



# The art of medicine

## Clinician as editor: notes in the era of AI scribes



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### Further reading

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Every clinician has a strategy. Between patients, before going home, late at night—clinical notes must be written. They are essential for recording patient visits, ensuring continuity of care, arriving at accurate diagnoses, and facilitating communication between doctors, as well as providing medico-legal protection and enabling reimbursement. But these notes are increasingly burdensome to write, thanks in part to the electronic health record (EHR). Artificial intelligence (AI) scribes—computational systems that record clinical encounters and produce narrative summaries—promise much-needed help. Indeed, in many settings, health-care organisations are already adopting this technology. Nevertheless, AI scribes arrive at a moment when the note has already been changing, with legislation increasingly granting patients access to their medical records. Given AI scribes’ promised disruption, it is crucial to consider what clinical notes are and what we want them to be.

Both the clinical encounter and the record of it are fundamentally narrative affairs: the clinical encounter unfolds as a story and the note documents that story. Early 19th-century patient records were long, detailed narratives about particular patients and their histories. But these records became increasingly succinct. Forms replaced paragraphs, and shared terminology replaced personal anecdotes; as historian John Harley Warner explains, there was a shifting “narrative preference for what was universal and precise over what was individual and discursive”. This trend continues in notes today with their dispassionate style and specialised terminology, ready to be packaged for health-care coders and billers.

A few decades ago, efforts to recentre narrative, especially narrative medicine and narrative-based medicine, emerged to address the depersonalised style of modern medicine exemplified by such notes. So much of medicine is receiving and telling stories, particularly the clinical encounter and hospital chart. Developing narrative skills can counter some of contemporary medicine’s depersonalisation, redress injustices, better attend to patients’ experiences, and improve clinicians’ diagnostic skills. Such efforts have blossomed globally, aiming to improve care through narrative training.

Despite endeavours to make narrative training central to medicine, patient records have moved in the opposite direction. EHRs posed new narrative challenges, drawing physicians towards computers and away from patients as they tell their stories and delimiting the narrative of patient records through screen clicks and checkboxes.

For doctors who see notes as a place for medicine’s art, AI promises more time for this work. Freed from real-time documentation demands, clinicians can refocus on the patient. In an ideal scenario, clinicians will have more time to craft good notes from imperfect AI-produced drafts.

However, seemingly already-complete AI-generated notes will be hard to resist. AI-generated notes are not transcriptions; like clinicians, the scribes group distinct problems and split appointments into recognisable components, creating the visit narrative. Thus, in addition to reducing administrative work, some argue AI scribes can create more time for the clinical attention. Freed from entering information on a computer, the clinician can shift body and self towards the patient, attending to feelings, questions, and concerns, honouring patients’ stories, and responding with compassion. The trouble here lies in the text AI scribes produce, revealing a mismatch between lofty goals and the scope of the technical task. AI-scribe companies conceive of notes as factual, scientific records for physicians, lawyers, and insurers. Seen thus, narrative happens in the clinic, and the note is a technical record AI can capture. But the note was never such a record, and its narrative features are arguably even more important now.

Today the note is not only insurer documentation, physician–physician communication, and liability protection, but also an interpersonal narrative between doctor and patient. While the note remains a site of documentation, memory aid, and clinical reasoning, clinicians today write aware of patient readers who have access to their medical records. Some clinicians write longer notes, and others report less detail. To avert worry, some omit differential diagnoses or write more complete so-called ghost charts unavailable to patients. For patients, open notes continue the clinical encounter narrative and offer opportunities for redress. A careful note can bridge patient–provider narrative divides, assuring care, clarifying misunderstandings, and increasing patient comprehension, compliance, and satisfaction; an uncared note can deepen fissures, exacerbating power differentials and complicating interpersonal dynamics. Just as AI scribes propose to automate the note as a factual record, its form and function are changing in narrative ways.

