



School of Nursing
UNIVERSITY OF WISCONSIN-MADISON

Artificial Intelligence Use in Nursing Education & Practice

From Curiosity to Competency

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Assistant Professor, University of Wisconsin School of Nursing



Learning objectives

- Describe current and emerging applications of artificial intelligence in nursing education and clinical practice.
- Identify how AI literacy can support safe and effective nurse engagement with AI
- Discuss key considerations for equitable, ethical, and responsible use of AI in nursing.
- Examine emerging workforce and practice implications of AI within healthcare systems and nursing settings.



**I certify I have no disclosures related to the
content of this presentation**



About Me



LOONY

Senior thesis:
associations between
fish species consumed
and mercury levels in
loon chicks



BS Zoology/Botany

MS – Env. Science



MAP LOVER
Masters Thesis: Use of
Geographic Information
Systems to predict trace
metals in rivers and
streams

CURIOUS AND CARING

Clinical Research Nurse
2012-2017
Nursing Informaticist
2017-2023



BSN 2012

PhD Nursing 2023



DATA DRIVEN
Dissertation: Nurse
Perceptions about and
Satisfaction with
Strategies to Explain
Machine Learning Clinical
Decision Support



My Why

Get nurses
here...



...instead of
here

PRESS RELEASE

California Nurses Association demand patient safeguards against artificial intelligence technology

California Nurses Association April 18, 2024



Hundreds of concerned nurses from across the state to protest at Kaiser Permanente's San Francisco Medical Center



What is Artificial Intelligence (AI)?

- No consensus on a standard definition
- AI is a broad umbrella term that encompasses many technologies.
- World Health Organization (WHO):
“branch of computer science, statistics, and engineering that uses algorithms or models to perform tasks and exhibit behaviors such as learning, making decisions, and making predictions”



PERSPECTIVE

We Need to Talk About How We Talk About 'AI'

EMILY M. BENDER, NANNA INIE / JAN 7, 2026



AUTHORS



EMILY M. BENDER

Emily M. Bender is a professor of linguistics at the University of Washington, where she is also adjunct faculty in the School of Computer Science and Engineering and the Information School. She specializes in computational linguistics and the societal impact of language technology.



NANNA INIE

Nanna Inie is an Assistant Professor at the IT-University of Copenhagen, Denmark. Her research focuses on cognitive augmentation technology — most recently, the cognitive cost of generative “AI” in knowledge work. She has published papers on LLM jailbreaking as “demon summoning”, on the effect of an...

