PAs and Emerging Healthcare Technology

A report from the 2025 AAPA Salary Survey

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Abstract

Artificial intelligence (AI) technology is positioned to radically change the healthcare ecosystem. However, not all physician associates (PAs) agree that the roll-out of these new systems will lead to better health outcomes, better patient interactions, or lower costs. In this report, we provide a brief overview of PA perceptions on emerging healthcare technology.

Methodology

Data were collected from PAs in the United States (U.S.) who had not opted out of AAPA research surveys for which AAPA had a valid email address. A series of questions related to PAs perceptions of new technology in healthcare were included in AAPA's 2025 Salary Survey. The overall margin of error was +/- 0.96% at a 95% confidence level and the survey was fielded from January 14 to February 28, 2025. Response rates and margins of error vary by section and breakout. "N" refers to the number of respondents and is generally the first column in the data tables. Totals may not equal 100% due to rounding and question type.

This research was deemed exempt by Sterling IRB (project ID: 12991) as a Category 2 exemption in accordance with US Department of Health and Human Service's Policy for Protection of Human Research Subjects listed at 45 C.F.R. §46.104(d). The author has no conflicts to report.

About PAs

PAs (physician associates) are licensed clinicians who practice medicine in every specialty and setting. Trusted, rigorously educated and trained healthcare professionals, PAs are dedicated to expanding access to care and transforming health and wellness through patient-centered, team-based medical practice. A PA's specific duties depend on the settings in which they work, their level of experience, and state law. There are approximately 178,000 PAs in the United States, who engage in more than 514 million patient interactions each year. To learn more about PAs, visit aapa.org.

About AAPA

Founded in 1968, AAPA is the national professional society for physician associates/assistants (PAs). It represents a profession of approximately 190,000 PAs across all medical and surgical specialties in all 50 states, the District of Columbia, U.S. territories, and the uniformed services.

PAs are licensed clinicians who practice medicine in every specialty and setting. Trusted, rigorously educated and trained healthcare professionals, PAs are dedicated to expanding access to care and transforming health and wellness through patient-centered, team-based medical practice. In 2025, U.S. News & World Report named PA the #3 Best Job across all occupations, the #2 Best Health Care Job, and the #3 Best STEM Job. Learn more about the profession at aapa.org and engage through Facebook, LinkedIn, Instagram, and X (formerly known as Twitter).

How to Cite

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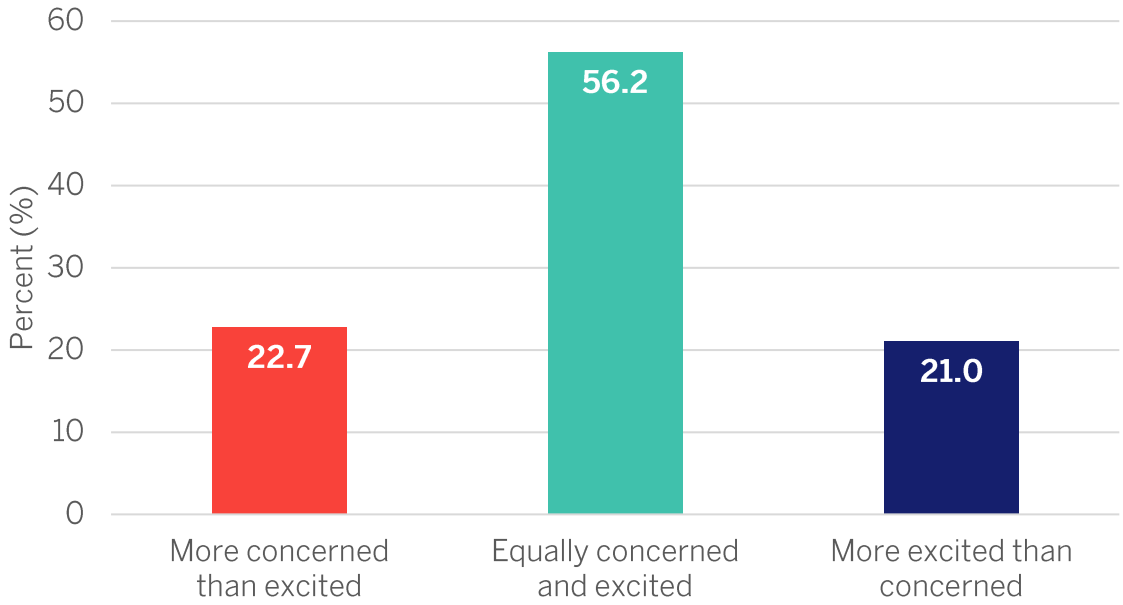
Executive Summary

