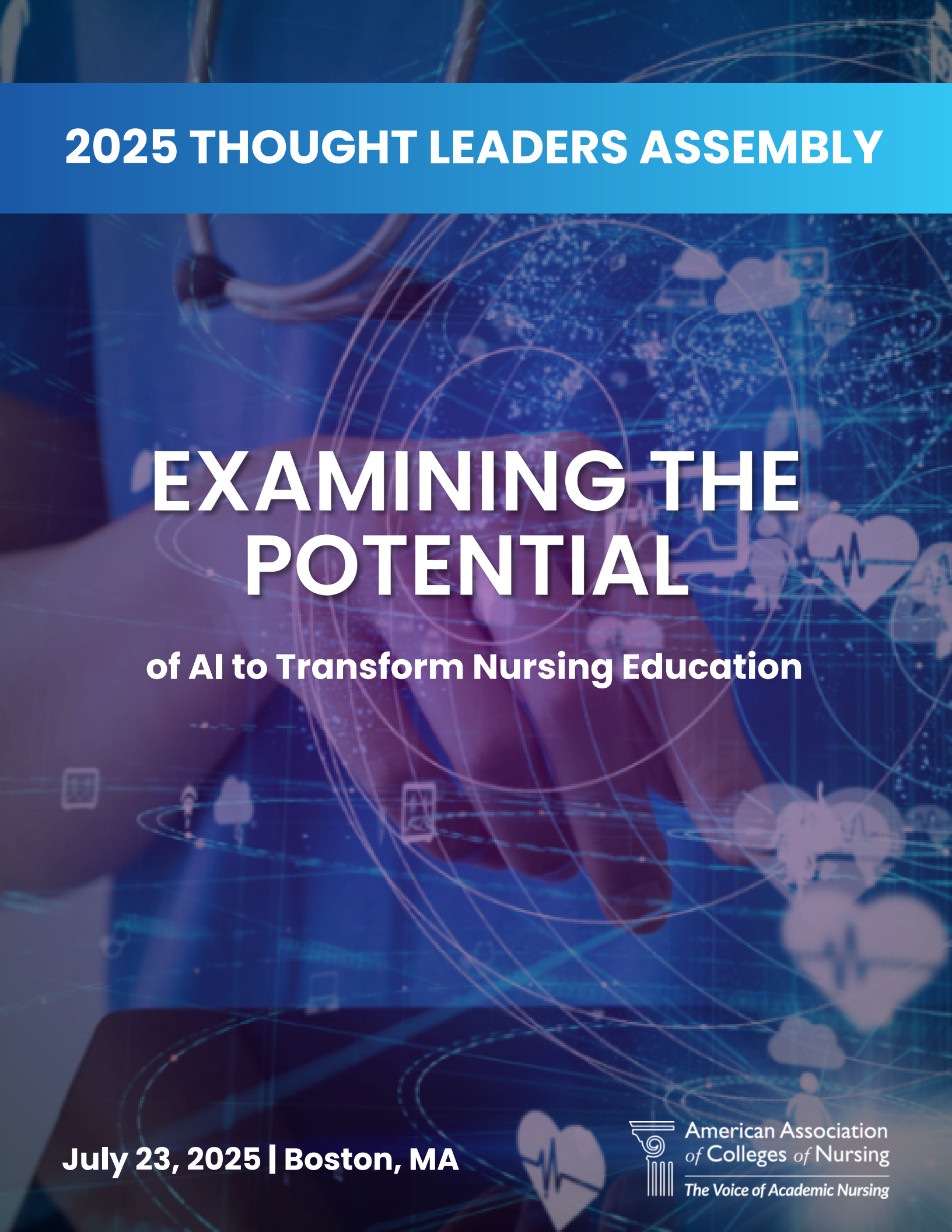

2025 THOUGHT LEADERS ASSEMBLY

EXAMINING THE POTENTIAL

of AI to Transform Nursing Education

July 23, 2025 | Boston, MA

American Association of Colleges of Nursing

The Voice of Academic Nursing

2025 AACN THOUGHT LEADERS ASSEMBLY

Overview

The **2025 Thought Leaders Assembly** was created as a dynamic forum to engage the AACN Board of Directors, members, invited guests, subject-matter experts, and senior staff in meaningful dialogue around emerging trends and complex challenges. Designed to spark new ways of thinking, this event fostered generative conversations that will help inform AACN's strategic direction and reinforce its role as a catalyst for innovation in academic nursing.

