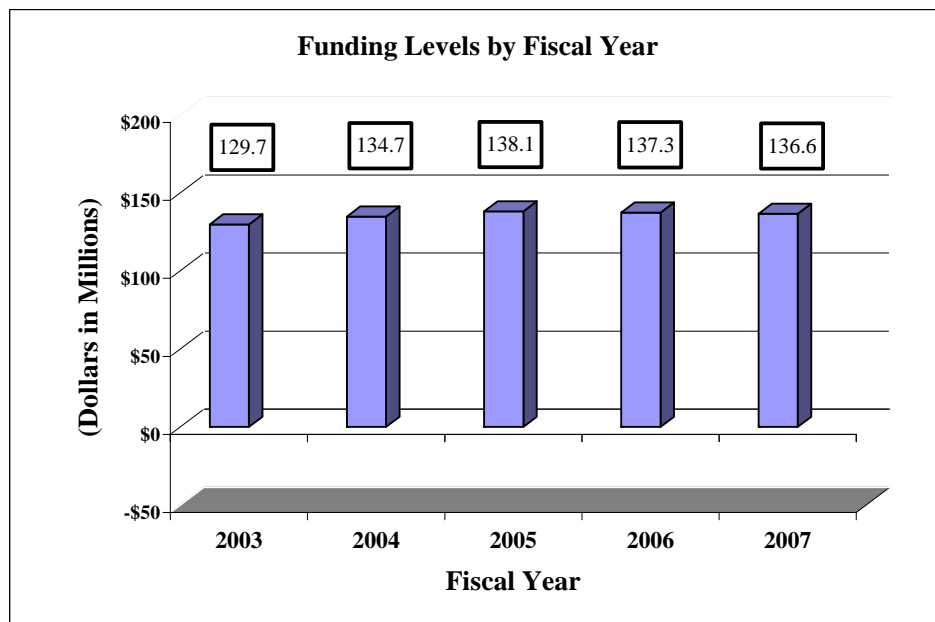
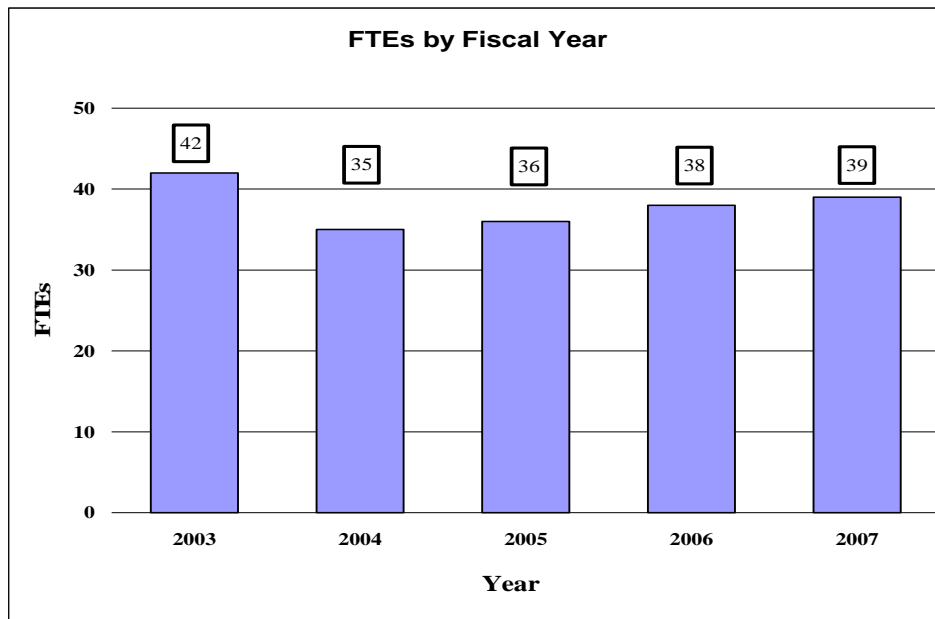
## **Conclusion**

Twenty years ago, a culture of dedication and innovation was initiated with the creation of a home for nursing research within NIH. Today, as NINR, we enjoy a vital and productive community of investigators true in their dedication to establishing a scientific basis for the care of individuals across all stages of life. Through their work, we continue to change not only the practice of nursing, but the lives of the people touched by their research. Upon this solid foundation, and with an increasingly multidisciplinary community of nursing scientists, we seek to build a greater understanding of our science in support of all people. We see a future of unlimited possibility.

