DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

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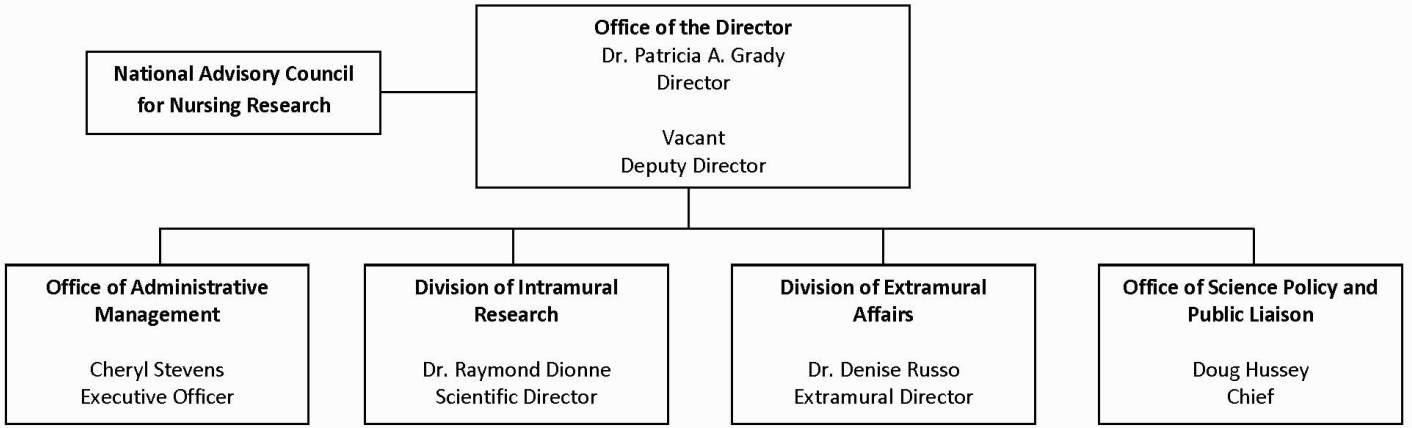
National Institutes of Health
National Institute of Nursing Research
Organizational Chart



NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

For carrying out section 301 and title IV of the PHS Act with respect to nursing research, [$145,043,000] *$144,153,000. (Department of Health and Human Services Appropriations Act, 2012.)*

NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research

Amounts Available for Obligation [1]
(Dollars in Thousands)

Source of Funding	FY 2011 Actual	FY 2012 Enacted	FY 2013 PB
Appropriation	145,660	145,043	144,153
Type 1 Diabetes	0	0	0
Rescission	(1,279)	(274)	0
Supplemental	0	0	0
Subtotal, adjusted appropriation	144,381	144,769	144,153
Real transfer under Secretary's transfer authority	0	(41)	0
Comparative Transfers for NCATS reorganization	0	0	0
Comparative Transfers to NCATS for Therapeutics and Rare and Neglected Diseases (TRND)	(119)	0	0
Comparative Transfers to NLM for NCBI and Public Access	(124)	(131)	0
Subtotal, adjusted budget authority	144,138	144,597	144,153
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	144,138	144,597	144,153
Unobligated balance lapsing	(12)	0	0
Total obligations	144,126	144,597	144,153

[1] Excludes the following amounts for reimbursable activities carried out by this account:
FY 2011 - $72 FY 2012 - $0 FY 2013 - $0

NATIONAL INSTITUTES OF HEALTH

National Institute of Nursing Research

Budget Mechanism - Total [1/]

(Dollars in Thousands)

MECHANISM	FY 2011 Actual		FY 2012 Enacted		FY 2013 PB		Change vs. FY 2012	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants								
Research Projects								
Noncompeting	178	$76,598	165	$67,248	163	$66,576	(2)	($672)
Administrative Supplements	*3*	98	*3*	300	*3*	217	*0*	(83)
Competing:								
Renewal	2	1,442	2	1,500	2	1,500	0	0
New	57	21,808	80	30,235	79	29,534	(1)	(701)
Supplements	0	0	0	0	0	0	0	0
Subtotal, Competing	59	$23,250	82	$31,735	81	$31,034	(1)	($701)
Subtotal, RPGs	237	$99,946	247	$99,283	244	$97,827	(3)	($1,456)
SBIR/STTR	9	$3,305	12	$4,409	12	$4,536	0	$127
Research Project Grants	246	$103,251	259	$103,692	256	$102,363	(3)	($1,329)
Research Centers								
Specialized/Comprehensive	11	$3,978	11	$3,978	11	$3,962	0	($16)
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative Medicine	0	0	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Research Centers	11	$3,978	11	$3,978	11	$3,962	0	($16)
Other Research								
Research Careers	29	$3,034	29	$3,034	29	$3,022	0	($12)
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	0	0	0	0	0
Other	0	200	0	237	0	236	0	(1)
Other Research	29	$3,234	29	$3,271	29	$3,258	0	($13)
Total Research Grants	286	$110,463	299	$110,941	296	$109,583	(3)	($1,358)
Research Training	FTTPs		FTTPs		FTTPs			
Individual Awards	81	$2,708	81	$2,708	77	$2,694	(4)	($14)
Institutional Awards	132	6,379	132	6,379	126	6,359	(6)	(20)
Total Research Training	213	$9,087	213	$9,087	203	$9,053	(10)	($34)
Research & Development Contracts	0	$4,025	0	$4,006	0	$5,036	0	$1,030
SBIR/STTR	*0*	*$5*	*0*	*$5*	*0*	*$5*	*0*	*$0*
	FTEs		FTEs		FTEs		FTEs	
Intramural Research	13	$6,747	13	$6,747	13	$6,720	0	($27)
Research Management and Support	61	13,816	61	13,816	60	13,761	(1)	(55)
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
Total, NINR	74	$144,138	74	$144,597	73	$144,153	(1)	($444)

1/ All items in italics are "non-adds"; items in parenthesis are subtractions.