This year's Assembly, titled **"Examining the Potential of AI to Transform Nursing Education,"** focused on the rapidly evolving landscape of artificial intelligence and its implications for nursing education, clinical practice, health equity, healthcare delivery, and higher education. Through expert-led presentations and collaborative discussions, participants explored the transformative potential of AI, identified opportunities for academic leadership, and considered how AI could support innovation, excellence, and equitable outcomes across the nursing profession.

Guided by four key goals, the expert presenters provided insight into how AI is shaping the future of nursing and how AACN can strategically position itself—and the broader academic nursing community—to lead in this new era.

AACN Thought Leaders Assembly Goals

Goal 1	Identify agreed upon terminology for technology, AI, data science and informatics (for the purposes of this Thought Leader's A ssembly only).
Goal 2	To describe the relationship between data science, informatics and AI, and how academic leaders can guide the development of programs that prepare nurses to responsibly apply AI in education, research, and practice.
Goal 3	Analyze concerns and risk factors associated with AI in nursing education and patient care and discuss strategies to mitigate potential risks.
Goal 4	Evaluate opportunities to leverage AI for enhancing patient safety and advancing health equity in nursing education.

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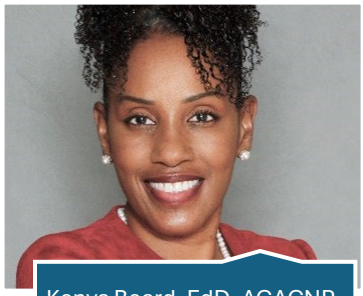
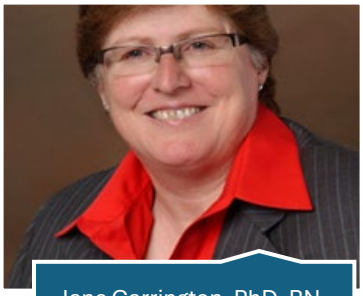
AACN Thought Leaders Assembly Presenters

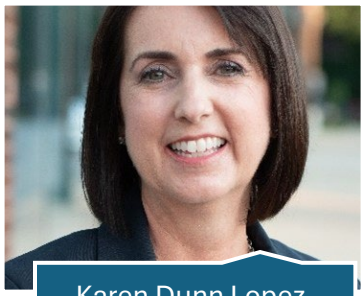


Kenya Beard, EdD, AGACNP-BC, ANEF, FAAN, FADLN



Jane Carrington, PhD, RN, FAMIA, FAAN

Michael Cary, PhD, RN, FAAN



Karen Dunn Lopez, PhD, MPH, RN, FAAN

Patricia Folcarelli, RN, MA, PhD

Patricia McGaffigan, MS, RN, CPPS, CPHFH

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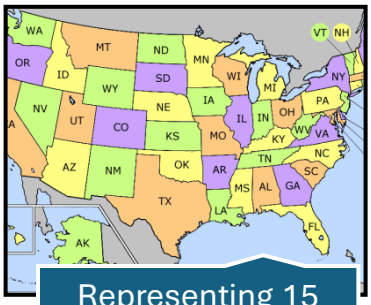
Participants

In addition to the speakers who shared their insights on the potential of AI in nursing education, the event included participation from AACN's Board of Directors, member deans from the Boston area, representatives from the Graduate Nursing Student Academy (GNSA), and AACN staff leaders.

33 Participants

Representing 16 Schools of Nursing



Representing 15 states and DC

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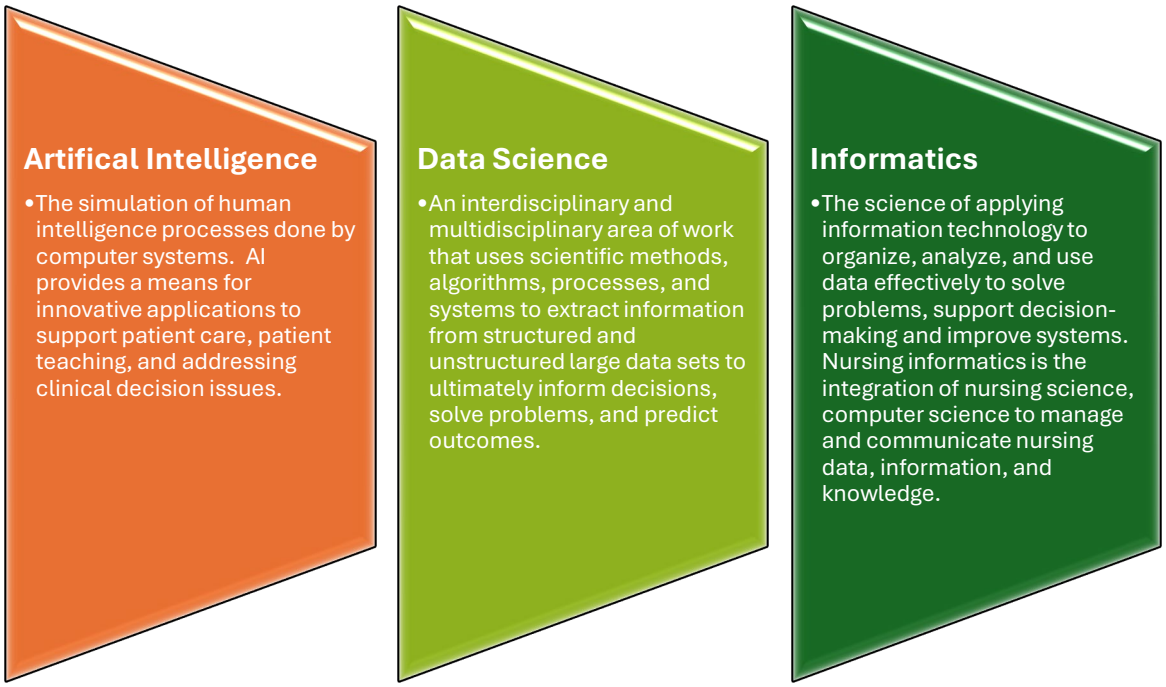
Examining the Potential of AI to Transform Nursing Education

