

## Artificial Intelligence

Technology has transformed healthcare in significant ways, and artificial intelligence (AI) is poised as the next big game changer for the industry. The expansion of AI in healthcare is projected to occur at an astounding rate — from a \$6.7 billion market in 2020 to more than \$120 billion by 2028.<sup>1</sup>

AI's potential seems almost infinite, with promises across the healthcare spectrum — such as sophisticated diagnostic and treatment tools, data analysis and management capabilities, automated administrative and workflow functions, expanded telehealth and virtual care applications, new approaches to training and education, and enhanced cybersecurity solutions.

Although AI offers many exciting opportunities for healthcare leaders, clinicians, researchers, and patients, it should be approached with measured enthusiasm. Like any type of technology, AI programs and systems are not infallible, and they can have unanticipated and unintended consequences.

As AI becomes more ubiquitous in healthcare, organizations will need to address potential risks and develop proactive strategies for managing these technologies. Although regulations, standards, and best practices are still evolving, the following risk strategies offer high-level recommendations to consider when implementing AI.

1

Assess your organization to determine whether it has the proper information technology (IT) infrastructure, personnel, knowledge, and capabilities to adopt AI tools and systems.

2

Determine whether your organization's IT governance and data governance policies are adequate to support AI systems and programs throughout their lifecycle.

3

Determine how to engage patients, families, and the community in your organization's AI initiatives. Consider how best to solicit feedback and review and respond to concerns.

4

Perform due diligence of AI vendors and developers when evaluating programs and systems. Consider whether they are transparent about how their technology works, its capabilities, its limitations, and the data sources on which the technology was trained.

5

Follow established best practices in technology development and implementation (e.g., frameworks that incorporate plan-do-study-act principles) when incorporating AI into your healthcare organization.

6

Develop, implement, and monitor policies and procedures for using AI in your healthcare organization. Determine appropriate protocols and parameters for each AI program and system that will be used.

7

Stay current on federal and state regulations associated with AI technologies (e.g., in relation to data privacy and security, informed consent, scope of practice, liability, etc.). Be aware that AI development might outpace regulations, requiring collaboration across experts and industries to determine appropriate policies and safeguards.

8

Stay up to date on evolving guidance about standards of care and best practices related to AI from professional associations, advocacy groups, government agencies, and research studies.

9

Ensure that oversight and assessment of AI tools and systems takes into consideration known and potential issues associated with ethics and fairness.

10

Promote awareness among healthcare providers and staff members of potential barriers and risks associated with AI technology, such as [biased data and algorithms](#), [black-box reasoning](#), [automation bias](#), [data privacy and security](#), [patient expectations](#), and [training and education deficits](#).

11

Ensure that healthcare providers and others who are incorporating AI technology into practice have received training on the programs and systems they are using, are adhering to any guidelines provided by the AI vendor or developer, and can demonstrate competency.

12

Develop and implement patient selection criteria, standardized clinical protocols, and [informed consent standards](#) for care involving AI to ensure consistency, quality, ethical use, and efficiency of care.

13

Develop measures of robustness to assess and monitor AI performance over time (e.g., validation on multiple data sets and cross-checking between clinicians and AI systems). Monitoring should vary based on the type of AI, its purpose, how it's deployed, and the clinical situation.

14

Empower clinicians and staff members to speak up if they feel that an AI tool or system is inaccurate or creating the potential for an adverse outcome. Encourage clinicians to participate in training and education to combat automation bias.

15

Determine processes for assessing errors and unanticipated outcomes involving AI, and determine strategies to mitigate risks. Ensure that your organization's mechanism for incident reporting covers AI-related events.

16

Routinely monitor AI programs and systems for possible security vulnerabilities or breaches, and implement safeguards at identified points of risk exposure.

17

Audit provider and staff practices for compliance with AI-related policies and procedures, provide feedback, and implement corrective actions as needed.

## Resources

For more information and risk strategies, see MedPro's [Risk Resources: Artificial Intelligence](#).

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## Endnote

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<sup>1</sup> Grand View Research, Inc. (2021, June 1). Artificial intelligence in healthcare market worth \$120.2 billion by 2028. *PR Newswire*. Retrieved from [www.prnewswire.com/news-releases/artificial-intelligence-in-healthcare-market-worth-120-2-billion-by-2028-grand-view-research-inc-301302563.html](http://www.prnewswire.com/news-releases/artificial-intelligence-in-healthcare-market-worth-120-2-billion-by-2028-grand-view-research-inc-301302563.html)

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