## Budget Policy

The Fiscal Year 2007 budget request for the NINR is \$136,550,000, a decrease of \$792,000 and .6 percent over the FY 2006 Appropriation. Included in the FY 2007 request is NINR's support for the trans-NIH Roadmap initiatives, estimated at 1.2% of the FY 2007 budget request. 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 as the result of several administrative restructurings in recent years, FTE data is non-comparable.



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 pursuing new research opportunities. We estimate that the average cost of competing RPGs will be \$294,000 in FY 2007. While no inflationary increases are provided for direct recurring costs in noncompeting RPGs, where the NINR has committed to a programmatic increase for an award, such increases will be provided.

NIH must nurture a vibrant, creative research workforce, including sufficient numbers of new investigators with new ideas and new skills. In the FY 2007 budget request for NINR, \$90 thousand will be used to support 1 award for the new K/R "Pathway to Independence" program.

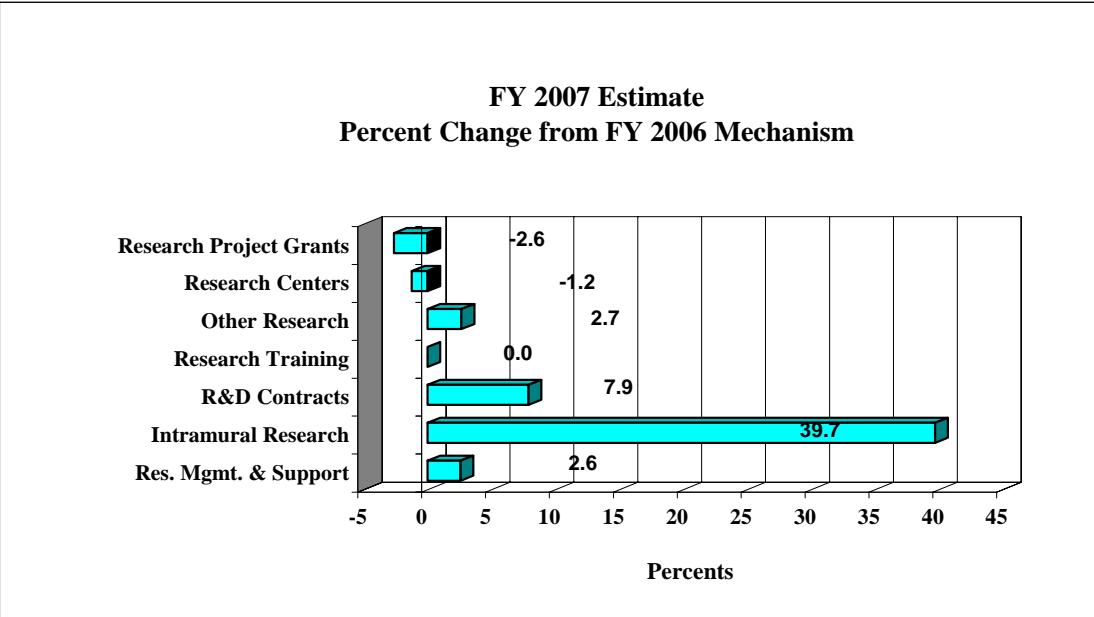
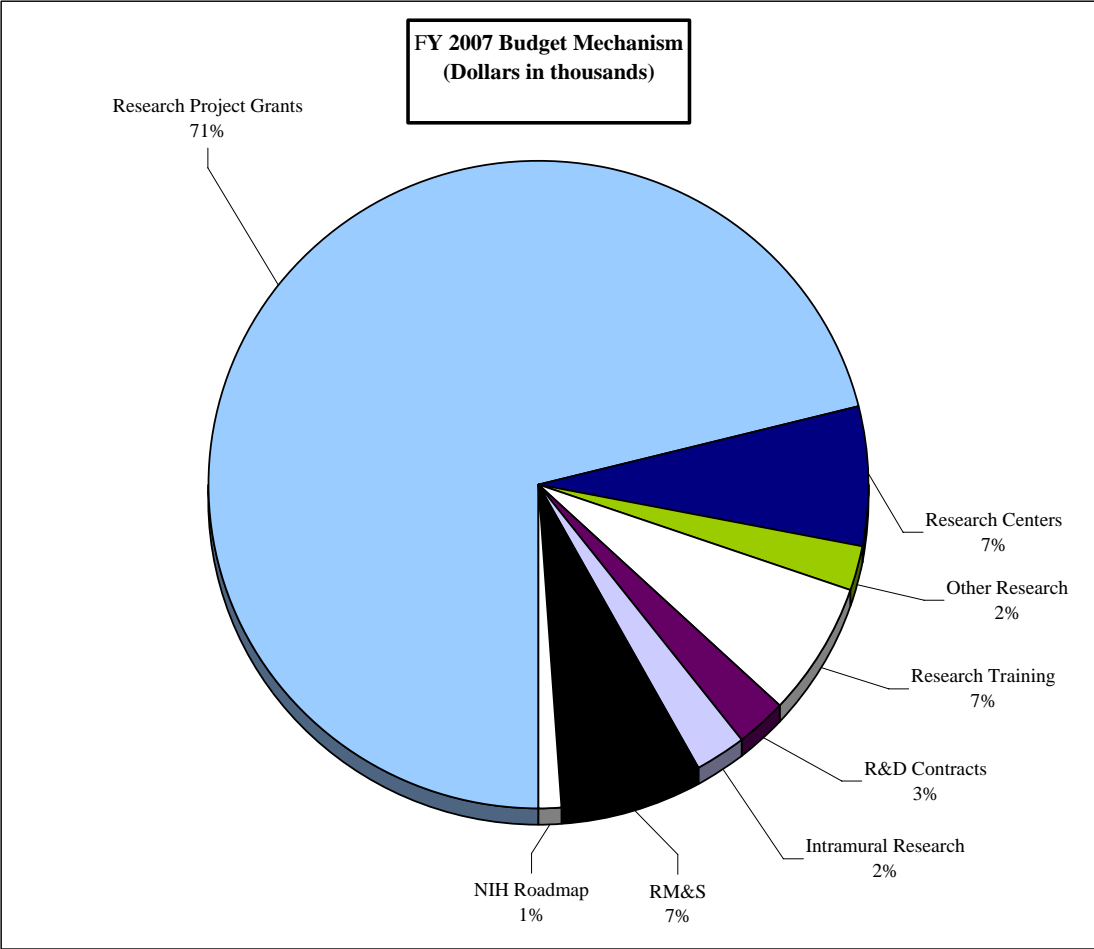
NINR will also support the Genes, Environment, and Health Initiative (GEHI) to: 1) accelerate discovery of the major genetic factors associated with diseases that have a substantial public health impact; and 2) accelerate the development of innovative technologies and tools to measure dietary intake, physical activity, and environmental exposures, and to determine an individual's biological response to those influences. The FY 2007 request includes \$216,000 to support this project.

In the FY 2007 request, stipend levels for trainees supported through the Ruth L. Kirschstein National Research Service Awards will remain at the FY 2006 levels.

