

Report

Beyond the pilot

How CIOs are operationalizing
AI across health systems in 2026



New research reveals what healthcare CIOs are doing differently to close the gap between pilots and payoff

Qventus

In 2025, health systems moved beyond experimentation and into action with AI.

They piloted new artificial intelligence tools, built governance from the ground up, and began to define what responsible adoption looks like inside their organizations. Chief Information Officers (CIOs), Chief AI Officers, Chief Medical Information Officers (CMIOs), and other senior technology leaders developed new skills and became more confident in their generative AI strategies.

The majority of leaders ranked the pressure to operationalize AI as a **7 out of 10 or higher**



In 2026, the AI conversation has shifted from strategy to execution. The healthcare industry — which represents one-fifth of the U.S. economy¹ — is deploying AI at a rate that is more than twice that of the broader economy². Healthcare AI spending totaled \$1.4 billion in 2025, nearly triple the prior year’s investment.

As AI spending surges, scaling AI pilots into fully deployed tools that actually pay off is proving harder than most anticipated. **This white paper’s survey found that 65% of respondents ranked the pressure to operationalize AI as 7 or higher on a scale of 1 to 10.** A majority of health systems remain stuck in the phase between piloting AI and full deployment, the latter being when these enterprises can finally generate a measurable return on investment and improve business outcomes.

Joseph Sanford, MD, associate vice chancellor and chief clinical informatics officer at the University of Arkansas for Medical Sciences (UAMS), says the various factors that go into selecting AI use cases present a four-dimensional challenge. “You’ve got ease of implementation, burden of problem, upfront cost, and return on investment,” says Sanford.

A quarter of respondents report they lack a clear process for benchmarking AI performance. Implementation timelines also remain too long. And EHR vendor dependency, cited by 74% as a top execution barrier, continues to slow the pace of progress.

What emerges from the findings of this research is a portrait of an industry that finds itself at a critical inflection point. There is certainty that AI will dramatically reshape health systems in the years to come. But at what pace, at what price, and at what scale is still to be determined.

¹ Centers for Medicare & Medicaid Services, “NHE Fact Sheet,” last modified January 14, 2026.
² Menlo Ventures, “2025: The State of AI in Healthcare,” October 21, 2025.

Methodology

This white paper is based on a survey and 1:1 interviews with more than 60 CIOs, Chief AI Officers, CMIOs, and other senior IT leadership at medium and large health systems. The findings focus on how technology leaders are navigating the pressure to prove a return on investment (ROI) for their AI investments, closing the gap between AI pilots and payoff, navigating EHR dependency, and developing a strong preference to consolidate vendors to work with as few partners as possible.

Where health systems stand: the shift from proof of concept to proof of value.

With AI governance frameworks in place and pilot programs well under way, CIOs have broadly begun implementing new AI tools across their organizations. Across the broader economy, 88% of organizations report using AI in at least one business function³, a sharp increase from 55% in 2023. For generative AI, usage stood at 79% in 2025, up from 33% in just two years.

“In 2025 we put a lot of functional tools out the door,” says Sanford. “2026 builds on that by improving user experience and expertise.”

CIOs are rapidly transforming their IT operations and becoming more assertive business leaders shaping enterprise strategy. Nearly 45% of respondents say that they are the primary decision makers around purchasing and evaluating AI technology. Three-quarters of CIOs⁴ report feeling more confident in their roles now than they did a year ago and a majority report working more closely with Chief Executive Officers (CEOs)⁵ over other C-suite peers as agentic AI expands their scope. Two-thirds see themselves as future CEOs as they gain more skills as enterprise leaders, not just information technology experts.

“ We were very early building our governance in 2023, but now we’re restructuring to accommodate today’s AI. It’s our framework 2.0. For example, today’s governance is still human in the loop, but tomorrow’s may not include human in the loop with advancements in autonomous AI. ”

Deepti Pandita, MD
CMIO and Chief AI Officer,
UCI Health

And while “cost reduction and operational efficiency” remain among the top three strategic priorities in 2026, CIOs aren’t just looking to cut costs when deploying AI. Nearly half of respondents also say that workflow automation to improve throughput, perioperative operations, and care gap and coding automation are also critical strategic objectives this year.