Major Changes in the Fiscal Year 2013 President's Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2013 budget request for NINR, which is $444 thousand less than the FY 2012 Enacted level, for a total of $144.153 million.

Research Project Grants (RPGs: -$1.329 million; total $102.363 million): NINR will continue to support competing RPGs which includes 81 awards in FY 2013, a decrease of 1 award from FY 2012. About 163 noncompeting RPG awards, totaling $66.576 million also will be made in FY 2013. NIH budget policy for RPGs in FY 2013 discontinues inflationary allowances and reduces the average cost of noncompeting and competing RPGs by one percent below the FY 2012 level.

NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research
Summary of Changes
(Dollars in Thousands)

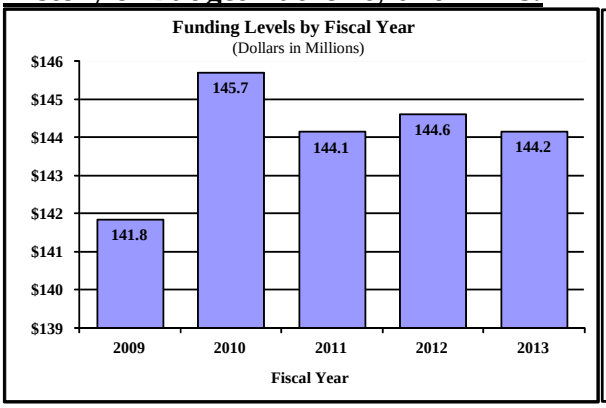
FY 2012 Enacted				**$144,597**
FY 2013 President's Budget				**$144,153**
Net change				**($444)**
	2013 President's Budget		**Change from FY 2012**	
CHANGES	**FTEs**	**Budget Authority**	**FTEs**	**Budget Authority**
A. Built-in:				
1. Intramural Research:				
a. Annualization of January 2012 pay increase & benefits		$2,166		$0
b. January FY 2013 pay increase & benefits		2,166		7
c. One more day of pay		2,166		8
d. Annualization of PY net hires		2,166		0
e. Payment for centrally furnished services		1,109		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		3,445		0
Subtotal				$15
2. Research Management and Support:				
a. Annualization of January 2012 pay increase & benefits		$8,114		($0)
b. January FY 2013 pay increase & benefits		8,114		24
c. One more day of pay		8,114		31
d. Annualization of PY net hires		8,114		0
e. Payment for centrally furnished services		1,319		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		4,328		0
Subtotal				$55
Subtotal, Built-in				$70

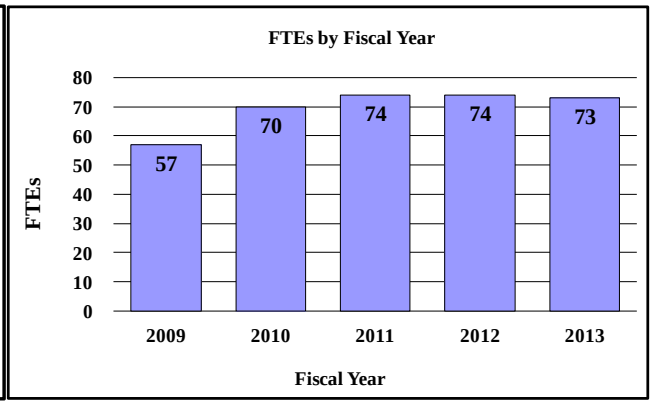
NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research

Summary of Changes--continued

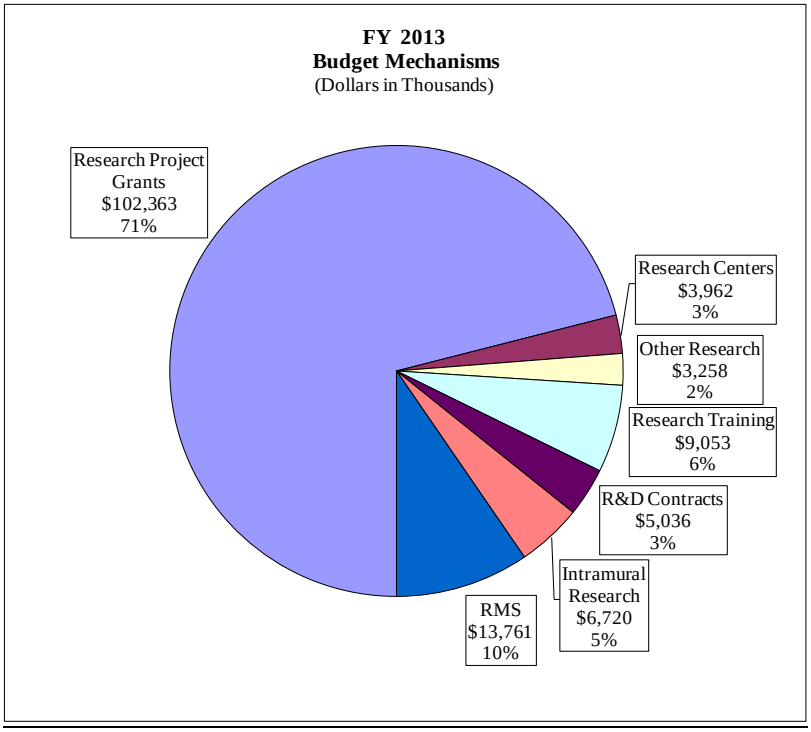
CHANGES	2013 President's Budget No.	2013 President's Budget Amount	Change from FY 2012 No.	Change from FY 2012 Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	163	$66,793	(2)	($755)
b. Competing	81	31,034	(1)	(701)
c. SBIR/STTR	12	4,536	0	127
Total	256	$102,363	(3)	($1,329)
2. Research Centers	11	$3,962	0	($16)
3. Other Research	29	3,258	0	(13)
4. Research Training	203	9,053	(10)	(34)
5. Research and development contracts	0	5,036	0	1,030
Subtotal, Extramural		$123,672		($362)
	FTEs		FTEs	
6. Intramural Research	13	$6,720	0	($42)
7. Research Management and Support	60	13,761	(1)	(110)
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, program	73	$144,153	(1)	($514)
Total changes				($444)

