



The 2026 benchmark for building with AI in healthcare

Who's building, what they're building, and how. A survey of 151 healthcare leaders.

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EXECUTIVE SUMMARY

Healthcare changed who counts as a developer

This is the first benchmark of how healthcare is building with AI. Paubox surveyed 151 healthcare leaders about how their organizations are using AI coding agents, what policies they have in place and who is involved in the process.

In most of these organizations, the staff building with AI sit outside the engineering function: IT teams, operations and administrative staff, compliance officers, and clinicians. IT staff build with these tools at 84% of organizations versus 58% for developers.

At roughly two in five of these organizations, developers are not among the builders. Widening the builder pool came as a side effect of AI adoption. Four out of five healthcare leaders rate the ability to let non-developers build an important reason they adopted these tools in the first place.

That broader group is shipping to patients: 80% of these organizations have deployed AI-assisted tools patients use directly. Every organization in the study handles PHI, which places this work inside the compliance perimeter.

What follows measures four things: how much these organizations are building, who is building it, what they are building, and the agent infrastructure it all runs on.

By the numbers

WHO BUILDS

84%

report IT staff building with AI coding assistants, the most common group of any function.

WHY

81%

rate enabling non-developers to build as an important reason they adopted these tools.

HOW MUCH

76%

built six or more tools, scripts, automations, or integrations in the past 12 months.

WHAT REACHES PATIENTS

80%

have deployed patient-facing AI-assisted tools into production.

WHAT IT RUNS ON

82%

connect existing applications or systems to AI services through APIs.

WHERE IT'S HEADING

70%

expect AI-assisted development to increase over the next 12 months.

WHAT THIS BENCHMARK SHOWS

The builder pool is widening

84%
versus
58%

IT staff versus developers or engineers.

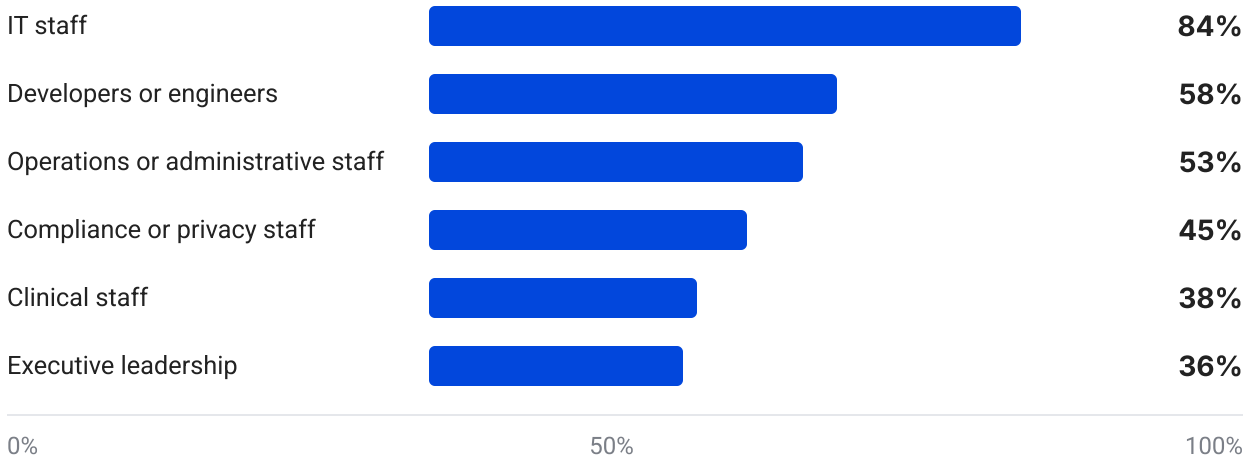
IT staff build with these tools at 84% of organizations versus 58% for developers. At roughly two in five of these organizations, developers are not among the builders.

Clinical staff, the group with the least software training and the closest contact with patients, appear at more than a third.

Who uses AI coding assistants to build

PAUBOX

Share of organizations reporting each group. Multiple selections allowed. n=151



Source: Paubox, *The 2026 benchmark for building with AI in healthcare*.

SUPPORTING FINDINGS

Five numbers from the benchmark

**76%****VOLUME**

Built six or more internal tools, scripts, automations, or integrations with help from AI coding assistants in the past 12 months, and more than a third built 21 or more.

