

“The Central Role of Science in the Advancement of Nursing”

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Good afternoon. I am Dr. Ann Cashion, Acting Director of the National Institute of Nursing Research, or NINR, one of the 27 Institutes and Centers within the National Institutes of Health. I am pleased to be here today to represent the nursing science community, and to contribute to this important report on the Future of Nursing. In the next few minutes, I will describe the essential role that nursing science must play in ensuring that future.

Nursing science focuses on improving health outcomes of patients and their caregivers. It supports the health research enterprise by bridging gaps between the bench, the research clinic, and communities, and by translating science to clinical care. Nursing science’s primary focus is on improving the quality of a person’s life, not necessarily on curing disease, and it spans all age groups and various conditions and illnesses.

NINR provides funding to scientists across the United States to conduct research in: Symptom Science, Wellness, Self-Management, and End-of-Life and Palliative Care, and to train the next generation of nurse scientists. NINR’s work supports the practice of the over 3 million nurses in the U.S., by developing the scientific evidence necessary for the advancement of clinical care.

For example, NINR scientists:

- Discovered biomarkers of neuronal damage in athletes and military personnel following traumatic brain injury, that may one day guide diagnostic and therapeutic development¹, and
- They developed early palliative care interventions tailored to patients with newly diagnosed incurable cancer, leading to improvements in quality of life and mood outcomes.²

On a broader scale, NINR-supported science has led to the development of robust, evidence-based interventions that have been implemented in multiple community and clinical settings, such as:

- A program that promotes healthy behaviors in low-income settings, through positive parenting³, and
- Technology-driven decision-support tools that use patient data from electronic health records to aid transitions from acute to sub-acute care.⁴

Unfortunately, minority populations in our country bear an unequal burden of disease. This problem is compounded by the fact that, as nurses know, racial and ethnic minorities are often underrepresented in research studies. Nurse scientists have a strong tradition of patient-focused care and partnering with vulnerable communities to recruit participants and achieve positive health outcomes. Indeed, a significant portion of NINR's annual budget goes to support health disparities research.

Findings from this research support include:

¹ Gill, J., Merchant-Borna, K., Jeromin, A., Livingston, W. Bazarain, J. Acute plasma tau relates to prolonged return to play after concussion (2017). *Neurology*. 2017 Feb 7;88(6):595-602. Gill J, Latour L, Diaz-Arrastia R, Motamedi V, Turtzo C, Shahim P, Mondello S, DeVoto C, Veras E, Hanlon D, Song L, Jeromin A. Glial fibrillary acidic protein elevations relate to neuroimaging abnormalities after mild TBI. *Neurology*. 2018 Oct 9; 91(15):e1385-e1389.

² El-Jawahri A, Greer JA, Pirl WF, Park ER, Jackson VA, Back AL, Kamdar M, Jacobsen J, Chittenden EH, Rinaldi SP, Gallagher ER, Eusebio JR, Fishman S, VanDusen H, Li Z, Muzikansky A, Temel JS. Effects of Early Integrated Palliative Care on Caregivers of Patients with Lung and Gastrointestinal Cancer: A Randomized Clinical Trial. *Oncologist*. 2017 Dec;22(12):1528-1534.

³ Breitenstein SM, Gross D, Fogg L, Ridge A, Garvey C, Julion W, Tucker S. The Chicago Parent Program: comparing 1-year outcomes for African American and Latino parents of young children. *Res Nurs Health*. 2012 Oct;35(5):475-89.

⁴ Holland DE, Knafelz GJ, Bowles KH. Targeting hospitalised patients for early discharge planning intervention. *J Clin Nurs*. 2013 Oct;22(19-20):2696-703.

- Exposing the substantial burden of out-of-pocket costs for rural breast cancer survivors⁵, and
- Revealing significantly less health care utilization by African Americans in comparison with Caucasian Americans after the 2009 recession.⁶

We are very proud of the contribution that nursing science has made to improving health and to supporting the nursing field, and we are excited about what can be achieved in the future. But in order to protect that future, we must ensure the continued growth of the research workforce.

However, recent data has shown that the number of students in PhD nursing programs has decreased.⁷ Doctoral nursing programs are not producing enough nurse scientists, even though there is a need for highly educated nurses to meet the current healthcare challenges and growing demand for nursing faculty.

NINR's training efforts focus on different stages of a research career:

- We support training grants, for full-time predoctoral and postdoctoral research training.
- We support NIH Research Supplements to Promote Diversity for groups under-represented in biomedical research.
- And we support training programs at the NIH campus including our long running Summer Genetics Institute and the highly successful Methodologies Boot Camps.

Through these NINR-sponsored training programs, nurse scientists are poised to keep pace with the latest techniques, initiatives, and innovations in science, and to educate the nursing workforce to become active participants, collaborators, and leaders in the transformation of health care.

I appreciate the opportunity today to describe for you the importance of nursing science, what the field has accomplished, and why it is so important to ensure its future. As part of the "Future of

⁵ Pisu M, Azuero A, Benz R, McNees P, Meneses K. Out-of-pocket costs and burden among rural breast cancer survivors. *Cancer Med.* 2017 Mar;6(3):572-581

⁶ Travers JL, Cohen CC, Dick AW, Stone PW. The Great American Recession and forgone healthcare: Do widened disparities between African-Americans and Whites remain? *PLoS One.* 2017 Dec 27;12(12):e0189676.

⁷ <https://www.aacnnursing.org/News-Information/Research-Data-Center/PhD>

Nursing” report, I urge this committee to highlight the importance of nursing science, including the need for more PhD-trained nurses, in order to advance nursing over the next 10 years.

Thank you.