EXECUTIVE INSIGHTS

Is Generative AI Worth the Hype in Healthcare?

Key takeaways

1. FDA approvals for AI healthcare devices, especially in radiology, have surged. Yet, despite the hype around generative AI, real-world deployments in healthcare remain limited, primarily due to high integration costs, complex system requirements and regulatory barriers.
2. AI-driven patient copilots are transforming patient engagement but face resistance due to concerns about accuracy and trust in AI-only assessments. And while clinician copilots are improving efficiency by automating administrative tasks, their integration into clinical workflows remains complex, with many tools not yet optimised for direct diagnostic support.
3. Only a small fraction of AI healthcare devices is developed by top companies, with market fragmentation making it difficult for providers to source reliable, integrated solutions. There is a need for unified AI platforms to address these integration issues; more cohesive tools that streamline diagnostics and improve workflow efficiency are proving slow to develop and emerge.
4. Digital health companies that can develop integrated, scalable AI solutions to overcome fragmentation and reduce the burden of regulatory compliance will gain significant traction in the market.

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Introduction

The ongoing 'digital revolution' is transforming healthcare. For over two decades, the World Health Organization has supported the adoption of artificial intelligence (AI) technologies to advance global healthcare goals.[1]

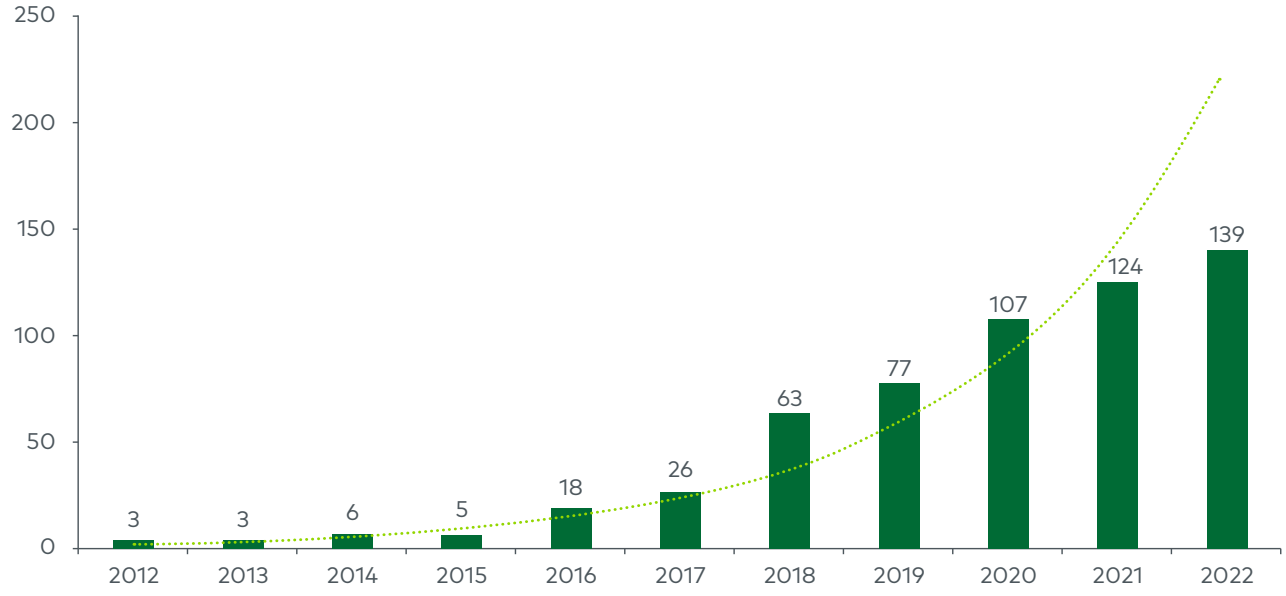
The rapid acceleration of AI technology is driving transformative change across industries, with healthcare set to experience significant disruption. Since 2012, computational power has been doubling approximately every three months, significantly outpacing the two-year cycle predicted by Moore's Law.[2]

This unprecedented growth, fuelled by advances in computing and substantial investments in AI infrastructure, creates a competitive imperative for healthcare organisations to integrate these technologies to stay competitive and improve patient outcomes.

In recent years, there has been much discussion and excitement regarding the use of AI in healthcare, particularly generative AI (GenAI). However, despite the sharp rise in the number of US Food and Drug Administration (FDA) approvals for AI-related medical devices (see Figure 1),[3] some still talk about AI as science fiction, not fact, and many experts question whether it is a reality in the medical setting.