Jane M. Carrington, PhD, RN, FAMIA, FAAN, is a clinical analyst, scientist, and educator. The focus of her research is nurse to nurse communication using the electronic health record for patients with a change in condition. Dr. Carrington addressed ***Goal 1: To identify agreed upon terminology for technology, AI, data science, and informatics (for the purposes of the Thought Leaders Assembly only).***



Highlights from Dr. Carrington's presentation included:

- *Nursing leaders must be intentional in building relationships and fostering continuous dialogue, recognizing that leadership and learning are lifelong commitments.*
- *While AI is not new, its growing sophistication is transforming nursing practice. Electronic Health Records (EHRs), which function as communication systems, are increasingly influenced by AI, changing how nurses engage with patients and document care.*
- *Though AI can simulate aspects of human intelligence, it cannot reason—making the human role of learning, critical thinking, and application essential. Data science in nursing blends nursing and computer science to manage, visualize, and share knowledge using tools like statistics and machine learning. These technologies work together to improve patient outcomes, streamline workflows, and empower nurses to lead innovation, research, and policy. As AI becomes more integrated into healthcare, educating nurses early and reinforcing their understanding over time is vital to ensure they can adapt and lead in a rapidly evolving environment.*

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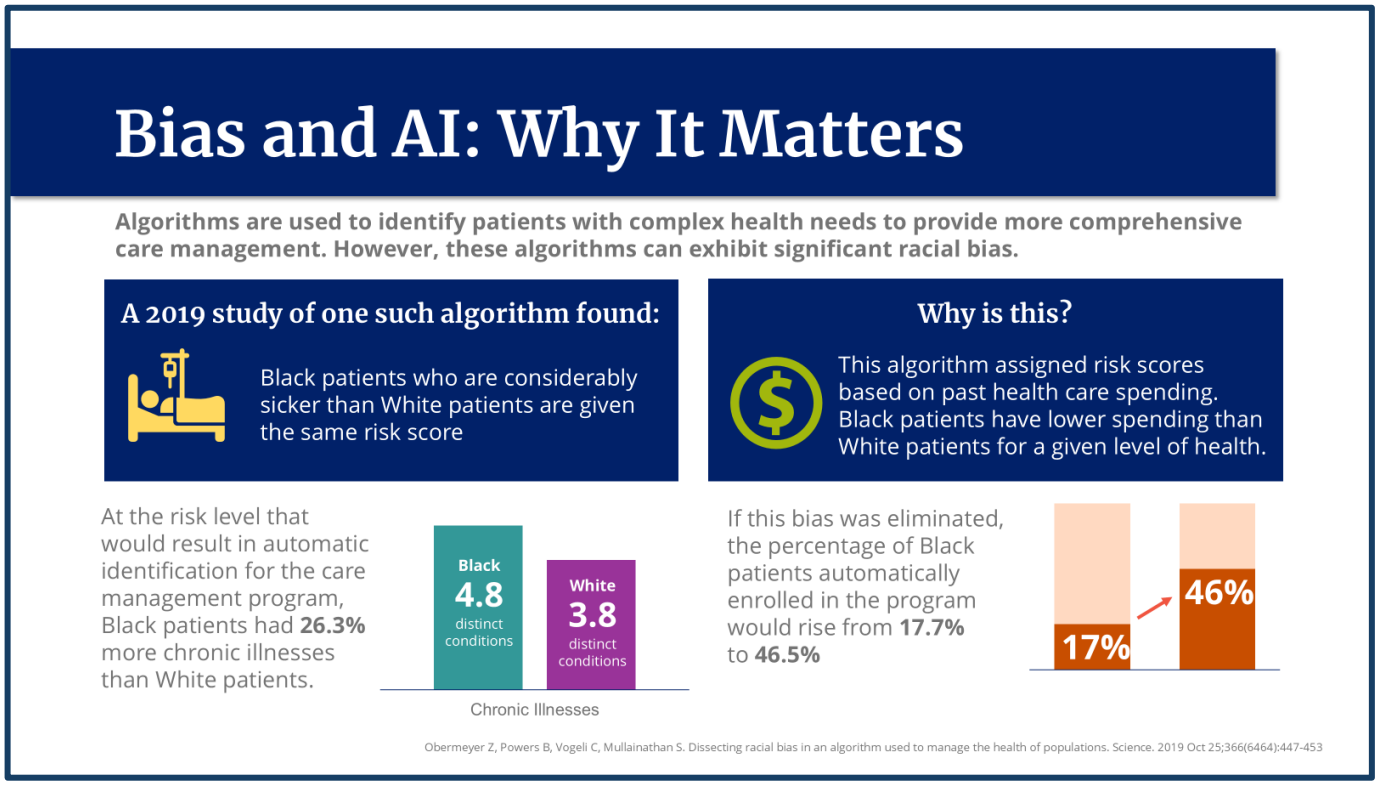
Karen Dunn Lopez, PhD, MPH, RN, FAAN, is a nursing informatics expert at The University of Iowa College of Nursing where she is a Professor and Director for the Center for Nursing Classification and Clinical Effectiveness. Dr. Dunn Lopez and Dr. Cary addressed ***Goal 2: To understand the relationship between data science, informatics and AI, and how academic leaders can guide the development of programs that prepare nurses to responsibly apply AI in education, research, and practice***. She highlighted the dynamic relationship between AI, machine learning and data science and quantified the impact of nursing research, and efforts to unlock hidden nursing data along with data generated from other team members.