To appreciate the scope of the problem and possible solutions requires both understanding the nature of the clinical note as a narrative and also how AI scribes work. Generative AI scribes do not create narratives from scratch; they incorporate information from current recordings, past examples of medical notes, preference and ranking data provided by human annotators, large sets of internet training data, and patterns encoded in the AI model. Source interplay is difficult to interpret, and the AI scribe determines appropriate words, phrases, and styles using opaque data sources. The model is trained to optimise features such as factuality rather than narrative. AI models learn to guess words, phrases, syntax, and style not only from medical notes but also from internet examples, both of which contain social

biases—particularly troubling given medicine’s ongoing research and care disparities. AI-generated summaries can also hallucinate details, making up disturbing interactions if words or phrases resemble training data patterns and inserting inaccuracies. AI can introduce insensitive, incorrect, offensive, or stereotype-based language, gender misattribution, and even diagnostic errors, a set of problems that will be magnified by automation bias—the bias to accept AI decisions and text as more authoritative than human ones.

There are also unique challenges posed by the clinical encounter for AI because of, as machine learning researcher Juan Quiroz and his team put it, the “complex nature of the clinical environment and clinical conversation”. In his experience as a practising clinician who is piloting an AI scribe, one of us (IH) has noticed that AI scribes can miss information from longitudinal clinician–patient relationships and non-verbal communication. They sometimes make speech-to-text transcription errors, confuse the clinician’s story with the patient’s, include details not appropriate to the EHR, use potentially judgemental language, omit important details, add plausible but incorrect information, and overstep their purview, making diagnostic suggestions rather than generating summary. Accents make the speech-to-text transcription less accurate. Most AI scribes today work in limited languages. Some of these issues may improve, but the fundamental problem remains: open notes emphasise notes as interpersonal narrative just as AI scribes seek to automate the task.

To counter these risks of automation, clinicians using AI scribes should view their new role as note editor—a transition best supported by training in editorial and narrative skills. Most immediately, seasoned clinicians will need to reduce transcription errors, odd word choices, extraneous details, and disclosures inappropriate for the record as well as adding missed details and often rewriting AI-generated assessment and plan sections, which contain the cognitive work of differential diagnosis building, test selection, plan formulation, and patient education. More broadly, clinicians must ask: if note writing supports the cognitive processes of doctoring, how might this be recaptured in the age of AI scribes? And, if the clinician is now not author but editor, what new expertise does this work entail?

Navigating the shift from author to editor should not be left to individual physicians. We propose that health-care organisations assemble an advisory group of physicians, medical educators, narrative experts, editors, and data studies scholars to make recommendations about when and how to use AI scribes and how to support this shift through narrative and editorial training. If clinical encounters are coauthored narratives, the physician’s second job is to edit with all authors in mind. How can notes honour patient or caregiver as coauthor while also making these records useful for providers, insurers, and lawyers? Narrative training strategies developed in fields such

as narrative medicine and narrative-based medicine will be essential grounding, but providers must also be equipped specifically to navigate the note’s changing form and function. Narrative training strategies, for example, should be geared towards helping providers learn to preserve or return the contradictions and ambiguity of patient stories in notes, not forcing them into narrative coherence, as generative models are likely to do. Narrative training should also teach clinicians, as physician Sayantani DasGupta has argued, to begin from “narrative humility”, not presuming another’s story can be fully known or should be shared in the note.

Furthermore, editing must be identified as an important part of clinical labour. Here medicine stands to learn from literary studies. More expansive frameworks for thinking about editing include seeing editing as collaboration and care work—envisioning the narrative together as the best version of itself and shaping words until that story is told. Editing is also a creative act in which editors craft the best narrative for their audiences from details and stories collected. Such choices sharpen judgement and analysis. Some describe editing, ideally, as an act of becoming attuned to the account of another and responding accordingly, underscoring note editing as a moral responsibility to patients.

As doctors become editors, they will need new skills. For example, doctors will need to be trained to work more carefully with diction. What kinds of speech produce a better AI-written note? How do you edit notes towards a style best for patients? How can doctors edit for words, phrases, and tone suited to the needs of all coauthors and readers, including translators and caregivers? And, while some AI promises to help “signal empathy”, doctors will need to understand better how words, phrases, tone, and form work so that they can refine such AI suggestions and balance them with legal, medical, and bureaucratic requirements of notes. Finally, such training will help clinicians guard against automation bias and the temptation simply to accept AI’s superficially complete notes. The time freed up by the author-to-editor shift will go somewhere, and we believe clinicians should spend it thinking more carefully about their new role. The learning and labour involved in becoming a good editor may diminish the time-saving promise of AI, but it could make doctoring more personally meaningful and improve quality of care.

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