

*Early Successes, Untapped Potential, Lingering Questions:*

# AI ADOPTION IN HEALTHCARE REPORT 2024

Where artificial intelligence (AI) is already being tried by medical organizations, where it could pop up next, and how well it has performed are revealed in this report.

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HIMSS<sup>™</sup>

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from WebMD

## AI Adoption in Healthcare Report 2024

Where are medical organizations already putting artificial intelligence (AI) to work? What kinds of benefits are those applications yielding, and where do physicians and others in healthcare expect AI to be tried next by their employer? In previous reports, Medscape has tapped into physicians' feelings about the future of AI in both the [United States](#) and [Europe](#). We also wanted to provide insights and experiences with AI

from medical employers that already had history with the technology the benefits of early adoption. For this report, Medscape partnered with the Healthcare Information and Management Systems Society (HIMSS), a global professional society that includes an interest group focused on AI related issues. To learn more about HIMSS' membership and digital transformation tools, visit the society's website. Data came from a

jointly managed survey to practicing physicians and other clinicians, practicing nurses, IT professionals, clinical leadership, and executive leadership at medical organizations. All respondents were in the US

*Some totals in this presentation do not equal 100% because of rounding.*



### About HIMSS

The Healthcare Information and Management Systems Society, or HIMSS, is a nonprofit professional society and digital health advocate whose mission is to reform the global health ecosystem through the power of information and technology. With a global headquarters in Rotterdam, The Netherlands, and an Americas headquarters in Chicago, Illinois, HIMSS represents more than 120,000 individual members and partners with 430 provider organizations and 550 health services organizations to drive digital health transformation and health equity worldwide.



### About Medscape

Medscape is a free online global resource for physicians and other healthcare professionals worldwide. The publisher offers latest medical news and expert perspectives, essential point-of-care drug and disease information, and relevant professional education and CME. Medscape's website and mobile app are part of the WebMD Health Professional Network.



## Right Now, AI Is Most Often Used With Administrative Tasks



Percentages show share of respondents whose workplace is currently using AI.

If respondents said their medical workplace was already leveraging AI in some way, our survey showed them a list of 19 likely applications and asked where AI specifically was in use. If they didn't know that detail, we excluded those respondents from the chart above.

Administrative tasks that rely on large language model AI

already in commercial circulation (think transcription and routine communications) topped the in-use-now list.

The entry point "to this technology is ambient AI," says HIMSS Senior Director Robert Havasy. "On the administrative side, it's a quick win. These tools are relatively mature and easy to deploy, and you don't need to integrate with a lot of your data

to do listening and transcription." AI hasn't yet arrived with applications like tailoring treatment plans and developing prognoses in part because many clinicians remain skeptical, adds Anne Snowdon, chief scientific research officer at HIMSS. Plus, technology companies simply haven't yet created the specific AI tools that will bolster those physicians' confidence, she says.

## On Their Own, Physicians Use AI for Analytical Help

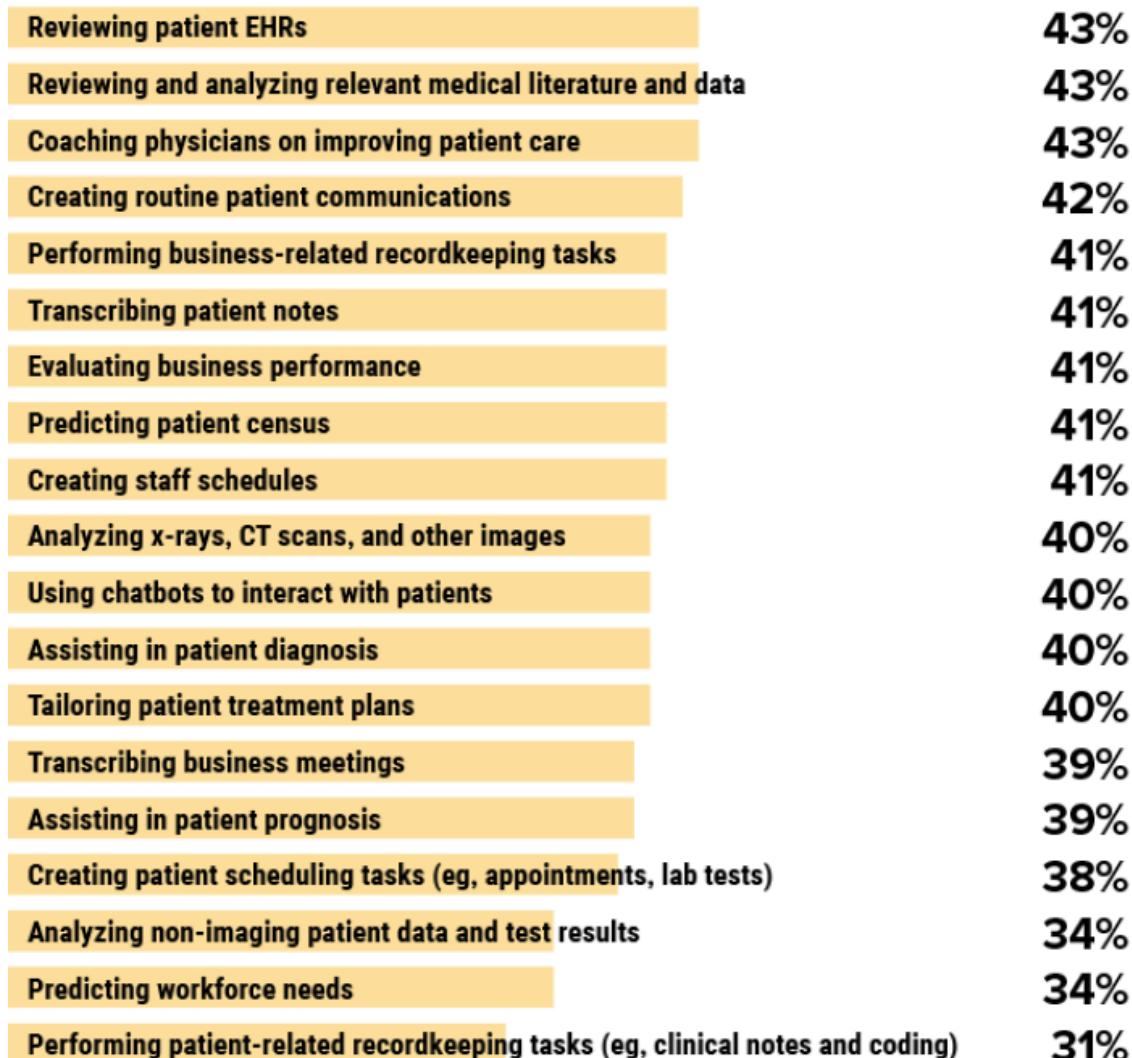
Transcribing patient notes	17%
Reviewing and analyzing relevant medical literature and data	17%
Assisting in patient diagnosis	16%
Creating routine patient communications	14%
Performing patient-related recordkeeping tasks (eg, clinical notes and coding)	11%
Analyzing x-rays, CT scans, and other images	10%
Reviewing patient EHRs	9%
Creating a staff schedule	8%
Tailoring patient treatment plans	7%
Assisting in patient prognosis	6%
Performing business-related recordkeeping tasks	6%
Creating patient scheduling tasks (eg, appointments, lab tests)	6%
Predicting workforce needs	6%
Using chatbots to interact with patients	5%
Coaching physicians on improving patient care	5%
Analyzing non-imaging patient data and test results	4%
Transcribing business meetings	4%
Predicting patient census	3%
Evaluating business performance	3%
Other	4%

Percentages show share of practicing physicians who are personally using AI in this activity regardless of whether their workplace is.