In healthcare practices around the country, a wide variety of artificial intelligence (AI) tools are being implemented with the goal of improving patient outcomes, lowering costs, creating a more equitable system of care delivery, and reduce administrative burdens.[1-2] While many physician associates (PAs) are interacting with AI systems, no formal studies to this point have explored how PAs feel about the addition of these software systems and their impact on clinical practice. To fill this gap, AAPA developed a series of survey questions to identify the general utilization, concerns, and perceived opportunities for AI held by PAs. The information presented in this brief is based on an optional module included within the 2025 AAPA Salary Survey and the responses of approximately 2,500 PAs from a variety of specialties, settings, and career stages.

Overall sentiment: AI in healthcare

Generally, PAs were mixed on their feelings on how AI tools were going to impact healthcare. Most (56%) were equally concerned and excited, with about one in five PAs indicating they were more excited than concerned (21%) or more concerned than excited (23%, Figure 1, Table 1). However, these feelings were marginally different when viewed across career stage, specialty, and gender. Early career PAs – those with five years of experience or fewer – were more likely to be "more excited than concerned" (24%) than mid-career (20%) or late career PAs (21%, Table 1). PAs who indicated working in "no medical specialty" – typically those who work in education or administration – were the least likely to be "more concerned than excited" about AI in healthcare while PAs in primary care were the most likely to be "more excited than concerned" (24%, Table 2). Female PAs were also less likely to be "more excited than concerned" (19%) than their male counterparts (26%, Table 3).

Figure 1. PAs Feeling on the Use of Artificial Intelligence in Healthcare



To collect more detailed information regarding how PAs viewed the potential benefits, harms, and impact of AI on healthcare, we used a series of open-ended questions within our survey. Similar to public perceptions on AI tools, PAs shared a variety of perspectives on the prospective utility of these applications in healthcare. Overall PA sentiment on AI was neutral across their responses, indicating a generally even distribution of expressed harms and benefits (Figure 2).

Figure 2. PA Thoughts on the Potential Benefits, Harms, and Impacts of AI on Healthcare

Benefits **AI Has the potential to...**	**Harms** **AI introduces ...**	**Impacts** **AI may change healthcare by...**
• Assist in documentation (e.g., appeal letters, charting, intake) • Reduce administrative burnout • Improve efficiency	• Bias within software models • Ethical, legal, and privacy concerns • Errors which need to be identified and corrected	• Supplementing or replacing critical thinking skills • Adjusting staffing levels • Reducing clinician workload • Reducing the "personal touch" in patient/provider interaction

Source: 2025 AAPA Salary Survey.
Question: Can you tell us more about your thoughts on the potential benefits, harms, and impacts of AI on healthcare?

Potential AI Benefits

PAs provided multiple examples of how their current use of AI, or desired use of AI, would improve their quality of life. One of the major areas where PAs wanted to see AI was in the administrative side of their work day. As one PA explained:

> *"Using AI to document the clinical visit sounds like a dream... documentation is the most draining part of the job."*

PAs shared various instances where AI supported their documentation tasks, including writing appeal letters, transcribing encounter notes, and developing personalized treatment plans for patients. Others echoed the importance of this reduction in administrative burden arguing, "[I use AI] to draft chart notes and it has improved my quality of life." For many, being able to utilize AI to help with these time-intensive tasks, such as charting, improved their overall efficiency and opened up more time for taking care of patients.

While many lauded AI's ability to assist in administrative tasks, a smaller proportion of PAs expressed how new algorithms and machine learning could make some aspects of their clinical practice more efficient. In line with prior research regarding the use of AI in identifying

EKG abnormalities[3] and assisting in radiology diagnoses[4], PAs in our sample highlighted their experiencing in using AI to assist with interpreting patient data:

> *"It has been used for years in radiology, especially breast imaging. It is a great addition to the human interpreting."*

51%

of PAs are interested in CME on effectively using AI in clinical settings.

