



Three AI Trends Revolutionizing Healthcare

W H I T E P A P E R



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Three Trends Overview



ew topics in healthcare are as misunderstood as the role of Artificial Intelligence (AI).

The movement toward incorporating AI into healthcare is sometimes depicted as replacing humans with machines. But the reality of AI's role in healthcare is quite different.

At a base level, AI's goal is to put more power in the hands of healthcare providers.

However, until recently healthcare AI has involved a lot of "pie-in-the-sky" projections about how the coming technology would revolutionize care delivery.

Today, AI-powered healthcare tech has matured past the "potential" stage and is beginning to produce real clinical impact. Here are three major trends that have emerged in healthcare AI that we expect to see accelerating in the coming years.



Better Imaging & Faster Triage

The introduction of AI algorithms into radiology was initially met with some resistance. Some of the more extreme prognostications regarding the capabilities of AI were to blame, as the notion took hold that radiologists would soon be obsolete.

But as radiology departments have increasingly implemented AI algorithms, the past few years have shown those fears to be unfounded. Far from replacing radiologists, algorithms assist radiologists in performing their jobs more efficiently and enable them to more easily coordinate care with multidisciplinary care teams.

Consider Viz.ai's aortic and pulmonary embolism (PE) modules, which detect abnormalities in patient imaging that could signal a potentially urgent condition. The Viz.ai care coordination platform automatically notifies the appropriate physicians who can examine imaging and patient information and decide whether an emergency intervention may be necessary.

This system has the potential to identify urgent cases more quickly and facilitate earlier patient entry into the care pathway compared to the radiologist's standard practice of going through images in chronological order.

Curt Langlotz, Professor of Radiology and Biomedical Informatics at Stanford University, has suggested a useful analogy for the role that AI will likely play in radiology: that of supporting technology used in commercial jets for decades (commonly known as "autopilot"). Just as pilots welcome the technology that automates much of the repetitive and monotonous data-crunching work of flying a plane, radiologists will likely come to see AI algorithms as an indispensable tool that helps them do their jobs quickly and more efficiently.

As Professor Langlotz told the Radiological Society of North America in 2017, "AI won't replace radiologists, but Rads who use AI will replace Rads who don't."

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Reimbursement for AI-Enabled Tech



New Technology Add-On Payments (NTAP) are a class of reimbursements offered by the Centers for Medicare & Medicaid Services (CMS) that are meant to help pay for new technology that is not included in the Medicare Severity Diagnosis-Related Group (MS-DRG) bundled payment.

These supplemental payments enable hospitals to acquire and deploy new technology that they would otherwise have to utilize at a loss.

Viz LVO algorithm is the only AI-enabled stroke software to be granted an official NTAP approval by CMS. This was an important regulatory milestone that should open the door to more NTAP payments for AI-enabled healthcare technology.

CMS uses three criteria to determine whether a technology qualifies for NTAP approval:

1. Newness: The technology must be defined as new by CMS, typically within 2 to 3 years following FDA approval.

2. Cost: The technology must be considered costly and inadequately reimbursed under current MS-DRG assignment.

3. Clinical improvement: The technology must significantly improve clinical outcomes for a patient population as compared to currently available treatments.

Until recently, demonstrating clinical improvement has been the major hurdle for AI-enabled technology in securing NTAP approval. Viz.ai's stroke platform was able to demonstrate meaningful improvements in detection and treatment time for LVO stroke patients – a population for whom minutes could mean the difference between life and death, or between fast recovery and chronic disablement.

As more and more data is gathered from clinical use cases and AI technology continues to iterate and improve, more AI-enabled health tech solutions will have the ability to demonstrate measurable clinical improvement and qualify for NTAP.

AI-Enabled Software as a Medical Device (SaMD)

Software as a Medical Device (SaMD) is a class of software designed to carry out one or more medical functions without being part of a hardware medical device.

For instance, software that is part of an MRI machine would not count as SaMD, but software that is used to process or view MRI images and that runs on a general-use device (like a PC or mobile device) would.

The possibilities for SaMD are virtually endless, but here are a few of the ways this class of software is already being used:

- Software that allows physicians to view high-res, dynamic imaging via smartphone or tablet (such as Viz.ai)
- Computer-aided detection software that provides image post-processing
- Smartphone applications that help patients manage chronic diseases or conditions like diabetes and high blood pressure
- Applications that assist in general or specific health maintenance or healthcare related outcomes – such as apps that track and/or monitor vital signs, or apps that collect and analyze sleep cycle data

SaMD is revolutionizing healthcare by giving providers and patients access to tools and information that help them manage healthcare needs more efficiently. Many SaMD applications are either hosted on or accessible via mobile devices, allowing users to access the information they need any time and from anywhere.

As AI continues to mature, we will see more integration of AI into SaMD. These AI-powered applications will deliver even more gains in efficiency, clinical impact, and improved health outcomes.



AI is the Future of Healthcare

AI algorithms have the potential to decrease time to care, improve clinical outcomes and remove administrative burden for providers at hospitals and healthcare systems around the world.

But AI is at its most powerful when integrated with other capabilities to streamline workflows and assist providers in delivering care efficiently.

Viz.ai combines all of the following in a single platform:

- AI-powered detection of pulmonary embolism, aortic dissection, ischemic and hemorrhagic stroke
- High-res, dynamic image viewing via smartphone for remote assessment
- Automated alerts and workflows that loop in and activate the appropriate care teams
- Centralized, HIPAA-compliant communication platform (“Slack for healthcare”) for efficient coordination of care teams and easy sharing of patient information across hospitals and health systems

Visit our website today to learn more about how Viz.ai’s AI-powered platform for pulmonary embolism and aortic dissection enables faster and more efficient care.

About Viz.ai

Viz.ai is the leader in AI-driven intelligent care coordination. Viz.ai’s mission is to fundamentally improve how healthcare is delivered in the world, through intelligent software that promises to reduce time to treatment, improve access to care, and increase the speed of diffusion of medical innovation. Viz.ai’s clinically validated platform leverages advanced deep learning to communicate time-sensitive information to specialists who can more quickly and easily make treatment decisions for the patient.

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