

# Patient Safety and Artificial Intelligence

## Considerations for Key Groups



## Health Care Systems

As health care systems embrace the use of generative artificial intelligence (genAI) tools in care delivery, they must remain steadfast in their mission to deliver safe care with quality outcomes. The IHI Lucian Leape Institute offers the following recommendations for health care systems:

- **Embrace AI deliberately:** While genAI promises to streamline operations and enhance care, health system leaders must navigate the associated risks. This includes ensuring that AI systems are developed, implemented, and used responsibly, ethically, and equitably; trustworthy and accurate; and cybersecurity risks have been mitigated. Health systems and their leaders must ensure that the use of genAI meets existing needs; create design and implementation plans that account for the possibility of flawed results and unanticipated consequences; and foster a culture that values patient safety, equitable care, and responsible use of genAI to enhance patient care. Health care systems must also resist the instinct to repurpose any AI-derived efficiencies into expectations of higher clinician throughput, instead reallocating some time efficiencies to reduce clinician burnout, improve the clinician-patient interaction, and meaningfully double-check AI results and recommendations.
- **Invest in AI education, training, and safeguards:** Health systems need to invest in educating their clinicians and safety and quality staff to build competencies for the effective use of genAI tools. This includes basic knowledge of AI, ethics and AI, and training and simulations on how to use system-approved AI-based tools. Also ensure that clinicians and staff maintain basic medical competencies and can function effectively with and without AI-based tools. Prioritize awareness of AI-related system policies and procedures,

### IHI Lucian Leape Institute Expert Panel Report on Patient Safety and AI

In January 2024, the IHI Lucian Leape Institute convened an expert panel to further explore the promise of generative artificial intelligence (genAI) and its potential risks for patient safety.

The panel reviewed the literature on AI and patient safety and engaged in a robust discussion that focused on three likely use cases for genAI in health care: documentation support, clinical decision support, and patient-facing chatbots.

The panel also reviewed considerations for key groups and provided specific recommendations and mitigation strategies for these audiences.

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including downtime plans and efforts to broadly enhance health literacy.<sup>1</sup> Since clinicians are highly likely to use genAI tools to interpret patient data (e.g., to suggest possible diagnoses or guide plans of care), health systems must ensure that they offer such tools inside institutional firewalls to decrease the probability of HIPAA violations.

- **Develop robust AI governance and promote interdisciplinary collaboration:** Establish governance, evaluation, and monitoring procedures to guide the use of genAI with clear policies on privacy, security (including cybersecurity), and data ownership and stewardship, as well as guidance for internal development of AI-based tools. The development and operationalization of governance must precede any AI clinical design or implementation efforts and help prioritize AI use cases, balancing the desire for rapid deployment with the need for caution. Governance bodies need to enlist a diverse group of interested parties while promoting learning within and across systems to maximize genAI's benefits. Governance also needs to develop and implement downtime procedures and AI audit and assessment processes.
- **Prioritize human-centered AI design:** Health care systems need to ensure that internally developed AI-based tools support and enhance the clinician-patient relationship, maintaining a focus on empathy and human connection in care while also improving efficiencies. Require external partners to demonstrate their use of human-centered AI design, which needs to be tested and validated before clinical implementation.

#### References

<sup>1</sup> Brach C, Keller D, Hernandez LM, et al. Ten Attributes of Health Literate Health Care Organizations. *NAM Perspectives*. Discussion Paper. Washington, DC: National Academy of Medicine; 2012. <https://doi.org/10.31478/201206a>