**88%****ADOPTION**

Describe adoption as formal and organization-level, which leaves informal employee-driven use as a small minority.

**80%****PATIENT-FACING**

Have put patient-facing AI-assisted tools into production.

**82%****INTEGRATION**

Connect existing applications or systems to AI services through APIs to at least a moderate extent, and 79% report comparable use of MCP servers.

**70%****TRAJECTORY**

Expect AI-assisted development to increase over the next 12 months. One percent expect a decrease.

SECTION 01

Adoption is higher than most estimates

Among organizations using these tools, 9 out of 10 describe AI adoption as formal and organization-level.



How much they build

Among organizations using these tools, 9 out of 10 describe AI adoption as formal and organization-level, which puts healthcare well past the pilot stage and leaves informal employee-driven use as a small minority.

In the past 12 months, roughly three quarters of these organizations built six or more internal tools, scripts, automations, or integrations with help from AI coding assistants, and more than a third built 21 or more.

The usual story about healthcare and AI is that it cannot scale. Research from Qventus, based on

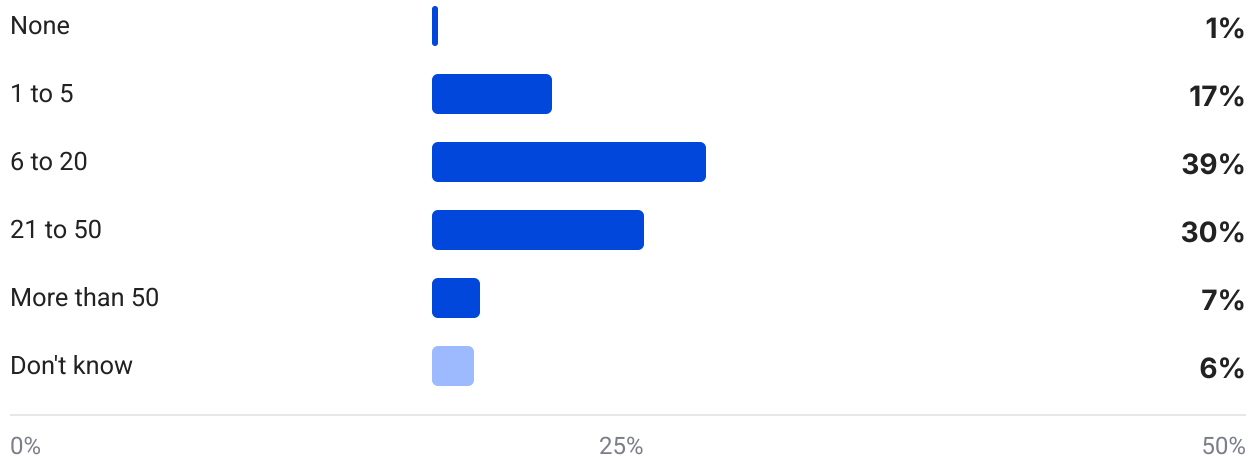
interviews and surveys with more than 60 senior healthcare IT leaders in April 2026, found that only 4% of health systems had scaled AI implementation with measurable outcomes, and 45% cited difficulty scaling pilots [1]. Seventy-four percent named dependency on electronic health record (EHR) vendor roadmaps as a top execution barrier [1].

While the industry conversation focuses on stalled enterprise AI programs, these organizations are shipping six to twenty tools a year of their own making.

Tools built with AI assistance in the past 12 months

PAUBOX 

Share of organizations. n=151



Source: Paubox, *The 2026 benchmark for building with AI in healthcare*.

Healthcare is building its own AI tools in response to everything it cannot buy.

SECTION 02

IT staff are building more than developers

IT staff build with AI coding assistants at 84% of these organizations. Developers and engineers appear at 58%.



Who builds it

These organizations adopted AI coding assistants for speed. The wider builder pool came with it.

When asked what drove adoption, development speed came out on top, cited by nine in ten organizations. Keeping pace with innovation and limited engineering resources followed close behind. Those three pressures are pushing all at once.

