Dec 13, 2021

Honorable Shannon Zenk
Director,
The National Institute of Nursing Research
Institutes of Health
31 Center Drive, Room 5B03
Bethesda, MD 20892

 RE: Recommendations on the NINR 2022-2026 Strategic Plan Framework

Dear Director Zenk:

The Alliance for Nursing Informatics (ANI) appreciates the opportunity to comment as nursing stakeholders on the National Institute for Nursing Research strategic plan.

The Alliance for Nursing Informatics (ANI), cosponsored by AMIA & HIMSS, advances nursing informatics leadership, practice, education, policy, and research through a unified voice of nursing informatics organizations. We transform health and healthcare through nursing informatics and innovation. ANI is a collaboration of organizations that represents more than 20,000 nurse informaticists and brings together 25 distinct nursing informatics groups globally. ANI crosses academia, practice, industry, and nursing specialty boundaries and works in collaboration with the more than 4 million nurses in practice today. We have reviewed the NINR 2022-2026 Draft Strategic Plan Framework and RFI and offer our comments and recommendations as nursing stakeholders. We have four overarching recommendations, which include detailed rationale:

1. Health Information Technology as a crucial cross-cutting component
2. Emphasis on inclusive data repositories, common data elements, and data standards
3. Increased focus on implementation science
4. Adopting an inclusive team-based paradigm for nursing research

ANI appreciates NINR's dedication to supporting innovative research, supports diversity, equity, and inclusion, and not only addresses current health challenges but also prepares us for future ones. In addition, we appreciate how NINR wants to illuminate the whole picture of health for individuals, communities, and populations in alignment with the 21st Century Cures Act and the Future of Nursing 2030 report. Consistent with our previous comments, we advocate for increased emphasis on a patient-centered and systems perspective and a stronger focus on the Social Determinants of Health.

1. Health Information Technology as a crucial cross-cutting component

ANI has previously commented on the NINR strategic plan and expressed appreciation for the focus on technology to improve health as a cross-cutting area crucial to advancing nursing science and the future of nursing research. Technology and informatics impact all areas of health and healthcare and should play an important role across all five lenses. ANI recognizes informatics as inclusive of the people, processes, and technology used to manage data, information, and knowledge. Nursing and health informatics are a crucial field of research, spanning a range of domains, including public health, consumer health, data science and analytics, and clinical informatics. Therefore, ANI encourages NINR to continue its inclusion of informatics and technology as a crucial component for the strategic plan and to devote attention to healthcare informatics and technology innovations to support nursing practice and advance research in nursing sciences.

ANI greatly appreciates the attention to health equity in NINR's Strategic Plan Draft Framework and strongly agrees that nursing science is uniquely positioned to produce evidence to eliminate structural inequities. With the proliferation of technology in all facets of our lives, and in health care, in particular, it has become clear that technology has the potential to either reduce or perpetuate disparities. Digital health solutions can support self-management, enable access to healthcare in underserved areas, and reduce barriers to health information. However, several factors, including unequal access to advanced technologies and technological resources, and biases in data, can significantly increase health disparities and inequity. Therefore, ANI strongly encourages NINR to devote research attention to the impact of digital health, telehealth, and remote monitoring, on health outcomes, particularly in underserved communities.

2. Emphasis on inclusive data repositories, common data elements, and data standards

ANI appreciates the attention given to developing common data elements and access to data repositories. However, we encourage NINR to devote attention to including nurse-generated and nurse-sensitive data elements in data repositories and nursing perspectives in data-driven research. In particular, ANI encourages NINR to devote specific attention to nursing research that advances data consistent with the FAIR principles.[1] It is only through the thoughtful harmonization of data that nursing data will be shared and compared in ways that allow the influence of nursing's unique contribution to population health and patient outcomes to be measured and results generalized in the context of care coordination.