Figure 1

Number of AI medical devices approved by the FDA, 2012-2022



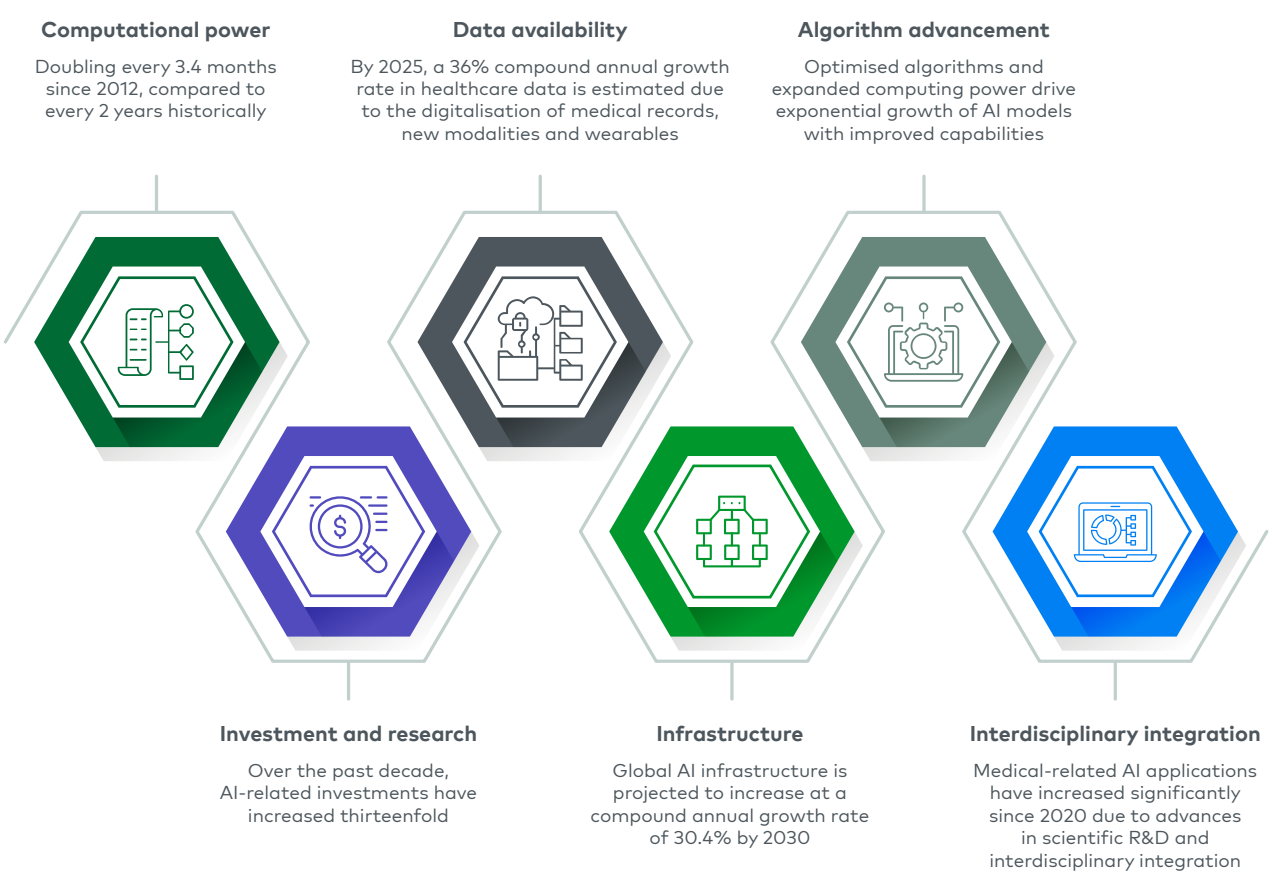
Note: AI=artificial intelligence; FDA=Food and Drug Administration
Source: Stanford University, "Artificial Intelligence Index Report 2024"

While there may be elements of overhype regarding GenAI's immediate potential, it is undeniable that the technology holds significant promise to transform global healthcare. The exponential rise in AI-related research publications, for instance, is a key indicator of innovation and scientific inquiry in this domain.[4]

In addition to increased computational power, AI growth in the healthcare and biopharmaceutical industries has been fuelled by the increased availability of data for training AI systems, improvements in machine learning algorithms, significant investment and research, enhanced infrastructure and access, and interdisciplinary integration (see Figure 2). Indeed, increased data availability has underpinned AI development in healthcare, enabling algorithms to learn and improve through ongoing exposure to diverse, high-quality information.[5] The exponential increases in the use of AI models are set to accelerate even further as AI becomes more critical in e-medicine. Leveraging new technologies like GenAI and large language models (LLMs) will speed up this adoption even more.

Figure 2

Key factors driving the exponential growth of AI



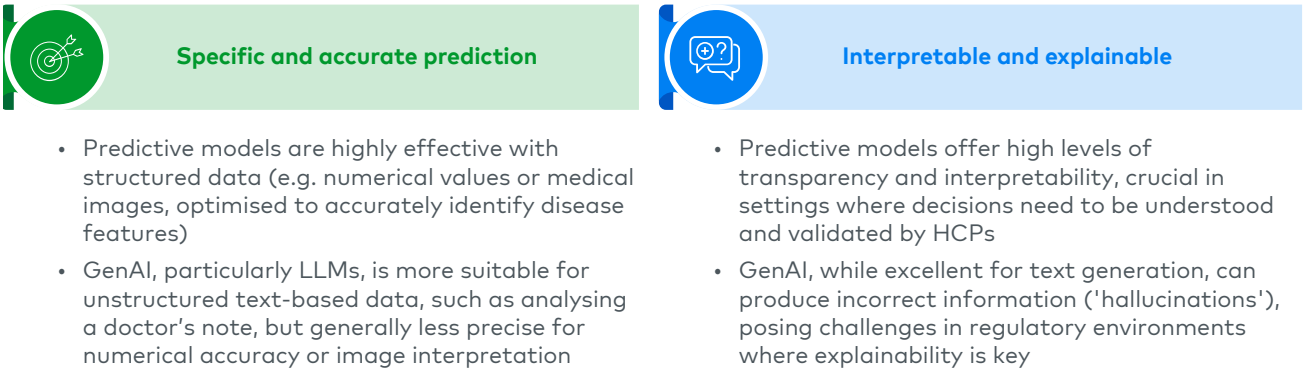
Note: AI=artificial intelligence
Source: Stanford University, "Artificial Intelligence Index 2019 Annual Report"; Stanford University, "Artificial Intelligence Index Report 2024"; Future Health Journal, "Bibliometric analysis of artificial intelligence in healthcare research: Trends and future directions"; Infiuss Health, "The Role of Data in Healthcare AI Training"; Global Health Journal, "Big tech, big data and the new world of digital health"; Grand View Research, "AI Infrastructure Market Size, Share & Trends Analysis Report"

GenAI and LLMs represent a subset of AI technologies distinct from predictive AI, each with unique healthcare applications and implications. GenAI refers to AI that can generate new data, while LLMs specialise in understanding and generating human-like text. In contrast, predictive AI primarily analyses data to forecast outcomes, which is critical in many healthcare applications.

