Taking notes: A urologist's "tech"-nique for streamlining patient encounters using artificial intelligence medical scribes

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As a urologist, managing a diverse patient population with complex needs is a daily challenge. The administrative burden, particularly in documenting detailed patient notes, is a time-consuming and meticulous task. The recent application of artificial intelligence (AI) medical scribes has revolutionized my practice over the past year, transforming the way I manage patient encounters.

THE CHALLENGE OF ADMINISTRATIVE BURDEN

Urologists face some of the highest burnout rates among medical specialties, with factors such as administrative tasks, hospital regulations, and decreasing physician autonomy contributing to this burden. Having worked in both Canada and the U.S., I have experienced the growing demands placed on clinicians by both administration and patients. The 2019 Medscape National Physician Burnout, Depression & Suicide Report found urologists had the highest rate of burnout among physicians at 54%.[1] Furthermore, the 2023 American Urological Association census of practicing urologists reported a 71% rate of ever experiencing burnout.[2]

Documentation, however, is critical for continuity of care and legal compliance. Before the adoption AI, I would often scribble down brief notes during clinic visits on paper charts and then spend 1–2 hours at the end of the clinic day to complete documentation — consuming valuable time that could have been spent on providing quality patient care.

THE TRANSFORMATIVE ROLE OF AI MEDICAL SCRIBES

AI medical scribes use natural language processing and machine learning to record, transcribe, and organize patient information in real-time. This allows the provider to focus more on direct patient care rather than dividing attention between the patient and the chart. The AI's ability to parse through jargon and complex medical terminology to produce coherent notes is remarkable, alleviating the need to manually dictate notes into a microphone or use structured and rigid text templates.

Benefits of AI scribes

1. Efficiency and time savings: AI scribes gather data in real-time during the clinic visit and take approximately 10–15 seconds to generate a completed patient note, significantly reducing the time spent on documentation. This enables providers to complete daily caseloads more effectively, care for more patients, and reduce patient wait times.
2. Improved accuracy and adaptability: The AI scribe learns over time, adapting to note-taking style and ensuring that notes are consistently accurate and tailored to different encounters and practices.
3. Enhanced patient care: By automating routine documentation, providers can dedicate more time to direct patient care, enhancing patient satisfaction and improving the quality of care provided.

Steps to integrate AI medical scribe in a busy urologist practice

Integrating AI medical scribes into a practice can significantly enhance efficiency and patient care. Below is a step-by-step guide on how to implement AI scribes effectively, along with insights into how I personally integrate them into my current practice.

Step 1: Choose an AI system

– Understanding AI features: Research various AI scribe platforms to understand their features, benefits, and integration capabilities with your existing electronic medical record (EMR) systems. Most are web-based and do not require any installation. Ensure the chosen system is PIPEDA-compliant.

- Popular options: Consider platforms like Heidi AI, Nabla, Freed, Autoscribe, Empathia AI, Scribeberry, and Tali. Most offer a free trial or version with basic features, while premium versions (typically costing $29–99 per month) provide advanced functionalities, such as specific template integrations, machine learning algorithms, and higher usage limits.
- How I do it: After trailing several platforms, I found Heidi AI to be user-friendly and efficient. It does not integrate directly with my current EMR, but allows me to copy and paste via text format. A free version is available with basic features.

Step 2: Set up the hardware

- Hardware requirements: AI platforms require a high-quality microphone for accurate voice recognition to pick up the patient's and provider's voices. Ensure your computer or mobile device meets these specifications. Alternatively, a small wireless microphone can be used to connect to your computer and travel with you from room to room.
- How I do it: I use a basic webcam connected to my desktop computer in my office as a recording device for patient interviews. In the exam rooms, I use the Heidi AI app on my phone as a microphone, which directly syncs data with my office computer.