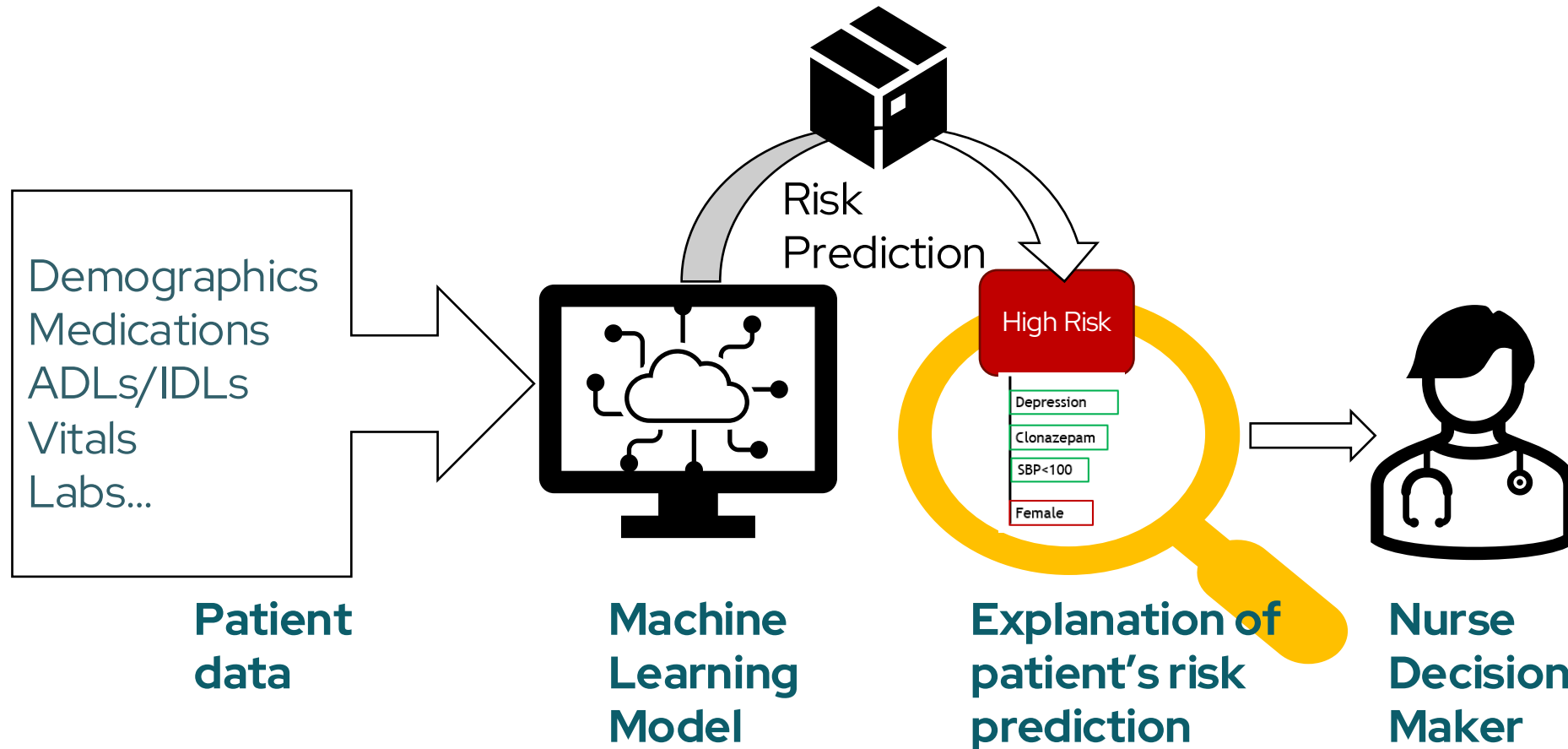
<https://www.techpolicy.press/we-need-to-talk-about-how-we-talk-about-ai/>



Current and emerging applications of artificial intelligence in nursing

Predictive Analytics:

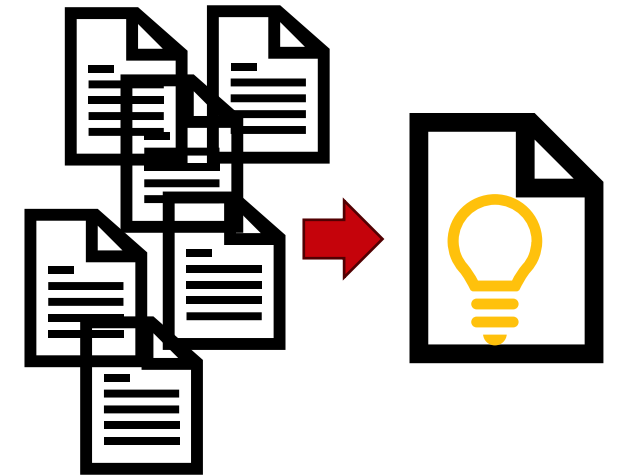
Machine Learning models for patient risk prediction



Text Summarization:

