



Outside Witness Testimony
U.S. Senate Committee on Appropriations
FY 15 Hearing: Driving Innovation through Federal Investments
Submitted by:
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The American Association of Colleges of Nursing (AACN) respectfully submits this testimony to the U.S. Senate Committee on Appropriations regarding the committee's Fiscal Year (FY) 2015 hearing *Driving Innovation through Federal Investments*. As the national voice for baccalaureate and graduate nursing education, AACN represents over 740 schools that educate more than 450,000 nursing students and employ approximately 17,000 nurse faculty. Collectively, these institutions produce approximately half of our nation's registered nurses and all of our advanced practice registered nurses, nurse faculty, and nurse researchers. AACN member institutions not only educate the next generation of nursing scientists, but also employ them after graduation, which helps to advance their research agendas as faculty and post-doctoral fellows. Currently, AACN members are developing the expertise of 5,145 research-focused doctoral students who are enrolled in 132 programs across the country. In addition, these institutions graduated 628 new nurse scientists last year.¹ AACN members are deeply concerned about the sustainability of biomedical and healthcare innovation, and the organization is committed to supporting federal investments that ensure our nation's researchers can help drive healthcare innovation locally and globally.

At the core of nursing science is the intent to create new models of care, transform existing care practices, and build upon those that improve quality of life, reduce costly interventions, and promote patient-centered care. Federal investments in healthcare research are necessary to meet these three objectives, which serve to enhance the health of our nation's patients, their families, and communities at large.

Investing in Innovative Healthcare Discoveries and Future Nurse Scientists

As our healthcare system continues to undergo transformations with the goal of increasing access to high-quality, cost-effective care, it is imperative that research endeavors align with efforts that support evolving models of care delivery. Nurse scientists receive support from the National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), the Department of Defense (DoD), and the Agency for Healthcare Research and Quality (AHRQ), which is essential to advancing the nation's health research agenda.

¹ American Association of Colleges of Nursing. (2014). *2013-2014 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing*. Washington, DC.

National Institutes of Health

NIH is comprised of 27 institutes and centers dedicated to improving the lives of patients and the delivery of health care in America. As the largest source of funding for biomedical research in the world, NIH employs a large cadre of scientists in universities and research institutions both domestically and abroad. According to the agency, “NIH research funding directly supports hundreds of thousands of American jobs and serves as a foundation for the medical innovation sector, which employs 1 million U.S. citizens.”² These institutes advance healthcare innovations that improve healthcare outcomes, better connect healthcare providers with their patients, and maximize limited resources.

Additionally, within NIH, the National Institute of Nursing Research (NINR) is focused on promoting prevention-based health practices derived from the research of nurse scientists. Advancing technology to improve health, as well as developing a strong cadre of nurse researchers are two of NINR’s focus areas in order to implement the institute’s strategic plan. In fact, NINR dedicates approximately 6% of its budget to educating nurse scientists needed to lead research efforts that inform healthcare delivery. This is critical given the growing demand for nursing and healthcare services. In FY 2013, NINR awarded 414 grants³ ranging in focus from “Transitional Telehealth Homecare: REACH”⁴ to “Standardized Rehabilitation for Intensive Care Unit Patients with Acute Respiratory Failure”⁵ to “Targeted Management Intervention for African-American Men with TIA [transient ischemic attack] or Stroke.”⁶ Nursing brings a critical lens to the nation’s research agenda.