Other PAs mentioned the integration between their electronic medical record (EMR) platform and AI tools. These responses highlight the strengths of having these tools directly embedded within the platform, such as being able to have AI review a patient's history or summarize external medical records. These examples demonstrate the potential benefit of AI to seamlessly integrate data within EMRs to improve the efficiency of PA practice.

AI Concerns: Perceived harms and impacts

While PAs documented many instances of administrative and clinical benefits, they also expressed multiple potential harms related to the integration of AI within healthcare settings. One concern was tied to ambiguity in understanding how AI models function and where their data comes from. As one PA highlighted in their answer:

> *"The major problem with AI in medicine is that you're thrusting it into a sector where there is not already AI literacy."*

This concern is generally supported by our survey. When asked what kinds of AI – based applications were being used in their setting, most PAs (61%) indicated they were not familiar with these tools when their broad descriptions were provided (i.e., "Machine Learning (systems that can learn by themselves)", Table 4). However, PAs in this sample were generally curious about learning more about these platforms, with 51% indicating they would be interested in CME related to the effective utilization of AI in clinical settings (Table 5).

Apart from concerns related to familiarity with AI technology, PAs also indicated there may be issues related to identifying and correcting mistakes made by AI systems. There was a sense of agreement among a proportion of the sample that an increase in the proliferation of AI knowledge bases could result in "[providers] not using their actual knowledge and relying on AI for all the answers". Some PAs contended this utilization could lead to a decline in critical evaluation in medicine. As one PA expressed:

> *"Too much reliance on algorithms doesn't leave room for more nuanced situations and care of individual patients.".*

While PAs did not always mention the specific AI model being utilized at their employer, there were questions surrounding how concerns related to the accuracy of

responses should be addressed, with some PAs expressing they have been challenged by the AI interfaces when attempting to question the validity of information presented. Without additional training, PAs were concerned that including AI in their practice could increase their workload as they correct errors and redevelop processes to include new technologies.

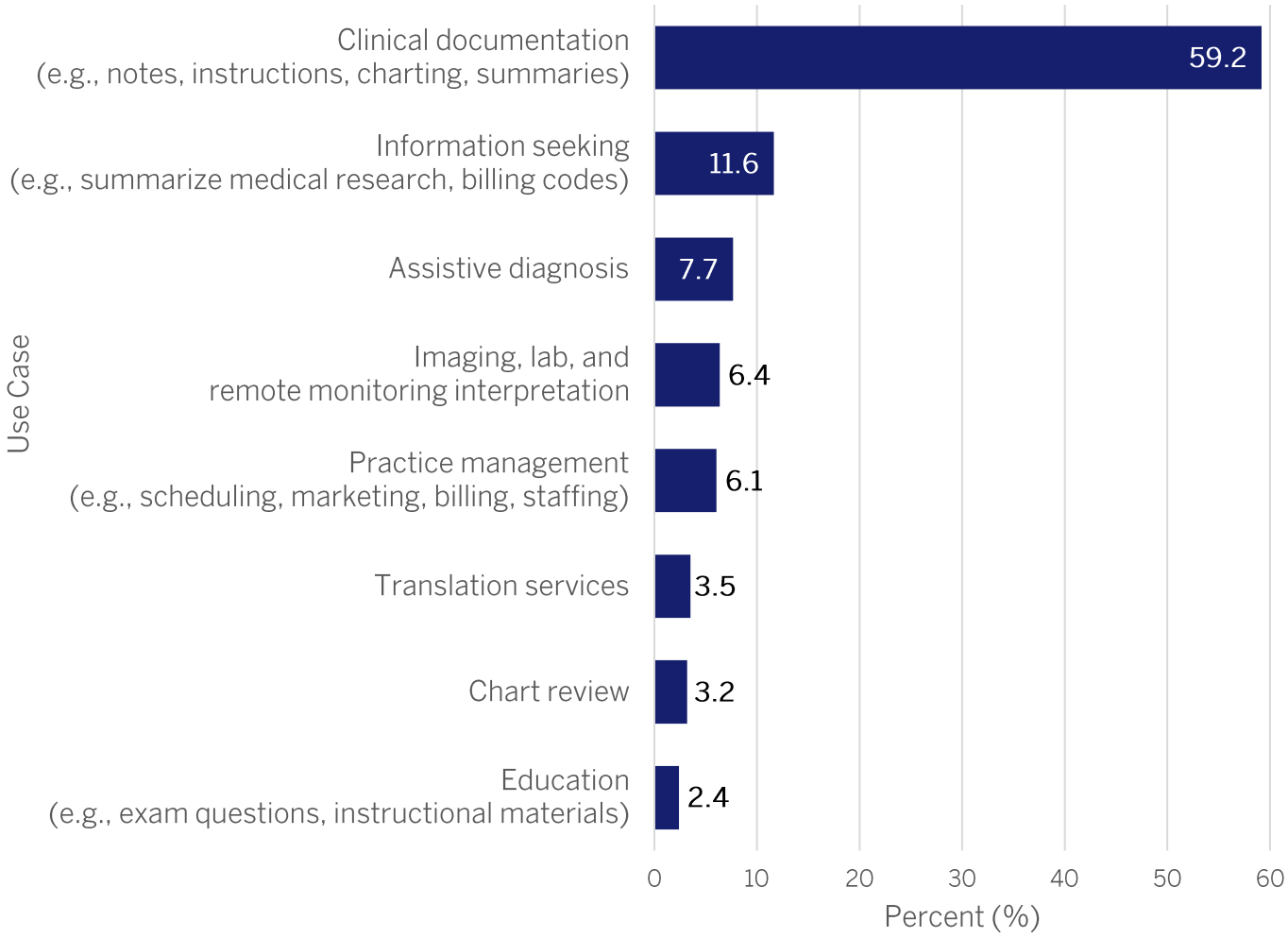
The final area of concern was related to the effect of AI on the healthcare workforce. Within this domain, PAs shared how they believed adopting AI could lead to job loss, specifically for scribes and medical transcriptionists. A smaller proportion were worried that an increase in AI use could even lead to a reduction in the utilization of PAs, but a larger consensus asserted these tools could lead to a reduction of the “human care” in medicine. This offloading of administrative tasks was seen as positive by many PAs who argued streamlining their workday could allow for more personal interactions with patients. Conversely, others who were more worried about the use of AI were unsure how these patient interactions would be captured in the data within these systems. For example, PAs were not sure if the protections employed by AI transcription and note writing services were equivalent to HIPPA – protecting processes utilized by them or other members of their patient’s care team.