The previous page ranked potential applications by how many survey respondents told us their employer already used AI. What about the 50% of practicing physicians who told us they leverage AI on their own to help with work? Their patterns could provide a clue for where medical workplaces prioritize AI implementations.

Using an AI engine to search and categorize medical literature was ranked higher on the physicians' preference list than the matching medical organizations' list. The same was true for asking AI for help in diagnosing a patient's condition, tailoring a treatment plan, or aiding in a prognosis.

## Where Medical Workplaces !Imagine AI Next: Reviewing EHRs, Literature



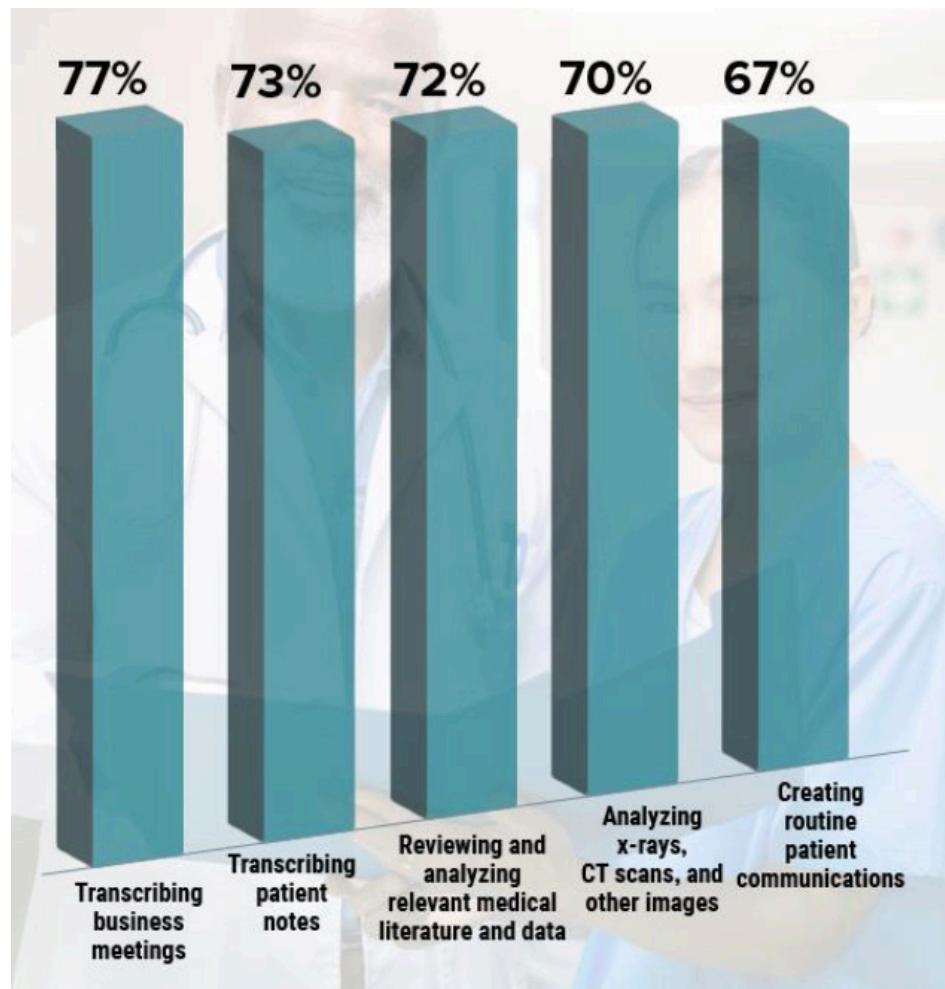
Percentages show share of respondents who knew how their workplace was considering using AI.

Here, we asked respondents whose medical employers already use AI to reveal where else AI could be put into action. Interestingly, applications associated with business functions rose above more administrative tasks to the top of the list.

In the near future, the release of OpenAI's search engine live in ChatGPT will entice many more medical organizations into leveraging AI to review medical literature, Havasy believes. Meanwhile, a lack of sufficient

digital infrastructure is likely the reason more survey respondents didn't anticipate using AI to analyze images in the near future, Snowdon adds. "In a paper I published, out of 1026 hospitals in the US, maybe 25% have the digital maturity that would support an AI application in radiology."

## Right Now, AI Produces Best Results for Medical Workplaces in Transcription



Percentages show share of respondents who rated AI's current effectiveness in their workplace. 4 or 5 on a scale of 1 (Not at all effective) to 5 (Very effective).

AI is still in the dawn of its technological evolution, especially in a field like medicine that moves deliberately. Still, many medical organizations that are early adopters have had time to note positive results, even if it's more a matter of sensing than tracking.

Several of the AI applications that respondents told us are

already effective line up with the administrative and recordkeeping tasks that are most popular in medicine now.

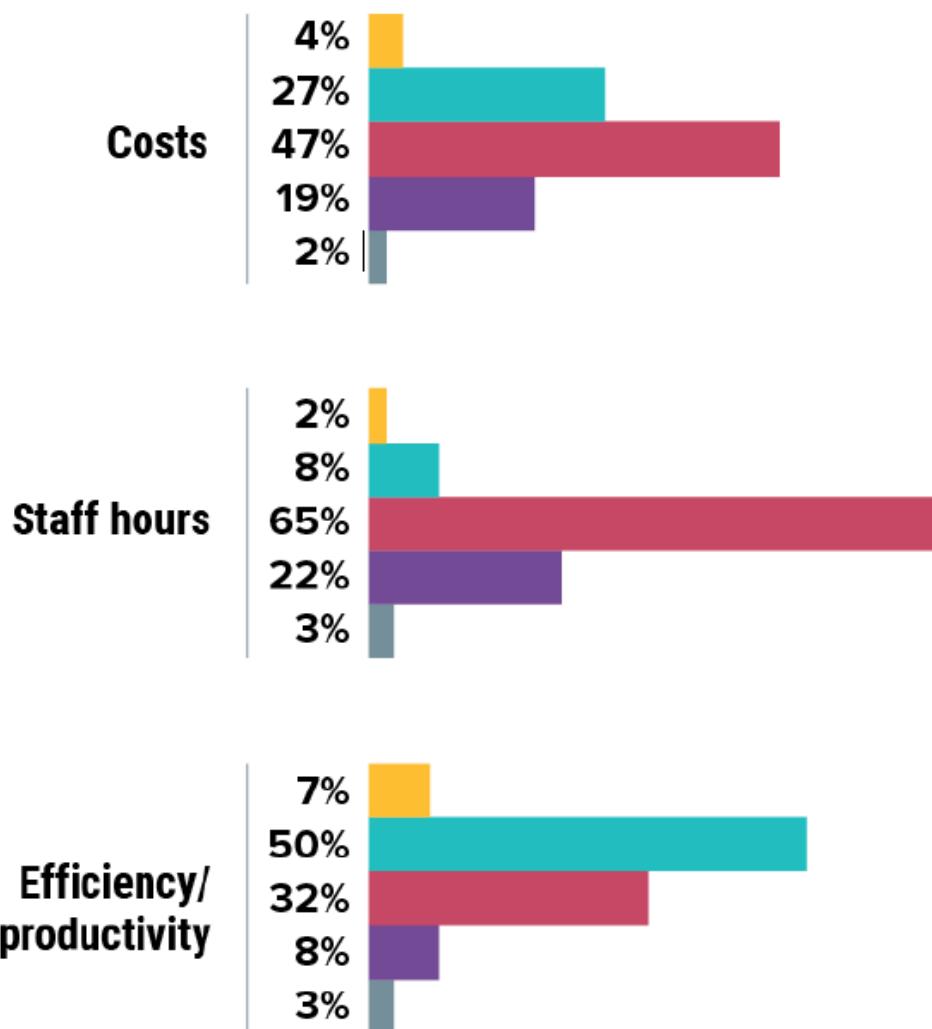
It's worth noting how effective respondents said using AI has been in reviewing medical literature. Much investment has gone into adapting AI to radiology, and likewise using the technology to analyze images got

high marks for its effectiveness to date.