> ***"AI will not replace doctors and nurses but, doctors and nurses that use AI will replace those that do not."***
> ***Quote adapted from Ehrenfeld (2024)***

Michael P. Cary, PhD, RN, FAAN, is a tenured Associate Professor at Duke University School of Nursing and dually trained as a health services researcher and applied health data scientist. Dr. Cary utilizes AI to investigate health disparities in aging populations, thereby promoting health equity and improving healthcare delivery. A thoughtful conversation on bias developed, focusing on the importance of including clinically relevant variables such as sex, ethnicity, and race, with consensus that their use must be accompanied by clear rationale to support equity and transparency.



Dr. Cary used case models to demonstrate the impact of bias in AI. These included stroke risk prediction models that demonstrated the inaccuracy of these models across groups, specifically across gender, age, and race. These showed less accuracy for Blacks than Whites, men than women, older than younger.

> ***"Inaccuracies due to bias in AI algorithms can result in either an over or underestimation of a particular illness that can potentially reduce access to care or provide unnecessary and costly treatment."***

Dr. Michael Cary underscored AI as a core competency for nursing and emphasized the need for interprofessional collaboration. ***"AI is not an add-on—it's a core competency. It's not something to fear, but it does demand caution and responsibility. With the right preparation, nurses can lead the way in ensuring AI enhances care, promotes equity, and upholds the human-centered values of our profession."*** He discussed multiple strategies such as creating AI 101 electives, microcredentialing, and badging to elevate expertise in the AI space.

Kenya V. Beard, EdD, AGACNP-BC, ANEF, FAAN, FADLN, currently serves as the inaugural Dean and Chief Nursing Officer at Mercy University's School of Nursing and former chair of the New York State Board of Nursing. A nationally recognized health equity expert and transformational leader, she has reshaped nursing education, policy, and practice. Dr, Beard addressed ***Goal 3: Analyze concerns and risk factors associated with AI in nursing education and patient care and discuss strategies to mitigate potential risks.***

Dr. Beard highlighted the ECRI 2025 Top 10 threats to Patient Safety, with AI governance ranked as the second most pressing concern. Emphasis was placed on the foundational role of system-level leadership in addressing this issue.