The FY 2007 request includes funding for 38 research centers, 25 other research grants, including 25 career awards, and 7 R&D contracts. Intramural Research increases in order to meet an expanding program and move toward an inter-disciplinary research approach with translational clinical components. Research Management and Support increases by 2.6 percent.

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





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

Budget Mechanism - Total

MECHANISM	FY 2005 Actual		FY 2006 Appropriation		FY 2007 Estimate	
	No.	Amount	No.	Amount	No.	Amount
Research Grants:						
<u>Research Projects:</u>						
Noncompeting	186	\$68,453,000	196	\$72,436,000	171	\$63,510,000
Administrative supplements	(3)	276,000	(3)	241,000	(3)	240,000
Competing:						
Renewal	6	2,334,000	5	2,366,000	7	3,004,000
New	91	27,447,000	74	21,208,000	94	26,924,000
Supplements	1	78,000	1	82,000	1	104,000
Subtotal, competing	98	29,859,000	80	23,656,000	102	30,032,000
Subtotal, RPGs	284	98,588,000	276	96,333,000	273	93,782,000
SBIR/STTR	13	3,297,000	14	3,228,000	14	3,161,000
Subtotal, RPGs	297	101,885,000	290	99,561,000	287	96,943,000
<u>Research Centers:</u>						
Specialized/comprehensive	36	9,282,000	38	9,803,000	38	9,683,000
Clinical research	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0
Comparative medicine	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0
Subtotal, Centers	36	9,282,000	38	9,803,000	38	9,683,000
<u>Other Research:</u>						
Research careers	24	2,567,000	24	2,538,000	25	2,615,000
Cancer education	0	0	0	0	0	0
Cooperative clinical research	0	0	0	0	0	0
Biomedical research support	0	0	0	0	0	0
Minority biomedical research support	0	0	0	0	0	0
Other	0	283,000	0	280,000	0	278,000
Subtotal, Other Research	24	2,850,000	24	2,818,000	25	2,893,000
<b>Total Research Grants</b>	<b>357</b>	<b>114,017,000</b>	<b>352</b>	<b>112,182,000</b>	<b>350</b>	<b>109,519,000</b>
<u>Research Training:</u>	<u>FTEPs</u>		<u>FTEPs</u>		<u>FTEPs</u>	
Individual awards	80	2,447,000	79	2,447,000	79	2,447,000
Institutional awards	155	6,722,000	154	6,722,000	154	6,722,000
<b>Total, Training</b>	<b>235</b>	<b>9,169,000</b>	<b>233</b>	<b>9,169,000</b>	<b>233</b>	<b>9,169,000</b>
Research & development contracts (SBIR/STTR)	6 (0)	3,392,000 (7,000)	6 (0)	3,362,000 (7,000)	7 (0)	3,628,000 (7,000)
<u>Intramural research</u>	<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>	
Intramural research	5	1,804,000	7	2,395,000	8	3,346,000
Research management and support	31	8,817,000	31	9,007,000	31	9,240,000
Cancer prevention & control	0	0	0	0	0	0
Construction		0		0		0
Buildings and Facilities		0		0		0
NIH Roadmap for Medical Research	0	873,000	0	1,227,000	0	1,648,000
<b>Total, NINR</b>	<b>36</b>	<b>138,072,000</b>	<b>38</b>	<b>137,342,000</b>	<b>39</b>	<b>136,550,000</b>
(Clinical Trials)		(30,829,000)		(30,583,000)		(30,307,000)

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

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

**Budget Authority by Activity**  
**(dollars in thousands)**

ACTIVITY	FY 2005		FY 2006		FY 2007		Change	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
<u>Extramural Research:</u>								
Nursing Research		\$126,578		\$124,713		\$122,316		(\$2,397)
Subtotal, Extramural research		126,578		124,713		122,316		(2,397)
Intramural research	5	1,804	7	2,395	8	3,346	1	951
Res. management & support	31	8,817	31	9,007	31	9,240	0	233
Cancer Control & Prevention	0	0	0	0	0	0	0	0
NIH Roadmap for Medical Research	0	873	0	1,227	0	1,648	0	421
Total	36	138,072	38	137,342	39	136,550	1	(792)

