



# AI in Healthcare

AI helping humans care  
for one another

Artificial intelligence (AI) solutions are currently being implemented across healthcare systems around the world; [decision-makers](#) in those organizations are increasing their investments in

this rapidly-advancing technology. While most of today's solutions focus on organizational efficiencies, we're beginning to see a shift towards incorporating the human experience.

# Why is this Happening?

## Providers want to develop AI

Recently, the American Medical Association (AMA) released [recommendations](#) supporting the development of AI, as long as it's developed *with* providers, indicating the industry is open to appropriately designed AI.

## Trust is building

Healthcare has been establishing trust with AI by implementing behind-the-scenes solutions to improve efficiency. Artificial Medical Intelligence ([AMI](#)) uses AI to review clinical documentation and accurately produce billing codes for medical procedures, saving organizations time and money.

## AI is helping medical teams personalize treatment

Additionally, AI is helping medical teams personalize treatment. [Tempus](#) developed a platform with the [Mayo Clinic](#) to help oncologists provide personalized cancer care. They built a data library from clinical documentation (notes, reports, pathology images, genomic tests, etc.). AI looks for patterns within the library to find the most effective treatment for each new patient based on their genetics and cancer type.

While these types of solutions are spreading, new AI technology is being developed and designed to enhance the human connections within healthcare.

# What's on the Horizon?

## Designers and developers will engage all healthcare staff

Projects must involve and give decision-making power to the spectrum of healthcare professionals involved in the solution (i.e., nurse chatbots need to include nurses). This will ensure solid design for the right problems and adoptability.

## AI+ML will supercharge the healing relationship between providers and patients

Care teams will train their own AI to process data from patient wearables and IoT devices. This data share allows

providers to see patient troubles and offer them support in real-time. The resulting connection enhances trust, [deepening the patient-provider relationship](#).

## Precision prevention

[Precision medicine](#) initiatives are underway to unlock the secret relationship between genomes, exposures, and diseases. These initiatives are designed to prospectively collect this information on over one million people for a mega data library. AI will be used to see patterns, giving providers the ability to provide genetic-specific clinical recommendations for disease prevention. Having this genomic approach to prevention will facilitate a new level of intimacy in patient-provider conversations.

# Smashing's Recommendations

## 1.

### Let them lead it

Find everyone that plays a part on the patient's journey or impacts the patient relationship, including front desk staff and lab techs. Listen to them and ensure they have decision-making capabilities in the design process. Solutions will only be adopted if people working in the industry find it useful, so don't forget to keep the human in the loop.

## 2.

### Design for a relationship

The patient and the provider are not two separate end-users. The design of new technology needs to treat the relationship as an end-user. Work with patients and providers to map the journey of their relationship. Conduct service design workshops to ensure activities and touch points are structured to enhance trust.

## 3.

### Build your data library

AI solutions are trained through data inputs. This could be data wrangled by data scientists, through [physical modeling](#) or leveraging software that [doesn't require coding](#). Other avenues include creating avatars to aggregate data input. It is imperative to identify your strategy for building a data library as the foundational step to making the implementation of AI a reality.

# Dig Deeper

- [How Machine Learning and Artificial Intelligence could improve your patient's experience](#)
- [What doctor? Why AI and robots will define New Health](#)
- [Artificial Intelligence: Healthcare's New Nervous System](#)
- [Viz LVO: Using artificial intelligence to automatically identify and triage suspected LVO strokes](#)
- [Hexoskin: Wearable body metrics](#)
- [Neuropace](#)
- [Wysa](#)
- [Ginger](#)
- [Top 12 Ways Artificial Intelligence Will Impact Healthcare](#)

## About Smashing Ideas

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