For decades, nursing research has proven its impact in reducing the cost at the point of care delivery. For example, in 2006, an NINR-funded study on the early implementation of an educational intervention program for parents of infants born prematurely showed that it can reduce parental stress, depression, and anxiety; enhance parent-infant interactions; and reduce hospital length of stay. Dr. Bernadette Melnyk and her colleagues found that hospital costs were decreased by \$5,000 per infant. Additionally, with 480,000 low birth-weight premature infants born each year in the U.S., approximately \$2.4 billion could be saved annually within the national healthcare system if the program was adopted by neonatal intensive care units across the country. After the study’s results were published, neonatal units across the nation were inquiring about this program to improve their own care.⁷

Continued investments in NIH will ensure that the development, evaluation, and implementation of its work are not disrupted so that benefits can be realized to the public without delay. When projects face funding cuts, or when institutes are forced to downsize employment, there is a loss

² National Institutes of Health. (Last reviewed: April 10, 2014). *Impact of NIH Research*. Retrieved from: <http://www.nih.gov/about/impact/index.htm>.

³ National Institutes of Health (2014). NIH RePORTER. Retrieved from: <http://projectreporter.nih.gov/reporter.cfm>.

⁴ ClinicalTrials.gov. Philadelphia: Children's Hospital of Philadelphia (U.S.). Identifier NCT02039297, Transitional Telehealth Homecare: REACH; 2013 Feb 28 [cited 2014 April 23]. Retrieved from <http://clinicaltrials.gov/ct2>.

⁵ ClinicalTrials.gov. Winston-Salem: Wake Forest School of Medicine (U.S.). Identifier NCT00976833, Standardized Rehabilitation for Intensive Care Unit (ICU) Patients With Acute Respiratory Failure; 2009 Sept 11 [cited 2014 April 23]. Retrieved from: <http://clinicaltrials.gov/ct2/show/NCT00976833>.

⁶ ClinicalTrials.gov. Cleveland: Case Western University (U.S.). Identifier NCT01807793 , Targeted Management Intervention for African-American Men With TIA or Stroke (TEAM); 2013 March 6 [cited 2014 April 23]. Retrieved from: <http://clinicaltrials.gov/show/NCT01807793>.

⁷ National Institute of Nursing (n.d.). *Research Because of Nursing Research: Helping Families COPE with Premature Births*. Retrieved from: http://www.ninr.nih.gov/newsandinformation/because-of-nursing-research-cope#_U1191CfWb9p.

in the progress underway toward life-saving and health promotion discoveries. This can significantly impact the ability of a study's results to maximize its cost-benefit and impact on the public. Funding cuts through sequestration or other budgetary measures place NIH at grave risk. In June of 2012, NIH Chairman Dr. Francis Collins, when questioned on how sequestration would affect the agency's operations, reported that a 5.5% cut to \$30.899 billion of NIH's budget (FY 2012 levels) would translate to a loss of \$1.709 billion. This would stunt the agency's ability to support the number and longevity of projects. Recently, Dr. Collins explained how budget cuts would further exacerbate NIH's ability to accept a greater number of applications, stating, "We are throwing away probably half of the innovative, talented research proposal's that the nation's finest biomedical community has produced... Particularly for young scientists, they are now beginning to wonder if they are in the wrong field. We have a serious risk of losing the most important resource that we have, which is this brain trust, the talent and the creative energies of this generation of scientists."⁸ Reduced funding puts the public at risk by eliminating support for new research and potential medical breakthroughs.

Centers for Disease Control and Prevention

The CDC ensures the security of our nation through initiatives that foster healthy communities and impede public health threats. CDC's researchers are responsible for generating information that allows the agency to formulate strategies to defend the public from biological, environmental, and chemical hazards. The expertise of these scientists, combined with state-of-the-art technologies (including advanced computing and lab analysis) are required to process large data streams and produce public health solutions. The CDC's ability to mobilize action plans into place and protect the public relies on the support of strong federal funding.

The nursing profession, and in particular the public health nursing sector, employs tools and standards developed by the CDC to assess, evaluate, and care for patients who are at risk due to public health threats. For example, the CDC has partnered with nursing and other health professions organizations to develop tools, training, and research for clinicians on vaccines and immunizations.⁹ These have been created so that health providers are equipped with the most up-to-date information to appropriately communicate to patients the benefits and risks associated with certain treatments, and to ensure providers are vaccinating according to current regulations.