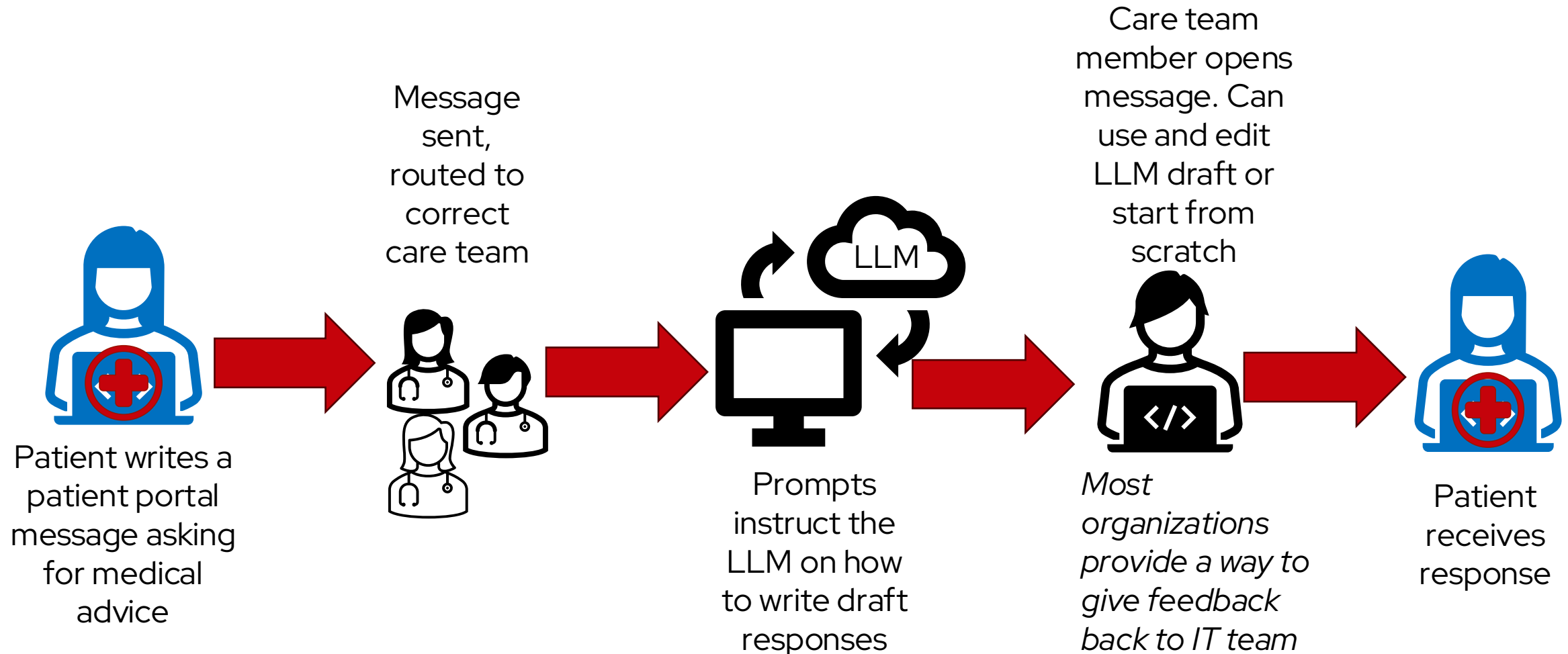
AI summarization of clinical notes

- Goal is to provide a summary of key insights from recent notes and events (with citations to original notes)
- May be particularly helpful in fast-paced areas (i.e. Emergency Department) where there may be little time for chart review.