> ***"While AI holds significant potential to transform healthcare, it must be harnessed thoughtfully. AI is not always accurate and should serve as an in informant – not a sole decision maker."***

Key risk areas in education included:

- *Academic integrity: AI written papers, cheating with chatbots*
- *Faculty capacity and readiness: lack of training, resistance to adoption*
- *Equity gaps: Biased algorithms, accessibility issues*
- *Over-reliance: Weakening critical thinking skills*

Key risk areas in patient care included:

- *Data bias and inequities: Misrepresentation of populations*
- *Loss of human touch: Depersonalized care*
- *Clinical errors: Inaccurate AI predictions*
- *Legal and ethical ambiguity: Unclear standards on liability and consent*

Strategies to reduce risks included:

- *Use of AI detection tools*
- *Faculty AI training*
- *AI and reflection-based assignments*
- *Clear academic AI policies*
- *Teaching validation of AI outputs*
- *Use case-based AI scenarios*
- *Emphasize ethics, bias and regulation*
- *Use "human-in-the-loop" protocols*
- *Audit AI recommendations*
- *Train in digital tools and bias*
- *Communicate AI use with patients*
- *Inclusive datasets*
- *Interdisciplinary evaluation teams*
- *Advocate for federal regulation*

In nursing education, key needs include promoting academic integrity, building faculty capacity and readiness, addressing equity gaps, and avoiding over-reliance on AI. Proactive system design is essential to minimize risks and prevent errors before they occur.

Pat Folcarelli, PhD, RN, MA, is the Sr. Vice President for Patient Care Services and the Cynthia and Robert J. Lepofsky Chief Nursing Officer at Beth Israel Deaconess Medical Center.

Patricia McGaffigan, MS, RN, CPPS, CPHFH, is President, Certification Board for Professionals in Patient Safety, and Senior Advisor, Safety at the Institute of Healthcare Improvement (IHI) where she serves as senior sponsor for the Lucian Leape Institute, co-chair of the National Steering Committee for Patient Safety, and liaison to IHI's patient and workforce safety & well-being and nursing initiatives.

Dr. Folcarelli and Dr. McGaffigan addressed ***Goal 4: Evaluate opportunities to leverage AI for enhancing patient safety and advancing health equity in nursing education.***

The discussion highlighted the need to "**keep the patient at the center".** Patients are now consumers of AI, and its integration into healthcare must prioritize safety, equity, and transparency. Insights from the

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Lucian Leape Institute, a patient safety think tank within the **IHI**, emphasized both opportunities and concerns surrounding AI in care delivery.

The panel highlighted:

- *The need to prepare students entering practice who are accustomed to using AI tools independently but must now understand the importance of protecting PHI*
- *Institutional innovations, such as internal AI-driven search tools to streamline access to policies, which improve nursing efficiency*
- *Use of generative AI in primary care to support documentation and workflow, along with ambient listening in outpatient settings—both being explored for broader applications*
- *Chatbots that can reduce nursing workload but also raise concerns around accuracy, safety, and patient experience*
- *A growing national movement to use generative AI in complex staffing models—yet caution is warranted, as relying solely on clinicians to verify AI outputs is an unreliable safety strategy and risks de-skilling the workforce*
- *The importance of protecting patients and the workforce*
- *Ensure faculty are prepared to address, integrate and steward responsible use of AI in the classroom*
- *The importance of continuous monitoring and evaluation of AI*

Considerations for nurse leaders included:

- *Develop robust AI governance and promote interdisciplinary collaboration*
- *Embrace AI deliberately and ensure continuous improvement of AI*
- *Invest in AI education, training, and safeguards*
- *Prioritize human-centered AI design*