Department of Defense TriService Nursing Research Program

The DoD TriService Nursing Research Program (TSNRP) is authorized as part of the DoD Health Care Program established at the Uniformed Services University of the Health Sciences. Though TSNRP receives only a marginal portion of the DoD's total budget allocations for research, the program "is central to the mission of military nursing because research is essential to generate the scientific knowledge upon which nurses base their practice."¹⁰ The program has established a body of research that is transferable to nursing practice across the Army, Air Force, and Navy and promotes interprofessional relationships with other scientists and disciplines.

⁸ USA Today (2014). *NIH Director: Budget Cuts Put U.S. Science at Risk*. Retrieved from: <http://www.usatoday.com/story/news/nation/2014/04/23/nih-budget-cuts/8056113/>

⁹ Centers for Disease Control and Prevention (Last updated January 2014). *Vaccine Resources for CDC Partners*. Retrieved from: <http://www.cdc.gov/vaccines/events/niw/ed-resources/partner-resources.html>.

¹⁰ Committee on Military Nursing Research, Institute of Medicine (1996). *The Program for Research in Military Nursing: Progress and Future Direction*. Washington, DC: The National Academies Press. Retrieved from: http://www.nap.edu/catalog.php?record_id=5257.

Moreover, the TSNRP supports a mentorship system for the development of junior investigators.⁸ TSNRP is unique in that it has a commitment solely to nursing research—“an area not addressed by other military research programs. Few, if any, doctorally prepared nurse researchers participate as investigators in other DoD medical research, development, test, and evaluation programs.”¹¹ Funding for TSNRP is direct support for the pipeline of future military nurse scientists whose work, when translated into practice, ensures our military men and women receive the best nursing care possible within the Armed Services.

Communicating Innovation to Health Providers and the Public

For innovative research discoveries to be implemented at the ground level, they need to be communicated to the healthcare system and the public. This is particularly crucial when research outcomes produce findings that have the potential to positively change healthcare delivery on a grand scale.

Agency for Healthcare Research and Quality

The Agency for Healthcare Research and Quality is tasked with producing and disseminating the evidence surrounding healthcare research to increase quality, safety, and efficacy of healthcare delivery. The agency develops resources for public consumption in addition to healthcare providers, health systems, and public and private payers. In addition, AHRQ partners with the U.S. Department of Health and Human Services and other entities, including federal agencies, private partners, and community stakeholders to make sure that the evidence surrounding research is understood and utilized appropriately.

AHRQ operates a Health Care Innovations Exchange, which aims to disseminate innovations and tools to improve quality and reduce disparities. Within this exchange are resources for patients and their families to help guide and inform them on decisions related to choosing appropriate treatment options and on quality and safety in the healthcare setting. For health provider organizations, AHRQ’s Innovation Concepts and Strategies resource relays processes and emerging concepts on best practices for creating a culture of innovation and developing an innovation strategy. As the healthcare system looks to develop new methods of healthcare delivery, it is essential that the successful models in this field are communicated broadly to ensure efficient implementation and to prevent duplicative efforts. As the profession who spends the most time caring for patients, nurses are instrumental in assisting patients and their caregivers in making healthcare choices, and the agency’s innovative work compliments this responsibility.

Federal investments in research that bolster innovation in our nation’s healthcare system are direct investments in our nation’s security, curative and preventive treatments, and overall well-being. These investments make significant contributions to evidence-based foundation as well as the development of future generations of nurse scientists. As educators and employers of America’s nurse researchers, our members have a significant concern about the detrimental impact funding cuts broadly and sequestration have on NIH, CDC, TSNRP, AHRQ, and other federally supported research agencies to develop future contributions healthcare innovations. AACN appreciates the opportunity to submit this testimony.

¹¹ Uniformed Services University (Last updated March 2014). *TriService Nursing Research Program*. Retrieved from: http://www.usuhs.mil/tsnrp/AboutTSNRP/History/triservice_program.php.