In recent years, the healthcare sector has shown greater willingness to invest more in AI and other advanced technologies, experimenting with these tools to help streamline back-office tasks, reduce clinician burnout, and optimize operations.

³ Alex Singla, Alexander Sukharevsky, Bryce Hall, Lareina Yee, and Michael Chui, “The State of AI in 2025: Agents, Innovation, and Transformation,” McKinsey & Company, November 5, 2025.

⁴ Salesforce, “AI Adoption Skyrockets 282% as CIOs Enter the Era of Scale — but Trust Becomes the New Bottleneck,” Salesforce News, November 17, 2025.

⁵ Deloitte, “New Deloitte Survey Shows Tech Execs Driving Growth, Shaping Strategy, and Eyeing the CEO Seat,” press release, November 13, 2025.



94% say AI operationalization delays would put their organization at a competitive disadvantage

Any gains that AI can unlock come at a critical time for the industry. More than 100 rural hospitals⁶ have closed in the past decade, making healthcare access more challenging for the one in four Americans who live in those communities. The One Big Beautiful Bill, signed into law in July 2025, includes almost \$1 trillion⁷ in federal spending cuts that will affect the Medicaid and Affordable Care Act programs over 10 years.

Healthcare workers, nurse assistants, and other essential functions are projected to face massive labor shortages⁸ in the years to come. That's putting pressure on wages, which along with rising general expenditures, have put pressure on hospital margins. In 2024, year-end hospital margins were just 2.1%⁹, on average, a sharp drop from 7.0% in 2019.

This labor pressure intensifies as the number of Americans ages 65 and older is projected to increase¹⁰ from 58 million in 2022 to 82 million by 2050, a 42% increase that will put even more pressure on the healthcare system.

"2040 may look worse than 1940 in terms of relative deprivation of access," says Sanford. "And we need to solve for that."

Technologists overwhelmingly agree that delaying AI operationalization, even by just another one to two years, will result in lost cost savings and efficiency gains (77% agreed with this sentiment). 94% say AI operationalization delays would put their organization at a competitive disadvantage compared to other health systems. These delays would also increase clinician burnout and turnover, according to 68% of respondents.

The gap widens between pilots, production, and scaled orchestration.

Recently, AI pilots have gotten attention for all the wrong reasons. One 2025 MIT report sent shockwaves across the globe after finding that 95% of generative AI pilots failed¹¹ to deliver ROI or scale to production. The word "pilot," when used in reference to AI, was spoken in 18% fewer financial earnings presentations¹² with Wall Street analysts during the fourth quarter of 2025 compared with the third quarter.

“2040 may look worse than 1940 in terms of relative deprivation of access... And we need to solve for that.”

Joseph Sanford, MD
University of Arkansas
for Medical Sciences (UAMS)

6 Jillian McKoy, "The Loss of a Rural Hospital Is Devastating for a Local Community," Boston University School of Public Health, November 25, 2025.

7 Berkeley Public Health, "What Do Cuts to Medicaid Really Mean?" University of California, Berkeley, July 22, 2025.

8 AHA Center for Health Innovation, "5 Health Care Workforce Shortage Takeaways for 2028," American Hospital Association, September 10, 2024.

9 PwC Health Research Institute, "Medical Cost Trend: Behind the Numbers 2026," PwC, July 16, 2025.

10 Mark Mather and Paola Scommegna, "Fact Sheet: Aging in the United States," Population Reference Bureau, January 9, 2024.

11 MLQ.ai, "State of AI in Business 2025 Report," MLQ Quarterly, 2025.

12 Wall Street Journal CIO Journal, "Piloting AI Tools Isn't Cool Anymore," Wall Street Journal. Isabelle Bousquette, February 26, 2026.

4% Achieved scaled AI implementation with measurable outcomes



Many health systems find themselves somewhere in the middle. 42% report actively deploying AI across multiple use cases, but **only 4% have achieved scaled AI implementation with measurable outcomes**. Nearly a quarter report said that their piloting solutions operate in limited areas. Meanwhile, 45% say “difficulty scaling pilots” is a top execution obstacle that their teams still face today.