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

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

**Summary of Changes**

FY 2006 Appropriation		\$137,342,000		
FY 2007 Estimated Budget Authority		136,550,000		
Net change		(792,000)		
CHANGES	FY 2006 Appropriation		Change from Base	
	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:				
1. Intramural research:				
a. Within grade increase		\$749,000		\$11,000
b. Annualization of January 2006 pay increase		749,000		6,000
c. January 2007 pay increase		749,000		13,000
d. Payment for centrally furnished services		27,000		5,000
e. Increased cost of laboratory supplies, materials, and other expenses		1,619,000		38,000
Subtotal				73,000
2. Research Management and Support:				
a. Within grade increase		3,660,000		64,000
b. Annualization of January 2006 pay increase		3,660,000		28,000
c. January 2007 pay increase		3,660,000		61,000
d. Payment for centrally furnished services		1,729,000		11,000
e. Increased cost of laboratory supplies, materials, and other expenses		3,618,000		69,000
Subtotal				233,000
Subtotal, Built-in				306,000

**NATIONAL INSTITUTES OF HEALTH  
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**Summary of Changes--continued**

CHANGES	FY 2006 Appropriation		Change from Base	
	No.	Amount	No.	Amount
<b>B. Program:</b>				
1. Research project grants:				
a. Noncompeting	196	\$72,677,000	(25)	(\$8,927,000)
b. Competing	80	23,656,000	22	6,376,000
c. SBIR/STTR	14	3,228,000	0	(67,000)
Total	290	99,561,000	(3)	(2,618,000)
2. Research centers	38	9,803,000	0	(120,000)
3. Other research	24	2,818,000	1	75,000
4. Research training	233	9,169,000	0	0
5. Research and development contracts	6	3,362,000	7	266,000
Subtotal, extramural				(2,397,000)
6. Intramural research	<u>FTEs</u> 7	2,395,000	<u>FTEs</u> 1	878,000
7. Research management and support	31	9,007,000	0	0
8. Cancer control and prevention	0	0	0	0
9. Construction		0		0
10. Buildings and Facilities		0		0
11. NIH Roadmap for Medical Research	0	1,227,000	0	421,000
Subtotal, program		137,342,000		(1,098,000)
Total changes	38		1	(792,000)