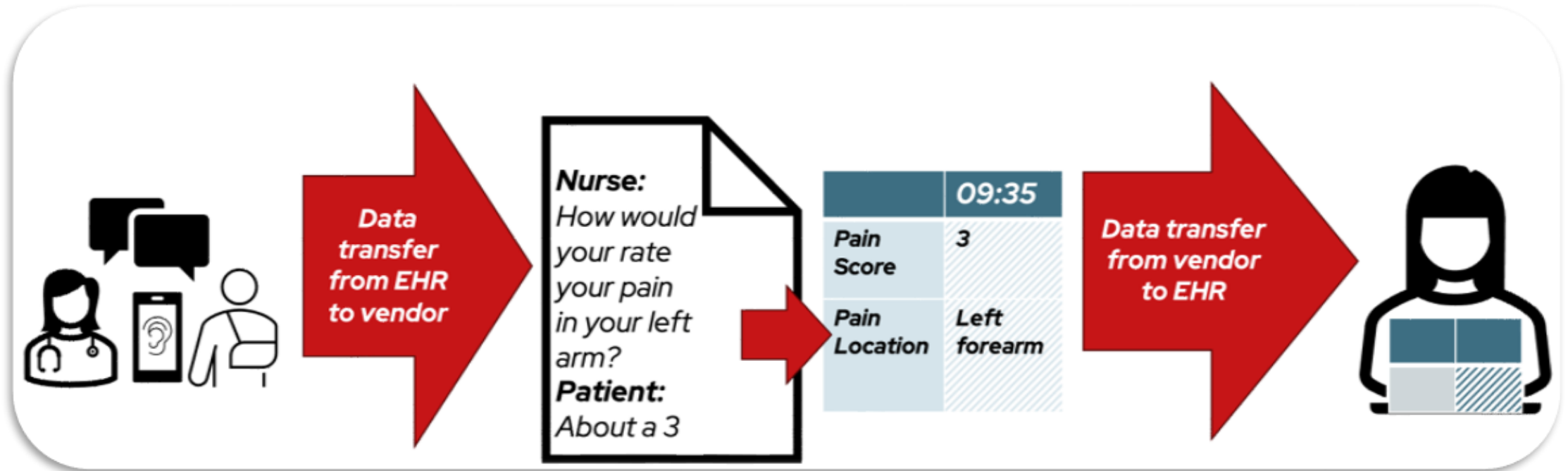


Text generation:

Augmented Response Technology (ART)



Ambient Listening for Inpatient Nursing



Protocol for an EHR-embedded pragmatic randomized control trial of Ambient AI to Reduce Nursing Staff Documentation Time

Ann Wieben, Jann Pfaff, Mary Ryan Baumann, Felice Resnik, Sarah Brzozowski, Chelsey Langer, Kristen Stine, Colin Gillis, Anne Gravel Sullivan, Caitlin Voegele, Leigh A Mrotek, Majid Afshar, Elizabeth S. Burnside, Jennifer Hankwitz, Stacy Rasmussen, Rudy Jackson, Becky Kohler

doi: <https://doi.org/10.64898/2026.07.09.26357653>

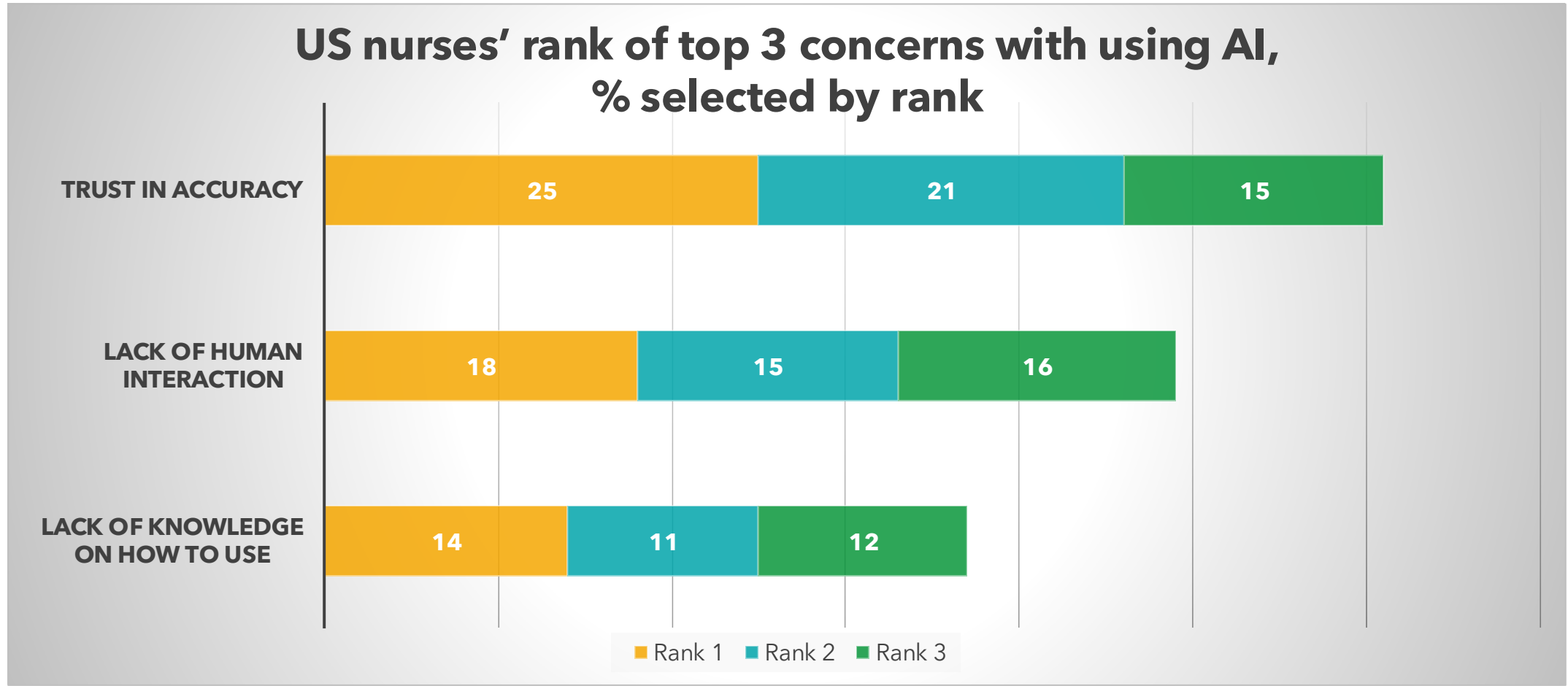
Funding: The protocol development was funded by University of Wisconsin Hospitals and Clinics (UW Health) and UW Institute for Clinical and Translational Research Learning Health System (NCATS ULTR002373)





