

# The four essential steps for optimizing healthcare outcomes with AI

AI's ability to support healthcare professionals and patients has resulted in numerous patient care advancements. From diagnostic support to automating repetitive tasks and empowering patients throughout their healthcare journeys, AI enables [improved care, lower costs, and more effective health management](#).

However, some institutions are adopting and benefiting from these profound advancements faster than others. Important components of successful adoption include identifying the right use case, building trust, which includes the principles of trustworthy AI, appropriate policy and governance, and engaging and empowering those who will be utilizing the tools. Here are four key steps for engaging AI to promote improved patient experiences and care.

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## 1. Identify the right use cases for AI

Fundamentally, AI is a tool and not a solution in itself. The foundation of any successful solution is solving important challenges and leveraging the best tools to meet those goals. Therefore, identifying use cases where AI is the appropriate tool involves understanding the challenges and collaborating closely with experts in the relevant clinical or administrative domains.

Successful AI-powered tools in the past have followed these principles with "traditional" AI, such as machine learning. This has enabled [processes to be automated](#) for clinical operations, billing, scheduling, and improving diagnostic reviews. Now, generative AI takes those capabilities even further, bringing greater personalization and efficiency to healthcare delivery.

Both traditional and newer AI tools, such as large language models and generative AI, can be used together to create more comprehensive solutions, such as automatically capturing and efficiently documenting the details of a clinical encounter as clinical notes, for example:

- Traditional AI identifies who is speaking and correctly captures medical terminology
- Generative AI creates properly formatted clinical notes
- Traditional AI adds those notes to the patient's electronic health records (EHRs) for final review by the provider
- Generative AI provides interactive support for the patient throughout their care journey

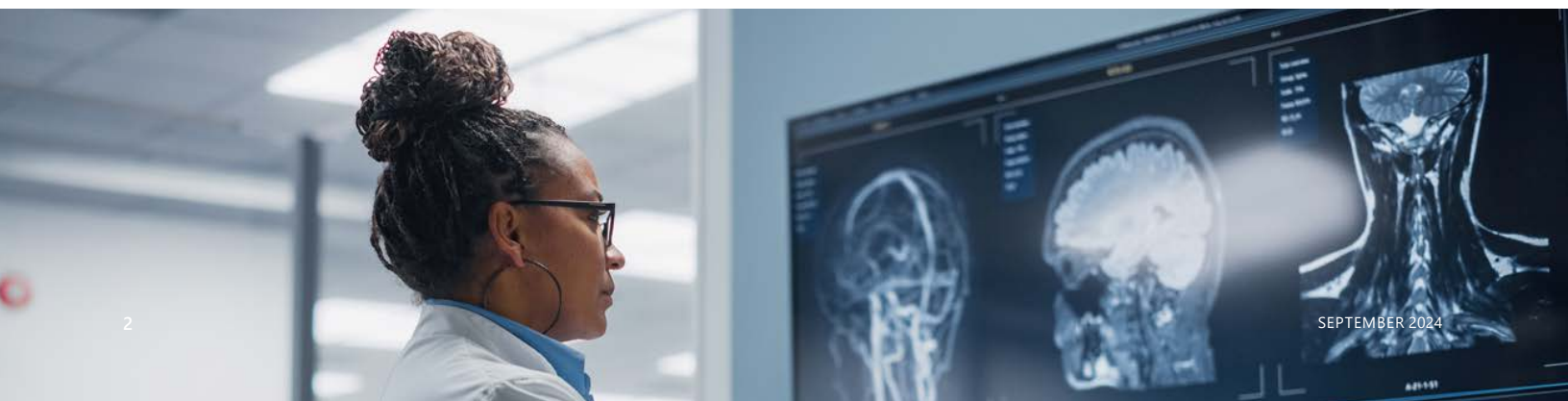
AI's use cases are virtually unlimited; the US Department of Veterans Affairs (VA) alone has created a list of over [100 potential use cases](#), with 40 percent already operational. AI solutions also automate essential operational and administrative functions, including:

- Prompting follow-up visits to improve patient care and compliance
- [Streamlining supply chain management](#) to ensure critical supplies and medications are available while controlling costs
- Identifying disease trends in specific populations to enable better preparation and responses

## 2. Build trust into every process

[Trustworthy and responsible AI](#) is a basic tenet of Microsoft's approach, which puts the principles of fairness, reliability, safety, privacy, security, inclusiveness, transparency, and accountability at its core. Microsoft has been a longtime leader in this space, promoting these AI concepts since 2016. This includes mitigating bias wherever possible, protecting the integrity of the system and data, and providing mechanisms to validate the results. It also means ensuring that people know how to use the tools effectively and safely and that teams understand how to minimize risks.

There have been concerns about whether proprietary data or even a user's AI chat prompts can be used to train a publicly accessible generative AI model. Azure OpenAI Service is fully secured and managed by Microsoft's dedicated teams, and the models are hosted within Microsoft's enterprise Azure environment. There is no integration or interaction with any public-facing services. User prompts, training data, and inputs such as EHRs are not available to Microsoft or other customers—and are not used to improve any Microsoft or 3rd-party products.



With quality data, traditional AI, including machine learning, can be very accurate and reliable. Because of its unique nondeterministic design, generative AI can fill complementary roles in advanced solutions where the benefits of both can be synergistic. However, both traditional and generative AI require scrutiny to validate their output.

All analytic tools, including AI-based solutions, need to be continually assessed and monitored. For example, patient populations and processes will continue to change over time and this drift requires that systems be updated to account for the differences that will impact performance. A human-in-the-loop remains necessary for the majority of AI-supported systems.

### 3. Create governance that both protects and empowers users

AI **governance** is a living set of guidelines designed to ensure safe, effective, and measurable processes and policies. This includes how systems should be utilized and the different roles and responsibilities of those using these systems. As such, AI governance also ties into many of the Trustworthy AI principles, such as transparency and accountability. It also includes how to communicate AI practices and protocols to patients.

These principles help to ensure that AI is used responsibly in real-world situations. AI governance often includes guidelines such as:

- Protecting patient data through encryption and access controls
- Ensuring that AI outputs and recommendations meet all regulations and ethical standards
- Assessing and assuring data quality while respecting patient privacy



## 4. Commit to training and upskilling to empower users

Successfully deploying new tools requires engaged, empowered personnel. An important factor is providing teams with education to understand what options are available to them and how to use the tools effectively. Organizations have a great opportunity to upskill and reskill personnel for an AI-powered future.

This career development also has significant additional benefits for overall [employee morale](#), [recruitment](#), and [retention](#). Healthcare agencies should ensure that everyone, from administrative staff to caregivers, are empowered to use these systems. Potential actions to take include:

- Holding “[prompt-a-thons](#)”—intensive, focused learning sessions—to teach people how to interact with generative AI for optimal results.
- User training to validate an AI system’s output using provided tools and defined processes.
- Preventing “automation bias”—which can lead some users to just accept the system’s response—through continued reinforcement of generative AI guidelines.

There’s another way improved user skills can help AI initiatives succeed. It is critical to ensure that data is validated and scrutinized for accuracy and bias before it is used by AI systems. Empowered team members with the training and domain expertise to understand these foundational elements are vital to this assessment process.

Trust in the technology also comes from trust in the technology partner. Microsoft’s extensive investment in AI infrastructure, along with leading the industry in 2016 with the establishment of the principles of responsible AI, enables providers to confidently deliver the most advanced patient care to their community.



Discover how Microsoft helps introduce generative AI to your environment to engage everyone from clinicians to patients. [Learn more.](#)

