

Artificial Intelligence in Healthcare

Insights from a statewide survey of healthcare professionals

This report summarizes healthcare professionals' perspectives on AI across the following aspects:

- Knowledge and experience with AI
 - Willingness to use AI
 - Perceived facilitation conditions
 - Areas of concern regarding AI implementation
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EXECUTIVE SUMMARY

PURPOSE

This report summarizes findings from a survey of healthcare professionals in South Carolina, as a component of the AI-enabled Devices for the Advancement of Personalized and Transformative Healthcare in South Carolina (ADAPT-SC) project. This broader project is a research initiative focused on understanding and supporting responsible artificial intelligence (AI) integration in healthcare devices and settings. Results from this survey detail healthcare professionals' views on the use of AI in healthcare. The goal of the survey was to understand healthcare contexts within which healthcare professionals are most open to using AI, the benefits and concerns of using AI that they anticipate, and the conditions they believe are necessary for practical and responsible AI adoption in real clinical settings.

We assessed:

- Healthcare professionals' familiarity and experience with AI
- Willingness to use AI across common clinical and administrative domains
- Expectations about AI's impact on patient care, workflow, and healthcare professional well-being
- Practical facilitators and barriers (e.g., integration into workflow, privacy/security, liability clarity, and regulation standards)

PRIMARY FINDINGS

- Overall, healthcare professionals report moderate knowledge of AI, but experience using AI in healthcare lags behind general experience.
- Healthcare professionals are most willing to use AI in a "support" capacity, such as research summaries, documentation, and drafting materials.
- Healthcare professionals express greater hesitation toward using AI for higher-stakes, patient-facing tasks (e.g., virtual assistants, telehealth, imaging interpretation, chatbots, triage).
- Data privacy assurance, AI validation, proper training, feedback channels, and patient consent emerged as healthcare professionals' highest priorities for integrating AI in their workflows.
- Social norms and cues have relatively little influence on healthcare professionals' perceptions of what facilitates AI integration.
- The most frequently reported concerns about using AI in health care settings relate to governance (e.g., unregulated standards, liability, and privacy).

BACKGROUND

Artificial intelligence (AI) is rapidly entering healthcare settings through tools that support documentation, triage, imaging interpretation, clinical decision support, and administrative tasks. While these tools are often promoted as ways to improve efficiency and quality of care, their real-world impact depends on whether healthcare professionals view AI as useful, trustworthy, and appropriate for the clinical tasks they are expected to support. In practice, healthcare professionals' perspectives play a critical role in determining whether new technologies are adopted, integrated, and ultimately used to improve care. Adoption may be slowed not only by technical limitations of these technologies but also by concerns about privacy, liability, unclear governance, and workflow disruption.

This report summarizes findings from a statewide survey in South Carolina examining healthcare professionals' perspectives on AI use in healthcare. Specifically, we assessed:

- Familiarity and experience with AI;
- Willingness to use AI across common clinical domains; and
- Perceived facilitators, barriers, and governance concerns.

The intent of this report is to provide a snapshot of where healthcare professionals appear most receptive to AI support, where hesitation is most apparent, and what conditions may represent meaningful levers to increase trust and uptake. By identifying these patterns, the findings can help organizations align AI pilot selection, training and communication strategies, and governance structures with healthcare professionals' expectations for safe and ethical implementation. The results also highlight areas for future research on AI adoption in healthcare settings.

SURVEY OVERVIEW

Healthcare professionals (N = 355) were recruited through partnering healthcare organizations and professional organizations across South Carolina during Fall 2025. Participants were required to be currently practicing healthcare professionals in the state. Participation was voluntary, and eligible respondents who completed the full survey and passed attention checks received a \$40 e-gift card.

Because participants were recruited through partner organizations and participation was voluntary, the findings should be interpreted as a descriptive overview of respondents' views rather than definitive population estimates for all healthcare professionals in the state.