Toward the bottom of the chart, comparatively slow development of AI tools could affect how respondents perceived tasks like evaluating medical business performance or headcount.

## AI Report Card for Performance Finds Efficiency Gains

● Substantially increased ● Somewhat increased ● No impact ● Somewhat decreased ● Substantially decreased



*Respondents' workplaces are currently using AI.*

Our survey asked for an early evaluation of how well AI is boosting overall efficiency and productivity, and reducing costs and staff time, in medical organizations.

Respondents gave highest marks in efficiency/productivity, with 57% of them saying it substantially or somewhat increased performance. IT professionals felt this way

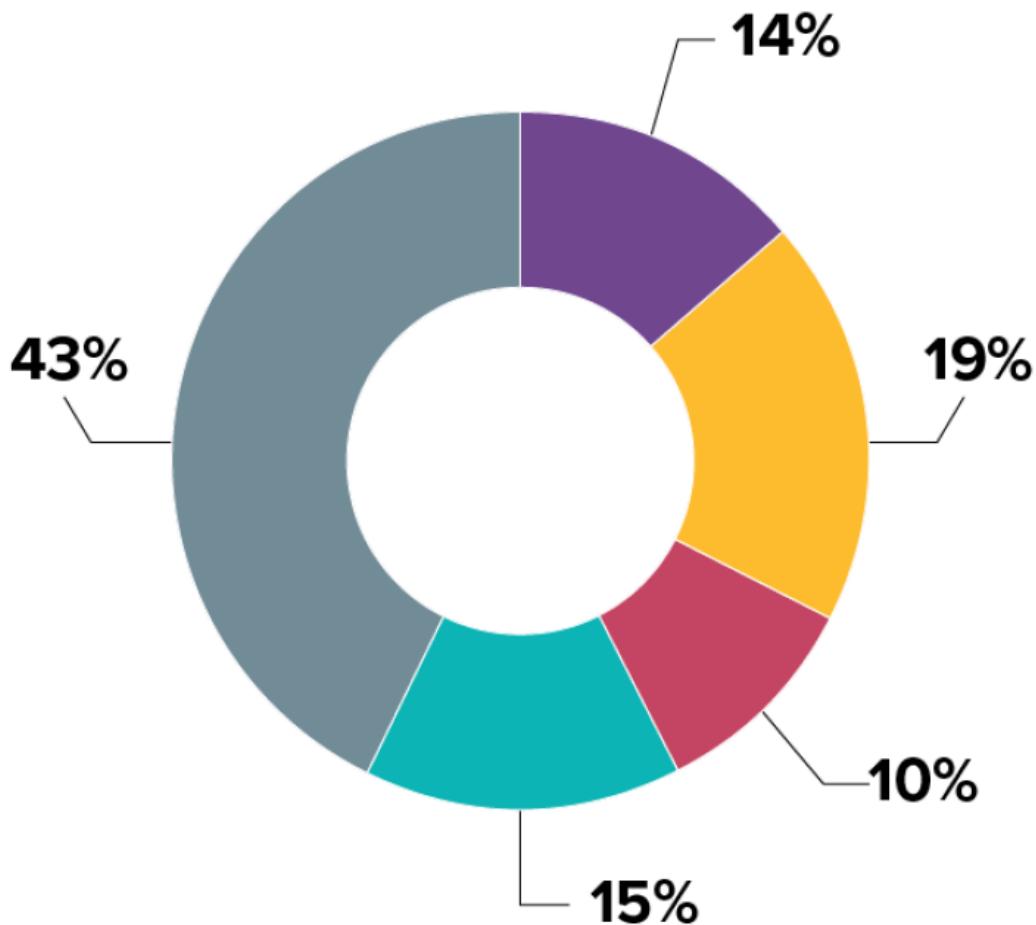
significantly more often than practicing physicians did. Twenty-five percent of respondents reported AI had substantially or somewhat cut staff hours, and 21% said the same for costs.

Bear in mind, Havasy cautions, “healthcare is complex. ROIs are never simple and direct. It takes a while to eke out savings.” It will be interesting

to watch how the healthcare industry decides to measure AI productivity gains, Snowdon adds, “because we just haven’t been fabulous in measuring, particularly in an inpatient setting.”

## Most Medical Workplaces Have Used AI for at Least 10 Months

● 1-3 months ago ● 4-6 months ago ● 7-9 months ago ● 10-12 months ago ● More than a year ago



How commonplace are early adopters of AI in medicine? A McKinsey & Co. survey published in May said 2023 was a year of discovery for generative AI, and 2024 was the year of application. Around 2 in 3 business organizations told McKinsey they regularly used generative AI, nearly double the rate from 10 months earlier.

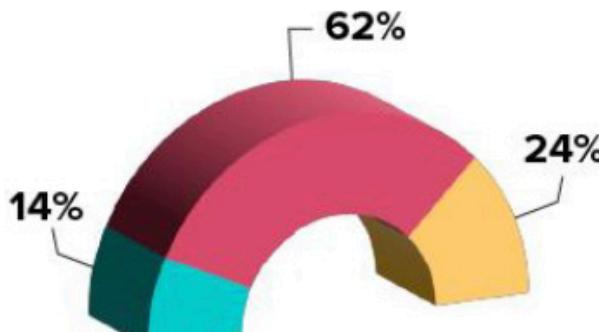
But medical providers can be a cautious lot and have some good reasons to go more slowly than other businesses. One in three respondents whose employers now use AI told us they only started within the last 6 months.

Our survey also drilled down and asked how soon medical employers would start using AI for each of the

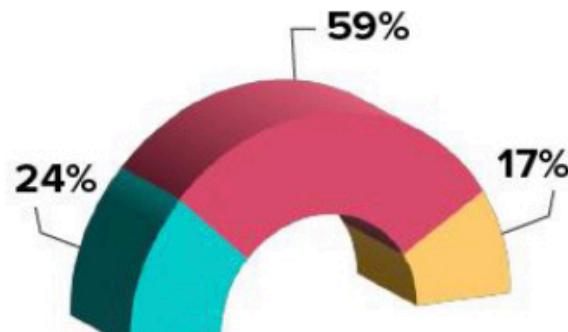
19 common applications mentioned on earlier slides. The most frequent response was within 2-3 years (chosen by anywhere from 44% to 57% of respondents, depending on the activity). Anywhere from 26% to 45% of respondents, meanwhile, said within a year.

## How Medical Workplaces Help Staff Leverage AI—or Don't

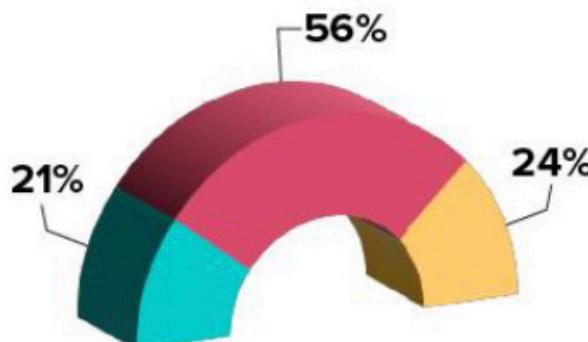
● Yes   ● No   ● Unsure



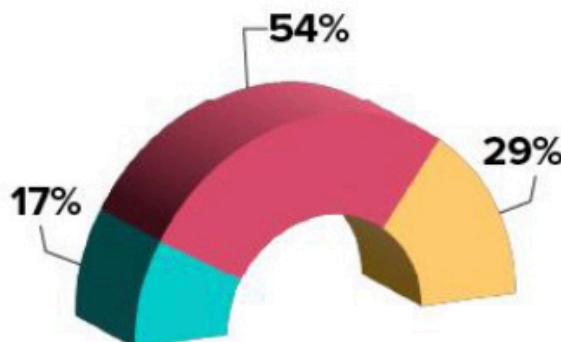
**Access to chatbots**



**AI-related training**



**Encourage AI use for work**



**Restrict AI use for work**

AI won't become ubiquitous in medical workplaces simply because individual physicians or AI professionals champion it. How actively management works with employees to help gradually integrate AI will be critical.