History of Budget Authority and FTEs:

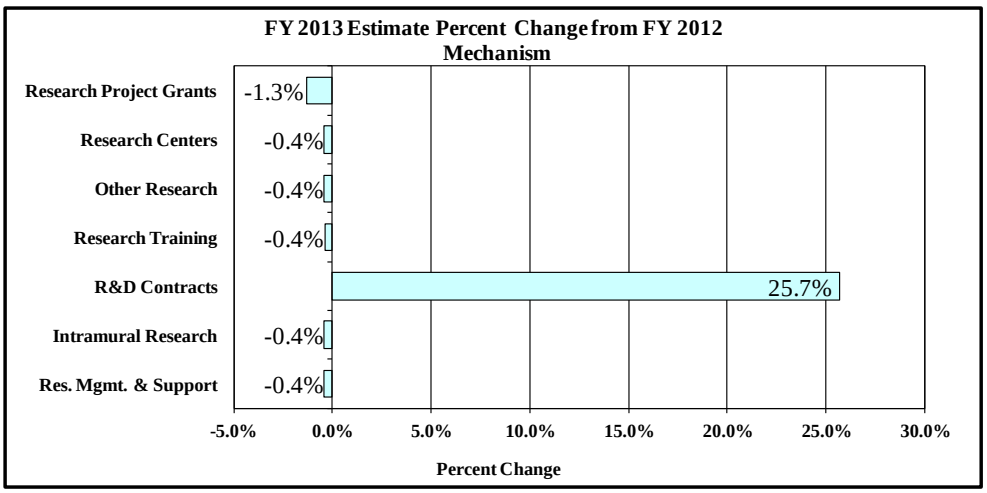




Distribution by Mechanism:



Change by Selected Mechanism:



NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research
Budget Authority by Activity
(Dollars in Thousands)

	FY 2011 Actual		FY 2012 Enacted		FY 2013 PB		Change vs. FY 2012 Enacted	
Extramural Research	**FTEs**	**Amount**	**FTEs**	**Amount**	**FTEs**	**Amount**	**FTEs**	**Amount**
Detail:								
Quality of Life		44,403		44,568		44,439		(129)
Health Promotion and Disease Prevention		38,995		39,139		39,025		(114)
Investing in Nurse Scientists		14,659		14,714		14,671		(43)
Innovation		9,639		9,675		9,646		(29)
Palliative and End-of-Life Care		15,879		15,938		15,891		(47)
Subtotal, Extramural		$123,575		$124,034		$123,672		($362)
Intramural Research	13	$6,747	13	$6,747	13	$6,720	0	($27)
Research Management & Support	61	$13,816	61	$13,816	60	$13,761	(1)	($55)
TOTAL	74	$144,138	74	$144,597	73	$144,153	(1)	($444)

1. Includes FTEs which are reimbursed from the NIH Common Fund.
2. Includes Real Transfers and Comparable Adjustments as detailed in the "Amounts Available for Obligation" table.

NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2012 Amount Authorized	FY 2012 Enacted	2013 Amount Authorized	FY 2013 PB
Research and Investigation	Section 301	42§241	Indefinite	$144,597,000	Indefinite	$144,153,000
National Institute of Nursing Research	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				$144,597,000		$144,153,000

NATIONAL INSTITUTES OF HEALTH
National Institute of Nursing Research

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
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	$138,198,000
Rescission				($1,126,000)
2006	$138,729,000	$138,729,000	$142,549,000	$138,729,000
Rescission				($1,387,000)
2007	$137,342,000	$136,550,000	$137,848,000	$137,404,000
Rescission				$0
2008	$137,800,000	$139,527,000	$140,456,000	$139,920,000
Rescission				($2,244,000)
Supplemental				$731,000
2009	$137,609,000	$142,336,000	$141,439,000	$141,879,000
Rescission				$0
2010	$143,749,000	$146,945,000	$144,262,000	$145,660,000
Rescission				$0
2011	$150,198,000		$149,963,000	$145,660,000
Rescission				($1,278,982)
2012	$148,114,000	$148,114,000	$142,755,000	$145,043,000
Rescission				($274,131)
2013	$144,153,000			

Justification of Budget Request

National Institute of Nursing Research

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

Budget Authority:

	FY 2011 Actual	FY 2012 Enacted	FY 2013 President's Budget	FY 2013 + / - FY 2012
BA	$144,138,000	$144,597,000	$144,153,000	-$444,000
FTE	74	74	73	-1

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

Director's Overview

The National Institute of Nursing Research (NINR) supports clinical, basic, and translational research to build the scientific foundation for clinical practice, prevent disease and disability, manage and eliminate symptoms caused by illness, enhance palliative and end-of-life care, and train the next generation of scientists. In doing so, NINR promotes and improves the health of individuals, families, and communities across the lifespan, in a variety of clinical settings and within diverse populations.