Therefore, while GenAI and LLMs can be useful for administrative and operational tasks, traditional predictive AI models still have value in clinical decision-making and diagnostics and are associated with several advantages over a generative model (see Figure 3).

Figure 3

Benefits of a predictive over a generative model



Note: GenAI=generative artificial intelligence; LLMs=large language models; HCPs=healthcare providers
Source: Computer Methods and Programs in Biomedicine Update, "Artificial Intelligence for Clinical Prediction: Exploring Key Domains and Essential Functions"; PLOS Digital Health, "Addressing 6 challenges in generative AI for digital health: A scoping review"

Deploying an AI system is a complex process influenced by numerous technical, organisational and regulatory factors. Understanding this complexity is crucial for successfully integrating AI into any operational environment, particularly in healthcare, where decisions can have significant and even life-changing consequences. Successful deployment relies on having the most appropriate AI system, a well-defined data strategy from healthcare providers (HCPs) and careful implementation in a complex digital health environment in any given care setting.

Implementing GenAI in healthcare is challenging, primarily due to the intricate models and customisation required. Several factors contribute to the limited adoption of GenAI in hospitals, including the need for a strong business case to justify its implementation, the need for effective change management to integrate it into existing workflows, regulatory challenges, systems integration and high implementation costs.

However, GenAI is emerging more quickly in administrative areas, such as patient documentation, scheduling and data management, where it enhances workflow efficiency.

Most LLMs authorised for hospital use are general-purpose platforms, designed to optimise administrative processes rather than directly support clinical decision-making or patient care.[6] While these platforms may not directly impact patient outcomes, their ability to streamline administrative tasks can significantly improve hospital operations.

By automating routine tasks, GenAI allows healthcare professionals to focus on more complex patient care, highlighting the importance of maintaining a balanced perspective on its potential to transform healthcare.

One critical regulatory difference between the US and the European Union (EU) affects the development and deployment of AI, particularly self-improving AI systems.

In the US, the FDA allows for self-improving AI under a predetermined plan, which means that AI models can evolve and improve over time without needing to go through a complete re-approval process for each update.[7] This flexibility enables faster innovation and continuous refinement of AI tools, making them more adaptive to real-world healthcare scenarios.

In contrast, the EU mandates that AI systems remain static at approval.[8] This regulatory divergence could lead to slower AI adoption in the EU, particularly for advanced GenAI systems that rely on continuous learning and improvement, further widening the gap in AI-driven healthcare innovation between the two regions.

How is AI disrupting healthcare?

While it is undisputed that AI is disrupting the healthcare industry by transforming patient care and healthcare management, understanding how it is doing so is crucial.

AI's role extends across the entire healthcare ecosystem, supporting a diverse range of stakeholders including patients, clinicians, HCPs and payers across the healthcare delivery pathway.

We have outlined four of the most impactful use cases – patient copilots, clinician copilots, provider copilots and AI autopilots – below.

Patient copilots

Patient copilots are digital health platforms that provide direct access to healthcare advice and services, offering faster and broader care at a lower cost. These platforms transform how patients engage with healthcare, allowing them to receive diagnoses, medication reminders and personalised health advice directly from apps or digital tools.

Patient copilots utilise a variety of technologies:

- Text-only interaction tools, such as Ada-AI and ChatGPT, provide health guidance through text-based conversations, enabling quick and convenient symptom checks.
- Platforms that combine text interaction with data uploads enhance personalisation by incorporating additional information like test results.
- Smartphones and wearables track real-time health data and allow for the diagnosis of various conditions through existing technology. For example, smartphone cameras can be used to upload images of skin conditions for AI-driven dermatological analysis. Microphone-based applications, such as Helfie's respiratory diagnostic tool,[9] analyse cough sounds to assess respiratory conditions.

By integrating these technologies, patient copilots empower patients to take a more active role in their healthcare, leading to better adherence to treatment plans and improved outcomes. However, their deployment also presents challenges (see Figure 4).

Overcoming 'last-mile solutions' (the final steps in delivering a product or service to the end user) includes addressing digital literacy and resource constraints to ensure AI-driven healthcare tools reach all patients, especially in remote or underserved areas. In addition to data privacy and security concerns, patient confidence in using AI is variable.

Figure 4

Opportunities and challenges of patient copilots

Opportunities

Expanded patient access

- Personalised medical support available 24/7
- Increased access for patients with limited access to healthcare infrastructure
- More people receive timely care outside traditional settings
- Helps bridge gaps in care and makes healthcare more inclusive and accessible

Rapid access and assessment

- Provides immediate, personalised information and support
- Earlier detection of potential health issues and more timely interventions
- Faster communication between patients and healthcare providers, ensuring critical information is shared promptly

Lower cost

- Digital platforms are highly agile and scalable, significantly reducing healthcare costs per patient
- Reduced requirement for frequent in-person visits and reduced administrative burden on HCPs

Challenges

'Last-mile solutions'

- Many remote and underserved areas lack reliable internet access and digital infrastructure
- Patients may have limited experience with digital technology, requiring additional training and support
- HCPs in underserved areas often operate with limited resources, making it challenging to implement and maintain necessary infrastructure and support systems

Low patient confidence and requirement for face-to-face consultations

- Low patient confidence in AI-only assessments with concerns about accuracy and fear of misdiagnosis
- More sophisticated diagnoses for complex conditions may need advanced diagnostic tools or direct physical examination

Data privacy and security

- Ensuring safe and secure storage and use of patient data
- Patients need to trust their personal information is safe when using AI-driven healthcare tools

Note: AI=artificial intelligence
Source: L.E.K. research and analysis

Patient comfort with AI in healthcare varies significantly depending on the task AI is used for. Studies show that patients are least comfortable when AI is used for fully autonomous decisions, such as for diagnosis or during surgery. For example, in a JAMA Network survey, 31% of respondents were "very uncomfortable" receiving a diagnosis from AI, showing that patients still prefer human involvement in critical health decisions.[10] Similarly, a PLOS ONE survey found that 92.6% of respondents preferred human medical professionals for triage decisions and 87.9% for discharge decisions, reflecting low comfort with AI in these more direct clinical decisions.[11]