In our survey, 24% of respondents said their employers provided AI training. Twenty-one percent reported their management openly encouraged using AI for work purposes, and 14%

said the employer provided chatbot access. Here again, IT professionals were likelier than doctors to say their employers delivered in each of these regards. And more than half of respondents said their organizations didn't restrict AI use at work.

"We're starting from zero" for training on AI-driven care delivery, according to Snowdon. "There's a relative lack of training programs, workshops, and efforts to define certifications around

AI and clinical practice. It's chicken-or-the-egg."

On a separate survey question, 42% of respondents characterized their management as "very positive" or "positive" about AI in medicine. Only 27% of them said the same of the medical staff at work.

## Doctors Are Less Inclined to Use AI Away From the Office

### Total respondents



### Physicians



Regardless of whether their organization uses AI and/or encourages individual employees to do so for work, do physicians experiment with AI away from the office? If they do, then medical employers could tap into a support group of doctors who are early adopters as they expand AI applications.

In our survey, physicians were trying AI on their own time less frequently than the broad groups of respondents (including executives and clinical leaders, IT professionals, nurses, and other clinicians).

## Where in Healthcare Do You Expect the Most Change From AI?

**“Hopefully it will make patient care more consistent, patient notes more accurate, and decision-making more timely.”**

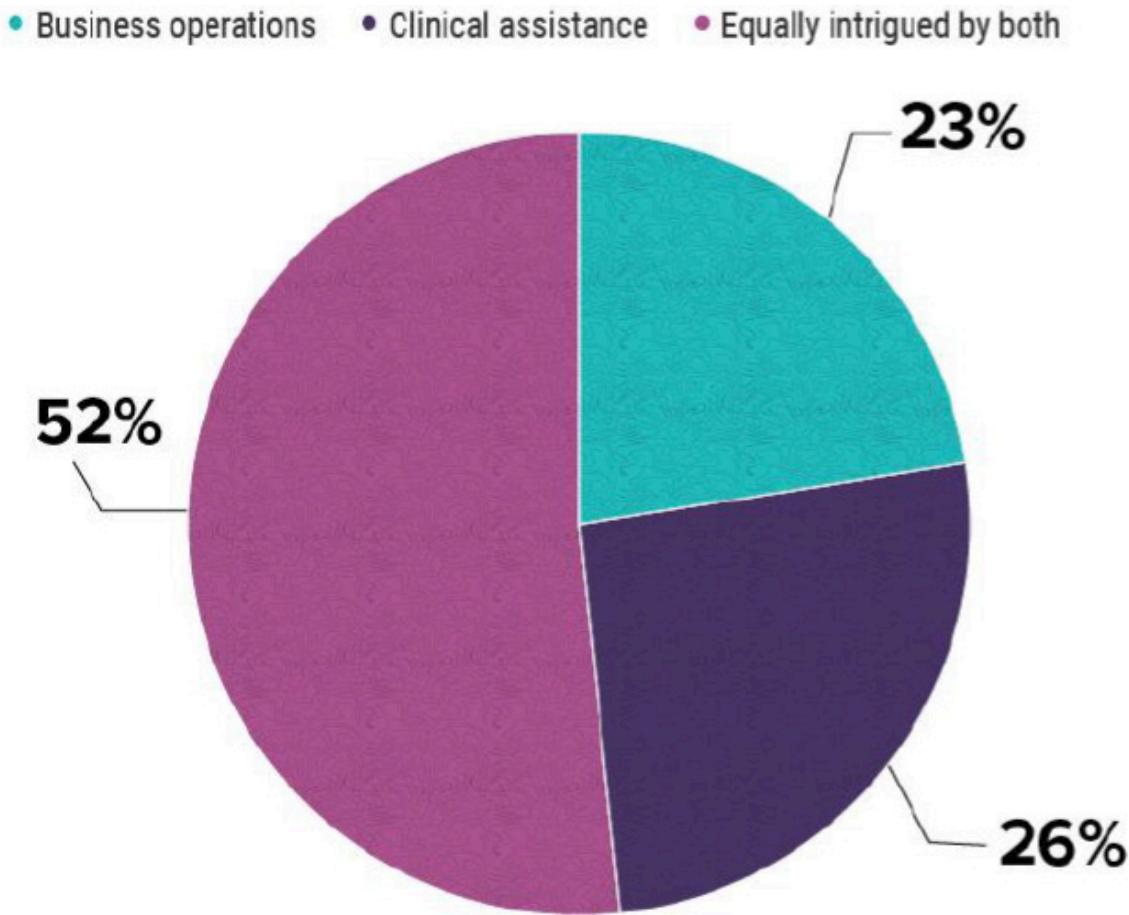
**“AI will optimize efficiency and reduce provider burnout by reducing the number of manual administrative tasks.”**

**“AI will assist in differential diagnosis and recommending optimal treatment plans by reviewing current patient-specific characteristics, including social factors of health.”**

**“All of it – but for the worse.”**

**“AI is going to improve medical coding/billing. It is going to find codes physicians missed and maximize the billing process.”**