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

**Budget Authority by Object**

	FY 2006 Appropriation	FY 2007 Estimate	Increase or Decrease
<b>Total compensable workyears:</b>			
Full-time employment	38	39	1
Full-time equivalent of overtime & holiday hours	0	0	0
Average ES salary	\$0	\$0	\$0
Average GM/GS grade	12.6	12.6	0.0
Average GM/GS salary	\$75,887	\$77,557	\$1,670
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$138,336	\$141,379	\$3,043
Average salary of ungraded positions	127,747	130,557	2,811
OBJECT CLASSES	FY 2006 Appropriation	FY 2007 Estimate	Increase or Decrease
<b>Personnel Compensation:</b>			
11.1 Full-Time Permanent	\$2,650,000	\$2,834,000	\$184,000
11.3 Other than Full-Time Permanent	751,000	806,000	55,000
11.5 Other Personnel Compensation	27,000	29,000	2,000
11.7 Military Personnel	0	0	0
11.8 Special Personnel Services Payments	115,000	120,000	5,000
<b>Total, Personnel Compensation</b>	<b>3,543,000</b>	<b>3,789,000</b>	<b>246,000</b>
12.0 Personnel Benefits	866,000	925,000	59,000
12.2 Military Personnel Benefits	0	0	0
13.0 Benefits for Former Personnel	0	0	0
<b>Subtotal, Pay Costs</b>	<b>4,409,000</b>	<b>4,714,000</b>	<b>305,000</b>
21.0 Travel & Transportation of Persons	200,000	210,000	10,000
22.0 Transportation of Things	25,000	27,000	2,000
23.1 Rental Payments to GSA	0	0	0
23.2 Rental Payments to Others	70,000	79,000	9,000
23.3 Communications, Utilities & Miscellaneous Charges	77,000	87,000	10,000
24.0 Printing & Reproduction	130,000	133,000	3,000
25.1 Consulting Services	25,000	26,000	1,000
25.2 Other Services	1,110,000	1,205,000	95,000
25.3 Purchase of Goods & Services from Government Accounts	7,532,000	8,235,000	703,000
25.4 Operation & Maintenance of Facilities	6,000	6,000	0
25.5 Research & Development Contracts	450,000	636,000	186,000
25.6 Medical Care	0	0	0
25.7 Operation & Maintenance of Equipment	250,000	270,000	20,000
25.8 Subsistence & Support of Persons	0	0	0
<b>25.0 Subtotal, Other Contractual Services</b>	<b>9,373,000</b>	<b>10,378,000</b>	<b>1,005,000</b>
26.0 Supplies & Materials	300,000	335,000	35,000
31.0 Equipment	180,000	251,000	71,000
32.0 Land and Structures	0	0	0
33.0 Investments & Loans	0	0	0
41.0 Grants, Subsidies & Contributions	121,351,000	118,688,000	(2,663,000)
42.0 Insurance Claims & Indemnities	0	0	0
43.0 Interest & Dividends	0	0	0
44.0 Refunds	0	0	0
<b>Subtotal, Non-Pay Costs</b>	<b>131,706,000</b>	<b>130,188,000</b>	<b>(1,518,000)</b>
<b>NIH Roadmap for Medical Research</b>	<b>1,227,000</b>	<b>1,648,000</b>	<b>421,000</b>
<b>Total Budget Authority by Object</b>	<b>137,342,000</b>	<b>136,550,000</b>	<b>(792,000)</b>

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

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

**Salaries and Expenses**

OBJECT CLASSES	FY 2006 Appropriation	FY 2007 Estimate	Increase or Decrease
<b>Personnel Compensation:</b>			
Full-Time Permanent (11.1)	\$2,650,000	\$2,834,000	\$184,000
Other Than Full-Time Permanent (11.3)	751,000	806,000	55,000
Other Personnel Compensation (11.5)	27,000	29,000	2,000
Military Personnel (11.7)	0	0	0
Special Personnel Services Payments (11.8)	115,000	120,000	5,000
<b>Total Personnel Compensation (11.9)</b>	<b>3,543,000</b>	<b>3,789,000</b>	<b>246,000</b>
Civilian Personnel Benefits (12.1)	866,000	925,000	59,000
Military Personnel Benefits (12.2)	0	0	0
Benefits to Former Personnel (13.0)	0	0	0
<b>Subtotal, Pay Costs</b>	<b>4,409,000</b>	<b>4,714,000</b>	<b>305,000</b>
Travel (21.0)	200,000	210,000	10,000
Transportation of Things (22.0)	25,000	27,000	2,000
Rental Payments to Others (23.2)	70,000	79,000	9,000
Communications, Utilities and Miscellaneous Charges (23.3)	77,000	87,000	10,000
Printing and Reproduction (24.0)	130,000	133,000	3,000
<b>Other Contractual Services:</b>			
Advisory and Assistance Services (25.1)	25,000	26,000	1,000
Other Services (25.2)	1,110,000	1,205,000	95,000
Purchases from Govt. Accounts (25.3)	4,516,000	5,219,000	703,000
Operation & Maintenance of Facilities (25.4)	6,000	6,000	0
Operation & Maintenance of Equipment (25.7)	250,000	270,000	20,000
Subsistence & Support of Persons (25.8)	0	0	0
<b>Subtotal Other Contractual Services</b>	<b>5,907,000</b>	<b>6,726,000</b>	<b>819,000</b>
Supplies and Materials (26.0)	300,000	335,000	35,000
<b>Subtotal, Non-Pay Costs</b>	<b>6,709,000</b>	<b>7,597,000</b>	<b>888,000</b>
<b>Total, Administrative Costs</b>	<b>11,118,000</b>	<b>12,311,000</b>	<b>1,193,000</b>