ROI measurement also remains a challenge. Four out of every five respondents say they struggle to determine or measure the ROI of AI, given the complexity of benchmarking solutions. 39% still don’t have a clear process for benchmarking AI performance or ROI. Without those key benchmarks, scaling AI beyond smaller pilots becomes very difficult to justify.

“If you make a wrong bet on a technology, you can blow your entire margins. Not-for-profit healthcare makes grocery stores look like they have excellent margins.”

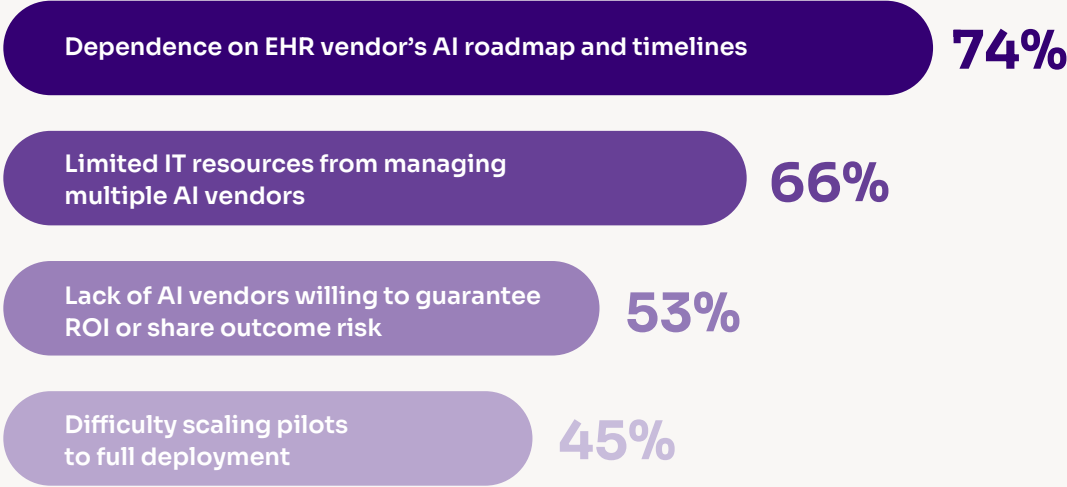
**James Whitfill, MD, SVP
Strategic Partnerships and
Chief Transformation Officer,
HonorHealth**

When calculating ROI, CIOs and other top technologists say there are three main measures they are closely monitoring. The first is revenue generation, cited by 62% of respondents. That was followed by hard dollar cost savings (59%), and then patient outcome improvement and staff productivity gains (both tied at 49%). Notably, leaders aren't expecting AI to be flawless. Only 5% of those surveyed report using "perfection" as a benchmark.

As health systems increase their AI investment, they also face the conundrum of justifying their spending to the CFO while acknowledging that ROI can require a long runway. And the bar is high, with a recent report finding that nearly 40% of executives now explicitly demand a 2x-3x return on their investments.

38% report that they don't expect to see ROI for 13 or more months, and yet, 74% say they need ROI within one year or less to justify the investment. Those timelines remain at odds with the rush to generate ROI from AI putting pressure on all stakeholders: the vendors that build the technology, the healthcare systems that launch these tools, and senior leaders and their workforce who have to be trained to use them to their full advantage. About one in four (26%) say long implementation timelines delaying measurable results is the greatest barrier to proving the value of AI¹³.

Biggest obstacles between AI strategy and execution



¹³ Fred Pennic, "The C-Suite Squeeze: Why Hospital IT Budgets Are Shrinking While AI Spending Soars," HIT Consultant, March 24, 2026

Automated care operations: a category coming into focus

Now more than three years into the generative AI boom that began following the debut of AI chatbot ChatGPT in November 2022, health systems are growing more disciplined about AI use case selection. This mirrors a broader trend across the economy: businesses are prioritizing fewer AI use cases that offer the greatest potential to scale across a function or entire enterprise, rather than small wins that only produce marginal efficiency gains or revenue growth on the margins.

“You can’t slather AI over problems; it will exacerbate the problems over time,” says Dwight Raum, Chief Digital Information Officer at Rochester Regional Health.