## AI More Intriguing for Business or Clinical? A Fairly Even Split

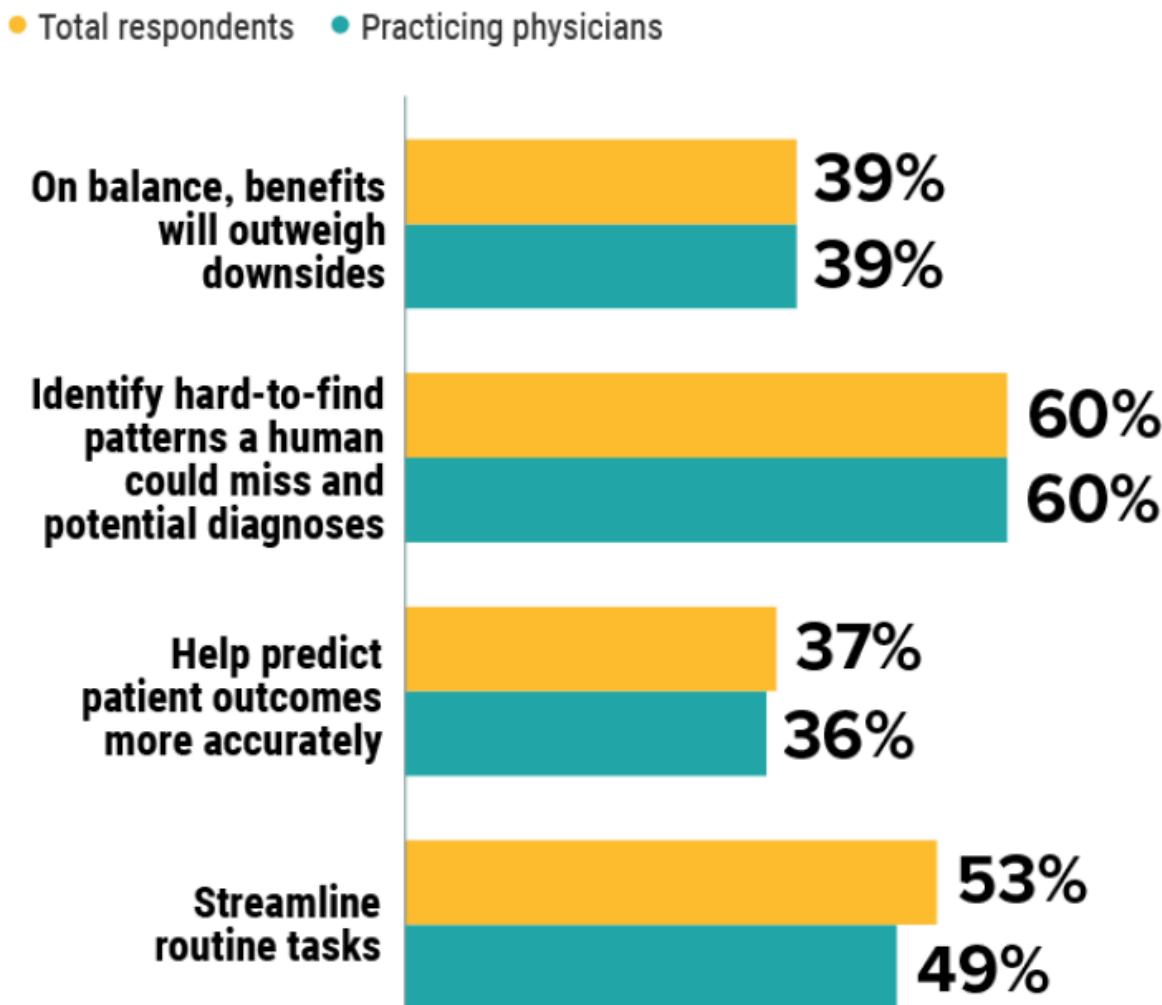


*Respondents were asked how they were personally more intrigued.*

Our survey audience included representatives of both the business and clinical sides of medicine, so we asked respondents if they personally were more intrigued about AI's future in one of the two arenas. Their answers essentially split down the middle.

"I'm seeing optimism and intrigue here on both sides," Havasy says. It's interesting to see parallel levels of AI support, Snowdon adds, given that the potential operational benefits "are more clearly in front of people" while clinicians might fret when AI developers publicly worry about a lack of guardrails.

## Identifying Patterns Gets Most Praise Among Potential AI Advances



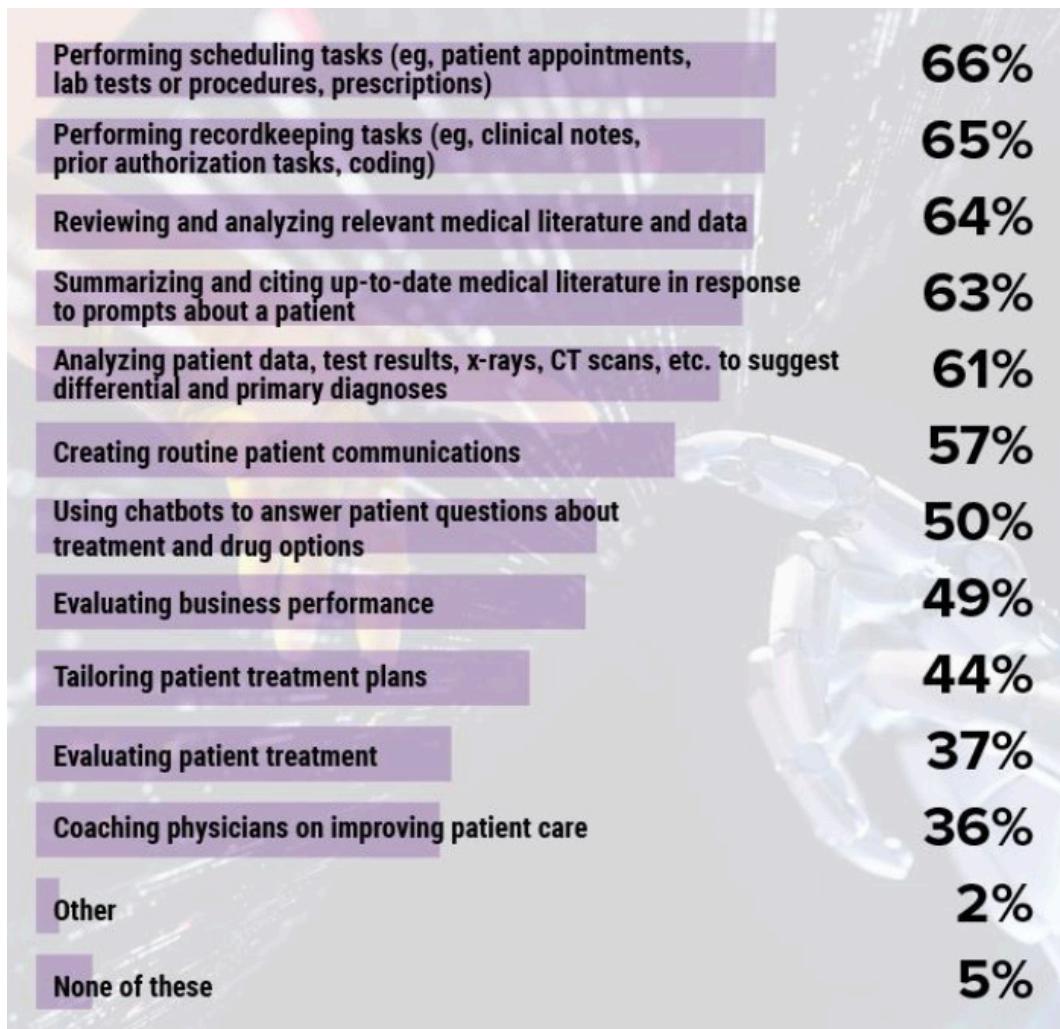
Percentages show share of respondents who rated each statement as 4 or 5 on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

Our survey asked respondents how they felt about several statements on AI and its touted potential in medicine. Practicing physicians tended to give similar evaluations as the entire group did.

They most often agreed with AI's potential abilities to discern patterns and help predict patient outcomes. Fewer than 40% of respondents believed that AI's benefits in the medical workplace will surpass its downsides.

"I'm a little bit surprised by the pessimism," Havasy says. But potential merits and demerits of AI in medicine remain "theoretical" right now, and most clinicians by nature are persuaded only by hard evidence that a substantial number of patients will enjoy great outcomes, Snowdon and he agree.