Enabling non-developers to build ranked last of

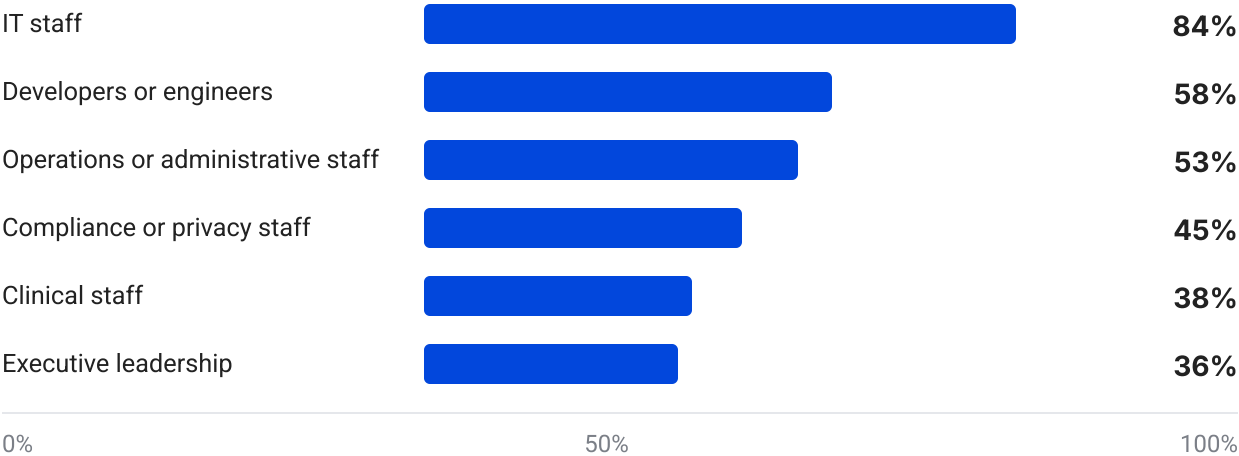
the five reasons surveyed, with only one third calling it "very important". Developers are building with AI at only just over half of these organizations. Clinical staff, the group with the least software training and the closest contact with patients, appear at more than a third. Review processes, access controls, and change management were historically built around an engineering team. IT staff now outrank that team by 26 points, and four other functions are building alongside them.

The survey measures organizations where AI-assisted building is now formal and sanctioned, and 88% rate their adoption as such. Paubox research from October 2025 found that 85% of healthcare IT leaders suspected staff were using unauthorized AI tools, which suggests informal use frequently runs ahead of formal policy [4].

Who uses AI coding assistants to build

PAUBOX

Share of organizations reporting each group. Multiple selections allowed. n=151



Source: Paubox, *The 2026 benchmark for building with AI in healthcare*.

SECTION 03

AI-built software has already reached the patient

Healthcare organizations build patient-facing software with AI more often than they build internal scripts.



What they build

Internal scripts and automations sit at 46%, below patient-facing forms and portals at 55% and chatbots at 53%. That inverts the sequence most teams assume, where low-stakes internal automation comes first and patient-facing systems follow once confidence builds. AI-assisted building is showing up everywhere at once rather than working its way up.

Data integrations and APIs lead at 65%, the plumbing the other six depend on and the layer that moves PHI between systems.

Set that against the finding that the people building these tools now extend well past the engineering team, and the two compound. A majority build patient-facing forms and portals with AI assistance. A majority also report

operations staff among the builders, and nearly two in five report clinical staff.

The software patients touch is coming from the widest group of hands healthcare has ever had on it.