As an example, envision a broken pre-admission testing process. Adding a voice-only AI agent to call patients won’t solve the entire workflow. In reality, it will just introduce more complexity that can lead to rework, staff frustration, and patient risk.

The winning formulas for AI use case prioritization are those that produce a direct and measurable impact on staff, the bottom line, and most importantly, the patients.

“How to choose use cases: is it objective? How likely would it be to achieve it? Financial impact and short time to value a carry a lot of weight.”

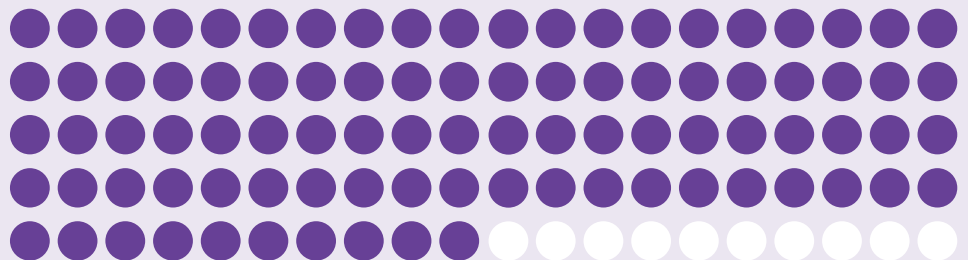
**Morgan Jeffries, MD
Medical Director for AI,
Geisinger**

“If it’s not something that really helps a patient as a healthcare system, why are we doing it?” asks Matthew Anderson, MD, CMIO at HonorHealth.

Respondents say cost reduction and operational efficiency (79%), revenue growth and reimbursement optimization (64%), and quality outcomes, compliance, and patient safety (60%) are among their top strategic priorities for 2026.

70+%

Rate automated care operations platforms as **“very critical”** or **“mission-critical”** to their 2026 objectives



How would you rate your organization's position on Agentic AI?

Healthy skepticism

57%

Actively investing

34%

Live and proven

6%

Survey data also reinforced where leaders see the greatest opportunities within the next 13 to 18 months: patient scheduling and care access (72%) and coordinating patient flow (58%). **More than 70% rate automated care operations platforms as “very critical” or “mission-critical” to their 2026 objectives.** This figure approaches revenue cycle management (81%) and clinical analytics (64%), both frequently cited among the greatest potential benefits of AI.

Agentic AI, which can autonomously handle actions like scheduling changes, sending follow-up reminders to patients, and care gap outreach with little to no staff intervention, is also beginning to advance. **A lot of senior leaders are still wary about agentic AI — almost 57% describe their position as healthy skepticism.** Still, 34% of respondents are actively investing in agentic AI. Fewer than 6% have live deployments with measurable ROI, signaling significant runway ahead for health systems that can properly deploy agentic AI.

“I think there is still some trepidation and fear about having fully automated processes and fully automated agents,” says Anderson. “More change management is required.”

About half (55%) report at least some AI initiatives already running with limited oversight from staff. This signals that human comfort with autonomous AI — from both the perspective of workers and patients — is already embedded in health system operations, even without formal agentic strategies in place.

This pattern mirrors how other infrastructure categories matured over time, including with the advent of the smartphone and tablets, where there was a gradual recognition of the technology's ability to transform business. Rapid adoption followed, and as the value equation became undeniable, IT departments had to play catch-up to securely implement the new technology.

For decades, health systems have been exploring ways to automate care operations. But the data suggests that AI advancements and the comfort gained from using the technology in pilot programs has reached the point where health systems are treating automated core operations as a vital part of their tech stack priority rather than a future consideration.

CIOs have reached an inflection point where automating care operations is no longer optional, but mission critical. Driven by mounting pressures like tight margins and workforce shortages, alongside rapid advancements in AI, technology leaders must make clear decisions on how to deploy and scale these technologies effectively.

The decisions that await them are the “how” — deciding which tools to buy off the shelf or customize with vendor partners, investing in change management and employee training, all while measuring usage and outcomes to generate a return.