## On Ranking of AI's Potential, Use in Patient Care Trails



*Respondents could choose more than one.*

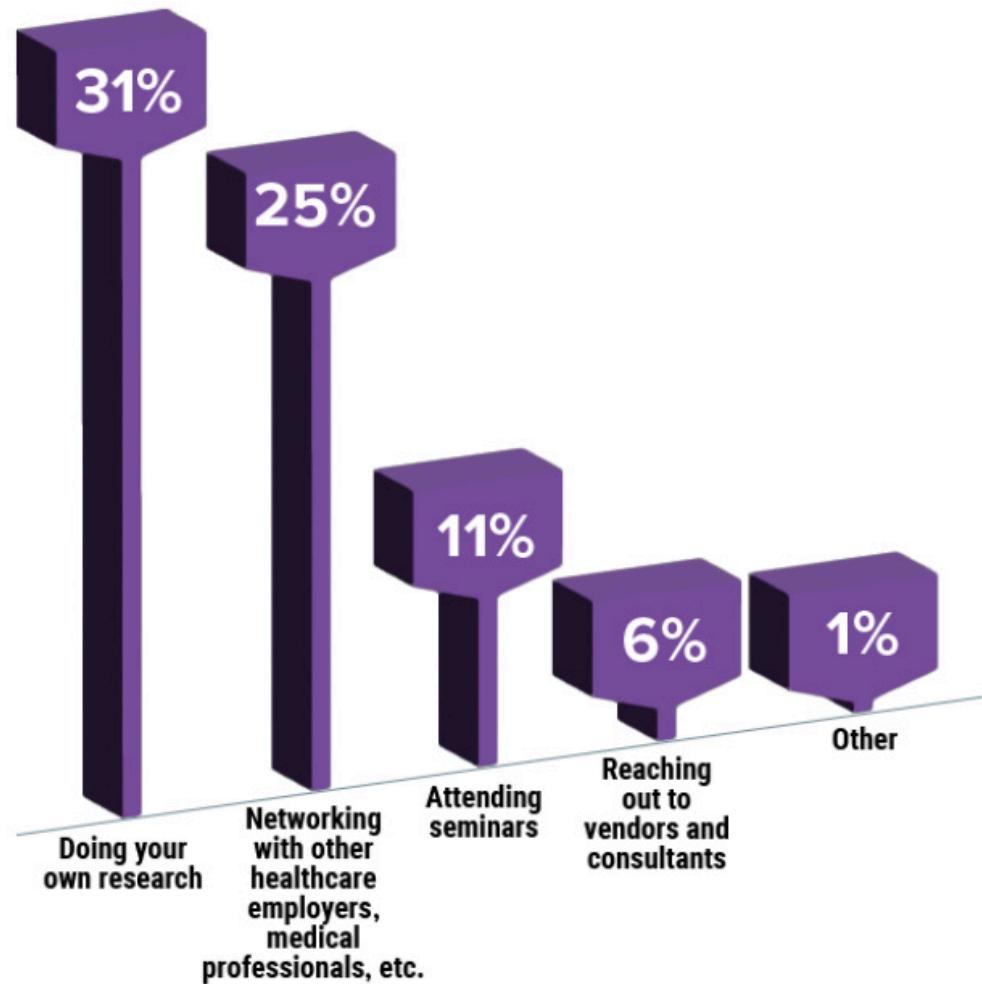
The above chart represents a ranking of applications where our survey's respondents believed AI has a future in medicine.

At this point in time, the more administrative tasks topped the list. Applications with a direct impact on patient care trailed the pack. In each of those, respondents in executive or clinical leadership or in IT more often supported AI's

potential than practicing physicians did. It's important to add context here, according to Havasy. For example, perhaps survey respondents downplayed AI's future in creating patient treatment plans and evaluating patient treatment because they thought medical organizations already do an excellent job and didn't see room for much improvement, he suggests.

With several applications—using chatbots on patient questions, coaching doctors for patient care, and creating routine patient communications, for example—the IT professionals in our survey were significantly more positive about the future than were practicing physicians.

## How Doctors Think Medical Workplaces Get Best AI Intel

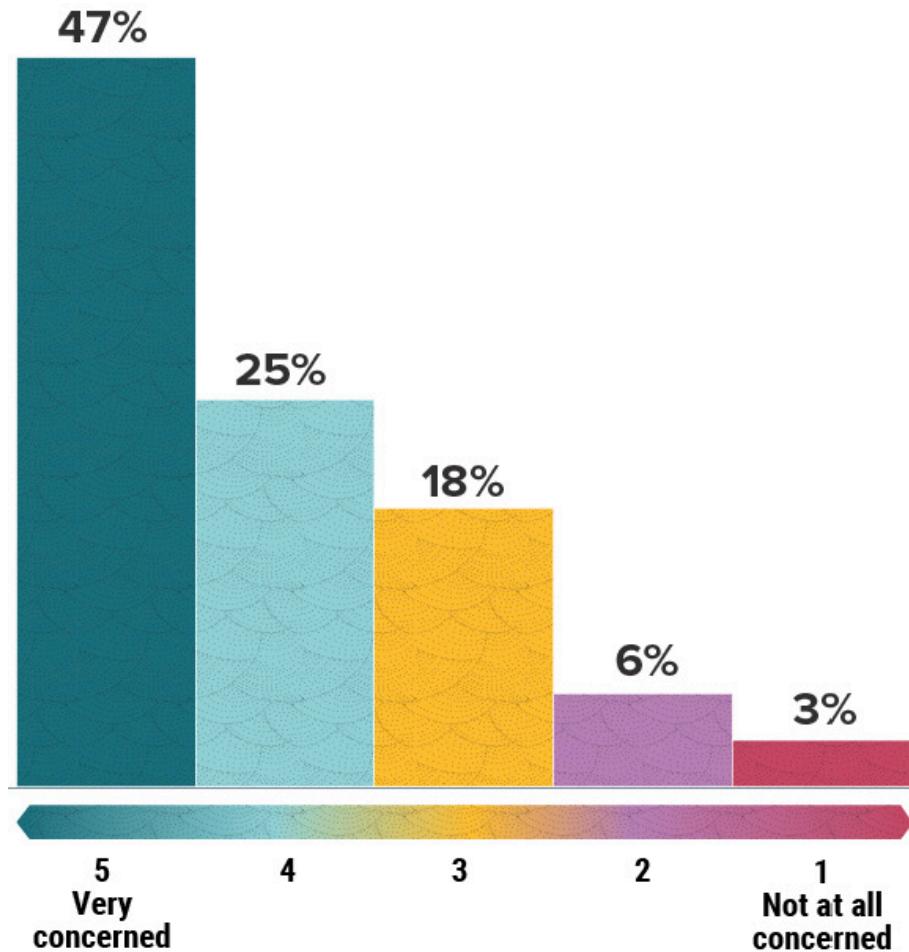


*Respondents could choose one. Responses from physicians whose workplaces don't use AI aren't shown.*

You can't sit through a football game's commercials or glance at online ads these days without getting confident predictions of a future economy managed by AI. Our survey asked physicians about the best way for their organizations to get the best information about using AI in healthcare.

By healthy margins, they answered that researching the pros and cons of AI yourself and networking with peers at other medical employers offer the most help. The above chart does not show responses from the 27% of physicians whose employers do not currently use AI, significantly more positive about the future than were practicing physicians.