This past year, NINR commemorated its 25th Anniversary and took the opportunity to reflect on past accomplishments and future priorities for supporting research and training nurse scientists, with the ultimate goal of improving the Nation's health. The culmination of NINR's 25th Anniversary year marked the launch of the Institute's new strategic plan, *Bringing Science to Life*, which will guide NINR's priorities in the coming years. A key focal point of the strategic plan is the "science of health," which focuses on the promotion of health and quality of life. NINR will seek to advance the science of health by:

- Enhancing the management of symptoms of chronic illness by engaging individuals as active participants in their own health and by improving clinical management of illness;
- Designing culturally-appropriate interventions to prevent illness in diverse groups, promote health equity, and eliminate health disparities;
- Improving quality of life for those with advanced illness by advancing evidence-based palliative and end-of-life care;
- Developing new technologies and innovative programs to improve health while at the same time containing health care costs, and;

- Equipping the next generation of nurse scientists and nurse clinicians with the skills needed to meet both current and future health challenges and improve health care.

The Nation faces complex health care challenges which require new ways of thinking and new models of care. To address these issues, NINR's research programs will continue to incorporate a broad range of interdisciplinary approaches designed to promote scientific exploration leading to better health outcomes and health services. These approaches include: basic science, clinical intervention studies; interdisciplinary and translational research approaches; analyses of cost, outcomes, and quality of care; and studies to assess and enhance the effectiveness of the nursing workforce. NINR will also maintain its strong commitment to addressing the health needs of minority and underserved populations and to building a diverse scientific workforce.

In FY 2013, NINR will fully support trans-NIH efforts leveraging areas of extraordinary opportunities to improve the Nation's health by advancing science in: basic, clinical, and translational research; developing technologies to accelerate discovery; and supporting new investigators and new ideas.

NINR has long been committed to supporting basic, clinical, and translational research as all three are necessary to build the evidence-base for improving the health of the American people. NINR will maintain its support of basic research, seeking to advance knowledge of underlying biological systems, including the molecular and genomic correlates of symptoms such as pain, and of health conditions such as obesity. NINR will also continue its focus on designing and testing interventions for preventive care, health promotion, and self-management of chronic illness, to translate evidence-based research findings into clinical and community health practices, and to facilitate the transition to new models of health care. Consistent with its mission to develop the scientific basis for patient care, NINR will continue to emphasize research that develops new clinical and behavioral interventions, and translates them into general practice.

As innovative technologies gain a larger role in health care, NINR recognizes the importance of investing in novel technologies and solutions for improving the Nation's health. NINR investigators pursue innovative methods that both optimize patient outcomes and minimize health care costs. NINR also collaborates with the private sector through Small Business Innovation grants (SBIR), supporting the development of technologies to advance patient care. For instance, NINR-supported researchers have developed a novel, automated medication dispenser which reminds patients when to take medication, monitors dosage, and reduces treatment errors. The new dispenser will be the first on the market that can deliver all five forms of drugs, including biologically-derived injectables. Another example is the development of a novel lab-on-a-chip device for HIV diagnostics, which accurately and rapidly detects clinically relevant infectious diseases in resource-limited settings.

The development of a strong cadre of nurse investigators has been a primary goal of NINR since its establishment. In developing a scientific workforce that is innovative, multidisciplinary, and diverse, NINR will continue to support and train nurse scientists at all career levels through rigorous scientific training activities. For example, NINR supports pre- and post-doctoral research fellowships and career development awards in the extramural community. NINR is also actively engaged in developing the next generation of researchers through activities in its

Intramural Research Program such as the Summer Genetics Institute, Graduate Partnerships Program, and Methodologies Boot Camp, which are all described in greater detail below. NINR's efforts include supporting the earlier entry of nurses into research training programs, recognizing the importance of attracting, training, and retaining young scientists to meet current and future health care challenges. NINR training programs also seek to develop the nursing school faculty of the future, which is essential in order to strengthen the nursing workforce.

NINR's 25th Anniversary year was marked by achievements and opportunities to plan for the future. A year-long series of events included two scientific symposia, a joint conference with the NIH Clinical Center focused on symptoms, a series of grantsmanship workshops, and a summit on advancing palliative and end-of-life care. Notably, the summit, entitled "The Science of Compassion: Future Directions in End-of-Life and Palliative Care," was a trans-NIH effort convened by NINR, with support from partners across the NIH, with nearly 1,000 participants. As the lead NIH Institute on issues related to end-of-life research, NINR capitalized on this opportunity to energize and mobilize palliative and end-of-life care research and to draw attention to the palliative and end-of-life care processes, the care options available to patients and their families, and the obligations of health service communities to address these complex needs.

As we seek to address the health and health care challenges of the future, NINR will be guided by the research areas highlighted in its new strategic plan, which was developed with input from stakeholders from across the research, academic, and health care communities. The strategic plan was designed to determine the areas of health in which there were the greatest needs and the areas of science in which NINR could achieve the highest impact. Our future efforts will focus on advancing the science of health by investing in innovative research to: improve quality of life by managing symptoms of acute and chronic illness; enhance health promotion and disease prevention; improve palliative and end-of-life care; enhance innovation in science and practice; and develop the next generation of nurse scientists.