However, patients are more comfortable when AI is used to assist clinicians in diagnostic support, as highlighted in a BMC Medical Ethics study, where 49.6% of survey participants indicated they would be comfortable with the use of AI to assist doctors in making their diagnoses. This study also confirmed that patients are most comfortable with AI being used for non-clinical or administrative tasks, with 84.2% of respondents comfortable with

AI managing tasks such as scheduling appointments or entering patient data, where the impact on direct patient care is limited.[12]

Despite challenges in deployment and building patient confidence, patient copilots are already becoming essential in modern healthcare. In the UK, most existing platforms target under-diagnosed or preventable conditions that benefit from early detection and ongoing management, such as chronic obstructive pulmonary disease, dermatological conditions, cardiovascular issues and mental health.[13] These tools help support regular interventions and improve long-term outcomes by enabling proactive management.

Patient copilots can be tailored to different business models, primarily business-to-business-to-consumer (B2B2C) and business-to-consumer (B2C), with both offering distinct opportunities within the healthcare ecosystem.

In the B2B2C model, insurers and HCPs are key in deploying patient copilots. These tools enable intelligent pathway management by guiding patients through their healthcare journeys, improving care coordination and helping insurers reduce costs. For example, AI copilots can monitor chronic conditions, ensure treatment adherence, and alert providers or insurers when intervention is needed, allowing for more proactive and efficient care management.

This model is gaining traction because insurers can leverage patient data to personalise healthcare plans, optimise resource allocation and enhance patient outcomes, all while maintaining cost efficiency. By working with HCPs and insurers, AI copilots can integrate into existing care pathways and facilitate better patient engagement, thus aligning with the broader goals of value-based care.

The B2C model focuses on direct-to-consumer platforms with user-friendly interfaces, typically accessed via smartphones or wearable devices. These platforms empower patients to manage their health independently, offering continuous health monitoring, personalised recommendations and telehealth consultations.

However, the B2C space faces challenges, such as lower revenue potential and the need to build trust and consumer adoption. And the last-mile challenge remains a significant hurdle, as integrating with HCPs or ensuring that digital tools lead to timely medical intervention requires collaboration with provider networks or partnerships to facilitate seamless care delivery.

In addition, B2C AI copilots face limitations when integrating with hospital electronic medical record (EMR) systems. Most hospital EMRs are not optimised for AI integration

beyond basic functions such as appointment scheduling or administrative tasks. True integration, particularly for AI copilots designed to enhance clinical workflows or decision-making, remains challenging due to interoperability issues, stringent data privacy regulations and the complexity of existing hospital information technology (IT) infrastructures. As AI systems evolve, future developments may facilitate better integration with EMRs, but for now, such systems largely remain at the early stages of deployment.

Clinician copilots

Clinician copilots are advanced AI systems designed to assist healthcare practitioners in various aspects of medical practice. They act as support tools that enhance clinical decision-making, streamline workflows and improve patient outcomes by seamlessly integrating into healthcare settings' daily activities. Many clinician copilots reduce administrative burdens, while more advanced tools also offer clinical decision support and educational resources, improving diagnostic accuracy, treatment advice and overall patient care.

With the advent of GenAI, clinician copilots are evolving from basic task-specific tools into fully integrated digital assistants. This transformation is redefining how AI supports HCPs, broadening its applications. For example, Microsoft's Nuance DAX Copilot can now listen to patient-provider conversations in real time, automatically transcribing and entering all relevant data into EMRs in structured and unstructured formats.[14] This drastically reduces the time clinicians spend on documentation, allowing them to focus more on patient care.

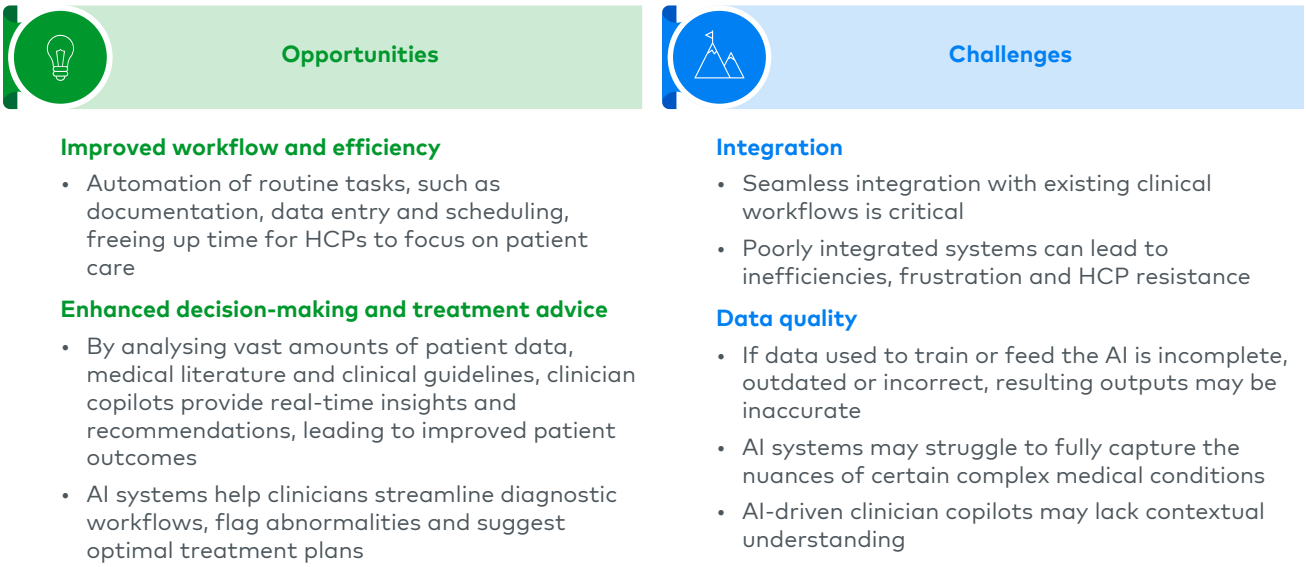
Other innovations include tools such as DeepScribe, which documents clinical notes from patient conversations and provides real-time suggestions for improving diagnosis and treatment plans based on vast datasets.[15] Similarly, systems like Abridge help clinicians capture and summarise patient interactions and help provide diagnostic insights.[16] These tools significantly reduce the time it takes for patients to receive diagnoses and begin treatment.