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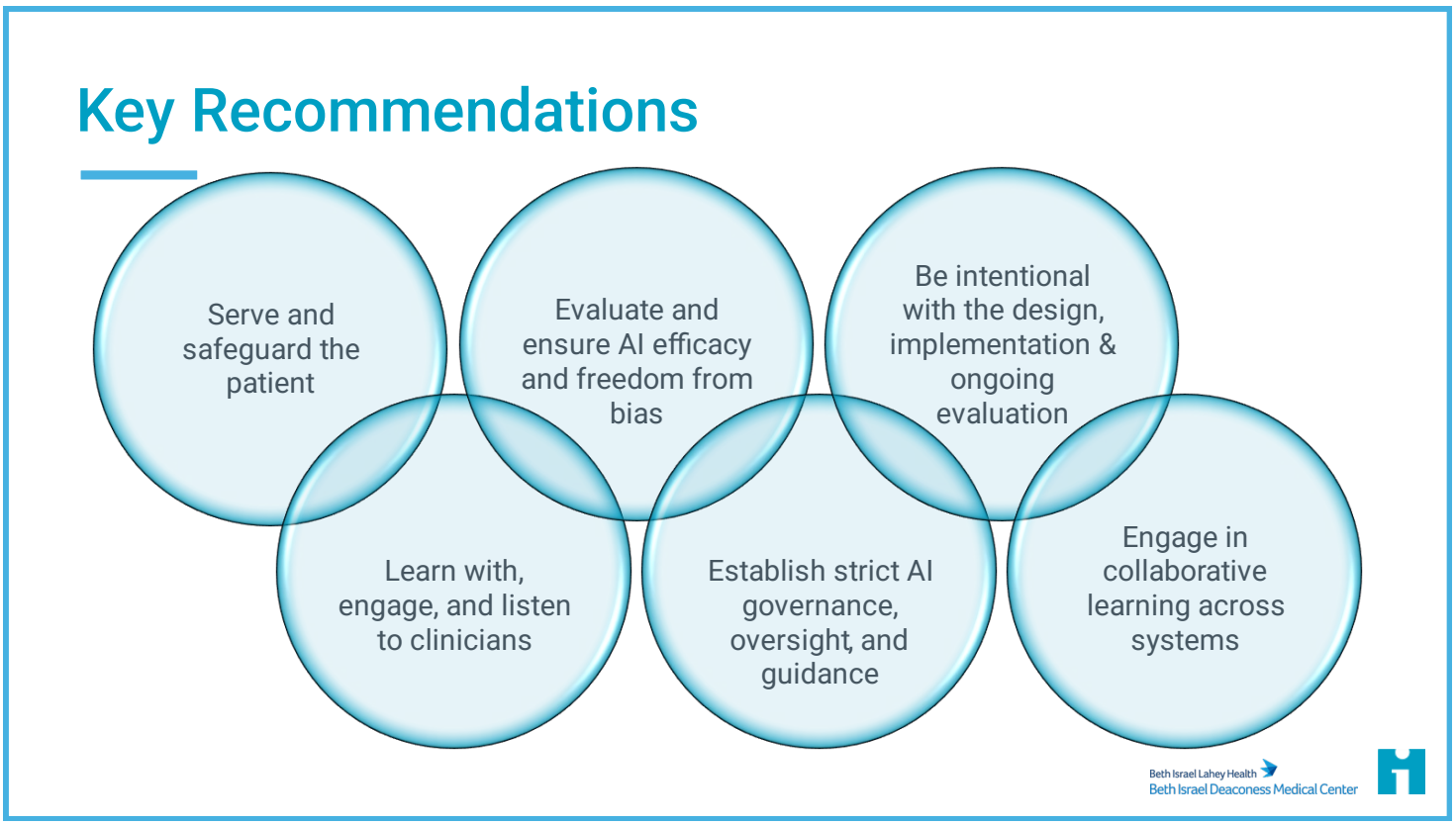
Key recommendations were provided to address AI safety priorities:



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Concluding Thoughts: The Future of AI and Nursing Education

AI Governance

AI governance in nursing refers to the frameworks, policies, and oversight mechanisms designed to ensure responsible, ethical, safe, and effective use of AI in nursing practice. It spans multiple dimensions—from organizational governance structures to educational initiatives, ethical guardrails, and technical transparency.

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1. High-Level Governance Structures

- **Executive and Working Committees**: Organizations often form an AI Governance Committee or AI Working Group (AIWG) comprising representatives from nursing leadership, data science, informatics, policy, ethics, patient advocates, and more. These groups ensure project requests are aligned with strategic goals and guide AI deployment, risk assessment, and accountability measures (Ball Dunlap & Michalowski, 2024; Schoenbaum, Elahi, & Cook, 2024).
- **Organizational Frameworks**: Institutions tailor governance frameworks to their values and risk tolerance, drawing from established models like the OECD's AI principles, Fair Information Practice Principles, and the U.S. National Institute of Standards and Technology (NIST) AI Risk Management Framework (TechTarget).

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2. Nursing-Specific Roles, Education, and Literacy

- **Data Ethics Roles**: To bolster accountability, some propose roles such as "Chief Nurse Data Ethics Officer" and "Nurse Data Steward." These positions focus on crafting AI-related ethics policies and ensuring nursing staff are active participants in AI governance (Ball Dunlap & Michalowski, 2024).
- **Curriculum and Training**: There's a strong push to integrate AI, data ethics, and literacy into nursing education and training programs. This empowers nurses to critically understand and interact with AI tools—from documentation assistants to decision-support systems (Wei et al., 2025).