Figure 3. Word cloud: PA Thoughts on the Potential Benefits, Harms, and Impacts of AI

How are PAs using AI in Clinical Practice?

PAs were asked how they were utilizing AI-based tools within their clinical practice, work setting, or primary employer. While a majority (57%) of PAs indicated they were not currently using any AI-tools to assist in their work tasks, others shared multiple use cases related to automating clinical and administrative work. The most frequently reported use case was AI assisting in documentation, such as creating progress notes, discharge instructions, and assisting in charting. Approximately one in four (27%, Table 6) PAs were using these AI documentation tools in their work (Table 6). To follow up on these survey insights, we also used the open-ended question: *What are some specific ways you are using AI within your medical specialty?* In the open-ended responses, 60% of the mentions of AI use were related to clinical documentation (Figure 4). Specifically, PAs cited how using applications like Abridge, Dax, DeepScribe, Dragon Dictation, Heidi, and Nabla assisted them in their clinical work to turn recorded conversations into notes, generate follow-ups to patient questions, and pull clinical insights out of transcribed text.

Figure 4. How PAs Are Using AI in Clinical Practice (Open – Ended Response)



While it made up a smaller proportion (4%, Figure 4) of the mentions within the open-ended responses, about one in 10 PAs (10%, Table 6) indicated they used AI tools to translate materials and patient instructions. Responses to the open-ended question provided specific examples of how services like Google Translate were used by PAs to help communicate clinical information. Other popular use cases were tied to a clinician's information seeking (12%) and use of AI for assistive diagnosis (8%, Figure 4). When sharing how they used AI for information seeking, many PAs pointed towards tools like OpenEvidence to assist them in finding relevant medical literature, but there was a smaller proportion who mentioned using ChatGPT and AI assisted tools that have recently been included in more traditional search engines, such as Google Gemini. This use of AI is also echoed in the survey data, with 8% of PAs using these tools to assist in summarizing medical research and 7% using AI to help with the selection of billing codes (Table 6). In the latter case, PAs expressed how finding relevant codes was directly assisted by AI tools reviewing clinical documentation.