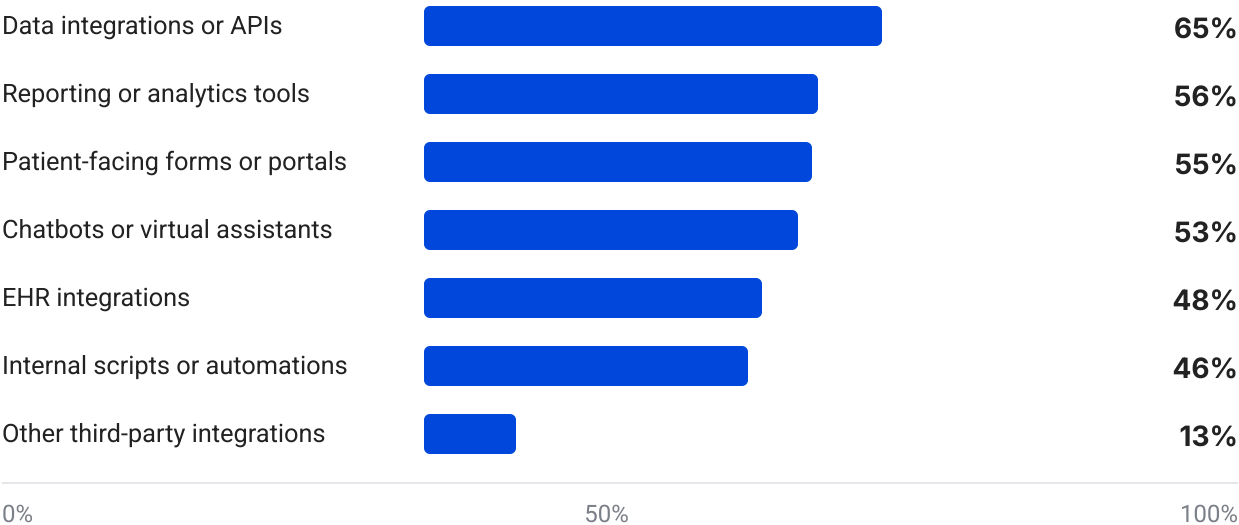
80%

have deployed patient-facing AI-assisted tools into production

What these organizations have built with AI assistance

PAUBOX

Share of organizations reporting each output. Multiple selections allowed. n=151



Source: Paubox, *The 2026 benchmark for building with AI in healthcare*.

SECTION 04

AI is wired into the systems that run the business

MCP is a much newer standard, and healthcare has adopted it at nearly the rate of a decades-old integration method.



What it runs on

Among these organizations, 82% connect existing applications or systems to AI services through application programming interfaces (APIs) to at least a moderate extent, and 79% report comparable use of Model Context Protocol (MCP) servers, which let AI assistants reach internal systems and tools. MCP is a much newer standard, and healthcare has adopted it at nearly the rate of a decades-old integration method.

An AI service reached through an API inside a clinical or administrative workflow is part of the production stack, carrying the same dependencies and the same failure modes as anything else in it.

The 65% building data integrations and APIs with AI assistance are, in many cases, building the connective tissue Wiesner describes.

82%

connect existing applications or systems to AI services through APIs, to at least a moderate extent

79%

report comparable use of Model Context Protocol servers, which let AI assistants reach internal systems and tools

"You can't integrate with 10, 15, 20 different point solution companies, separate vendors, and integrate them into your health system in a scalable and safe way."

Dr. Jason Wiesner · Chair, Imaging Service Line, Sutter Health [1]

PAUBOX

Let your agent send PHI. **Without handing it the key.**

The Paubox MCP Server gives AI assistants HIPAA compliant email and secure form tools through the Model Context Protocol.

[See how it works](#)

SECTION 05

What comes next

Seventy percent of these organizations expect AI-assisted development to increase over the next 12 months. One percent expect a decrease.



Where it's heading

Seventy percent of these organizations expect AI-assisted development to increase over the next 12 months. One percent expect a decrease.

Outside healthcare, 89% of development executives told Forrester's Developer Survey, 2025 that their firm is either currently implementing or actively planning a citizen developer strategy [2]. The difference in healthcare is the mechanism: AI coding assistants, versus the low-code platforms that carried the earlier wave. Low-code platforms

shipped with guardrails an administrator configured. Consumer AI coding assistants can ship with no compliance layer. Teams are able to move faster, but organizations need to be prepared with policies to keep patient data secure.

Gartner projects that by 2027, more than 65% of engineering teams using agentic coding will treat integrated development environments as optional, shifting control, governance, and validation to automated platforms [3].

"What began as a race to deliver the most 'magical' developer experience is now evolving into a contest of operational excellence, commercial maturity, and enterprise readiness."

Philip Walsh · Sr Director Analyst, Gartner [3]

Three things worth planning around

The builder pool will keep widening. Non-developer enablement is already an important driver for 81% of these organizations, and 70% expect AI-assisted development to increase over the next 12 months. Planning for software that comes only from an engineering team will describe fewer and fewer organizations.

Patient-facing output will keep growing. A majority already build patient-facing forms and portals with AI assistance, and 80% have

shipped patient-facing tools to production. The next 12 months add to that base.

