

The Future of AI in Healthcare: Opportunities, Risks, and the Standard of Care

Jordan E. Barnard, Esq.

POLING

Bridget K. Bodnar, Esq.

POLING



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Artificial Intelligence (AI), a technology that enables computers to perform tasks that usually require human intelligence, has transformed numerous industries. Among these, healthcare stands as one of the largest and most profoundly impacted industries, with AI-driven innovations advancing at an extraordinary rate. Between 2020 and 2023, the AI market in healthcare surged by 233%, growing from \$6.7 billion to \$22.4 billion.¹ This trajectory shows no signs of slowing, with projections estimating that AI-driven healthcare solutions in the U.S. will generate \$102.2

billion in revenue by 2030.² While many associate AI with conversational tools like ChatGPT, which gained popularity in 2023, AI has been an integral part of medical technology for years. From diagnostic algorithms to robotic-assisted surgeries, AI is reshaping patient care in profound ways. However, as AI increases, so do its legal and ethical concerns, particularly surrounding liability, the standard of care, and the risks associated with automated medical decision-making. As AI becomes more prominent, its role in healthcare will likely shift from being an assistive tool to a core component of diagnosis and treatment. This evolution will force healthcare professionals and institutions to adapt. The challenge lies in balancing AI's efficiency and predictive power with the need for human oversight to ensure patient safety and legal accountability.

AI's Role in Diagnosis and Treatment

AI is set to play a transformative role in healthcare, particularly in diagnosis and treatment. By analyzing

genetic data, lifestyle factors, and medical history, AI can develop personalized treatment plans tailored to each patient.³ This level of customization enhances treatment effectiveness while reducing potential side effects. AI-driven diagnostic tools can process vast amounts of patient data, identifying patterns human clinicians may overlook. For example, AI can evaluate lab results, imaging scans, and genetic information to aid in diagnosing conditions such as cancer, cardiovascular diseases, and neurological disorders. Research suggests AI can even outperform human physicians in diagnostic accuracy. A 2023 study in the *Annals of Emergency Medicine* found ChatGPT correctly diagnosed 97% of emergency room cases, compared to 87% accuracy by human doctors.⁴ However, AI is not without its limitations. Since algorithms depend on the data they're trained on, biased or incomplete datasets can lead to inaccurate diagnoses. Additionally, AI lacks the contextual awareness and intuition experienced physicians have. Therefore, human oversight remains crucial to accurately interpreting AI-generated insights and ensuring patient safety.

Standard of Care and Liability

The integration of AI in healthcare raises significant legal questions regarding liability and the standard of care. Medical malpractice claims are assessed by determining whether a physician provided care that aligns with the prevailing standard of care, which is based on what a similarly trained professional would do under comparable circumstances. Currently, physicians are not universally expected to use AI for diagnosis and treatment. However, as AI becomes more prevalent, there may be a shift in such expectations. Courts may begin to ask whether a competent physician should have consulted an AI tool when making medical decisions. This shift would redefine

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the standard of care, potentially making AI usage a legal obligation rather than an optional aid.

In cases of AI-related medical errors, liability could fall on multiple parties, including healthcare providers, healthcare facilities, and AI developers and manufacturers. Healthcare providers may be held liable if they misinterpret AI-generated recommendations, misapply AI tools, or overly rely on AI without verifying its accuracy. Healthcare facilities could face vicarious liability for their staff's use of AI. Additionally, institutions may be responsible for inadequate training, failure to vet AI tools, or implementing AI systems known to be flawed. AI companies might also be liable if their software provides incorrect or harmful recommendations due to design flaws, insufficient testing, or biased algorithms. As AI continues to integrate into healthcare, defining responsibility and accountability will be critical in maintaining trust and safety.

Best Practices for AI Implementation

As AI improves and complicates patient care, healthcare facilities need strong policies to manage risks. Institutions should conduct peer-reviewed studies and clinical trials before implementing AI-driven diagnostics or treatment recommendations and should have dedicated teams regularly reviewing AI performance to keep these tools compliant with clinical standards. Physicians and healthcare providers should receive comprehensive training on AI systems to ensure they understand the limitations and best practices. Additionally, patients should be made aware when AI plays a role in their diagnosis or treatment. Some states are already moving towards requiring disclosure when AI-generated recommendations influence medical decisions.⁵

AI is revolutionizing healthcare by making diagnosis and treatment faster, more accurate, and easier to access. However, AI also raises legal, ethical, and liability concerns. As AI advances, legal frameworks must also adapt to regulate its uses. Doctors, hospitals, and AI developers must work together to ensure AI improves medical care while keeping patients safe and ensuring accountability. By recognizing AI's risks and finding ways to manage them, the healthcare industry can benefit from its potential while reducing harm. The future of AI in healthcare is promising, but only if implemented with the right safeguards in place.

ENDNOTES

1 50+ AI in Healthcare Statistics 2024 · AIPRM, (July 8, 2024), <https://www.aiprm.com/ai-in-healthcare-statistics/>.
2 Id.
3 AI in Healthcare: Enhancing Patient Care and Diagnosis, <https://www.park.edu/blog/a-i-in-healthcare-enhancing-patient-care-and-diagnosis/>.
4 Joe Kita, Are You Ready for AI to Be a Better Doctor Than You?, MDedge (Apr. 15, 2024), <https://www.mdedge.com/oncologypractice/article/268712/business-medicine/are-you-ready-ai-be-better-doctor-you>.
5 Dan M. Silverboard, Melissa A. Wong & Emily Butcher Repetto, Regulation of AI in Healthcare Utilization Management and Prior Authorization Increases, Holland & Knight (Oct. 31, 2024), <https://www.hklaw.com/en/insights/publications/2024/10/regulation-of-ai-in-healthcare-utilization-management>.

Jordan E. Barnard, Esq., is an attorney with POLING in Columbus, Ohio. Jordan primarily practices in medical malpractice, focusing on the defense of physicians, healthcare professional, hospitals, and nursing homes. Jordan also has experience in unemployment law, workers' compensation, and general liability.

Jordan is a graduate of the Ohio State University Moritz College of Law (J.D.). During her time at OSU, Jordan served as an Editor for the Ohio State Law Journal, Ohio's highest-ranked law review.

Bridget K. Bodnar Bridget, Esq., is an attorney with POLING in Columbus, Ohio. She earned her Juris Doctor from Capital University Law School, graduating cum laude. During her time in law school, she was awarded the Barrister's Academic Excellence Scholarship and consistently made the Dean's List. As a participant in the Capital University Legal Clinic, Bridget provided valuable assistance to a variety of clients across various specialty areas.

In addition to her academic accomplishments, Bridget gained legal experience as a law clerk in the Health Care Fraud section of the Ohio Attorney General's office and in private practices representing both side of personal injury claims.

Prior to law school, Bridget obtained her Bachelor of Science degree from The Ohio State University, graduating magna cum laude. While at The Ohio State University, she served as a research assistant in the Stress, Behavioral, and Health Disparities lab at Wexner Medical Center, which enriched her understanding of the medical field and deepened her interest in healthcare representation.