As GenAI continues to advance, clinician copilots will expand their capabilities further, enabling real-time analysis of complex patient data, early detection of health risks and predictive decision support. This shift offers immense opportunities to enhance healthcare by improving efficiency, decision-making and patient outcomes (see Figure 5).

However, their successful deployment requires careful consideration of the challenges, including integrating with existing clinical workflows, ensuring data quality, addressing ethical concerns and maintaining human oversight. HCPs can leverage AI's full potential to support clinicians and improve patient care by addressing these challenges.

Figure 5

Opportunities and challenges of clinician copilots



Note: HCPs=healthcare providers; AI=artificial intelligence
Source: BMJ Health & Care Informatics, "Achieving large-scale clinician adoption of AI-enabled decision support"; Journal of Medical Internet Research, "Stakeholder Perspectives of Clinical Artificial Intelligence Implementation: Systematic Review of Qualitative Evidence"

Although gaining a better understanding of how physicians perceive and use digital health interventions to achieve improved outcomes is crucial, clinician copilots are being increasingly adopted across the healthcare sector due to their profound benefits in reducing administrative burdens, streamlining clinical processes, and supporting diagnostic and treatment decisions.

More than 50% of respondents from the American Medical Association 2023 Physician Survey identified reducing administrative burden as AI's most significant opportunity.[17] Additionally, findings from a 2024 online survey of UK general practitioners revealed that 20% of respondents have started using GenAI in clinical practice, with 29% of those using it to generate documentation and 28% to suggest differential diagnoses.[18]

Provider copilots

Provider copilots are advanced AI systems that assist healthcare organisations in various capacities. These AI tools integrate into the healthcare ecosystem, supporting multiple functions from clinical support to administration to patient management.

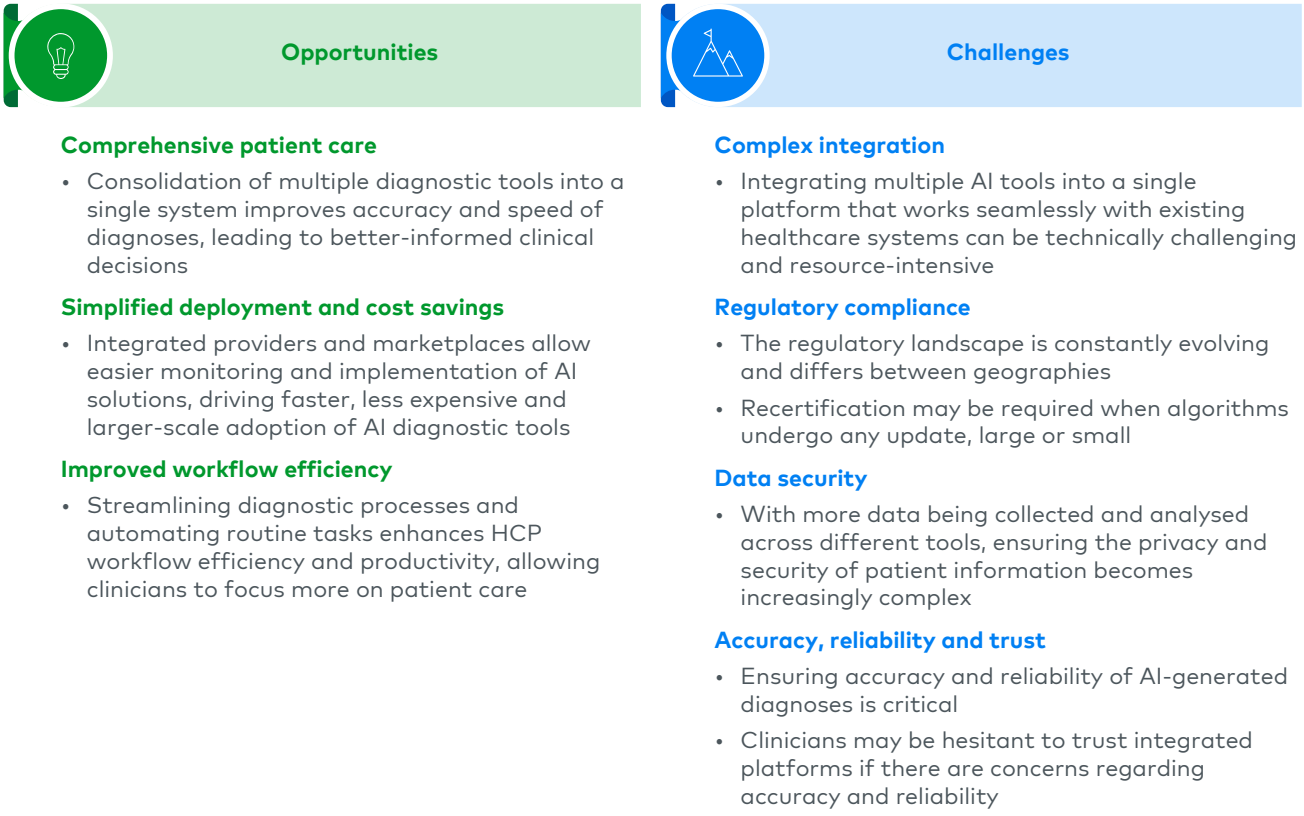
Navigating the rapidly evolving landscape of healthcare technology, particularly regarding AI-driven diagnostic algorithms, presents a significant challenge for providers. Although the concept of provider copilots promises to revolutionise patient care, realising this potential is complex.