How health systems are navigating EHR lock-in and vendor overload

CIOs and their IT teams increasingly field pitches from AI startups and software vendors that vow their solutions can generate a high ROI, but have to sort through if those product demos are legitimate, closely examine a vendor’s security protocols, conduct a pilot, and then proceed through lengthy contractual and onboarding processes. The survey found 25% are managing this resource-intensive process across four to seven AI vendors today.

Two-thirds of respondents (66%) cite limited IT resources from managing multiple AI vendors as a top three execution obstacle.

Working with too many AI vendors creates complexity in the system and produces additional, unnecessary costs. This problem is not new: a couple of years ago, businesses confronted it with the proliferation of AI assistants whose usage exploded across enterprises and later needed to be reined in.

Managing vendors frequently comes at a high cost for health systems. **51% report spending 11% to 25% of IT bandwidth on vendor management, integrations, and implementations alone.**

17% report spending as high as 26%-50%. Only 4% of health systems surveyed say they have the appropriate resources and processes in place. Nearly half (42%) say it’s either “not very sustainable” or “not sustainable at all.”

“One of the biggest bottlenecks is procurement — RFI, RFP, questionnaires, AI governance — that process alone can take several months,” says one CMIO at a Southwestern health system.

“We’re managing point solutions to ensure that any heavy lifting on the IT team’s part goes into the ROI model.”

**Chief Health Informatics Officer,
Large Southern Health System**

A clear preference has emerged. 72% say they would prefer to operate with one comprehensive AI partner who manages multiple use cases, but only 11% are currently taking that approach. Nearly half (49%) say that if they could rebuild their AI tech stack from scratch, they would opt for one comprehensive platform that automates multiple operational workflows end to end.

“You may have one specific, compelling solution; that’s not what we’re looking for,” says Anderson. “We’re looking for things that have enterprise impact — a partnership that is collaborative and long term.”



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The EHR dependency dilemma

For many health systems and their CIOs, the historical instinct when facing this level of technology vendor sprawl has been to consolidate back toward their electronic health records (EHR) vendor or to prioritize the EHR above all other alternatives. EHRs are traditionally the largest single budget line of a hospital system's IT spending, which is why many technology leaders prefer to optimize their biggest investment for new technology applications like AI. However, this path carries its own constraints.

EHR dependency is the most commonly cited execution barrier in the survey. **74% say reliance on their EHR vendor's AI roadmap is a top obstacle to executing their AI strategy.**



74%
Say reliance on their EHR vendor's AI roadmap is a top obstacle to executing their AI strategy

“ I think that the cost of waiting for Epic or Oracle, or any of them, is you might lose out. There's a late-mover disadvantage. Not a first-mover advantage, but there is a late mover disadvantage. ”

Matthew Anderson, MD
CMIO at HonorHealth

When asked whether health systems would wait 18 months for an AI feature from an EHR versus deploying a proven third-party vendor solution in three months with guaranteed ROI, **40% would move to a third-party solution now, 38% say it depends, and only 22% would wait.**

In the 2025 survey, when asked a similar question, 52% of respondents said they would wait for the EHR. This signals that urgency is mounting. But both paths come with pitfalls: overreliance on EHR vendors puts too much faith in a single solution, yet unchecked AI sprawl is difficult to manage.

CIOs know they must find the right balance to execute an effective AI playbook. To strike this balance, many CIOs look at 3 factors: does an AI use case directly affect my bottom line (e.g., where every % increase in surgery translates to millions in revenue)? Does this directly impact a mission-critical area like patient experience? And finally, can I afford to wait for the EHR to deliver? By applying this filter, CIOs can make data-driven decisions about when to wait and when to invest.

The consolidation shift: CIOs are choosing platforms over point solutions

With years of experience navigating EHR dependency and third-party vendor sprawl, health system leaders are developing a clear picture of what a better path ahead looks like, centered on fewer and deeper partnerships. “We’re trying to partner with as few groups as possible,” says Jeffries.

72% of leaders express a preference for one comprehensive AI partner over managing multiple specialized vendors. And yet, only 11% currently work with one AI partner today.

With a preference toward vendor consolidation in mind, technology leaders identified their key priorities before making an AI investment. Guaranteed ROI or a risk-sharing pricing model is the preference of 59% of respondents, who report that partners who won’t share outcome risks are increasingly disqualifying themselves from consideration.