PAs mentioned that applications like VisualDx and Viz.ai were also used in their practice to assist in their interpretation of patient data and provide diagnosis support. Moreover, In line with prior research on the clinical use of AI, these cases provide examples of how software tools were being used by PAs to help interpret data from patient medical devices, review radiographic imaging, and provide feedback on clinical tests (6.4%, Figure 4). While some PAs were concerned about the potential impact of these types of tools on clinical decision making, PAs who were implementing these applications into their work expressed how they were more of a support to augment their clinical abilities than something that superseded their own knowledge, skills, or abilities.

A segment of PAs also mentioned they implemented AI tools into administrative tasks related to managing a practice. Although only 1% of PAs were using AI to predict staffing needs (Table 6), about 6% of PAs provided examples of how AI can be used related to software assisted scheduling, marketing, billing, or staffing. Similar to the motivations behind using AI for charting and clinical documentation, these PAs shared that asking AI tools to aid specific tasks, such asking ChatGPT to help develop a marketing plan for their practice, allowed PAs to free up more time for other clinical tasks.

Future challenges: Implementing AI within Clinical Practice

Regardless of whether they were excited or concerned about the proliferation of AI technology within clinical practice settings, many PAs acknowledged that these technologies were going to continue to influence the healthcare system. To that end, we asked PAs to identify factors related to new AI tools that would make them feel more comfortable implementing these applications within their workplace. In line with prior concerns expressed about the transparency of AI, four in five (81%) PAs were interested in being provided with the clear limitations of the AI system being implemented while a similar percentage (80%) would want to see performance metrics related to the accuracy and error rates of the AI on various tasks. PAs also wanted to learn more about these systems through use case examples (79%) and desired clear references to explain how AI systems arrived at their decisions (79%). While not as top of mind, a sizable proportion of PAs would feel more

comfortable about implementing AI if they knew how the application's performance was monitored (77%), understood how bias would be identified within the system (71%), or how the use of AI intersects with applicable regulations (71%, Table 7).

This general feeling of uncertainty among PAs is echoed in the final open-ended question posed to the PAs:

> *"What evidence is missing from our understanding of the potential harms, benefits, or clinical impacts of using AI based tools in healthcare?"*

Many PAs indicated it was too early to answer this question - or that they were generally unsure what the impact would be without long-term studies and/or more personal experience using AI. This sentiment is best summed up by the following response:

> *"This is like studying COVID in March 2019. Too soon. Needs years of implementation and outcomes before any real data is going to be convincing enough to stand on."*

Those with this perspective compared the current implementation of AI to the "wild west", arguing "we really won't know until it has been used and we can study the outcomes". Similar to the COVID-19 pandemic, the impact of AI may be hard to identify at this time, but we can start to see how it is disrupting established healthcare practices.

When more concrete concerns were raised, they were often in relation to data protection and ensuring patients were both protected from risks while still receiving quality care post-AI adoption. This view was reflected in this PAs response:

> *"The entire idea of using AI in healthcare is based on learning from our patient interactions, whether for note taking or anything else, is terrifying given the vast potential for bias and privacy violations."*

PAs want to ensure patients feel their provider can be trusted with sensitive medical information. This is especially true for PAs who discussed their work with vulnerable populations. In these cases, PAs contended these groups could experience additional errors from AI decision making based on biases in models. To that end, many PAs stressed that future research should lead to a deeper understanding and broader oversight of AI to ensure patients are protected from nefarious data applications.

A smaller proportion of PAs were concerned about the potential legal implications related to using AI clinically. For example, one PA asked about the "legal ramifications of data theft, loss, or hallucination" on a practice. This ambiguity is reflected in the following response:

> *"If I use an AI to help me with a diagnosis and it has a hallucination, but I listened to what it says - who is at fault?"*