SURVEY CONTENT

The survey covered several key areas related to health care professionals' experiences with and perspectives on AI in healthcare:

- AI knowledge and experience (general and healthcare-specific)
- Willingness to use AI across common healthcare tasks
- Perceived impacts of AI (patient outcomes, efficiency, equity, privacy, healthcare professional well-being)
- AI adoption-related drivers and barriers (usefulness, ease of use, social influence, resources/support, privacy risk, liability, regulation clarity)

SURVEY PARTICIPANTS

Respondents were predominantly female (84%), with 16% identifying as male (Figure 1). The average respondent's age was 46.1 years (SD = 12.2; median = 45). Most respondents identified as White (84%), followed by Black or African American (9%), Asian (2%), and Other (1%); an additional 3% preferred not to report their race. Approximately 2% of respondents selected two or more races (Figure 2). Only 2% of respondents identified as Hispanic or Latino (Figure 3). Survey respondents represented a range of healthcare specialties, most commonly Nursing (26%), followed by Family Medicine (21%), Other (16%), Emergency Medicine (9%), and Pediatrics (9%) (Figure 4). The most frequently reported certifications were Registered Nurse/RN (36%), followed by Nurse Practitioner/APRN NP (23%), Physician Assistant (19%), and Physician/MD or DO (17%), with an additional 6% reporting other certifications (Figure 5).

Fig 1. Participant Gender

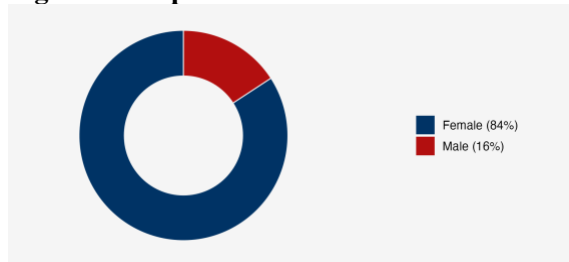


Fig 2. Participant Race

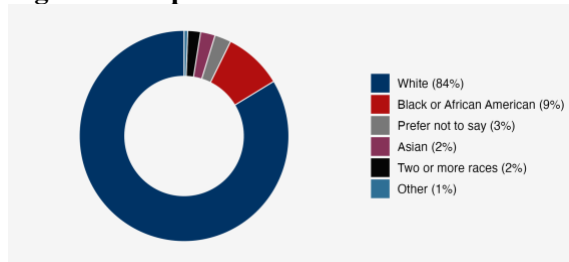


Fig 3. Participant Ethnicity

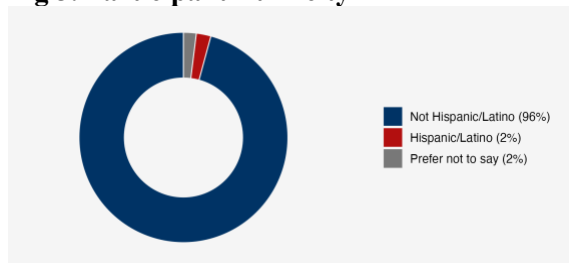


Fig 4. Participant Healthcare Specialty

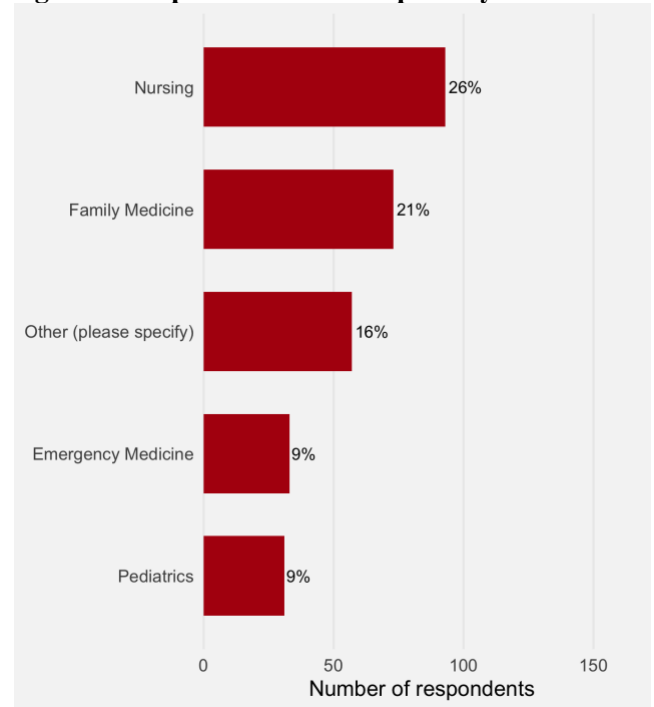
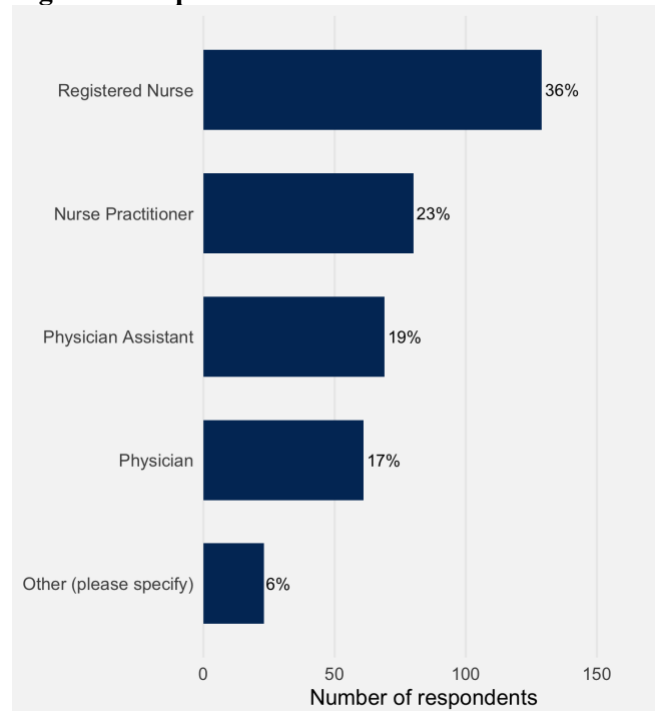