Overall IC Budget Policy:
Investigator-initiated research projects, support for new investigators, research training, and career development continue to be the Institute's highest priorities. NINR will follow the NIH Budget policy for RPGs in FY 2013, which does not include an inflationary increase in noncompeting awards and a one percent decrease in the average cost for competing RPGs. Overall, NINR will maintain a strategic balance between solicitations issued to the extramural community in high-priority areas of research, and funding made available to support investigator-initiated projects. Scientific reviews, with recommendations from the National Advisory Council for Nursing Research, inform the level of recommended support for all research applications. Intramural Research and Research Management and Support will decrease by one percent.

The NINR will support a two percent increase for stipends levels under the Ruth L. Kirschstein National Research Service Award training program consistent with the recommendations of the National Academy of Sciences. This will build on the two percent increase in stipend levels for FY 2012. Stipend levels were largely flat for several years, and the requested increase will help to sustain the development of a highly qualified biomedical research workforce.

Funds are included in R&D contracts to support trans-NIH initiatives, such as the Basic Behavioral and Social Sciences Opportunity Network (OppNet).

Program Descriptions and Accomplishments

Investing in Advancing the Quality of Life: Symptom Management: NINR's research program to improve quality of life focuses on reducing the burdens of chronic and acute illness across the disease spectrum and across the lifespan. This program supports basic, clinical, and translational research to: enhance the individual's role in managing disease; reduce the burden of debilitating symptoms; and improve health outcomes for individuals and their caregivers. The program places a particular emphasis on symptom management: seeking to improve knowledge of biological, genomic, and psychosocial mechanisms of pervasive symptoms such as pain, fatigue, impaired sleep, and depression, as well as to design interventions to help providers, individuals, and caregivers better manage the often complex symptoms of acute and chronic illness. NINR currently sponsors important research initiatives to advance quality of life and symptom management across the lifespan and to involve individuals more fully as active participants in their own health. For example, NINR currently sponsors an initiative to improve self-management and quality of life of children and adolescents with chronic illness, such as heart disease, asthma, diabetes, and/or obesity. Another initiative seeks to understand common biological, behavioral, and environmental pathways linking asthma and obesity, as well as to develop interventions to improve symptom management for individuals with both conditions. Recent research projects under the Quality of Life program include studies to explore: the impact of genomics on the effectiveness of pharmaceuticals for chronic obstructive pulmonary disease and on symptom expression in asthma; nutritional and psychosocial care to improve quality of life for chronic heart failure patients; and a nurse delivered cell-phone counseling intervention to increase adherence to HIV medications in individuals living in urban and rural areas.

Budget Policy:
The FY 2013 President's Budget request for this program is $44.439 million, a decrease of $129 thousand or 0.29 percent below the FY 2012 Enacted level. In FY 2013, NINR plans to continue to address the many challenges and opportunities that exist in the areas of self-management, symptom management, and caregiving as part of a strategically balanced research portfolio.

Program Portrait: Reducing the Burden of Adverse Symptoms

FY 2012 Level: $44.568 million
FY 2013 Level: $44.439 million
Change: $ -.129 million

The human and economic costs of pain, fatigue, and symptom-related effects of illnesses levy a heavy burden on the U.S. health care system. Chronic pain alone, by example, affects over 100 million American adults and costs the Nation between $560 and $635 billion annually according to a recent report released by the IOM.[1] Through directly funded research as well as scientific training, NINR supports a vital and growing scientific program across the Nation, with the goal of preventing and alleviating the adverse symptoms and effects of illnesses and adverse side-

[1] Institute of Medicine of the National Academies, Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research, June, 2011. Accessed at: http://iom.edu/Reports/2011/Relieving-Pain-in-America-A-Blueprint-for-Transforming-Prevention-Care-Education-Research.aspx

effects of therapeutic interventions. NINR-supported scientists are examining and identifying: biological markers that indicate an individual's susceptibility to adverse symptoms such as pain and fatigue; molecular targets for new drug therapies to manage illnesses and symptoms; and, individual variations in the ability to recover from the symptoms and effects of events such as acute brain injuries. NINR also sponsors scientific training, symposia, and courses, connecting current and new scientists with the latest advances in molecular and genetic research methods. In FY 2011 NINR co-sponsored, along with the NIH Clinical Center, a free, one-day, joint conference, "Symptom Mechanisms, Measurement, and Management." This conference brought distinguished researchers from across the Nation, providing attendees with a foundation in symptom-related topics with a particular focus on those associated with chronic illnesses such as cancer and sickle cell disease. Recently, NINR also solicited input from the larger scientific community on the development of a research initiative which would establish common data elements across biobehavioral symptom research trials in an effort to advance scientific discovery and accelerate knowledge in the treatment and prevention of symptoms. Further, since the summer of 2010, NINR has sponsored a week-long intensive "Methodology Boot Camp" program. This free program provides a foundation in symptom-related science, including molecular and genomic methodologies, to increase the research capacity of graduate students and faculty. In FY 2013, NINR will continue to support symptom-related research and build upon promising, recent, advances in understanding, preventing and treating the adverse symptoms and effects of illness and interventions.

Investing in Health Promotion and Disease Prevention: The Investing in Health Promotion and Disease Prevention program studies the key biological, behavioral, and social factors that promote health and healthy behaviors, and prevent the development of disease to achieve long-term, positive health outcomes in individuals across the lifespan. Research supported under this activity seeks scientific discoveries of health predictors and prevention strategies across conditions, diseases, and settings, often focusing on minority and/or underserved populations. With the goal of decreasing the burden of acute and chronic illness while reducing health care costs, research efforts involve: understanding the multiple causes of illness; designing personalized, evidence-based interventions that are culturally-appropriate; building interdisciplinary and community partnerships in research; and reducing health disparities. One current initiative supports innovative methods (e.g., social media) to promote positive health behaviors in sleep, diet, and physical activity in children and adolescents. Another initiative aims to reduce health disparities in minority and underserved children, focusing on biosocial, cultural, and family factors, as well as developing effective health promotion interventions. Recent research projects include: a comparison of two evidence-based parent training programs for urban, African American families with children at risk for behavioral problems; a study comparing the effects of a nurse care coordination intervention to traditional home health care on cost, hospitalization, and health care utilization in older adults; and a study that examines hospital-acquired infections and cost-effective means to prevent them.