The gap between vendor AI and self-built AI will widen. Health systems report real difficulty scaling vendor AI, with only 4% reporting measurable outcomes at scale and 74% blocked by EHR vendor roadmaps [1]. Self-built AI-assisted tooling has no such dependency, which is part of why the volume is what it is.

RECOMMENDATIONS

Recommendations

1 Inventory who builds, alongside what runs

Ask each department head which tools their team has built or changed with AI in the last 12 months. Most inventories catalog systems. This one catalogs authors, and it is the only way to find the 38% case where clinical staff are shipping software.

2 Add one question to your review intake

"Was any part of this built with an AI coding assistant?" A yes routes into the same review, logging, and access control as everything else. One field is cheaper than a new process, and it tells you what your inventory missed.

3 Pull the patient-facing list

Every AI-assisted tool a patient sees, submits to, or receives a message from. In this study 80% of organizations have at least one. Review that list on its own track, separately from internal tooling.

4 Map the integration surface and name an owner for each connection

82% of these organizations connect systems to AI through APIs and 79% use MCP connections. Document them while the count is still small enough to document.

5 Time the sanctioned path against the workaround

Publish the approved toolset, then measure how long it takes to ship something through it versus around it. If the approved path is slower, policy will not fix that. Design will.

6 Size governance for next year's volume

Seventy percent of these organizations expect AI-assisted development to increase. Review capacity sized for today's output is already behind.

7 Check the delivery layer on everything in that list

For each tool that emails a patient, sends a reminder, or delivers a result, confirm the channel it sends through is encrypted and covered by a BAA. This is the fastest item on the list and the one with the shortest path to a reportable breach.

★ EMAIL ENCRYPTION

Secure email for healthcare

What effective implementation looks like



100% HIPAA compliant

r2

HITRUST
CERTIFIED



4.9/5 stars in G2

The findings in this report describe a production reality: more software, built by more people, reaching patients, connected to more systems. Each of those trends adds another channel PHI travels through.

1 Secure the outbound layer specifically

Paubox Email Suite and the Paubox Email API encrypt every message by default, with no tags, portals, or user decisions required at send time.

2 Give agents a compliant way to act

The Paubox MCP server lets agents send HIPAA compliant email through the Paubox Email API, and the API key stays with the server process, never entering the model's context.

3 Build on infrastructure that carries its own proof

Paubox signs a business associate agreement (BAA) with every customer on every plan, enforces TLS 1.2 or higher by default, and is HITRUST certified.

4 Building with AI in healthcare

[Paubox's working guide](#) to which AI providers will sign a BAA, safe patterns for running models on patient data, and how an agent can send PHI without holding the credential that sends it [5].

"Nobody set out to turn their operations team into developers. It happened anyway. That's a net positive, but it means the risk surface has shifted and compliance and security teams have to catch up. And that starts with knowing who is building what."

Rick Kuwahara · Chief Compliance Officer, Paubox

Methodology

Paubox commissioned a survey of 151 healthcare leaders in July 2026. The margin of error is plus or minus 8.0% at the 95% confidence level.

Respondents were sourced through a double-blind online survey using global research panels. All respondents were compensated, and data quality was verified through manual and automated processes.

Three screening criteria applied. Respondents had to work in healthcare, at an organization that creates, stores, or transmits PHI electronically, and at an organization that uses AI coding assistants or AI-powered development tools to build or modify software, automations, or workflows. Every statistic in this report

describes healthcare organizations that already use AI coding assistants. None describe healthcare organizations generally.

The sample skews toward mid-sized and large organizations. Hospitals and health systems account for 63% of respondents, and 76% work at organizations with 201 to 5,000 employees. Findings describe established healthcare organizations.

This is Paubox's first benchmark of AI-assisted software development in healthcare. No prior Paubox survey measured this topic. This edition therefore establishes the baseline that future editions will measure against. Where prior Paubox research is referenced, it is cited and dated.

Sources

Primary data. Paubox, *The 2026 benchmark for building with AI in healthcare*. Survey of 151 healthcare leaders, fielded July 2026. Every statistic in this report without a numbered citation comes from this survey.

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Build on a compliant layer

Paubox encrypts every message by default, signs a BAA with every customer on every plan, and gives AI agents a compliant way to send PHI.

Start for free



Ryan Winchester

Paubox Customer, CareM