Fig 5. Participant Healthcare Certification



Note: Specialty and certification items allowed multiple selections; percentages reflect the share of respondents selecting each category and may not sum to 100% due to multiple responses and rounding. For readability, only the five most frequently selected categories are shown; all other responses are included in totals but not displayed.

SURVEY RESULTS

KNOWLEDGE ABOUT AI

Across the sample, most respondents reported being “somewhat” (43%) to “moderately” (28%) knowledgeable about AI, suggesting that while AI is not a foreign concept for many healthcare professionals, detailed understanding remains limited. About 1 in 4 (23%) reported being only “slightly” knowledgeable, and very few reported being not at all knowledgeable (3%) or being extremely knowledgeable about AI (3%) (Figure 6).

EXPERIENCE WITH AI

Nearly two-thirds of respondents (64%) reported having a “moderate” or “extensive” level of experience with AI in general, compared with only 39% reporting similar levels of experience with AI in healthcare (Figure 7). This difference suggests that many healthcare professionals may encounter AI through everyday tools outside of clinical work, while fewer have had direct experience using AI in ways explicitly tied to their roles in healthcare.

IMPLICATIONS

Healthcare professionals' general experiences with AI may foster their openness to AI technologies. However, more limited experience with AI in healthcare settings may introduce uncertainty about the reliability and appropriate clinical use of this technology.

Additionally, these findings may indicate that implementation messaging should avoid assuming advanced AI literacy, while still recognizing that healthcare professionals may already have a baseline awareness of AI’s capabilities.

Healthcare organizations and developers should consider fostering additional experiences by carefully designing pilot opportunities to help healthcare professionals build awareness and confidence.