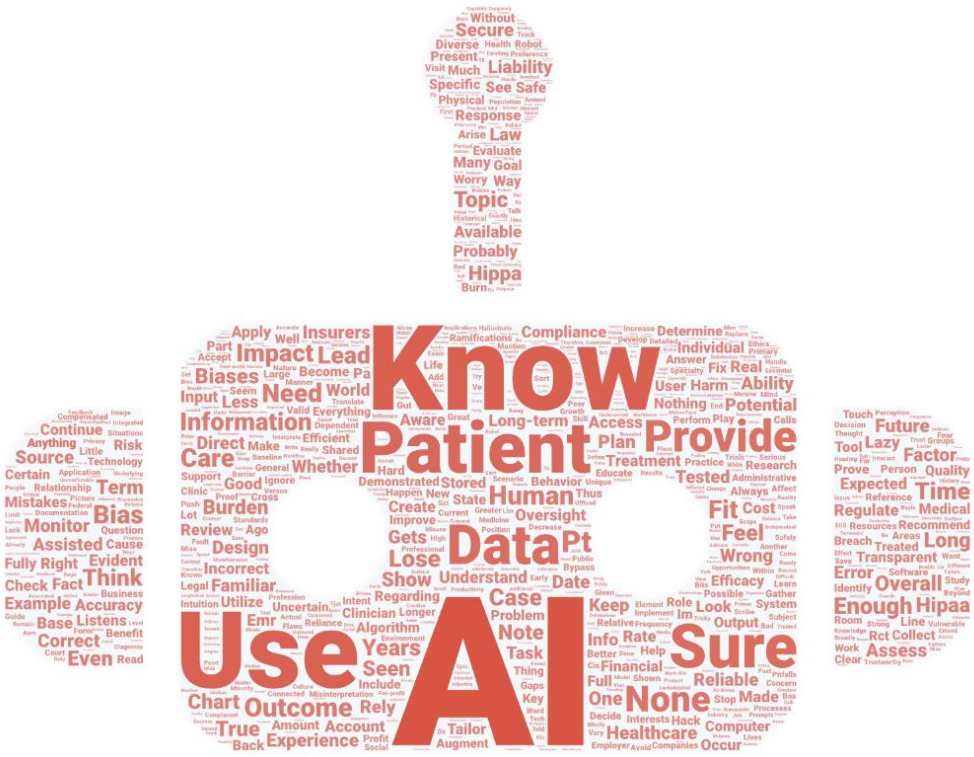
Others questioned if "transcripts from AI generated notes be used in a court of law during medical malpractice case". PAs who expressed these concerns argued that while they were not aware of any established precedent, they were concerned that these tools might lead more towards clinician vulnerability than improved patient-provider interactions.

Many PAs were optimistic that AI could improve healthcare systems but acknowledged any tool comes with a degree of error. As one PA highlighted in their response, "Just like our own error, the [AI] documentation must be reviewed before you sign a chart". Along these lines, responses stressed the importance of maintaining critical evaluation skills and not always taking AI generated information at face value to avoid making decisions off inadequate data. To this end, many PAs needed more time to see if integrating AI directly led to cost-savings and improved outcomes – which was echoed in the following response:

> *"It's meant to make us more efficient but the current model we use is clunky and not fully integrated into EPIC and thus slows my work."*

Overall, PAs stressed that AI could prove useful if backed up by a human and developed ethically. While there may be short-term kinks, these tools could become "trustworthy partners in healthcare".

Figure 5. Word cloud: What evidence is missing from our understanding of the potential harms, benefits, or clinical impacts of using AI based tools in healthcare?



Conclusion

Many PAs are curious about how the growing use of AI in healthcare will affect their relationship with patients. PAs who responded to our survey were optimistic that including new technology within their clinical work could open the door to improving patient-provider interactions, reducing administrative burnout, and augmenting their information seeking. Roughly 43% of the PAs in our sample are already using AI to support their work in some capacity, As these tools continue to be refined, PAs concerns surrounding the utilization of patient data, regulatory ambiguity related to AI systems, and workforce impacts should be investigated. In addressing these issues, PAs should continue to address knowledge gaps related to these systems by seeking out educational opportunities. Additionally, PAs can continue to serve as advocates for their patients by ensuring data used in AI decision making is collected, interpreted, and utilized ethically within their clinical practice. It is too early to evaluate long-term impacts of AI on the healthcare system; however, PAs can position themselves as part of the solution. Ongoing research and collaboration between AI developers and healthcare professionals will be crucial in navigating this evolving landscape and ensuring maximum benefit for patients and practitioners.

Data Tables

Table 1. PA Feelings on the use of AI in Healthcare, by Career Length

Measure	Early Career (0 to 5 Years)	Mid-Career (6 to 20 Years)	Late Career (21 or More Years)	Overall
	Percent (%)			
More concerned than excited	21.2	22.3	25.5	22.7
Equally concerned and excited	55.0	57.7	53.7	56.2
More excited than concerned	23.8	20.0	20.8	21.0

Source: 2025 AAPA Salary Survey
Question: How do you personally feel about the use of AI in healthcare?

