CLINICAL DECISIONS
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Use of an Artificial Intelligence Scribe for Clinical Notes

This interactive feature addresses the approach to a policy issue. A case vignette is followed by specific options, neither of which can be considered either correct or incorrect. In short essays, experts in the field then argue for each of the options as assigned. Readers can participate in forming community opinion by choosing one of the options.

CASE VIGNETTE

A Medical Director Considering Implementing an AI Scribe for Residents

Alejandro Campos, M.D.[1]

You are the medical director and preceptor of a primary care clinic that serves as a continuity site for internal medicine and family medicine residents. Residents typically see six to eight patients per half-day session and complete clinical documentation between patient encounters or after clinic hours, often at the expense of reading, teaching conferences, and personal time.

Your institution has recently implemented an ambient artificial intelligence (AI) scribe tool for attending physicians, which automatically generates draft clinical notes from recorded clinical encounters with patients who consent to its use. Program leadership is now considering making the AI scribe available to residents in the primary care clinic.

Some faculty members argue that AI scribes could reduce documentation burden for trainees, improve patient–resident interaction during visits, and free time for structured educational activities or personal time. Others raise concerns that trainees may overlook errors or inaccuracies in AI-generated drafts and that reliance on AI-generated documentation could affect clinical reasoning and communication skills that are developed in part through clinical documentation; such documentation by the trainee also serves as an important component of trainee assessment.

You must decide whether to recommend implementing the AI scribe for residents in the clinic or to recommend against its implementation.

OPTIONS

Which one of the following approaches would you recommend? Base your choice on the literature, your own experience, published guidelines, and other information.

1. **Recommend implementing the AI scribe.**
2. **Recommend not implementing the AI scribe.**

To aid in your decision making, we asked experts in the field to summarize the evidence in favor of the options. Each option was assigned to an expert by the editors rather than being chosen by the expert. Given your knowledge of the issue and the points made by the experts, which approach would you choose?

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OPTION 1

Recommend Implementing the AI Scribe

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Ambient AI scribe technology has been perceived as a potential disruptor of the physician–patient relationship. Yet, by reducing documentation burden, it may restore attention to the clinical encounter. This residency program should adopt this technology, with attention to potential limitations.

AI scribes generate drafts of clinical notes from physician–patient conversations during clinical encounters, and these drafts must be reviewed by physicians before they are finalized. Current AI

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scribes are limited in their ability to perform clinical inference, largely for safety reasons. Thus, AI scribes should not infer nonverbalized diagnostic or therapeutic plans. Clinicians must therefore continue to incorporate differential diagnoses, evidence-based decision making, and patient-centered communication to preserve critical thinking while using AI scribes. This distinction reinforces the trainee's role in interpretation and synthesis.

Early evidence suggests that AI scribing is associated with reduced task load and burnout and with a modest reduction in documentation time among attending physicians.[1-3] Data from trainees are more limited but show similar effects. In a pilot study involving 47 residents, AI scribing over a 2-month period was associated with reduced documentation time and fewer reports of after-hours work associated with documentation burden.[4] In a smaller survey of 14 internal medicine residents, AI scribing was associated with decreased charting time after 1 month as reported by the residents.[5] These findings suggest that AI scribes may mitigate the high rates of burnout among trainees.

More work is needed to measure the educational effect of AI scribing, but this uncertainty should not limit access to these tools. Trainees should be engaged as they intelligently adapt to shifting technology and clinical practices. Trainees are already using large language model–based tools in their clinical education and practice (e.g., medical search engines), and residency and fellowship programs should help shape the way these tools are integrated responsibly into training. AI scribe documentation is the latest iteration of clinical notes, which now serve multiple audiences, including patients and insurance companies. The next generation of physicians will need to adapt to ongoing changes in clinical documentation and the integration of AI tools into clinical care.