One of the most significant developments is the rise of unified platforms, which combine multiple AI diagnostic tools under a single umbrella, offering HCPs a centralised solution for accessing and integrating various algorithms. Instead of dealing with a fragmented landscape of isolated tools, providers can now select and deploy a suite of AI solutions that work seamlessly together.

While these integrated diagnostic AI platforms offer significant opportunities for improving patient care and operational efficiency by enabling more accurate and timely diagnoses, they come with challenges related to integration, regulatory compliance, data security and trust (see Figure 6).

Figure 6

Opportunities and challenges of integrated diagnostic AI solutions



Note: AI=artificial intelligence; HCP=healthcare provider
Source: PLOS Digital Health, "Frameworks for procurement, integration, monitoring, and evaluation of artificial intelligence tools in clinical settings: A systematic review"; Journal of Medical Internet Research, "Stakeholder Perspectives of Clinical Artificial Intelligence Implementation: Systematic Review of Qualitative Evidence"

Curated marketplaces for AI tools are emerging to simplify adoption for HCPs. These marketplaces offer pre-approved AI solutions that can be integrated into existing clinical workflows, primarily in areas such as imaging, where data is abundant and standardised.

For example, many imaging platforms now provide curated marketplaces with AI tools that assist radiologists in automating tasks like detecting abnormalities in scans. However, these marketplaces are often limited to specific areas, such as radiology, due to the maturity of AI in that field.

In the future, these curated marketplaces may expand into other clinical areas, offering a broader range of AI tools to support diagnostics, treatment recommendations and administrative tasks. EMR providers may also play a key role in this expansion, potentially integrating a wide array of AI tools into their platforms, creating a more seamless experience for HCPs.

Looking further ahead, we could envision a scenario where AI autopilots autonomously manage many aspects of patient care with minimal clinician supervision. These systems would continuously learn and improve, providing real-time diagnostic and treatment advice while automating routine clinical tasks. While this is still an evolving area, the future of AI in healthcare points towards greater automation and integration, ultimately enabling clinicians to focus more on complex decision-making and patient care.

AI autopilots

AI autopilots are rapidly advancing, particularly in diagnostic applications. Platforms such as Oxipit, approved for autonomous radiology screening, represent a significant leap in AI capabilities.[19] In recent studies from Harvard and Stanford, AI systems achieved a 92% diagnostic accuracy, as compared to 75% for human clinicians in specific tasks.[20] This level of performance demonstrates AI's potential to assist and lead in diagnostic tasks that rely heavily on pattern recognition, such as radiology, pathology and ophthalmology.

Commercially, AI autopilots are expected to unlock substantial value by automating high-volume diagnostic processes, potentially saving billions. For instance, the global market for AI in healthcare is projected to grow from $19.27 billion in 2023 and $26.69 billion in 2024 to around $613.81 billion by 2034, primarily driven by demand for diagnostic AI solutions.[21] Automating routine diagnostics can help healthcare systems manage increasing patient volumes, reduce diagnostic errors and alleviate the workforce shortage, particularly in specialities like radiology where demand exceeds supply.

As the technology evolves, integrating AI autopilots into hospital information systems and EMRs will streamline data sharing and improve the overall efficiency of healthcare workflows. AI systems could eventually operate 24/7, providing continuous diagnostic support even in resource-constrained or remote environments. However, realising this

potential will depend on addressing key challenges, such as navigating regulatory approval processes, ensuring data privacy and security, and building clinician trust in AI-driven decision-making.

The ability of AI autopilots to handle routine diagnostics autonomously could revolutionise healthcare delivery by enabling faster, more scalable and more affordable care. This will be particularly impactful in underserved regions, where access to specialists is limited, further expanding the global reach of high-quality healthcare.

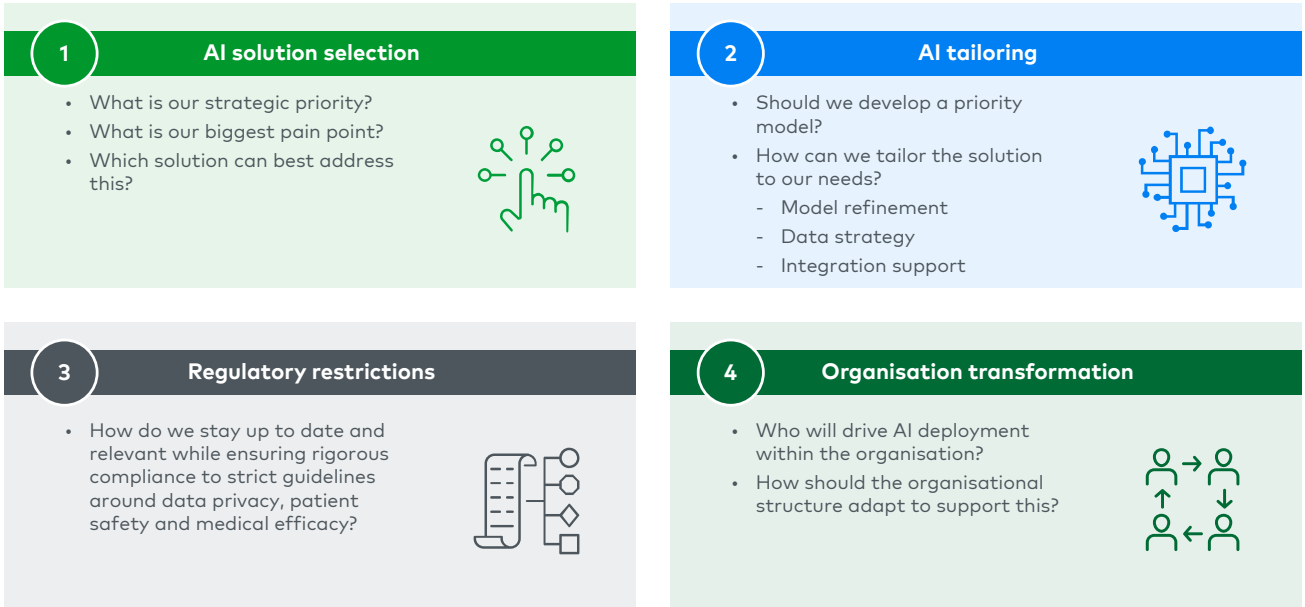
How can providers successfully deploy AI?