Budget Policy: The FY 2013 President's Budget request for this program is $39.025 million, a decrease of $114 thousand or 0.29 percent below the FY 2012 Enacted level. In FY 2013, NINR plans to continue to address the many challenges and opportunities that exist in the areas of health promotion and disease prevention as part of a strategically balanced research portfolio.

Investing in Nurse Scientists: Through its Investing in Nurse Scientists program, NINR seeks to reinvigorate the scientific research workforce by emphasizing research training and career development to cultivate the next generation of nurse scientists and contribute to a scientific workforce that is innovative, multidisciplinary, and diverse. Under this program, NINR supports nurse scientists at all career stages with individual and institutional pre- and post-graduate research fellowships, as well as career development awards, including awards to trainees from under-represented and disadvantaged backgrounds. This program seeks to promote earlier entry

of nurses into research training programs and to strengthen the scientific basis for clinical practice, in order to enable nurse scientists to meet both current and future health challenges. For example, NINR recently solicited applications for a new initiative known as the Scholars Training for the Advancement of Research, or STAR program. This innovative program provides additional resources for institutions with existing NINR-supported training programs to support the interdisciplinary "fast-track" training of outstanding students finishing baccalaureate degrees in nursing who are interested in pursuing a PhD. NINR also supports investigators under the NIH K99/R00 Pathway to Independence (PI) program, in which promising postdoctoral scientists receive both mentored and independent research support for up to five years. Collectively, NINR training activities support the nursing workfoce by contributing to the development of the nursing faculty needed to teach and mentor individuals entering the field.

Budget Policy: The FY 2013 President's Budget request for this program is $14.671 million, a decrease of $43 thousand or 0.29 percent below the FY 2012 Enacted level. This proposed level of funding will allow NINR to cover its current commitments as well as allow new training grants to be awarded in FY 2013. In FY 2013, NINR plans to continue its commitment to developing the next generation of investigators and enhance overall research capacity in strategically important areas of research as part of a balanced program portfolio. These efforts will continue to include awards to encourage earlier entry into research careers and to expand the interdisciplinary backgrounds of new investigators.

Investing in Innovation: The Investing in Innovation program provides the foundation for innovative strategies and advances in technology that address a variety of health care challenges and deliver real-time personalized information to individuals, families, and communities. The Innovation program encourages the development of new technologies and informatics-based solutions to assist individuals and providers in promoting health, preventing disease, managing symptoms, and engaging people in their own health care. The program encourages novel approaches to identify effective methodologies and strategies to link underserved populations with available health resources, provide health equity, and help resolve health disparities. For example, NINR supported two critical phases of the development of a novel "lab-on-a-chip" device for detecting HIV. The technique has proved highly successful, and the research team has gone on to refine and clinically test this microfluid-based lab-on-a-chip – or mCHIP – in real life settings, with studies demonstrating that the mCHIP can accurately, rapidly, and cost-effectively detect clinically relevant infectious diseases in resource-limited settings. Currently supported activities include: development of a novel at-home, multi-purpose drug delivery system which aims to improve medication adherence and safety while reducing errors; use of an at-home heart rhythm monitor to help better predict and prevent the body's rejection of a donated heart; and a clinical trial and cost-effectiveness study of a multi-component diet and physical activity intervention using the web, phone, and print materials to target pre-diabetic adults.

Budget Policy: The FY 2013 President's Budget request for this program is $9.646 million, a decrease of $29 thousand or 0.30 percent below the FY 2012 Enacted level. In FY 2013, NINR plans to continue supporting research on the use and development of novel technologies that address current and future clinical care and patient management needs, and their incorporation into standard practice. This level of funding will allow NINR to cover current commitments and fund additional awards in this emerging area of research as part of a balanced portfolio.

Investing in Palliative and End-of-Life Care: Through interdisciplinary research efforts, the Investing in Palliative and End-of-Life Care program applies behavioral, biological, and social science strategies to understand and address the challenges faced by individuals with life-threatening illness and their caregivers. The program explores the dynamic interactions of various factors that influence palliative and end-of-life care, and develops interventions to optimize patient and caregiver quality of life across care settings and cultural contexts. This program also advances high-quality, evidence-based palliative care as a critical component of maintaining quality of life at any stage of illness, not just at the end of life. Specific research topics and activities under this program include: improving awareness and relief of pain, suffering, and distressing symptoms through effective palliative care; understanding and facilitating decision-making by patients, caregivers, and providers, including through the use of advance directives; promoting wellness and self-management of symptoms through meaningful health activities; and developing new investigators in this area of science.

Current research projects examine end-of-life health care decision-making and the experience of dying in a diverse sample of the very old. Other projects assess the impact of providing palliative care early, rather than late in illness, on quality of life, quality of care, resource utilization, and survival of cancer patients. NINR research includes testing an interdisciplinary palliative care intervention in advanced heart failure patients to improve symptoms, physical and spiritual well-being, and advance care planning. Finally, the NINR publication "Palliative Care: The Relief You Need when You're Experiencing the Symptoms of Serious Illness" which conveys information on the benefits of palliative care and answers common questions, has been downloaded over 1 million times from the NINR webpage. NINR recently released a Spanish-language version of this popular publication to increase awareness of palliative care among Hispanic patient and caregiving populations, and care providers who serve Hispanic communities.