## Substantial Data Privacy Issues Seen With AI

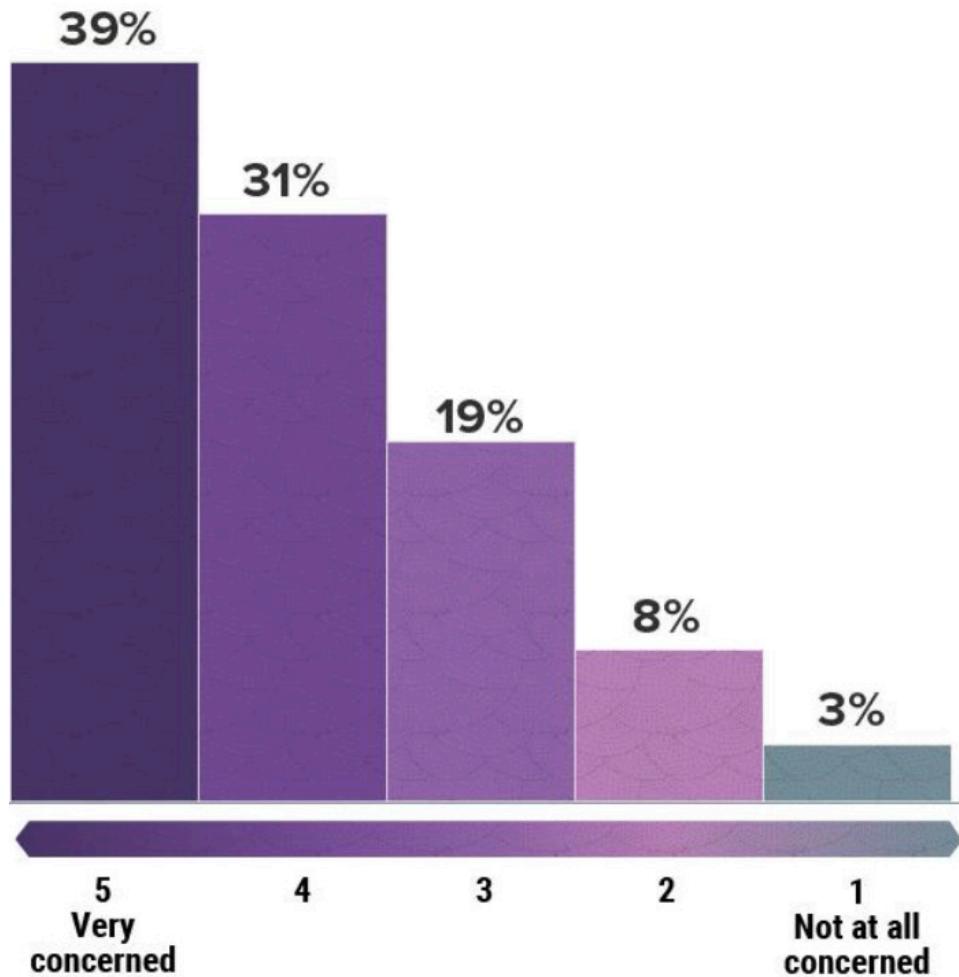


One of the major AI worries raised by people working in medicine concerns the privacy of patient and business data. Critics point out that many AI technologies are controlled by private corporations, which they say have a profit motive to monetize healthcare data. Others anticipate bad actors misusing AI to breach supposedly secure data or to invent algorithms that override anonymity of patient health information.

Seventy-two percent of respondents in our survey voiced higher levels of concern about maintaining data privacy, so these concerns seem to be shared within medical organizations.

“Hopefully there will not be unauthorized use of AI resulting in loss of patient data,” one survey participant said.

## 7 in 10 Doctors Worry About Ethical Dilemmas With AI



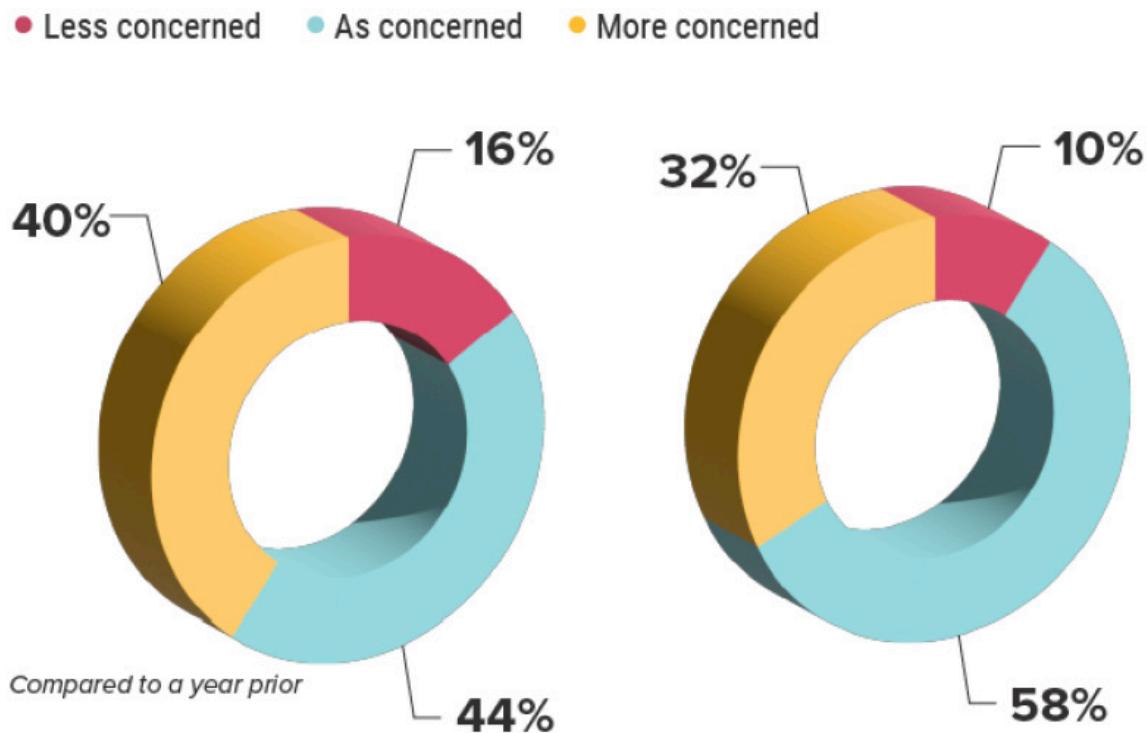
*Respondents were practicing physicians.*

For many doctors, the rise of AI in medicine is replete with ethical issues that might not occur to a technology developer. What if, for example, biased data is fed into an AI engine, leading to biased treatment of a patient on the other end? And who would be responsible for such unfavorable outcomes after reliance on an AI system?

A previous [Medscape report](#) tapped into physicians' feelings about the ethics in specific scenarios, like using a chatbot to obtain a patient's procedural consent and letting a generative AI system run a mental health consultation. "Relying on AI instead of actually touching and examining patients is not right or ethically correct," one survey respondent insisted.

Seventy percent of the practicing doctors in our survey described themselves as having higher levels of concern about ethical dilemmas as AI's role in medicine expands.

## How Physicians' Attitudes Shift on Key AI Issues



### AI could substitute for doctor's judgment

Many doctors are hardwired to be suspicious of any development that could intrude on their clinical judgment and expertise or raise the risk of medical malpractice.