Proven clinical outcomes with strong references also ranked high (63%), as did strong financial stability and long-term visibility (49%). “I think product roadmap is always important,” says a chief health Informatics officer at a southern health system. “It’s not everything, but for a place like us, it generally takes us a long time to get into these types of partnerships, and so we want to make sure that they’re durable.”

“If we have to build something new or if we have to try something out, you know how much of that burden is on the vendor and how much is on us.”

**Matthew Anderson, MD
CMIO, HonorHealth**

IT vendor selection doesn’t operate in a silo managed only by technology leaders. Health systems say it is critical that clinical leadership works closely with IT to ensure AI implementations reduce friction, rather than increase clinician burnout. C-suite leaders are keeping a close eye on the workforce effects of AI: 87% say “tech fatigue,” when staff exhaustion occurs due to learning new systems before seeing tangible value,” is a barrier to AI adoption.

When monitoring the effectiveness of AI tools, 62% of senior IT leaders say they are involving clinicians in defining success metrics beyond just efficiency; 57% are monitoring for new administrative burdens, workflow disruptions, and other unintended consequences; 53% are measuring clinician satisfaction and burnout metrics both pre- and post-implementation; and 43% are setting explicit expectations that productivity gains won’t increase patient volume requirements.

The bottom line: CIOs aren’t waiting to be sold on AI. They’re actively pursuing platform partners that can deliver real ROI, rapid time to value, and enterprise-scale impact. This is how AI moves from hype to results, by bolstering margins, elevating patient experience, and making daily work easier for staff.

Five actions every healthcare CIO should take in 2026

As health systems continue to navigate their AI journey throughout 2026 and 2027, ambition and urgency are both at elevated levels despite structural barriers around EHR dependency, frustration when it comes to vendor fragmentation, ROI accountability, and the strain on overworked IT departments. **The enterprises that succeed are those that treat AI implementation as an infrastructure challenge, not a project portfolio.**

The CIOs making the most progress on their AI strategies are deliberate in their decision-making, confident when they consolidate, and focused on comprehensive AI use cases that matter the most to their health systems, rather than spreading themselves thin by approving every available tool.

This research concludes with the following recommendations for CIOs and CMIOs:

1. No guarantees, no deal.

Risk sharing with AI vendors must be non-negotiable before agreeing to any partnership. With 80% struggling to measure ROI and 53% citing lack of vendor guarantees as a top obstacle, moving forward without risk sharing can be a costly error. Health systems must clearly define success metrics as a condition of any new partnership.

2. Automated care operations are no longer optional.

With more than 70% rating automated care operations platforms as “very critical” or “mission-critical” to their 2026 objectives, the health systems moving from evaluation to operationalization will win.

3. Too much patience comes at a cost.

With 74% citing EHR dependency as a top execution barrier and 40% saying they would move to a proven third-party solution rather than wait 18 months for the same feature, the wait-and-see approach carries real costs. CIOs must rigorously evaluate whether a three-month AI deployment outweighs an 18-month wait.

4. Stop managing, start consolidating.

72% say they’d prefer to work with one comprehensive AI partner, but only 11% are doing so today. With too much IT budget consumed by managing vendors, integration, and implementation, waiting for vendor sprawl to resolve itself is not a strategy. Health systems must prioritize consolidation now.

5. Move from urgency to action in 2026.

Tech leaders rate the pressure to operationalize AI as 7 or higher on a scale of 1 to 10. Waiting comes at a steep cost: 94% say AI operationalization delays would put their organizations at a competitive disadvantage compared to other health systems, while 68% believe it would increase clinician burnout and turnover. Health systems that fail to act now risk falling behind — for their clinicians and their patients.

Qventus

Qventus uses AI to intelligently automate operations across care settings and help health systems secure the margins needed to achieve their mission of delivering exceptional care to their communities.

Think of Qventus as an AI teammate working alongside your care teams. We reduce the administrative burden, identify potential issues upstream, surface suggested interventions, and actually take action to solve problems for busy staff—a collective system of action that sits on top of your enterprise systems of record.

[Let's talk](#)