AI literacy to support safe and effective nurse engagement with AI

2024 McKinsey and the American Nurses Foundation survey to evaluate nurses' perceptions of AI (n=7200)



Wisconsin nursing workforce survey

- Nurses are required to take every two years when renewing their nursing license (N=89,486)
- In 2024, what % of nurses reported using AI within their workplace?

Wisconsin nursing workforce survey

- Nurses are required to take every two years when renewing their nursing license (N=89,486)
- In 2024, what % of nurses reported using AI within their workplace?
 - **Only 4.1%**
 - *Is this a true number, or failure to detect when AI is in use?*

Source: Wisconsin





Preparing Nursing Students for AI: Program Guidelines from American Association of Colleges of Nurses (AACN)

• Domain 8: Informatics and Healthcare Technologies

8.3d Examine how emerging technologies influence healthcare delivery and clinical decision making.	- Analyze the successes and challenges associated with integrating technology into care delivery. - Articulate the perspectives of healthcare teams on incorporating technological devices and platforms into clinical practice.
8.3j Evaluate the potential uses and impact of emerging technologies in healthcare.	- Identify areas where emerging technologies can enhance healthcare delivery. - Evaluate the feasibility of implementing emerging technologies.
8.5h Assess potential ethical and legal issues associated with the use of information and communication technology.	Identify ethical concerns related to artificial intelligence in healthcare.
8.5k Advocate for policies and regulations that support the appropriate use of technologies impacting healthcare.	Advocate for policies supporting artificial intelligence's ethical and effective integration in healthcare.

What are we doing at UW-Madison to foster AI literacy for students and faculty?

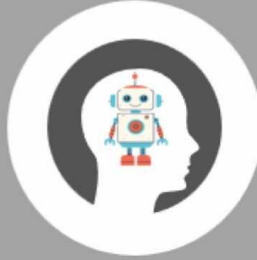
- Aligning curriculum with [Domain 8](#) of AACN essentials
- Generative AI module in Learning Management System that covers UW Madison policy and academic integrity considerations
- Content about clinical applications and ethical considerations for AI in health care for undergraduate and DNP students
- Nursing and AI journal club for faculty, staff, and graduate students
- Presentations at Nursing Colloquia





How do we foster AI literacy among nurses who are already practicing?

N.U.R.S.E.S.

