Artificial Intelligence Scribes Shape Health Care Delivery

Elise Blaseg, MD, and Alison Huffstetler, MD

Although most physicians are interested in the use of augmented or artificial intelligence (AI) in health care, only 38% are using AI in their practices.[1] Initial results from AI integrated organizations show that AI scribe programs significantly decrease electronic health record workload, and as physician burnout rates remain high, there is greater interest in AI tools.[2,3] The cautious approach to AI by physicians is due in part to the absence of necessary oversight and a limited regulatory framework.[4] As AI changes health care delivery, primary care must be at the forefront to shape practice transformation.[5]

AI scribe services aim to reduce administrative burden, although the nuances of implementation vary between companies. Most tools feature customizable note templates, including national repositories used by other clinicians. Most available AI scribe tools offer medical code extraction, ranging from identifying key diagnoses and billable procedures to suggesting additional codes based on commonly co-occurring disorders, all with the hope of reducing the burden on doctors.

An environmental scan of the literature was used to identify evaluations of AI in practice. There are few studies on AI scribes, and none include direct comparative analytics of the various products. Several commentary and opinion pieces highlight the immense promise of AI scribes while remaining wary of the significant risks, including technical limitations and ethical concerns.[6-8] One perspective piece illuminates particular concern about chart integrity degradation, biases, and "model collapse" where future AIs are trained on past data, ultimately leading to performance decline.[9] Although these critiques are valid, they underestimate the dynamic nature of technologic evolution and health care's capacity to refine these tools, ensuring they are tailored to meet the evolving needs of clinicians.

The authors also explored commercially available clinical AI scribes through reviews from peer forums and vendor marketplace sites. The list was compiled based on reputable reviews, popularity, and commercial availability. Platforms with insufficient online presence and those still in the beta testing stage, such as Doximity GPT, were eliminated from consideration. Eight companies were identified for review (Table 1).[10-19] Services offered by companies included ambient listening, note generation (eg, history of present illness, review of systems, physical examination, assessment and planning), diagnosis coding, and order recommendations. The most cited concerns pertained to accuracy. Although some AI scribe services claim to have 90% to 99% accuracy, users have reported a different experience.[10,12,14] AI hallucination, or false information produced by a generative AI model, ranges in severity from misleading to outright fabrication.[6] This is a marked concern for clinicians who rely on accurate documentation to facilitate patient care and protect against litigation. Consequently, not all users believed that the scribe saved documentation time because of the need to review and edit the AI-generated notes.[2,10]

AI scribe services are promising for electronic health record interoperability and improved care delivery. However, the need for appropriate AI oversight is clear.[20] Regulation and policies should promote patient safety and information security. The risk of biases perpetuated by AI algorithms and the threat of data breaches must be mitigated through ethical and accountable governance.[21] The trustworthiness and acceptance of AI remains uncertain.

ELISE BLASEG, MD, St. Mark's Family Medicine Residency, Salt Lake City, Utah

ALISON HUFFSTETLER, MD, Robert Graham Center for Policy Studies in Family Medicine and Primary Care, Washington, District of Columbia

Author disclosure: No relevant financial relationships.

A collection of Graham Center Policy One-Pagers published in *AFP* is available at https://www.aafp.org/afp/graham. One-Pagers are also available at https://www.graham-center.org.

REFERENCES

1. AMA Augmented Intelligence Research. Published online 2023. Accessed October 25, 2024. https://www.ama-assn.org/system/files/physician-ai-sentiment-report.pdf
2. Tierney AA, Gregg G, Hoberman, B et al. Ambient artificial intelligence scribes to alleviate the burden of clinical documentation. *NEJM Catal Innov Care Deliv*. February 21, 2024. Accessed October 23, 2024. https://catalyst.nejm.org/doi/full/10.1056/CAT.23.0404
3. Muhiyaddin R, Elfadl A, Mohamed E, et al. Electronic health records and physician burnout: a scoping review. *Stud Health Technol Inform*. 2022;289:481-484.
4. Ratwani RM, Classen D, Longhurst C. The compelling need for shared responsibility of AI oversight: lessons from health IT certification. *JAMA*. 2024;332(10):787-788.

