

# Patient Safety and Artificial Intelligence

## Considerations for Key Groups



## Clinicians

As use of generative artificial intelligence (genAI) becomes more widespread in health care, it is crucial for clinicians to actively learn about these new technologies and how to appropriately use them in care delivery. The IHI Lucian Leape Institute offers the following recommendations for clinicians:

- **Reinvest saved time into improving patient care:** AI-based tools can offer clinicians potential relief from time-consuming clerical work, potentially saving clinicians hours in their workday and contributing to improved working conditions, less clinician burnout and cognitive overload, improved patient experience, and better quality and safety. Yet, these benefits may be undermined if clinical workflows are not adjusted to align with new approaches to documentation or if all of the clinicians' newly available "free" time is reallocated to compensate for the cost of AI-based tools (e.g., see more patients) or save the system money. Clinicians need to advocate for any time made available by AI-generated efficiencies is reallocated, at least in part, to activities that support clinician well-being and provision of high-quality, safe care.
- **Advocate for continuous improvements:** Clinicians need to understand the limitations and challenges of genAI and advocate for or contribute to advances through research or improvement projects. Clinicians must employ their skills and expertise to better understand and ameliorate existing concerns such as the possibility of AI-generated bias; the lack of representative data sets for underserved populations; the absence of robust, rigorous testing and validation on accuracy of performance and outcomes; and the lack of transparency or explainability of AI-based recommendations or results.

### 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.

Visit [ihi.org/LLISafetyAI](https://ihi.org/LLISafetyAI)

- **Recognize that genAI tools may identify discrepancies that need to be reconciled:** While genAI tools may do an acceptable job in summarizing medical records, they may sometimes identify discrepancies such as in medications or code status. Instrument and implement AI tools to show clinicians (and, where appropriate, patients) these discrepancies and ask them to identify ground truth. Exercise care to ensure that this process does not create a tremendous amount of new work for clinicians and that, once reconciled, the record is modified to reflect the true state going forward.
- **Work to learn new skills and retain old skills:** Potential dependency on AI-based outputs and recommendations may lead to overreliance and clinical deskilling. Thus clinicians will need to continue training on basic competencies such as developing appropriate differential diagnoses and management plans, detection of patient deterioration, and even communicating effectively with patients, caregivers, and other clinicians. In addition, education on new genAI-related skills will need to be mastered, including basic genAI knowledge, AI and ethics, simulation practice with clinical genAI tools, and instruction on health care system practices and policies including those to be used in the event of system downtime or when patients do not consent to use of genAI tools in their care.
- **Consider AI tools as an aid, not a replacement:** Current genAI tools function best as support tools for clinicians, assisting with work tasks related to certain aspects clinical care. GenAI tools, at least at present, have not yet reached the level of maturity and accuracy needed to function independently of clinicians. Clinicians, in partnership with patients, must remain the final decision makers, utilizing their critical thinking skills and empathy to guide clinical care and health-related decisions. Health care systems must implement robust strategies to ensure that “clinician in the loop” systems that provide oversight for use of AI tools in clinical care lead to actual safety, and not just the appearance of safety.