## NATIONAL INSTITUTES OF HEALTH

### National Institute of Nursing Research

#### SIGNIFICANT ITEMS IN THE SENATE APPROPRIATIONS COMMITTEE REPORT

FY 2006 Senate Appropriations Committee Report Language (S. Rpt. 109-103)

##### Item

***Nurse-managed Health Centers*** – The Committee urges the NINR to increase funding for research and demonstration projects involving nurse-managed health centers and advanced practice nurses. (p. 138)

##### Action taken or to be taken

NINR recognizes the value of nurse-managed health centers and advanced practice nurses in the field of nursing research. NINR supports research on the effectiveness of advanced practice nurses and their impact upon patient health outcomes. One study supported by NINR showed that, in a subacute intensive care unit, acute care nurse practitioners provided effective care comparable to physicians. Another study demonstrated that advanced practice nurses help high-risk patient populations, including low birth weight infants, high-risk pregnant women, and elders after cardiac surgery, in the transition from hospital to home care, lowering the overall costs of providing care.

NINR remains committed to funding research that translates effective nurse-managed interventions into practice settings. As an active participant in the NIH Roadmap, NINR seeks to increase collaborations between its nurse scientists and other biomedical researchers. These collaborations will allow new nurse-managed interventions to integrate more quickly into the everyday practice of healthcare, maintaining the quality and decreasing the cost of our healthcare system.

##### Item

***Nursing Shortage*** – The nursing shortage has an adverse effect on the health care delivery system as well as the health of our Nation's citizens. A shortage of nurse faculty caused schools of nursing to turn away thousands of qualified students last year. NINR confronts this issue by directing 8 percent of its budget to research training to help develop the pool of nurse researchers who also become faculty. Training support for fast-track baccalaureate-to-doctoral program participants is one important initiative. The 17 recently-funded Nursing Partnership Centers to Reduce Health Disparities is another initiative that helps produce an adequate number of nurse researchers. The Committee encourages these ongoing efforts. The Committee also encourages NINR to fund research projects located in rural areas that serves minority nursing students through community colleges. Not only will these partnerships between research-intensive



schools of nursing and minority serving schools of nursing train more minority nurses, but they also expand opportunities for health disparities research. (p. 138)

#### Action taken or to be taken

The current shortage of nurses to meet the healthcare needs of the Nation is of great concern. The most recent Health Resources and Services Administration National Sample Survey of Registered Nurses found that the nursing workforce is aging, with many current nurses nearing retirement and too few young nurses entering the profession to replace them. The current shortage of nurses also severely affects the pipeline for new nurse scientists. Nurse scientists form the backbone of university faculty in schools of nursing, and our Nation is facing a critical shortage of nursing faculty.

NINR supports strategies to change the career trajectory of nurse scientists. The Institute emphasizes early entry into research careers, including fast-track baccalaureate-to-doctoral programs, to increase the number of nurse investigators, and supports pre-doctoral and post-doctoral nurses who are the future researchers and nursing faculty. An on-line NINR program, Developing Nurse Scientists, is offered to help nursing faculty and doctoral students develop research skills, including applying for research grants. NINR remains committed to developing the next generation of nurse scientists.

