

# Patient Safety and Artificial Intelligence

## Considerations for Key Groups



## Safety and Quality Professionals

By monitoring processes, identifying risks, and implementing best practices, patient safety and quality professionals prevent errors, reduce harm, and enhance patient outcomes. Tasked with this responsibility, these professionals can help mitigate risks potentially introduced by generative artificial intelligence (genAI) tools, while also employing this new technology to advance patient safety and quality of care. The IHI Lucian Leape Institute offers the following recommendations for safety and quality professionals:

- **Harness AI to advance safety and quality:** Patient safety and quality professionals often spend more than half their time gathering data for the purpose of reporting and monitoring. GenAI can enhance the detection and monitoring of patient safety issues and create efficiencies for mandatory reporting. AI tools may also make existing patient safety processes more efficient, such as collating incident reports, chart abstraction, and root cause analyses. It is important to ensure that a reasonable fraction of the time gained through these AI-generated efficiencies is used to re-task patient safety and quality personnel to develop effective strategies to mitigate recurring safety risks and hazards, instead of solely prioritizing reduced costs.
- **Rethink key paradigms in patient safety:** Before using AI to enhance the incident reporting process, it is worth rethinking the entire ascertainment model of patient safety. For example, historically health care organizations relied on voluntary incident reports to determine cases of healthcare-associated infections. Today, most use sophisticated chart and laboratory review methods rather than voluntary reporting, which is burdensome and neither sensitive nor specific. GenAI tools create opportunities for safety professionals to have “eyes

### 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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and ears” on the clinical workplace through nuanced and even real-time chart reviews. Ideally, patients and clinicians at risk for adverse events can be identified before actual harm occurs, creating opportunities to prevent rather than react to harm.

- **Collaborate to strengthen governance and oversight:** Human oversight and governance as a safety guardrail for AI-based tools may be a surprisingly weak protection, as humans are often poor at exercising vigilance. This might lead to perfunctory and ineffective human double checks of generally accurate AI outputs. Thus, patient safety and quality professionals need to collaborate with other key groups (e.g., patients and clinicians, information technology and informatics personnel, data scientists and analysts, leaders) to ensure that systems are in place to facilitate safe, high-quality care. This collaboration must ensure that human oversight of AI involves authentic partnerships and robust, ongoing efforts – not just nominal involvement, which may create the illusion of safety. In addition, engage patient safety and quality professionals in federal and local governance bodies tasked with overseeing AI use in health care to ensure that the design and implementation of genAI prioritizes safe and quality care, with realistic assessments of the true safety of systems that depend on humans acting as safety bulwarks in the face of periodically inaccurate AI outputs.