



June 30, 2024

National Academy of Medicine
500 5th Street NW
Washington, DC 2001

Re: Artificial Intelligence (AI) Code of Conduct Principles and Commitments Discussion Draft

Dear NIH Office of Science Policy,

The Alliance for Nursing Informatics (ANI) appreciates the opportunity to comment as nursing stakeholders on the NIH Plan to Enhance Public Access to the Results of NIH-Supported Research.

[The Alliance for Nursing Informatics](#) (ANI), co-sponsored by AMIA and 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 representing more than 25,000 nurse informaticists and bringing together 29 distinct nursing informatics groups globally. ANI crosses academia, practice, industry, and nursing specialty boundaries and collaborates with the more than 4 million nurses in practice today.

We support the NAM's proposed code of conduct and its holistic view of AI in the context of trust and learning health systems. We strongly support the inclusion of the following components, in particular:

The inclusion of principles reflecting the Steering Committee's cognizance of the potential for AI to exacerbate existing health disparities and perpetuate patient harms, specifically that AI should be "equitable," "accessible," "transparent," and "accountable."

The Code Commitments to involve people as partners with agency in the AI life cycle and to focus on workforce well-being; we embrace AI as a tool for patients, clinicians, and other important stakeholders in the healthcare ecosystem to deliver high-quality, trustworthy care. To do this, stakeholder partnerships are essential. We note the importance of these commitments during a time of unprecedented levels of nursing burnout. Half of nurses already report feeling burned out, one-third "at the end of their rope,"¹ and 75% of nurse leaders report that nursing burnout was their top challenge.² Even before the COVID-19 pandemic, poorly designed technology, such as electronic health records with low usability, correlated with nursing burnout.³ Failure to engage the nursing workforce in the development of policies and codes of conduct around AI is likely to exacerbate burnout. Conversely, engaging nurses as partners with agency nurses may enable them to participate effectively in AI development, implementation, and governance so that AI alleviates nursing burnout.⁴

The recognition that AI is increasingly adaptive, learning and evolving continually with new data; thus, the "adaptive" principle and Code Commitment for ongoing monitoring are important to move forward the discussions on how to achieve a culture of safety. Strategies for AI monitoring and safety that were

¹ National nursing workforce study. NCSBN. Accessed February 6, 2024. <https://www.ncsbn.org/research/recent-research/workforce.page>

² AONL. Longitudinal nursing leadership insight study. AONL. Published 2023. Accessed September 29, 2023. <https://www.aonl.org/resources/nursing-leadership-covid-19-survey>

³ Melnick ER, West CP, Nath B, et al. The association between perceived electronic health record usability and professional burnout among US nurses. *J Am Med Inform Assoc.* 2021;28(8):1632-1641.

⁴ Robert N. How artificial intelligence is changing nursing. *Nurs Manage.* 2019;50(9):30-39.

developed for “locked” algorithms will be insufficient in the near future.

We thank the NAM for receiving comments on their draft Code of Conduct. Please find ours below:

Two additional areas to be considered either as added “principles” or explicitly named under the existing ten principles:

Transparency and anthropomorphism: Throughout the era of modern computing, scientists and scholars have warned of the risks of anthropomorphism in computing - a phenomenon in which people attribute human qualities to computers. These include misplaced trust, transference of agency, the formation of emotional attachments, and potential dejection when computers fail to behave as expected.^{5,6} As large language models (LLM’s) are trained on an expanding corpus of human-generated input, the experience of engaging with applications supported by generative AI can start to mimic human interactions. To prevent unintended adverse consequences, it is imperative that AI systems fully disclose when and how people are interacting with non-human technology.

Autonomy: Data activists stress the importance of civilian data rights, including the right to remain ‘unknown’ to digital and AI-supported processes and algorithms.⁷ The White House’s Blueprint for an AI Bill of Rights stresses individuals should have the right to opt out of such systems in favor of those supported by human alternatives.⁸ This recommendation, which aligns with the human-centered concept of autonomy, is missing from NAM’s proposed Code Principles.