Budget Policy: The FY 2013 President's Budget request for this program is $15.891 million, a decrease of $47 thousand or 0.29 percent below the FY 2012 Enacted level. Given the enormous potential and great need for improving the quality of life of dying patients and their caregivers, NINR plans to expand end-of-life research efforts in FY 2013 to build upon continuing accomplishments in this program area. The proposed level of funding will allow NINR to support existing commitments and fund additional awards in this critical area of research, as part of a balanced program portfolio.

Program Portrait: The Science of Compassion – Palliative and End-of-Life Care Research

FY 2012 Level: $15.938 million
FY 2013 Level: $15.891 million
Change: $ -.047 million

Increasing numbers of Americans live with life-limiting illnesses, and then later die from these debilitating conditions' consequences; thus, there is an urgent need to improve quality-of-life for those with advanced conditions through evidence-based palliative and end-of-life care. In 1997, following the IOM report "Approaching Death: Improving Care at the End of Life," the NIH Director designated NINR as the lead NIH Institute for end-of-life research. NINR-supported investigators recently published studies that have examined how assessment of depression in hospice patients improved patient quality of life, and have developed unique online tools to improve patient-provider communication about end-of-life decision-making and chronic conditions. With palliative and end-

of-life care research a vital part of NINR's new strategic plan, NINR plans to continue and expand its research initiatives in these areas to further the science of evidence-based care for advanced illness.

In 2011, NINR convened a national summit on "The Science of Compassion: Future Directions in End-of-Life and Palliative Care." This three-day, trans-NIH scientific summit focused on examining the current state of end-of-life and palliative care science, and envisioning and discussing future directions in research to improve quality of life for those with advanced illness. The nearly 1,000 attendees included scientists, palliative and end-of-life care health professionals, educators, policy analysts, members of professional organizations, and members of the public. The event consisted of: a town hall discussion on the ethics of science at the end of life; three plenary sessions examining various aspects of palliative and end-of-life care science; a special session focused on parents and clinicians as partners in research; ten breakout scientific sessions; and a poster session. Topics for discussion included: complex and co-morbidities; communication and advance care planning; pediatric and perinatal issues; research methodologies; the use of new technologies; and pain and symptom management, among many others. The summit featured research from junior and senior scholars in the field and provided mentoring opportunities, reflecting NINR's continued commitment to developing future nurse scientists. Events like this Summit serve to invigorate and guide the research community's efforts towards real progress in improving quality of life for those with advanced illness.

Intramural Research Program: The Intramural Research Program (IRP) supports research using the latest clinical and genomic technologies to gain a better understanding of the underlying biological mechanisms of a range of symptoms, their effect on patients, and how patients respond to interventions. Recent scientific efforts include applying genomic approaches to the study of clinical pain and fatigue. For example, one study examines biological factors that may play a role in inflammatory pain, which could eventually provide new targets for drug treatments. Another recent study developed a device to capture electronically patient reports of pain in order to improve pain assessment and management. The IRP also supports several research training opportunities through programs such as the NINR Summer Genetics Institute, a one-month program designed to increase the research capability in genetics among graduate students and faculty in nursing, and to develop and expand the basis for clinical practice in genetics among clinicians. NINR participates in the NIH Graduate Partnerships Program (GPP), in which doctoral students from schools of nursing with established NINR-supported training programs can complete their dissertation research within the IRP. NINR also sponsors the Methodologies Boot Camp, which is a one-week intensive research training course at the NIH that focuses in depth on a timely topic of relevance to health, healthcare, and nursing science, such as pain research methodologies. The Methodologies Boot Camp is aimed at increasing the research capabilities of graduate students and faculty through distinguished guest speakers, classroom discussions, and laboratory training.

Budget Policy: The FY 2013 President's Budget request for this program is $6.720 million, a decrease of $27 thousand or 0.40 percent below FY 2012 Enacted level. In FY 2013, this program will build on the recent accomplishments of the IRP and continue to support innovative research to address the scientific challenges of understanding and managing adverse symptoms such as acute and chronic pain. This program will also continue to support important training and career development opportunities for innovative investigators.

Research Management and Support: Research Management and Support (RMS) activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. The

functions of RMS also encompass strategic planning, coordination, and evaluation of the Institute's programs, as well as communication and coordination with other federal agencies, Congress, and the public.

Budget Policy: The FY 2013 President's Budget request for this program is $13.761 million, a decrease of $55 thousand or 0.40 percent below FY 2012 Enacted level. In FY 2013, NINR plans to continue addressing the challenges and opportunities that exist in strategically managing a research portfolio that addresses areas of science critical to public health.