TABLE 1

Comparison of Artificial Intelligence Scribe Platforms

Platform	Cost per month*	Pros	Cons
DeepScribe	Not published	Proofread by human Notes require minimal editing EHR integration	No free trial Pulls in irrelevant information Lack of coding help
Nabla	$119	Live transcription Asynchronous care documentation Does not store user data	Struggles to filter out content Minimal integration
Freed	$99	User friendly Adapts future notes to user feedback	No EHR integration Concerns with accuracy transcription
Abridge	$99 $249 integrated	Epic EHR integration Asynchronous care documentation	No free trial Difficult to use at small institutions Suboptimal order entry
Heidi	$69	Multidisciplinary team collaboration Multilingual transcription	No mobile application Concerns with transcription accuracy
Nuance	$600	Deep integration and high accuracy Automatically documents encounters	Difficult to use at small institutions Delayed note generation
Suki	$399 integrated	User friendly Artificial intelligence assistant accessed through voice command	No free trial Suboptimal ambient mode documentation
Lyrebird Health	$89	Quick note generation Customizable templates and adaptive note writing	Integration challenges

EHR = electronic health record.

*—Many companies offer annual discounts of 20%.

Information from references 10-19.

5. Yang Z, Silcox C, Sendak M, et al. Advancing primary care with artificial intelligence and machine learning. *Healthc (Amst)*. 2022;10(1):100594.
6. Agarwal P, Lall R, Girdhari R. Artificial intelligence scribes in primary care. *CMAJ*. 2024;196(30):E1042.
7. Bowman MA, Seehusen DA, Britz J, et al. Research to improve clinical care in family medicine: big data, telehealth, artificial intelligence, and more. *J Am Board Fam Med*. 2024;37(2):161-164.
8. Coiera E, Liu S. Evidence synthesis, digital scribes, and translational challenges for artificial intelligence in healthcare. *Cell Rep Med*. 2022;3(12):100860.
9. McCoy LG, Manrai AK, Rodman A. Large language models and the degradation of the medical record. *N Engl J Med*. 2024;391(17):1561-1564.
10. Reddit. Peer discussion forum. Reddit subthread. Accessed October 23, 2024. https:/reddit.com/r/medicine
11. Elion. AI clinician assistant. Accessed October 23, 2024. https://elion.health/categories/ai-clinician-assistant
12. DeepScribe. The ambient intelligence platform for healthcare. Accessed October 29, 2024. https://www.deepscribe.ai/
13. Nabla. Enjoy care again. Accessed October 29, 2024. https://www.nabla.com/
14. Freed. We'll do your SOAP notes. Accessed October 29, 2024. https://www.getfreed.ai/
15. Abridge. Enterprise-grade AI for clinical conversations. Accessed October 29, 2024. https://www.abridge.com/enterprise
16. Heidi. The AI medical scribe for all clinicians. Accessed October 29, 2024. https://www.heidihealth.com/
17. Nuance. Improving clinician well-being and patient experience. Accessed October 29, 2024. https://www.nuance.com/healthcare/dragon-ai-clinical-solutions/dax-copilot/explore-dax-for-clinicians.html
18. Suki. Suki assistant. Accessed October 29, 2024. https://www.suki.ai/
19. Lyrebird Health. Automate all of your clinical documentation. Accessed October 29, 2024. https://www.lyrebirdhealth.com
20. Liaw WR, Westfall JM, Williamson TS, et al. Primary care: the actual intelligence required for artificial intelligence to advance health care and improve health. *JMIR Med Inform*. 2022;10(3):e27691.
21. Nazer LH, Zatarah R, Waldrip S, et al. Bias in artificial intelligence algorithms and recommendations for mitigation. *PLOS Digit Health*. 2023;2(6):e0000278.■