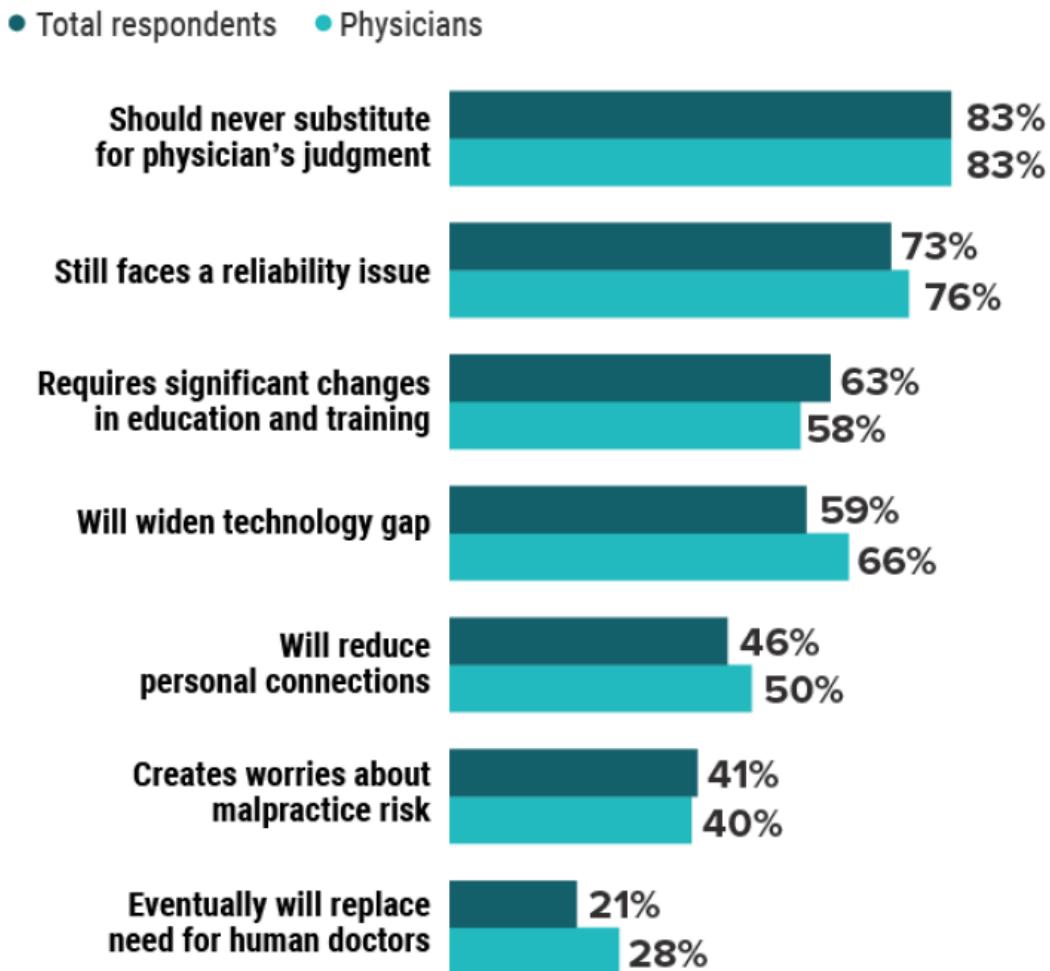
With that backdrop, it's not surprising that 60% of practicing physicians in our survey were at least as concerned as they were a year earlier about AI substituting for their clinical know-how. Even more often

### Malpractice risk from AI in diagnosis/treatment

(90%), they said they were as concerned or more than a year ago that using AI in diagnosis and treatment could affect malpractice risk.

"Pandora's Box is open, and I reckon...a few malpractice lawsuits will have to flourish before adequate controls, or attempts to control, AI occur," predicted one respondent who performs systems security risk assessments.

## Potential Downsides With AI: How Much Do You Agree?



Percentages show share of respondents who rated each statement as 4 or 5 on a scale of 1 (Strongly disagree) to 5 (Strongly agree).

Most of the time, the responses from all respondents to our survey and from the practicing physicians alone were pretty comparable.

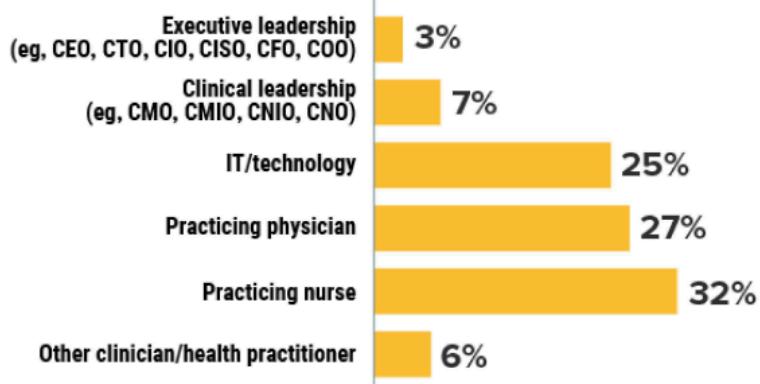
At similar rates, they agreed with the ideas that AI should never take over for a doctor's independent judgment, that the technology generally has a way to go before

reaching sufficient reliability in the medical world, and that education and training about AI in medical workplaces should be beefed up.

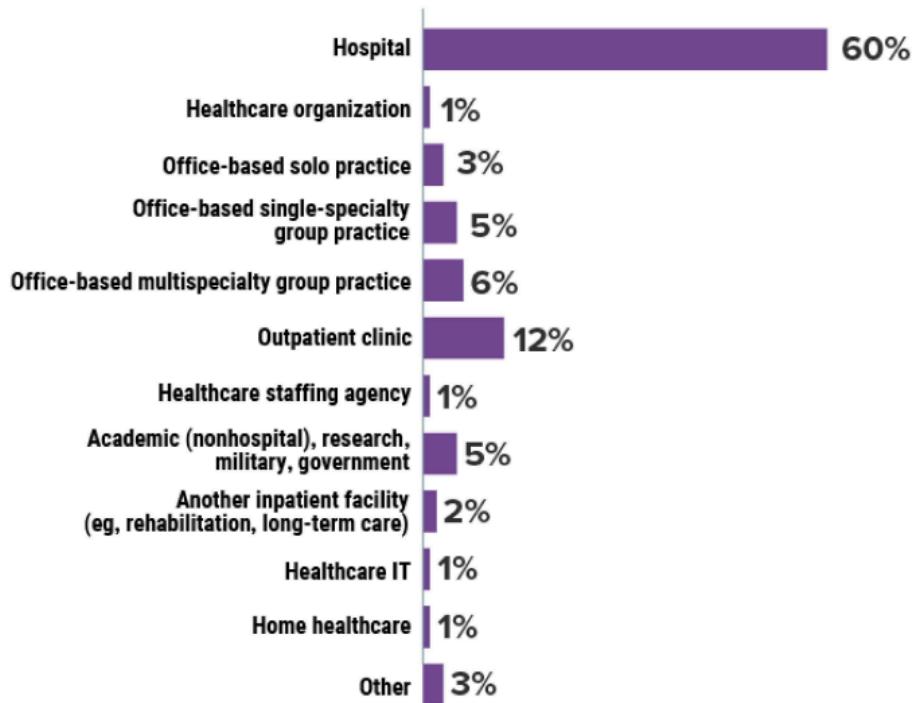
Doctors were somewhat more concerned than others in our survey that AI will undermine personal connections with patients and eventually push aside physicians.

## Demographics

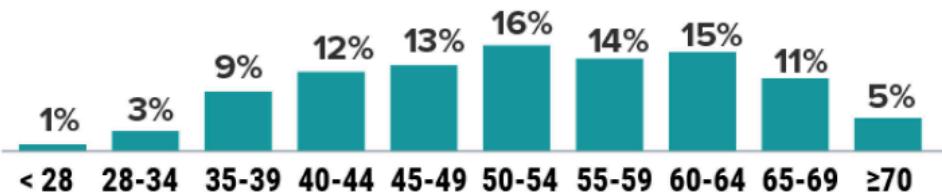
### JOB FUNCTION



### WORK SETTING



### AGE



## Methodology

### Survey Methodology

Physicians were invited to participate in a 10-minute online survey on the adoption of AI in healthcare.

### Screening Requirements

Respondents were required to be US executive or clinical leaders, practicing physicians or nurses, other clinician/health practitioners, or IT/technology professionals. Respondents who worked in academic (nonhospital), research, military, or government settings were excluded.

### Sample Size

846 respondents met the screening criteria and completed the survey. Respondents were recruited from HIMSS (322) and Medscape (524) membership ranks.

### Recruitment Period

September 4-October 16, 2024

### Sampling Error

The sampling error was at a 95% confidence level, using a point estimate of 50% (+/-).

Analytic Group	Sample Size	Margin of Error
Total respondents	846	3.37%
IT/technology professional	215	6.68%
All healthcare professionals	546	4.19%
Practicing nurses/other clinician/health practitioner	321	5.47%

### Honoraria

Respondents who completed the survey were entered into a sweepstakes for a chance to win a \$100 Amazon gift card.