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Budget Authority by Object
(Dollars in Thousands)

	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
Total compensable workyears:			
Full-time employment	74	73	(1)
Full-time equivalent of overtime and holiday hours	0	0	0
Average ES salary (*in dollars*)	$0	$0	$0
Average GM/GS grade	12.4	12.3	(0.1)
Average GM/GS salary (*in dollars)*	$97,392	$97,171	($221)
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207) *(in dollars)*	$0	$0	$0
Average salary of ungraded positions (*in dollars*)	0	0	0

	OBJECT CLASSES	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
	Personnel Compensation:			
11.1	Full-time permanent	$5,903	$5,845	($58)
11.3	Other than full-time permanent	1,409	1,410	1
11.5	Other personnel compensation	284	284	0
11.7	Military personnel	65	67	2
11.8	Special personnel services payments	451	456	5
	Total, Personnel Compensation	**$8,112**	**$8,062**	**($50)**
12.0	Personnel benefits	$2,196	$2,182	($14)
12.2	Military personnel benefits	36	36	0
13.0	Benefits for former personnel	0	0	0
	Subtotal, Pay Costs	**$10,344**	**$10,280**	**($64)**
21.0	Travel and transportation of persons	$227	$227	$0
22.0	Transportation of things	44	44	0
23.1	Rental payments to GSA	10	10	0
23.2	Rental payments to others	9	9	0
23.3	Communications, utilities and miscellaneous charges	110	110	0
24.0	Printing and reproduction	21	21	0
25.1	Consulting services	142	142	0
25.2	Other services	1,625	1,510	(115)
25.3	Purchase of goods and services from government accounts	10,613	11,573	960
25.4	Operation and maintenance of facilities	77	77	0
25.5	Research and development contracts	174	341	167
25.6	Medical care	3	3	0
25.7	Operation and maintenance of equipment	257	257	0
25.8	Subsistence and support of persons	0	0	0
25.0	**Subtotal, Other Contractual Services**	**$12,891**	**$13,903**	**$1,012**
26.0	Supplies and materials	$608	$608	$0
31.0	Equipment	305	305	0
32.0	Land and structures	0	0	0
33.0	Investments and loans	0	0	0
41.0	Grants, subsidies and contributions	120,028	118,636	(1,392)
42.0	Insurance claims and indemnities	0	0	0
43.0	Interest and dividends	0	0	0
44.0	Refunds	0	0	0
	Subtotal, Non-Pay Costs	**$134,253**	**$133,873**	**($380)**
	Total Budget Authority by Object	**$144,597**	**$144,153**	**($444)**

Includes FTEs which are reimbursed from the NIH Common Fund.

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Salaries and Expenses
(Dollars in Thousands)

OBJECT CLASSES	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
Personnel Compensation:			
Full-time permanent (11.1)	$5,903	$5,845	($58)
Other than full-time permanent (11.3)	1,409	1,410	1
Other personnel compensation (11.5)	284	284	0
Military personnel (11.7)	65	67	2
Special personnel services payments (11.8)	451	456	5
Total Personnel Compensation (11.9)	**$8,112**	**$8,062**	**($50)**
Civilian personnel benefits (12.1)	$2,196	$2,182	($14)
Military personnel benefits (12.2)	36	36	0
Benefits to former personnel (13.0)	0	0	0
Subtotal, Pay Costs	**$10,344**	**$10,280**	**($64)**
Travel (21.0)	$227	$227	$0
Transportation of things (22.0)	44	44	0
Rental payments to others (23.2)	9	9	0
Communications, utilities and miscellaneous charges (23.3)	110	110	0
Printing and reproduction (24.0)	21	21	0
Other Contractual Services:			
Advisory and assistance services (25.1)	142	142	0
Other services (25.2)	1,625	1,510	(115)
Purchases from government accounts (25.3)	6,845	6,845	0
Operation and maintenance of facilities (25.4)	77	77	0
Operation and maintenance of equipment (25.7)	257	257	0
Subsistence and support of persons (25.8)	0	0	0
Subtotal Other Contractual Services	**$8,946**	**$8,831**	**($115)**
Supplies and materials (26.0)	$608	$608	$0
Subtotal, Non-Pay Costs	$9,965	$9,850	($115)
Total, Administrative Costs	**$20,309**	**$20,130**	**($179)**

NATIONAL INSTITUTES OF HEALTH

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Details of Full-Time Equivalent Employment (FTEs)

OFFICE/DIVISION	FY 2011 Actual			FY 2012 Enacted			FY 2013 PB		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Office of the Director	6	0	6	6	0	6	6	0	6
Office of Administrative Management	19	0	19	19	0	19	19	0	19
Division Intramural Research Programs	11	2	13	11	2	13	11	2	13
Division of Extramural Affairs	23	0	23	23	0	23	22	0	22
Office Science Policy and Public Liaison	13	0	13	13	0	13	13	0	13
Total	72	2	74	72	2	74	71	2	73
Includes FTEs which are reimbursed from the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements	0	0	0	0	0	0	0	0	0

FISCAL YEAR	Average GS Grade
2009	12.1
2010	12.3
2011	12.4
2012	12.4
2013	12.3

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Detail of Positions

GRADE	FY 2011 Actual	FY 2012 Enacted	FY 2013 PB
Total, ES Positions	0	0	0
Total, ES Salary	0	0	0
GM/GS-15	7	7	7
GM/GS-14	25	25	24
GM/GS-13	12	12	12
GS-12	9	9	9
GS-11	5	5	5
GS-10	0	0	0
GS-9	3	3	3
GS-8	3	3	3
GS-7	3	3	3
GS-6	1	1	1
GS-5	0	0	0
GS-4	1	1	1
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	69	69	68
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General	0	0	0
Director Grade	0	0	0
Senior Grade	0	0	0
Full Grade	1	1	1
Senior Assistant Grade	1	1	1
Assistant Grade	0	0	0
Subtotal	2	2	2
Ungraded	22	22	22
Total permanent positions	67	67	66
Total positions, end of year	93	93	92
Total full-time equivalent (FTE) employment, end of year	74	74	73
Average ES salary	0	0	0
Average GM/GS grade	12.4	12.4	12.3
Average GM/GS salary	97,392	97,392	97,171

Includes FTEs which are reimbursed from the NIH Common Fund.