Fig. 6 Healthcare Professionals’ Knowledge About AI

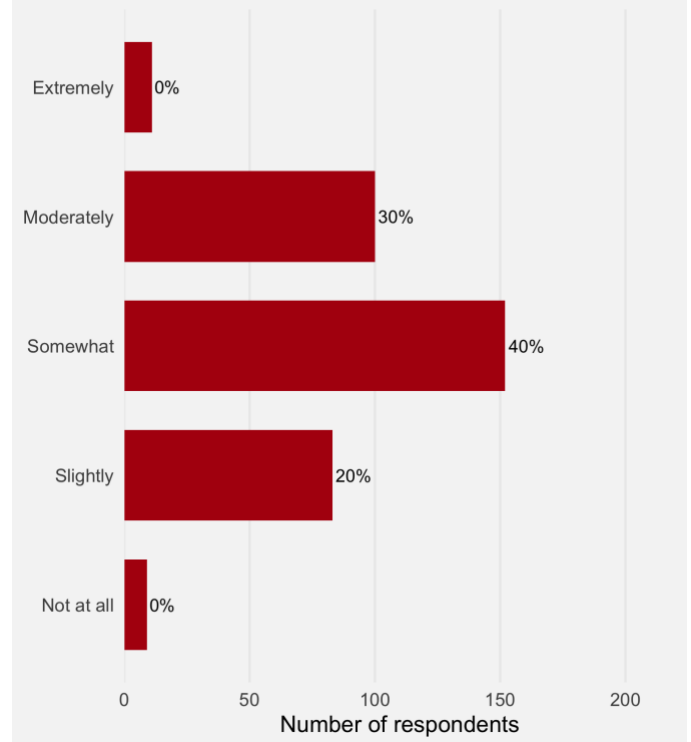
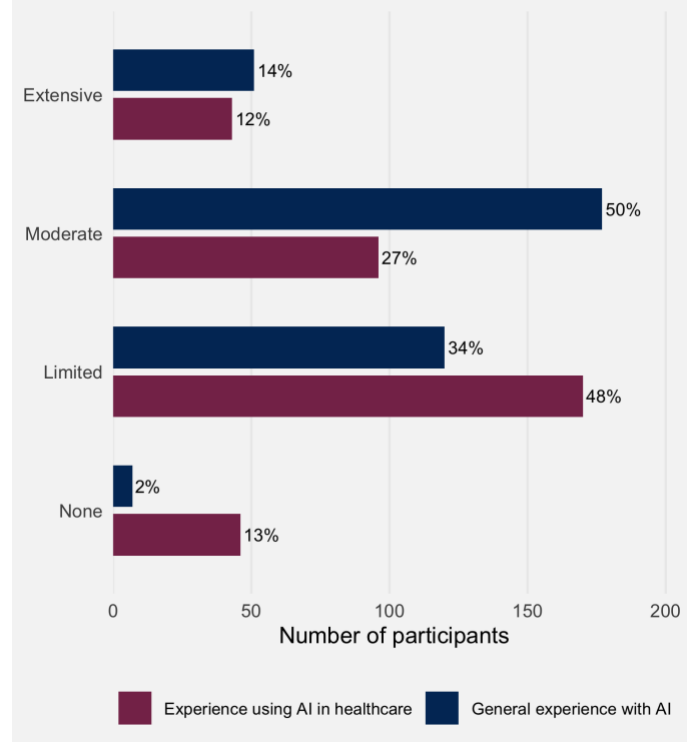


Fig. 7 Healthcare Professionals’ Experience with AI



WILLINGNESS TO USE AI BY DOMAIN

Respondents were asked how willing they would be to use AI in various health care domains. Respondents' willingness to use AI varied by task type. Overall, healthcare professionals were most receptive to AI applications that support information synthesis and documentation (Table 1). In other words, respondents appear most receptive to AI systems designed to reduce burden while leaving final responsibility and decision-making authority with the healthcare professional.

In contrast, healthcare professionals expressed lower willingness to use AI systems more directly connected to high-stakes clinical decisions or procedures (Table 1). It should be noted, however, that lower willingness in these areas does not signal outright rejection of AI; rather, it reflects that healthcare professionals differentiate between AI use cases.

These findings suggest that healthcare professionals' willingness towards AI systems may, in part, be driven by the clinical domain and the tasks the system is designed to augment.

IMPLICATIONS

Healthcare professionals' willingness to use AI in different domains may offer a practical roadmap for the sequencing of AI implementation in healthcare settings. In early phases of AI integration, organizations and developers may be more successful in piloting AI tools that target high-willingness domains, such as medical research summaries, discharge instructions, or translation services.

The results also suggest that it is important to move beyond broad measures of AI acceptance. Healthcare professionals' willingness to use AI depends on the technology's capabilities and the impacted task domain. These dependencies require careful consideration and interpretation of broad acceptance claims.

Table 1. Healthcare Domains with the Highest Willingness to Use AI

Healthcare Domain ¹	% Somewhat/ Very Willing
Summaries of medical research and standards of care	92%
Natural language processing	91%
Creation of discharge instructions, care plans, and/or progress notes	91%
Predictive analytics	91%
Translation services	90%
Triage and case prioritization support	69%
Telehealth and virtual assistants (e.g., symptom checkers, chatbots)	69%
Patient-facing chatbot for customer service functions	68%
Medical imaging interpretation	66%
Surgical simulations and guidance	61%

Note. This table displays the domains with the highest and lowest willingness ratings. Percentages reflect the proportion of respondents who selected "Somewhat Willing" or "Very Willing" (ratings > 3 on a 1–5 scale). Additional domains were included in the survey but are not shown here.

¹ Scales adapted from the American Medical Association (2025).