Implementation should be accompanied by clear oversight frameworks. Program leaders, in collaboration with informatics teams, should define measurable outcomes related to trainee experience and education. Furthermore, with vendor innovations in health care solutions and electronic health records, tools should include safeguards against automation bias and access to transparent metrics. Policies may need to vary by level of training to account for documentation workload, clinical responsibilities, and educational needs. For example, early trainees may require closer supervision and structured guidance when using AI scribes. Governance will need to evolve alongside advances in the technology and trainees' familiarity with health care–based AI tools.

AI scribing can reduce burnout and documentation burden for trainees and should be implemented in this training program with careful evaluation, attention to educational effect on trainees, and thoughtful governance.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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OPTION 2

Recommend Not Implementing the AI Scribe

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The adoption of ambient AI scribes is increasing among residency programs, driven by the potential to reduce documentation burden, enhance physician–patient interaction, and improve clinician well-being. However, implementation of an AI scribe in this residency program should be deferred given the potential negative effects on trainee learning, clinical reasoning, and communication skills.

Composing a clinical note is a cognitive exercise that distills the patient's narrative, identifies salient findings, formulates diagnostic hypotheses, and prioritizes treatment strategies. For example, construction of the "history of present illness" (HPI) requires the author to distinguish relevant details from extraneous information. When an AI scribe is used, the initial HPI is generated automatically from the physician–patient conversation — shifting the task of determining relevance from the trainee to the AI scribe. In our work within an academic medical system, several clinicians using ambient AI scribes noted that the language in AI-generated notes is homogenized and lacks the distinctive "voice" used to convey diagnostic uncertainty, reassurance, or concern, which may impair peer-to-peer communication of clinical reasoning and context.[6]

AI-generated documentation has been shown to contain omissions, misattributions, and fabricated details, particularly in complex encounters.[7]

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In a simulated primary care setting, Draper et al. identified omissions (e.g., nocturia), fabricated negatives (e.g., "no chest pain" when this was not discussed), and factual inaccuracies (e.g., regarding duration of symptoms).[7] Such errors risk loss of clinically meaningful details or introduction of inaccuracies that may lead to inappropriate clinical decisions. These errors probably arise from the intersection between probabilistic AI systems and the inherent ambiguity of clinical communication. Although experienced clinicians may recognize these AI-generated errors, trainees may miss subtle but consequential inaccuracies.

The use of AI-generated documentation may also obscure trainees' clinical reasoning from their preceptors. For example, an AI-generated HPI stating "patient reports musculoskeletal chest pain" may appear to be appropriate yet provides no insight into whether the trainee assessed for high-risk clinical features (e.g., exertional symptoms, radiating pain, diaphoresis, or associated dyspnea). This lack of transparency reduces opportunities for teaching and feedback while increasing the risk of omitting clinically meaningful details.

The risks of deskilling (i.e., erosion of existing competencies owing to reduced practice) and upskilling inhibition (i.e., reduced opportunities to acquire new or advanced skills) related to overreliance on AI tools are of particular concern during residency training.[8] Although these concerns have primarily been evaluated with AI tools more generally, they may still inform the potential implications of the use of AI scribes for trainee learning and skill development. An observational study involving endoscopists showed that, after 3 months of routine use of an AI-assisted colonoscopy tool, adenoma detection rates during subsequent non–AI-assisted colonoscopies decreased from 28.4% to 22.4%.[9] Although this study was conducted among practicing clinicians, it arouses concerns that reliance on AI tools during residency training may reduce opportunities to maintain, refine, or develop clinical skills.

Despite these concerns, ambient AI scribes may offer measurable benefits. In a randomized trial, the use of an ambient AI scribe was associated with a 9.5% reduction in documentation time among independently practicing physicians.[10] However, the absence of trainees in the study limits the ability to generalize to residency training settings.

Clinical documentation is a formative activity through which trainees synthesize information, clarify ambiguity, and develop professional identity. Preserving this process is essential for clinical mastery. Given the potential implications for learning, ambient AI scribes should not be implemented in this training program at this time.

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