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3. Ethical and Regulatory Compliance

- **Nursing Ethical Principles**: Core nursing ethics—autonomy, beneficence, non-maleficence, and justice—must be carefully navigated in AI implementations. AI tools may risk undermining patient autonomy and introduce algorithmic bias or misinformation (Abuadas, Albikawi & Rayani, 2025; Hassenein et al., 2025).
- **Legal and Regulatory Frameworks**: AI use in nursing must comply with foundational healthcare regulations such as HIPAA (U.S.) and the EU AI Act (Europe), especially as AI-enabled medical tools are regulated as "high-risk" applications (Wikipedia).
- **Transparency, Fairness, and Accountability**: Models should be explainable and interpretable. Ongoing audits for fairness, bias, and performance are crucial to maintain trust (Hassenein et al., 2025; Wei et al., 2025).

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4. Operational Implementation & Risk Management

- **Evaluation and Monitoring Protocols**: Effective governance requires processes for selecting vendors, evaluating AI tools before deployment, pilot testing, clinician oversight, and ongoing monitoring (TechTarget+1).
- **Security and Privacy Measures**: Governance must ensure AI systems have strong encryption, access controls, and privacy protections to safeguard sensitive patient data (Hassenein et al., 2025; Yelne et al., 2023).
- **Guarding Against Over-Reliance**: Nurses need to retain their clinical judgment and not become overly dependent on AI recommendations. Education is key to maintaining critical thinking (Hassanein et al., 2025; Wei et al., 2025).

5. Research, Long-Term Oversight, and Culture Building

- **Long-Term Impact Studies**: Research is needed on how AI affects nursing roles, job satisfaction, nurse-patient interactions, and care equity over time (Wei et al., 2025).
- **Ethical Awareness and Advocacy**: Nurses must be empowered to shape AI tools that serve patients responsibly and sustainably. Participating in governance helps preserve patient rights and professional integrity (nursingcentered.sigmanursing.org; Nursing Times).

6. Patient and Workforce Safety

- The IHI Lucian Leape Institute published a dedicated report, **"Patient Safety and Artificial Intelligence: Opportunities and Challenges for Care Delivery"** as a key reference and source of recommendations which directly addresses the safety implications and integration of AI in healthcare, particularly generative AI.
- Other guidelines and frameworks that have been developed to ensure the safety and ethical use of AI in healthcare include AHRQ and NIST.
- AHRQ established the AI in Healthcare Safety Program as part of its Patient Safety Organization (PSO) Program. This program aims to identify potential harm caused by AI in healthcare and to develop strategies to prevent such harm. It utilizes the existing PSO infrastructure to rapidly develop and disseminate resources related to AI safety. The program acknowledges that while AI holds great promise to improve patient safety, it can also introduce new risks.

In Summary

- **AI governance in nursing** ensures AI technologies support and enhance nursing care—without compromising ethics, safety, or professional values.
- It requires **multidisciplinary structures**, **nursing-specific leadership roles**, **education on AI and ethics**, **regulatory adherence**, **continuous monitoring**, and **nurse involvement at every stage**.
- The goal: AI, which is explainable, fair, safe, and centered around patient well-being and nursing expertise.