PERCEIVED FACILITATING CONDITIONS FOR AI ADOPTION

To understand what conditions would facilitate AI adoption in day-to-day clinical practice, respondents were asked to rate the importance of several potential facilitating conditions (Table 2). Overall, responses indicate that healthcare professionals prioritize conditions that establish trust, protect patient data, and provide clear operational support for safe use. By comparison, fewer respondents rated factors such as peer uptake or leadership recommendation as important. Taken together, the results indicate that healthcare professionals place the greatest value on trust, oversight, and practical implementation supports than on informal social cues or “trend” indicators.

IMPLICATIONS

Healthcare professionals view credible safeguards as key facilitators of their use of the AI systems. Openness to adopting AI seems closely tied to trust in both the technology itself and the institutions responsible for protecting patients and employees.

Messaging around AI systems in healthcare may be most effective when emphasizing data privacy protections and performance oversight rather than assuming ease of use alone will drive healthcare professional uptake.

Strategies that rely primarily on peer uptake or leadership endorsement may be less effective than strategies that focus on privacy protection and validity. Additionally, healthcare professionals prioritized the importance of receiving education and training on any AI tools they use in their practice.

Table 2. Perceived Facilitating Conditions for AI Adoption

Facilitating Condition ¹	% Important/ Very Important
Data privacy is assured by my own practice/hospital and Electronic Health Records (EHR) vendor	91%
AI's safety and efficacy are validated by a trusted entity and monitored over time	90%
Personnel receive proper training/education on AI tools being used	88%
There is a designated channel for feedback should issues arise	86%
I receive informed patient consent and am confident that Patient Health Information (PHI) will not be misused	85%
It is intuitive and requires no special training	54%
Its implementation is being overseen by a physician	48%
It is the standard of care	40%
The leaders within my practice/area of specialty recommend it	36%
Other physicians I know are using it	30%

Note. This table highlights the five facilitating conditions most frequently rated as important and the five conditions with the lowest frequency of being rated as important. Percentages reflect the share of respondents who selected “Important” or “Very Important” (ratings > 3 on a 1–5 scale). Additional facilitating conditions were included in the survey but are not shown here.

¹ Scales adapted from the American Medical Association (2025).

AREAS OF CONCERN REGARDING AI IMPLEMENTATION

To understand the main barriers to using AI in healthcare, respondents were asked about their concerns related to AI use in clinical practice. We examined healthcare professionals' levels of concern across four common risk areas, measured using multi-item scales. Overall, concern about unregulated standards was most frequently endorsed, followed by liability and privacy issues (Table 3).

IMPLICATIONS

Healthcare professionals' concerns about AI implementation appear to be driven less by fears of job loss and more by questions of governance and accountability. The high endorsement of concerns related to unregulated standards, liability, and privacy suggests that clinicians' trust in AI is closely tied to whether clear rules, responsibilities, and protections are in place.

These findings further imply that successful and ethical implementation of AI will likely require organizations to move beyond general messaging about innovation or efficacy. Instead, healthcare professionals may be more receptive to AI tools when they are accompanied by clear standards for use, explicit responsibility pathways, and robust privacy protections.

This pattern of concern underscores the importance of approaching AI adoption as a system-level implementation challenge. Concerns about governance, liability, and privacy are primarily organizational in nature and are best addressed through formal policies, ongoing monitoring, and accessible feedback channels.

Table 3. Areas of Concern About AI Implementation

Area of Concern ²	% Agree/ Strongly Agree
Unregulated Standards	94%
Liability	85%
Privacy	79%
Job Insecurity	25%

Note. Scale scores were calculated by averaging all items within each construct to retain the original 1–5 response metric. Percentages reflect the proportion of respondents with an average score > 3, indicating overall agreement (Agree/Strongly Agree) that the construct represents a concern.

² Scales adapted from García de Blanes Sebastián et al. (2022), Hsieh (2023), and Park et al. (2024).

CONCLUSION

This report has provided a snapshot of how healthcare professionals in South Carolina view the use of artificial intelligence in healthcare and the conditions they believe are important for its responsible integration.

Overall, the findings suggest:

- Moderate familiarity with AI, but less healthcare-specific experiences with AI.
- A preference for AI in supportive roles (e.g., summarizing medical research, assisting with documentation, providing translation services) compared to higher-stakes and patient-facing applications.
- Strong emphasis on safeguards to facilitate AI adoption.
- Concern about unregulated standards was most frequently endorsed, followed by liability and privacy issues.

As healthcare organizations continue to explore the use of AI, the survey results offer an important foundation for understanding which applications may be most accepted in practice and which conditions may be the most important for building trust in these tools.

ACKNOWLEDGEMENTS

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