Step 3: Train with the AI scribe

- Mock sessions: Practice using the AI with mock patient encounters to understand how it processes patient interviews and generates notes. Personalize the AI's note-taking style to fit preferences and preferred medical terminology. Direct patient quotes can be inserted in the history portion of a note. Notes can be organized in various formats, including SOAP and history & physical. They can also generate referral letters, medical certificates, discharge summaries, and patient education letters.
- How I do it: To introduce AI scribes to my colleagues, I conducted mock sessions, acting as a patient and then the provider, to demonstrate how the AI handles different scenarios and languages. Heidi AI is multilingual and able to understand many common languages, from French to Mandarin.

Step 4: Using the AI during patient encounters

- Consent and engagement: Obtain verbal consent from patients before using the AI during their visit. Explain how the AI will assist in generating notes to enhance patient care. Activate the AI at the start of consultations. Stay engaged with patients while the AI captures key details.
- How I do it: I obtain verbal consent at the beginning of each patient encounter and explain the AI's role in assisting with my practice. After consent is obtained and documented, I activate the AI and conduct the clinical interview without writing any notes. I verbalize exam findings and plans, then stop the transcription and allow 10–15 seconds for the AI to generate the note. More recently, prior to the patient entering the room, I activate the AI while reviewing the chart and verbalizing any information I want in the clinical note, including previous labs, imaging findings, and past medical history.

Step 5: Integrate the AI system with your EMR

- Integration: Many AI systems can integrate directly with EMRs For example, Scribeberry, Autoscribe, and Tali can integrate directly with Accuro. This allows users to push notes to patient charts, pull schedules, and access patient context, such as history and medications, streamlining workflow. If not, this will have to be done manually.
- How I do it: Since my EMR doesn't integrate directly with Heidi AI, I copy and paste the generated note into my EMR and then review it for accuracy and completeness. I occasionally need to add details that were missed by the AI system.

Step 6: Monitor the impact on your workflow

- Time and efficiency: Track time saved compared to traditional methods of dictating or typing notes. Monitor how AI affects patient care and administrative burden. Gather patient feedback to ensure comfort with the process. Adjust its use as needed to optimize benefits.
- How I do it: The more I use AI, the faster it gets. I use AI for all new patient consultations and most patient followups. At the end of the visit, I typically show patients the generated note for feedback and completeness. They are frequently amazed by the details captured and the speed of creating the note. I still use text templates for certain routine procedures and operations. The combination of AI and templates allow me to spend more time on patient care.

Optional step: Utilize optical character recognition

- Application: Optical character recognition (OCR) technology recognizes text within digital images, converting scanned documents or images into edit-

able electronic versions. OCR is particularly useful for capturing information from physical paper documents or images, such as new referrals, and integrating them into digital workflows.

– How I do it: I occasionally use OCR to extract information from new referrals (usually in PDF format) and copy the text into the "Context" tab of Heidi AI. This feature allows me to add details without needing to verbalize them aloud during the visit. I use Microsoft OneNote as an OCR, performing a screen clipping of the relevant text and copying it into the AI. While not too impactful or time-saving for the routine healthy patient, the OCR process takes only 10–15 seconds and is very useful when the patient history is complex with a long list of medical problems and medications/allergies. Other OCR tools include Adobe, Tesseract, and Readiris.

FUTURE DIRECTIONS

While AI scribes have been a positive addition to clinical practice, the future is limitless. Seamless integration with EMR and diagnostics would further streamline workflows by eliminating additional data entry or information lookup. Moreover, advancements in machine learning could enable AI to assist in clinical decision-making, abiding by recommended guidelines, analyzing large patient datasets, and flagging potential problems based on historical patterns and predictive models.

Adopting AI in a busy urology practice is a game-changer. Integrating AI medical scribes into urology practices is a transformative step that enhances efficiency, improves patient care, and supports physician well-being. As technology continues to evolve, the role of AI in medicine will only expand, providing even greater support to those of us on the front lines of patient care. We won't be replaced by AI, but we may be replaced by someone who uses AI.

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