Table 2. PA Feelings on the use of AI in Healthcare, by Major Specialty Area

Measure	Primary Care	Surgical Subspecialties	Medical Subspecialties	No Medical specialty
	Percent (%)			
More concerned than excited	21.7	21.6	24.7	11.3
Equally concerned and excited	54.8	59.2	54.8	63.4
More excited than concerned	23.6	19.3	20.5	25.4

Source: 2025 AAPA Salary Survey
Question: How do you personally feel about the use of AI in healthcare?

Table 3. PA Feelings on the use of AI in Healthcare, by Gender

Measure	Male	Female
	Percent (%)	
More concerned than excited	19.3	24.0
Equally concerned and excited	54.5	56.8
More excited than concerned	26.2	19.2

Source: 2025 AAPA Salary Survey
Question: How do you personally feel about the use of AI in healthcare?

Table 4. PA Awareness of AI-based Applications, by Type

Measure	N	Percent (%)
Natural Language Processing (teaching machines to understand, interpret, and generate human language)	525	22.4
Large Language Models (A combination of deep learning and natural language processing using massive amounts of data to understand, summarize, generate, and predict new text-based content)	360	15.4
Machine Learning (systems that can learn by themselves)	327	14.0
Deep Learning (Models based on machine learning that detect patterns with minimal human involvement)	187	8.0
I am not familiar with any of these	1,434	61.3
Other	93	4.0
Total	2,341	100.0

Source: 2025 AAPA Salary Survey
Question: What kinds of AI-based applications currently being used in clinical care are you familiar with?
Note: Respondents were able to select all that applied, totals do not add to 100%.

Table 5. PAs Interest in CME regarding AI

Measure	N	Percent (%)
Yes	1,130	50.6
No	349	15.6
I would need to know more about the course	754	33.8
Total	2,233	100.0

Source: 2025 AAPA Salary Survey
Question: What kinds of AI-based applications currently being used in clinical care are you familiar with?

Table 6. PAs Use of AI-based Tools, by Type

Measure	N	Percent (%)
Document medical notes (e.g., progress notes, discharge instructions, charting)	630	27.0
Translation services	235	10.1
Summarize medical research	192	8.2
Selecting billing codes	169	7.3
Assistive diagnosis	161	6.9
Creation of chart summaries	143	6.1
Predict health risks, quality gaps, outcomes	135	5.8
Generate draft responses to patient portal messages	130	5.6
Create recommendations and self-care engagement	79	3.4
Patient-facing chatbot	48	2.1
Analyze patient-generated wearable and remote patient monitoring data	43	1.8
Automate pre-authorization	43	1.8
Surgical simulations and guidance	32	1.4
Triage and case prioritization support	30	1.3
Predict demand and staffing needs	22	0.9
None of the above	1,327	56.9
Total	2,331	100.0

Source: 2025 AAPA Salary Survey
Question: In which ways are you currently using AI in your clinical practice, work setting, or primary employer?
Note: Respondents were able to select all that applied, totals do not add to 100%.

Table 7. Features Leading to AI Adoption by PAs, by Type

Measure	N	Percent (%)
Clear limitations of the AI system	1,638	81.2
Performance metrics and validation, such as accuracy or error rates on various tasks	1,618	80.2
Clear information and reference to help explain how AI decisions were made	1,588	78.7
Use case examples that provide real-word scenarios	1,584	78.5
Demonstrated usefulness and efficacy among similar practices	1,579	78.3
List of the primary features	1,569	77.8
Introductory summary information that explains the intended use and benefits	1,559	77.3
Information about how the AI's performance is monitored	1,555	77.1
Examples of the expected output	1,546	76.6
Source and type of input data	1,477	73.2
Identifying issues of bias	1,439	71.3
AI system training data and how it is collected	1,436	71.2
An evaluation of the tool has been completed by my specialty society	1,434	71.1
Regulatory status of the AI system and what applicable technical standards does it meet	1,428	70.8
Information about the frequency of AI updates	1,209	59.9
Total	2,017	100.0

Source: 2025 AAPA Salary Survey.
Question: If you were considering implementing some form of AI in your workplace, which of these factors would help you make an informed decision?
Note: Respondents were able to select all that applied, totals do not add to 100%.

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