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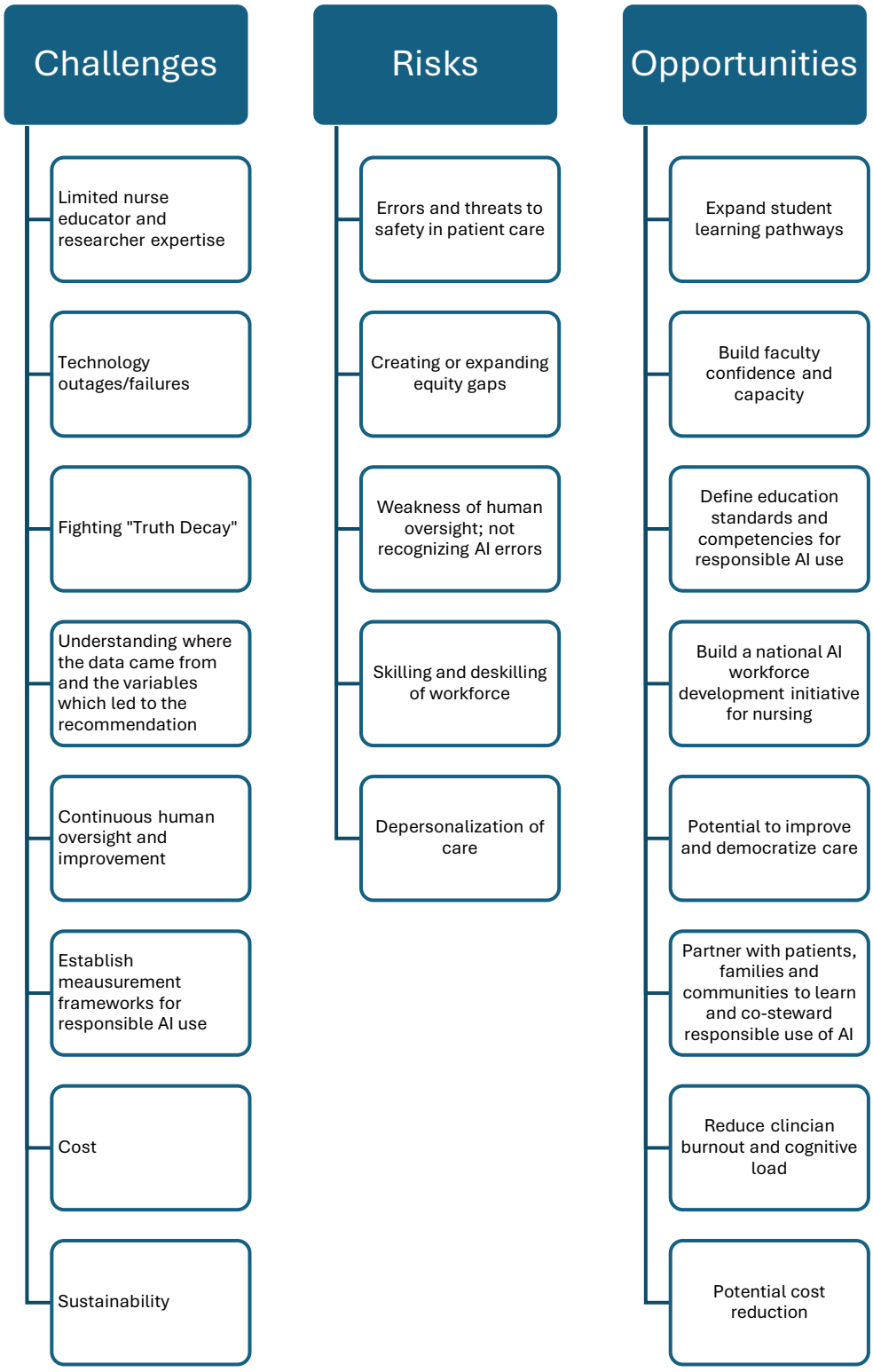

References

Abuadas, M., Albikawi, Z., & Rayani, A. (2025). The impact of an AI-focused ethics education program on nursing students' ethical awareness, moral sensitivity, attitudes, and generative AI adoption intention: a quasi-experimental study. *BMC Nursing*, *24*(1), 720. https://doi.org/10.1186/s12912-025-03458-2

AI Transformation in Policy, Practice, and Education for Nursing and Health Care: A Foundational Dialogue. American Academy of Nursing. https://aannet.org/general/custom.asp?page=AI-transformation-2024

Ball Dunlap, P. A., & Michalowski, M. (2024). Advancing AI Data Ethics in Nursing: Future Directions for Nursing Practice, Research, and Education. *JMIR Nursing*, *7*, e62678. https://doi.org/10.2196/62678

Cary, M. P., Jr, De Gagne, J. C., Kauschinger, E. D., & Carter, B. M. (2024). Advancing Health Equity Through Artificial Intelligence: An Educational Framework for Preparing Nurses in Clinical Practice and Research. *Creative Nursing*, *30*(2), 154–164. https://doi.org/10.1177/10784535241249193

Embracing AI in healthcare: preparing nurses for the future of clinical practice. https://nursing.jnj.com/nursing-news-events/nurses-leading-innovation/embracing-ai-in-healthcare-preparing-nurses-for-the-future-of-clinical-practice

Hassanein, S., El Arab, R. A., Abdrbo, A., Abu-Mahfouz, M. S., Gaballah, M. K. F., Seweid, M. M., Almari, M., & Alzghoul, H. (2025). Artificial intelligence in nursing: an integrative review of clinical and operational impacts. *Frontiers in Digital Health*, *7*, 1552372. https://doi.org/10.3389/fdgth.2025.1552372

Schoenbaum, A., Elahi, A., & Cook, T. (2024). Implementing artificial intelligence in clinical workflows: Steps to success. *Nursing Management*, *55*(11), 40–47. https://doi.org/10.1097/nmg.0000000000000189

Yelne, S., Chaudhary, M., Dod, K., Sayyad, A., & Sharma, R. (2023). Harnessing the Power of AI: A Comprehensive Review of Its Impact and Challenges in Nursing Science and Healthcare. *Cureus, 15*(11), e49252. https://doi.org/10.7759/cureus.49252

Wei, Q., Pan, S., Liu, X., Hong, M., Nong, C., & Zhang, W. (2025). The integration of AI in nursing: addressing current applications, challenges, and future directions. *Frontiers in Medicine*, *12*, 1545420. https://doi.org/10.3389/fmed.2025.1545420