

Can AI solve some of healthcare's largest headaches? C-Suites navigate the benefits and share tips on identifying the AI gems in a sea of options



In 2023 – and for the foreseeable future – the investment in, adoption, and use of artificial intelligence is one of the hottest topics in healthcare.

Healthcare organizations have accelerated their investments in such technologies over the past few years, especially since the COVID-19 pandemic. Adoption is largely driven by the increasing opportunity for AI to potentially impact patient outcomes, support the redesign of inefficient workflows, strengthen cybersecurity, and forge more strategic and collaborative cross-organizational partnerships.

During a Becker's Healthcare advisory call sponsored by RAPIDAI, leaders from the company facilitated a discussion with C-suite healthcare executives across the country about the most important factors and nuances that organizational leaders must consider when applying AI-powered tools to improve clinical, operational, and financial success within healthcare.

Major themes from the discussion are summarized below.

Healthcare organizations are adopting AI to improve clinical and operational workstreams

Organizations are leveraging AI today for clinical use cases, such as implementing medical imaging analysis to help clinicians expedite triage, diagnosis, and treatment pathways. It's also used to predict the likelihood of patients developing conditions like sepsis based on certain criteria and can provide clinical documentation support for nurses. Many clinical use cases are aimed at reducing time to treatment and length of hospital stay. Operational workstream burdens can be challenged by AI through efforts like reducing the cognitive and administrative burden associated with coding and obtaining prior authorization approval. There's a consensus that reporting support and cross-department collaboration are benefits welcomed by hospital staff

across departments. “What we’re really working toward are large AI moves that can impact us from an operational standpoint, more so than from a clinical standpoint over the next five years,” said the medical director of a West Coast academic health system.

Some institutions are developing their own algorithms for AI applications – for example, one participant said her health system uses a proprietary algorithm to transcribe for the clinician so they can worry less about documentation, and more about the patient interaction. However, most healthcare organizations prefer to partner with third-party vendors.

Whichever way they choose to go, healthcare organizations that decide to leverage AI must ensure their use of AI aligns with their governance, ethics, and data protection policies, said the vice president of strategy, informatics and clinical experience at a multi-state healthcare system.

Imaging and radiology stand out as leading use cases for adoption of AI technologies

Radiology – and specifically aspects related to imaging – illustrate the tremendous utility and value of AI technology. This is mainly because there is a current shortage of radiologists, yet a high demand for radiology services, which includes image interpretation.

“The more context we can give radiologists beyond just information that helps them triage patients, such as malignancy localization, quantification and visualization, the more it not only improves decision-making but also reduces the cognitive burden they have, so they can go faster,” said Dr. David Stoffel, chief business officer of RAPIDAI. He explained RAPIDAI not only surfaces more granular information for radiologists, but also socializes that information by making it available on their mobile devices and across the organization, reducing delay and administrative friction.

The chief medical information officer of a leading health system in the South said AI is currently being used for at least 30% of radiology imaging – and that percentage will only increase in the future. “It’s an area that is ripe for machine learning; there’s just so much you could do with AI in that field.”

Beyond radiology and imaging, there are many other clinical and operational problem areas where leveraging AI technology may help. However, the chief data officer of a children’s hospital cautioned against bringing in new technology haphazardly and recommended only doing so if the solution can address high-priority, urgent problems.

“We’re trying to assess each opportunity from a first-principles perspective: what is the problem space that we’re trying to address before we get to the bells and whistles of a given AI-enabled technology,” he said.



The CMIO of the Southern health system concurred and said that with so many AI vendors and “solutions looking for a problem to solve,” there is risk in going along with a sales pitch that is not an optimal fit. There are an estimated 1,500 AI vendors currently on the market. “This feels like the dot-com era all over again,” he said. In a crowded market, healthcare organizations must analyze the true value-add to the organization from a clinical, operational, and financial perspective. The CMIO noted that his system uses only two trusted AI partners, one of which is RAPIDAI whose technology has helped reduce post-processing times for stroke from 15 to 2.5 minutes.

When evaluating potential AI partners, organizations must keep a set of key criteria in mind

Criteria that healthcare organizations must keep front and center when evaluating potential AI technology partners include:

- **Vendor maturity:** Many AI vendors are startups with limited subject matter expertise outside of their core product offerings. If a healthcare organization chooses to partner with an AI vendor, this vendor will need to be aligned with standard corporate IT practices, which can add substantial overhead. By contrast, established vendors like RAPIDAI – which has an install base of over 2,200 sites across 60 countries – can hit the ground running.
- **Product/interface maturity:** In a healthcare context, this refers to a product’s integration with an organization’s workflows and EHR system. “Whenever a vendor comes along and says, ‘Oh, interfaces – those are easy,’ it’s a glaring red flag that they have no idea what they’re talking about,” said the CMIO of the Southern health system. He emphasized that a vendor not knowing what an EHR-compatible interface is should serve as a signal not to move forward with a partnership.
- **Cybersecurity:** How technology vendors handle cybersecurity and the safeguards they have in place to prevent data breaches – including in hybrid technologies that can be accessed both on-premises and in the cloud – is of utmost importance. A platform’s ability to remain functional during a cybersecurity attack is an immense benefit.

- **ROI:** ROI can be tangible and intangible; both bring value from an experience and cost perspective. Look for AI solutions that bring tangible ROI, such as the number of minutes shaved off a patient’s door-to-needle time when they enter the emergency department. *Intangible ROI* can be measured in terms of improved patient experience – due to physicians engaging more with patients instead of looking at their computer screens and taking notes, as well as improved physician experience due to reduced administrative burden and burnout.

“The AMA estimated that every time a health system loses a physician, it costs about a million dollars in lost billings and recruitment costs for that next physician to come in,” said the medical director of the West Coast academic health system. “So, if you can do something that meaningfully reduces burnout and reduces the loss of physicians from a system, you can make an ROI argument easily. It doesn’t always have to be direct costs.”

RAPIDAI’s ROI is tied to the technology’s ability to reduce post-processing time for patients with vascular complications by enabling prompt, informed decision-making. “At the core, clinical optimization is the foundation, and operational and financial benefits layer on top of that bedrock,” said Jason Daniels, national director of health systems strategy & access at RAPIDAI. “It’s important that the entire care team has the information they need when they need it. It ultimately reduces care delays, workflow inefficiencies, and unnecessary spending.