Effective implementation requires careful planning and consideration. The right approach to AI can lead to significant benefits, but without a proper strategy, AI implementation can also introduce challenges such as workflow disruptions, data privacy concerns and integration issues.

Deploying an AI system is not as simple as just purchasing a solution; it encompasses a broad spectrum of challenges and involves multiple strategic considerations and necessary operational changes (see Figure 7).

Figure 7

AI deployment encompasses a broad spectrum of challenges

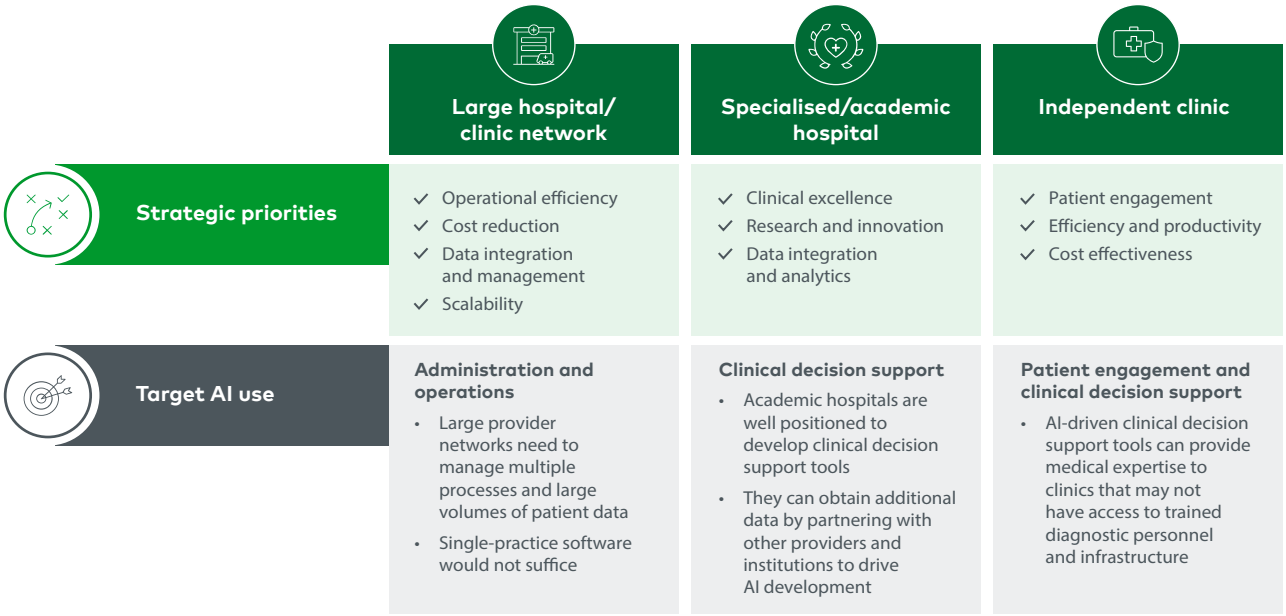


Note: AI=artificial intelligence
Source: PLOS Digital Health, "Frameworks for procurement, integration, monitoring, and evaluation of artificial intelligence tools in clinical settings: A systematic review"

Different provider archetypes have different strategic priorities, and the most suitable AI should align with a provider's specific strategic objectives and organisational needs, which can differ widely based on archetype and ownership (see Figure 8).

Figure 8

Strategic priorities of different healthcare provider archetypes



Note: AI=artificial intelligence
Source: L.E.K. research and analysis

In addition to selecting the right technology partners, HCPs must tailor AI solutions to meet their specific needs.

While customisation is often necessary, many GenAI solutions are increasingly offered as 'off-the-shelf' products that can be easily integrated with existing healthcare systems, such as EMRs, imaging platforms and scheduling tools. For example, solutions like Microsoft's Nuance DAX Copilot can be activated and integrated into an EMR with minimal effort by simply working with the EMR vendor.

The complexity associated with GenAI solutions primarily arises when a HCP seeks to develop a bespoke solution or when customisation beyond the typical scope is required, and is more common in regions with stricter regulatory environments, such as the EU, where self-improving AI cannot be approved. In most cases, however, HCPs will purchase prebuilt, fully integrated solutions that align with major systems like EMRs and imaging platforms, minimising the need for extensive customisation or technical development.

In contrast, deploying predictive AI solutions may require more effort in selecting the right platform provider and ensuring smooth integration into existing IT systems. But for most healthcare settings, the trend is towards buying AI plug-and-play solutions, streamlining the adoption process and reducing the technical complexity associated with AI deployment.

As noted earlier, while the FDA permits the use of self-improving medical AI under a predetermined plan, allowing AI systems to evolve and improve over time, the EU currently mandates that AI systems remain static at the time of approval. Given the additional regulatory hurdles and potential delays in implementing enhancements, this static model requirement could discourage providers from pursuing self-improving AI.

Beyond this, there are several additional regulations in the EU that further complicate AI deployment in healthcare. The Digital Markets Act aims to limit monopolistic practices by large tech companies, which could indirectly impact AI solutions that rely on large digital platforms. The upcoming Artificial Intelligence Act also introduces stringent transparency, safety and accountability rules for high-risk AI systems, such as those used in healthcare. Additionally, the General Data Protection Regulation creates complex data privacy requirements, making it challenging to process the vast amounts of patient data required for training AI models while ensuring compliance.

