Medtronic
Engineering the extraordinary

CASE STUDY

5 ways artificial intelligence is transforming healthcare

How artificial intelligence solutions are empowering health system leaders to deliver results

Digital technology is driving rapid, fundamental changes to almost every aspect of daily life – including the delivery of healthcare. Today, patients expect healthcare to be convenient, accessible, and delivered seamlessly, much in the same way they might order an item from Amazon. Meanwhile, health system leaders are under tremendous pressure to find cost-effective solutions aimed at improving patient outcomes and operational efficiency. While balancing these demands is challenging, advancements in artificial intelligence (AI) can help make healthcare work better for everyone.

Artificial intelligence is a powerful tool that can increase the speed, efficiency, and effectiveness of global health systems. By analyzing large amounts of data in real time, AI can help improve clinical

and nonclinical decision making; reduce medical variability; and optimize staffing. Likewise, AI can reduce the volume of tedious administrative tasks that often lead to burnout among healthcare professionals.

At Medtronic, we're driven to create healthcare technologies that are worthy of the human body. That's why we've adopted a people-centered approach to the research, development, and responsible deployment of AI. When AI solutions are seamlessly integrated into health system workflows, clinicians have the power to focus on what matters most: patients.

Here are five ways our AI-enabled solutions are accelerating the digital transformation of healthcare technology:

1. Improves accuracy

With staff stretched thin by the pandemic, reducing clinician burden is vital. Artificial intelligence can help improve the accuracy of information that clinicians receive so they can better prioritize their time, empowering them to focus on patient care.

2. Promotes interventional insights

One of the most promising applications of artificial intelligence in healthcare is its integration in diagnostic imaging analysis. By using AI to analyze images gathered during a scan, physicians can identify conditions more quickly, promoting early intervention. We incorporate AI and image analysis in an intelligent endoscopy module, the first computer-aided detection system to use AI to identify pre-cancerous and cancerous colorectal polyps during a colonoscopy.

AI in the healthcare industry

of healthcare executives trust AI to support nonclinical, administrative processes to allow clinicians more time for patient care

Source: Optum

Top 3 potential improvements in patient outcomes due to AI

Virtual patient care (41%)

Diagnosis and predicting outcomes (40%)

Medical image interpretation (36%)

The system works by scanning every visual frame of the procedure in real time and alerting physicians to the presence of lesions – including small, flat polyps that can easily go undetected by the human eye. By detecting and removing these polyps, clinicians reduce the odds of patients developing colorectal cancer.

3. Supports training and education

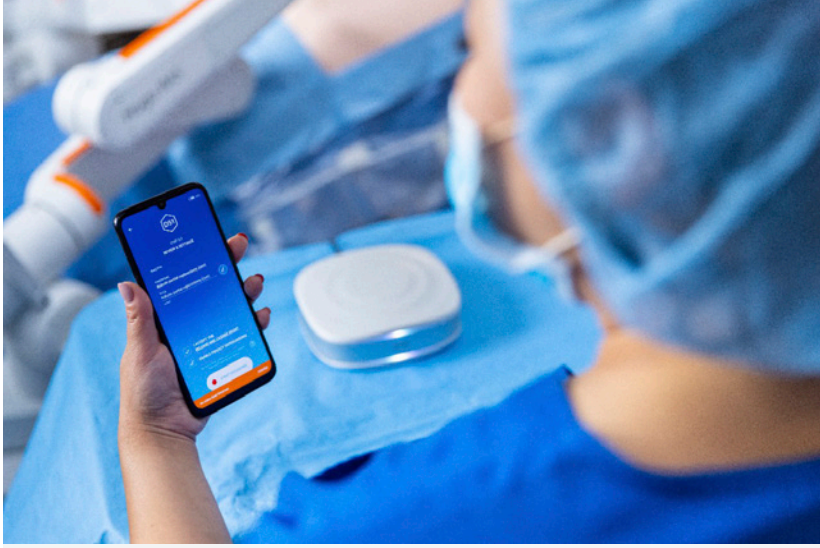
Advances in technology are driving constant changes in the delivery of healthcare. Care providers must seek new training and education opportunities to adjust to this quickly evolving landscape. Artificial intelligence supports these efforts by revolutionizing the capture, storage, and analysis of surgical video.

4. Prioritizes patient care

Even before the pandemic, the demand for healthcare outstripped capacity within many global health systems. Prioritizing care for the most critically ill patients is one of the keys to delivering equitable, accessible healthcare. Software platforms powered by AI can assist healthcare professionals with decision-making, ensuring that no patient slips through the cracks.

5. Fosters equity in healthcare

Unfortunately, structural barriers often prevent healthcare systems from getting the right solutions to the right places at the right time. By creating algorithms from data sets that reflect diverse patient populations, AI can help reduce the bias that often infiltrates the healthcare ecosystem and creates these barriers. Medtronic is committed to dismantling disparities in healthcare and creating long-lasting solutions for underserved communities.



Surgical video at your fingertips

Healthcare providers never stop learning. The growing demand for surgical video capture and analysis underscores their commitment to continuing education and training. To support that, Medtronic is providing digital learning tools to advance patient care while bolstering training and education.

Making healthcare more human with AI

Artificial intelligence has the potential to help solve some of the biggest challenges facing healthcare today, such as managing costs, physician burnout, and health equity. Our AI solutions are designed to give healthcare professionals the time and tools they need to deliver better care to more people around the world. Let the digital transformation begin.

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