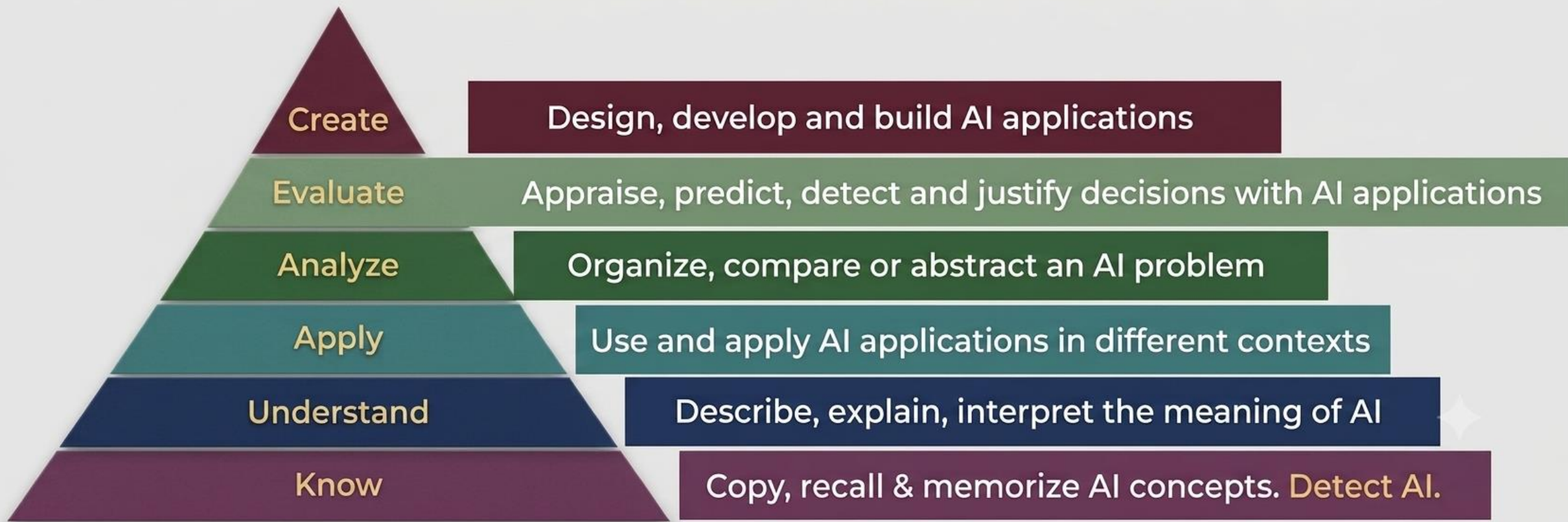
N AVIGATE AI BASICS	U TILIZE AI STRATEGICALLY	R ECOGNIZE AI PITFALLS	S KILLS SUPPORT	E THICS IN ACTION	S HAPe THE FUTURE OF NURSING
					
Promote basic understanding of AI among nurses as a leadership responsibility.	Apply AI tools with purpose and alignment to care quality, safety, and outcomes.	Lead efforts to balance innovation with risks like bias, overreliance, and inaccuracy.	Champion upskilling and professional development to prepare nurses for AI-integrated care.	Guide ethical AI use in nursing by promoting transparency, fairness, and accountability.	Direct AI implementation should be done in ways that align with nursing values and improve care quality.

Hoelscher, 2025; Created using OpenAI Dall-e 3

A QUICK GUIDE TO AI LITERACY



Conceptualizing AI literacy



Know and Understand AI

- Standard glossary of AI terms
- Micro-learnings about how different types of AI work
- Dashboard of AI tools at your organization with clear labeling related to the type of AI tool



Apply AI



- Clear connection between problem being solved and why the AI tool is the best tool to tackle that problem
- Knowledge-checks to ensure nurses understand the AI tool outputs and application within context of the patient care pathway

Analyze/Evaluate AI

- Communicate the research/testing results in simple, straightforward terms that are patient-centric
- Where possible, provide real-time feedback mechanisms
- Adopt a standard AI evaluation framework that nurses can use



Create AI



- Nurses should be co-designers in AI integration
- Involve nurses in the selection and implementation processes
- Early engagement improves trust and buy-in, and assures that tools align with workflows

The Imperative for Direct Care Nurse Voice



Consequences of Exclusion

- **Misaligned Outcomes:** AI goals and algorithmic targets that fail to reflect the actual priorities of clinical practice.
- **Flawed Evaluation:** Assessment frameworks that miss the nuances of real nursing work and the complexities of their clinical environments.
- **Increased Burden:** The deployment of technologies that create additive cognitive tasks rather than supporting the delivery of care.