These regulatory frameworks pose significant hurdles for AI adoption in the healthcare sector, creating a more complex environment for innovation as compared to other regions like the US. Providers and digital health companies must be prepared to navigate this landscape.

HCPs' successful deployment of AI will also require support from across the broader digital health ecosystem. This includes key players within healthcare IT (EMR vendors, resource management software vendors and practice management software vendors), data integration specialists (often referred to as 'data plumbers') and cybersecurity companies. These stakeholders play a critical role in ensuring that AI solutions are effectively integrated into healthcare environments, securely managing and safeguarding vast amounts of sensitive data.

However, as AI solutions become more widespread, we also see increasing fragmentation across this space. Vendors are building closed systems around their platforms, encouraging providers to stay within their ecosystems for easier integration. For instance, if a HCP uses a specific radiology information system, they may feel pressured to remain within that system's marketplace for additional AI tools. This, in turn, limits the ability to source best-in-class AI solutions from different providers.

The industry's challenge will be ensuring that AI tools remain interoperable across different systems, allowing HCPs to integrate solutions that meet their specific needs without being locked into a single ecosystem.

As AI adoption grows, these dynamics will shape the future of healthcare technology, making collaboration and innovation across stakeholders crucial. Ensuring interoperability and avoiding vendor lock-in will be essential for developing more effective, secure and integrated healthcare solutions.

Conclusion

GenAI's transformative potential within healthcare is immense, offering unprecedented opportunities to enhance patient care and streamline operations. However, realising this potential requires HCPs to navigate significant challenges, including system complexity, regulatory hurdles and high implementation/integration costs.

It is crucial to differentiate between the hype surrounding GenAI and its actual capabilities to ensure successful integration.

By embracing these technological advancements, adapting workflows and fostering an environment that supports innovation, HCPs can significantly improve patient outcomes and operational efficiency, positioning themselves at the forefront of a rapidly evolving industry.

How L.E.K. Consulting can help

GenAI is set to revolutionise healthcare by enhancing patient care and operational efficiency, though challenges like system complexity, regulations and potential high costs remain. HCPs must strategically adapt to stay competitive in this evolving landscape.

At L.E.K., we're uniquely positioned to help HCPs on this journey, drawing on our deep expertise in healthcare and digital strategy. We offer practical advice to guide organisations through the complexities of AI adoption, ensuring they can successfully implement these technologies and remain competitive in the long term.

Through focused guidance and innovative solutions, we empower HCPs to stay ahead. Connect with the authors for a further discussion.

Endnotes

[1]World Health Organization, "Leading the Future of Global Health with Responsible Artificial Intelligence." https://www.who.int/publications/m/item/leading-the-future-of-global-health-with-responsible-artificial-intelligence

[2]Stanford University, "Artificial Intelligence Index 2019 Annual Report." https://hai.stanford.edu/sites/default/files/ai_index_2019_report.pdf

[3]Stanford University, "Artificial Intelligence Index Report 2024." https://aiindex.stanford.edu/wp-content/uploads/2024/05/HAI_AI-Index-Report-2024.pdf

[4]Future Health Journal, "Bibliometric analysis of artificial intelligence in healthcare research: Trends and future directions." https://doi.org/10.1016/j.fhj.2024.100182

[5]Infiuss Health, "The Role of Data in Healthcare AI Training." https://infiuss.com/blog/the-role-of-data-in-healthcare-ai-training

[6]Future Internet, "Generative AI in Medicine and Healthcare: Promises, Opportunities and Challenges." https://doi.org/10.3390/fi15090286

[7]US Food and Drug Administration (FDA), "Marketing Submission Recommendations for a Predetermined Change Control Plan for Artificial Intelligence/Machine Learning (AI/ML)-Enabled Device Software Functions." https://www.fda.gov/regulatory-information/search-fda-guidance-documents/marketing-submission-recommendations-predetermined-change-control-plan-artificial

[8]EUR-Lex, "Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024." https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401689

[9]Helfie, https://www.helfie.ai/cough-ai

[10]JAMA Network Open, "Perspectives of Patients About Artificial Intelligence in Health Care." https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2791851

[11]PLOS One, "American Public Opinion on Artificial Intelligence in Healthcare." https://doi.org/10.1371/journal.pone.0294028

[12]BMC Medical Ethics, "Public perceptions of artificial intelligence in healthcare: ethical concerns and opportunities for patient-centered care." https://bmcmedethics.biomedcentral.com/articles/10.1186/s12910-024-01066-4

[13]NHS England, "Supporting care with remote monitoring." https://transform.england.nhs.uk/covid-19-response/technology-nhs/supporting-the-innovation-collaboratives-to-expand-their-remote-monitoring-plans/

[14]Nuance, "DAX Copilot." https://www.nuance.com/healthcare/dragon-ai-clinical-solutions/dax-copilot.html

[15]DeepScribe, https://www.deepscribe.ai/

[16]Abridge, https://www.abridge.com/

[17]American Medical Association, "AMA: Physicians enthusiastic but cautious about health care AI." https://www.ama-assn.org/press-center/press-releases/ama-physicians-enthusiastic-cautious-about-health-care-ai

[18]BMJ Health & Care Informatics, "Generative artificial intelligence in primary care: an online survey of UK general practitioners." https://informatics.bmj.com/content/31/1/e101102

[19]Oxipit, https://oxipit.ai

[20]JAMA Network Open, "Large Language Model Influence on Diagnostic Reasoning: A Randomized Clinical Trial." https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2825395

[21] Precedence Research, "Artificial Intelligence in Healthcare Market Size, Share and Trends 2024 to 2034." https://www.precedenceresearch.com/artificial-intelligence-in-healthcare-market

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