Approximately 6% of NINR's budget goes to support our Centers programs, which are vital to developing the nursing research infrastructure. In addition to our ten Core and nine Exploratory Centers, we support a joint initiative with the National Center on Minority Health and Health Disparities to create partnerships between established, research-intensive institutions and growing, minority-serving institutions. These Nursing Partnership Centers on Reducing Health Disparities, involving 17 schools of nursing, will increase health disparities research and broaden the diversity of the nurse scientist pool. Several of these Centers are located in rural areas or serve rural and other underserved populations. These Centers represent a major investment aimed at expanding the cadre of nurse scientists involved in health disparities research. This program continues to be a priority for the Institute.

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

**Authorizing Legislation**

	PHS Act/ Other Citation	U.S. Code Citation	2006 Amount Authorized	FY 2006 Appropriation	2007 Amount Authorized	FY 2007 Budget Estimate
Research and Investigation	Section 301	42§241	Indefinite		Indefinite	
National Institute of Nursing Research	Section 41B	42§285b	Indefinite	\$128,173,000	Indefinite	\$127,381,000
National Research Service Awards	Section 487(d)	42§288	a/	9,169,000		9,169,000
<b>Total, Budget Authority</b>				<b>137,342,000</b>		<b>136,550,000</b>

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

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

**Appropriations History**

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation <u>1/</u>
1998	55,692,000 <u>2/</u>	56,950,000	59,443,000	48,043,000
1999	62,229,000 <u>2/ 3/</u>	68,198,000	69,834,000	69,834,000
Rescission				(46,000)
2000	65,335,000 <u>2/</u>	76,204,000	90,000,000	90,000,000
Rescission				(478,000)
2001	84,714,000 <u>2/</u>	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	139,198,000	140,200,000	139,198,000
Rescission				(1,126,000)
2006	138,729,000	138,729,000	142,549,000	138,729,000
Rescission				(1,387,000)
2007	136,550,000			

1/ Reflects enacted supplementals, rescissions, and reappropriations.

2/ Excludes funds for HIV/AIDS research activities consolidated in the NIH Office of AIDS Research

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 2005 Actual	FY 2006 Appropriation	FY 2007 Estimate
Office of the Director	4	4	4
Office of Science Policy and Public Liaison	5	5	5
Office of Administration Management	7	7	7
Associate Director for Scientific Program and Division on Extramural Activities	15	15	15
Division of Intramural Research	5	7	8
<b>Total</b>	<b>36</b>	<b>38</b>	<b>39</b>
Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research			
FTEs supported by funds from Cooperative Research and Development Agreements	(0)	(0)	(0)
FISCAL YEAR	Average GM/GS Grade		
2003	11.8		
2004	11.8		
2005	12.3		
2006	12.6		
2007	12.6		

**NATIONAL INSTITUTES OF HEALTH  
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**Detail of Positions**

GRADE	FY 2005 Actual	FY 2006 Appropriation	FY 2007 Estimate
ES-6	0	0	0
ES-5	0	0	0
ES-4	0	0	0
ES-3	0	0	0
ES-2	0	0	0
ES-1	0	0	0
Subtotal	0	0	0
Total - ES Salary	\$0	\$0	\$0
GM/GS-15	3	4	4
GM/GS-14	12	13	13
GM/GS-13	3	6	6
GS-12	5	6	6
GS-11	1	2	2
GS-10	5	1	1
GS-9	3	5	5
GS-8	0	1	1
GS-7	0	0	0
GS-6	0	0	0
GS-5	0	0	0
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	32	38	38
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General Director Grade	0	1	1
Senior Grade Full Grade			
Senior Assistant Grade Assistant Grade			
Subtotal	0	1	1
Ungraded	17	19	19
Total permanent positions	32	38	39
Total positions, end of year	50	58	59
Total full-time equivalent (FTE) employment, end of year	36	38	39
Average ES level	ES-	ES-	ES-
Average ES salary	\$0	\$0	\$0
Average GM/GS grade	12.3	12.6	12.6
Average GM/GS salary	\$62,908	\$75,887	\$77,557

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research