The Nexus of Inclusion and Literacy

Inclusion without Literacy

The Risk of Tokenism:

Nurses are invited to pilot tools or complete surveys but lack the specialized knowledge required to question system assumptions, interpret system behavior, or shape evaluation criteria.

Literacy without Inclusion

The Risk of Abstraction:

Nurses may understand the technology in theory but remain unable to apply that knowledge if they are excluded from the design, implementation, and research teams.

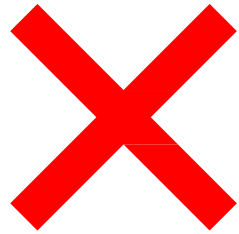


Key considerations for equitable, ethical, and responsible use of AI in nursing

Ethical considerations related to AI



Bias &
Inequity



Errors
(Hallucinations)



Data
Security
/ Privacy



Environmental
Impact



Accountability



Emerging workforce and practice implications of AI



Full Length Article

Regulating at the AI frontier: The collision of policy, regulation, and nursing practice

Benjamin J. Galatzan PhD, RN ^a  , Elizabeth A. Johnson PhD, MS-CRM, RN ^b,
Meghan Reading Turchioe PhD, MPH, RN, FAHA ^c, Christina Baker PhD, RN, NCSN, NI-BC ^d,
Ann Wieben PhD, RN ^e



Is there professional guidance for nurses on the ethical use of AI?



POSITION STATEMENT



The Ethical Use of Artificial Intelligence in Nursing Practice

Effective Date: 2022
Status: Position Statement
Written by: ANA Center for Ethics and Human Rights
Adopted by: ANA Board of Directors



ANA 2025 Code of Ethics

Provisions that Address AI

- **3.2 Advocating for Persons Who Receive Nursing Care**
 - “As technology increasingly influences healthcare, nurses establish and maintain trust by balancing clinical and ethical judgment with the use of augmented intelligence or artificial intelligence (AI) in nursing practice. Nurses lend their expertise and influence the integration of augmented intelligence and AI in clinical encounters.”
- **4.2 Addressing Barriers to Exercising Nursing Practice Authority**
 - “Nursing practice authority can also be affected by technological advances such as the implementation and use of augmented intelligence or artificial intelligence (AI), especially when integrated without careful consideration of potential harmful consequences. To maintain nursing practice authority, nurses address barriers surrounding rapid and evolving technologies...”
- **7.5 Considerations Related to Ethics, Technology, and Policy**
 - “Augmented intelligence or AI also may result in wage inequalities and amplify inequities inherent in big data. Balancing the risks and benefits of technologies requires that nurses stay informed about developments, acknowledge the potential benefits and harms, maintain the dignity of the recipient of care, complement the relational nature of nursing, and ensure the voice of nursing is present when decisions are made in healthcare systems.”





AMERICAN ACADEMY
of NURSING

American Academy of Nursing Position Statement
Artificial Intelligence in Health Care

<https://aannet.org/page/AI-position-statement-2026>



If you remember one thing...



AI only sees...

- the past
- the pattern
- the data trail
- key word matches
- what worked before
- what was done
- a digital shadow

VS

Nurses see...

- possibilities for the future
- the purpose
- the human story
- the context
- what might work next
- why it was done
- the whole, real person

Resources to learn more

- Duke AI Research Hub: <https://nursing.duke.edu/ai-hub>
- AI Nurses Network: <https://ai-nurses.kcl.ac.uk/ai-education/>
- AI in Nursing Education (AACN):
<https://www.aacnnursing.org/our-initiatives/education-practice/ai-in-nursing-education>
- AI4Nurses (my site): <https://ai4nurses.wiscweb.wisc.edu/>





“Let us never consider ourselves finished, nurses. We must be learning all of our lives”

Florence Nightingale

Source: <https://www.usa.edu/blog/nursing-quotes/>

Let's connect!



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