ANI fully endorses the NINR's emphasis on supporting research related to the Social Determinants of Health (SDoH). ANI has long been an advocate for a national effort to capture data related to the SDoH. ANI has expressed concern about inconsistencies in data capture when patients move across the care trajectory. Without a national standard for SDoH, major electronic health record (EHR) vendors who allow recording of SDoH do so in a custom rather than standard manner. This custom approach leaves the valuable SDoH data in non-interoperable fields, rendering them obscure or inaccessible to clinicians to identify opportunities to impact outcomes.[2] We encourage NINR to dedicate attention to this issue

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[1] FAIR Principles. https://www.go-fair.org/fair-principles/

[2] A. Arons, S. DeSilvey, C. Fichtenberg and L. Gottlieb, "Documenting social determinants of health-related clinical activities using standardized medical vocabularies," JAMIA Open, vol. 2, no. 1, 2019.; K. A. Monsen, J. M. Rudenick, N. Kapinos, K. Warmbold, S. K. McMahon and E. N. Schorr, "Documentation of social determinants in electronic health records with and without standardized terminologies: A comparative study," Proceedings of Singapore Healthcare, vol. 28, no. 1, pp. 39-47, 2019.

and support ongoing national efforts to develop standards and common data elements for SDoH. NINR could promote the evaluation and use of common data elements in research exploring SDoH.

In addition, the NINR has an opportunity to lead efforts to integrate SDoH into healthcare by leveraging the discipline's high standards on comprehensive education and using theory and models to guide research and practice. While efforts to collect SDoH data to inform clinical decision-making, comprehensive efforts are needed to ensure that SDoH data are appropriately defined, used, and interpreted. Without a clear understanding of what SDoH data represent, i.e., measures of institutional discrimination, bias, and/or marginalization rather than individual characteristics, those data may be used in a way that leads to poor health outcomes and perpetuation of health disparities. Given the strengths of nursing science and education, NINR has the opportunity to lead training and education about SDoH data to ensure that nurses and other clinicians are using SDoH data to their fullest potential.

The important role of data science and data-driven research to address current and future health challenges cannot be overstated. While ANI values the attention given to this in the NINR Strategic Plan Draft Framework, we encourage a review of some terms used to describe this to ensure clarity and inclusivity. Most notably, we encourage NINR to reduce the emphasis on 'Big Data' and instead focus on the methods and models of 'data science,' providing more clarity and transcending the size of the data sets in use. In addition, ANI highly encourages NINR to engage in strategic collaborations with other institutes within the NIH to strengthen and harmonize data science efforts.

3. *Increased focus on implementation science*

ANI values the NINR's emphasis on supporting research conducted through the lenses of systems science, health equity, and population and community health. To further support this, we encourage NINR to promote all research areas going beyond the generation of new knowledge into clinical translation, implementation, and dissemination. A focus on implementation to support systems and models of care should include an emphasis not only on the *technical* implementation of interventions (e.g., interoperability) but also on *procedural* implementation, which is increasingly gaining attention thanks to implementation science. Each context of care will require different implementation efforts, and ANI encourages NINR to devote attention to the role of technical and procedural implementation efforts to promote effectiveness and generalizability.

4. *Adopting an inclusive team-based paradigm for nursing research*

As a collaborative alliance representing a diverse group of 20,000 nurse informaticists, ANI recognizes the importance of collaboration and harmonization across settings, disciplines, and organizations. Therefore, we strongly encourage NINR to engage in strategic collaborative efforts with other institutes within NIH and align plans with ongoing national efforts to maximize impact. In addition, ANI recommends that the NINR Strategic Plan reflect the broad field of nursing science and the large body of interdisciplinary research in which nursing scientists engage.

To adequately address health needs in population and community health, ANI encourages NINR to devote attention to the role of APRNs and informatics nurse specialists (INS) in these healthcare domains. APRNs have advanced training in applying evidence-based findings into care and identifying emerging healthcare needs. INS have advanced training in eliciting information from data, particularly in large observational data sets, that are integral in the early identification of emerging health issues and

health disparities. ANI encourages the NINR to support research conducted with diverse research teams, emphasizing collaboration with APRNs and INS. In addition, we encourage research that supports members of the diverse nursing workforce in implementing evidence-based interventions to improve patient outcomes within their communities.

ANI appreciates the opportunity to contribute to the conversation on NINR's next strategic plan to describe priority areas of research aligned with the NINR mission to promote and improve the health and quality of life of individuals, families, and communities. We believe the informatics research priorities ANI has endorsed in this letter can significantly improve health and quality of life over the next 10-20 years and are critical to enhancing healthcare for all.

Sincerely,

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