Inconsistencies: One area of inconsistency noted in the landscape review was the inclusive collaboration of key stakeholders, including patients, clinicians, developers, and regulators. NAM appropriately recognizes this as a key area for increased focus in future work throughout the AI life cycle. We encourage NAM to consider specifically describing the important role that nurses may play as a distinct, critical group of stakeholders to be consulted. Adoption and buy-in of specific AI tools and technologies by nurses will play a central role in the success of the AI intervention, patient safety and outcomes, and nursing workforce wellbeing. Nurses can and should meaningfully contribute to AI development, implementation, and governance within their care settings and, importantly, help ensure AI does not perpetuate health disparities.⁹ Research has demonstrated that, when nurses participate in AI decision-making, they improve the AI implementation and report high satisfaction and improved patient care with AI.^{10,11,12,13} As central professionals in the healthcare delivery process, their perspectives on how AI will change the way healthcare is delivered are vital.

Another inconsistency noted in the review was the safety culture established with AI. We concur that this will be critically important as adaptive systems become more common and continue to outpace the regulatory frameworks in place to monitor safety. We urge the committee to consider including that nurses will be critical partners in monitoring and alerting health systems about potential patient harm and

⁵ Friedman B, Kahn PH. Human agency and responsible computing: Implications for computer system design. *J Syst Softw.* 1992;17(1):7-14.

⁶ Caporael LR. Anthropomorphism and mechanomorphism: Two faces of the human machine. *Comput Human Behav.* 1986;2(3):215-234.

⁷ Engagement UVA. *Unlocking the Future: Navigating AI Ethics and Data Activism with Renée Cummings.* Published October 13, 2023. Accessed June 24, 2024. <https://www.youtube.com/watch?v=HFIPcCAW94I>

⁸ *Blueprint for an AI Bill of Rights.* The White House. Accessed June 24, 2024. <https://www.whitehouse.gov/ostp/ai-bill-of-rights/>

⁹ Rajpurkar P, Chen E, Banerjee O, Topol EJ. AI in health and medicine. *Nat Med.* 2022;28(1):31-38.

¹⁰ Servaty R, Kersten A, Brukamp K, Möhler R, Mueller M. Implementation of robotic devices in nursing care. Barriers and facilitators: an integrative review. *BMJ Open.* 2020;10(9):e038650.

¹¹ Vanderboom CE, Scherb CA, Kirchner RB, et al. Leadership Strategies, An Interdisciplinary Team, and Ongoing Nurse Feedback: Ingredients For a Successful BCMA Project. *Nurs Econ.* 2016;34(3):117-125.

¹² Gonçalves LS, Amaro ML de M, Romero A de LM, Schamne FK, Fressatto JL, Bezerra CW. Implementation of an Artificial Intelligence Algorithm for sepsis detection. *Rev Bras Enferm.* 2020;73(3):e20180421.

¹³ Randell R, Honey S, Alvarado N, et al. Factors supporting and constraining the implementation of robot-assisted surgery: a realist interview study. *BMJ Open.* 2019;9(6):e028635.

unintended consequences of AI, particularly adaptive systems that continue to learn and evolve over time. In providing direct patient care, nurses are ideally positioned to raise and address equity issues stemming from AI,¹⁴ including fairness and justice, for example by recognizing disparities in patient care resulting from algorithmic bias.¹⁵ This is essential to the culture of safety and trust promoted in learning health systems.

One of the next steps described is to “Convene working groups representing critical contributors to ensuring responsible AI in health, health care, and biomedical science.” This is clearly aligned with the stated priorities in this draft Code of Conduct, but we note that these contributors are not defined. We encourage the Steering Committee to think specifically about (1) patient advocates and (2) nurses as two groups of critical contributors, each providing their own unique perspectives on conduct, accountability, and roles related to AI.

Thank you for the opportunity to comment on the NIH Plan to Enhance Public Access to the Results of NIH-Supported Research.

Sincerely,



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ANI Co-chair

The [Alliance for Nursing Informatics](#) (ANI), co-sponsored by AMIA and 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

¹⁴ McGrow K. Artificial intelligence: Essentials for nursing. *Nursing*. 2019;49(9):46-49.

¹⁵ American Nurses Association (ANA) Center for Ethics and Human Rights. The Ethical Use of Artificial Intelligence in Nursing Practice.; 2022. https://www.nursingworld.org/~48f653/globalassets/practiceandpolicy/nursing-excellence/ana-position-statements/the-ethical-use-of-artificial-intelligence-in-nursing-practice_bod-approved-12_20_22.pdf

