

Improve Patient Care and Clinician Productivity with Ambient Clinical Documentation

AI-based agents in the exam room can automate charting and other documentation tasks, reducing stress on clinicians and freeing them to focus on their patients. This evolution helps reduce staff burnout as it improves the quality of care.

Clinical burnout has become a significant challenge for healthcare organizations, with nearly all physicians reporting that they are affected on a regular basis.¹ Many struggle with the emotional burdens of their practices or even leave the professions they once loved, compromising the ability of hospitals and clinical practices to deliver the highest standards of care. Burnout is bad for doctors, bad for patients and bad for business.

Patient charting and other documentation is a huge workload that exacerbates burnout. To keep up with the volume of paperwork, providers often wind up focusing on filling out paperwork during appointments with patients, which takes a toll on engagement. The burden of documentation tasks continues beyond the clinical visit itself, with backed-up charting duties often extending to off-hours "pajama time" as well.

Based on ongoing dramatic improvements in generative AI (Gen AI), the technology ecosystem has begun delivering solutions that help automate clinical documentation. Speech-to-text capabilities capture conversations among clinical staff and with patients, summarize the conversations to auto-generate clinical notes and provide a time-saving foundation for post-visit updates to patient charts.

Doctors and other care providers are broadly optimistic about AI's ability to improve clinical outcomes,¹ increasing the proportion of time they spend seeing patients rather than screens. Could Gen AI solutions that help ease administration and paperwork burdens for providers help reduce burnout? Our research suggests high potential for success.

Future-proof medicine with emerging technology

The recent pace of digitization in patient-care settings has been dramatic, with near-universal adoption of connected billing systems, electronic health records and patient communication portals. While these technologies can be vectors of empowerment for all concerned, they can also cause information overload. As financial pressures push for more patient engagements per physician per day, the growing clerical burdens on doctors reveal opportunities to improve efficiency with automation.

While many healthcare workers have used speech-to-text dictation in clinical documentation for years, current Gen AI can go much further. Ambient clinical documentation solutions are now able to unobtrusively transcribe patient-provider and provider-provider conversations (e.g., conversation between a doctor and a nurse) and assimilate that information into clinical documentation. Solutions can also create an after-visit summary that can be automatically uploaded to a patient portal after being validated by a physician.

In addition to summarizing clinical outcomes, ambient clinical documentation can generate concepts and data points for entry into electronic medical records. Information well suited to this model includes CPT codes, charge dropping/routing and patient education. Large language models are also capable of drafting patient



93%

of physicians experience burnout regularly¹



80%

say documentation tasks impede patient care²



83%

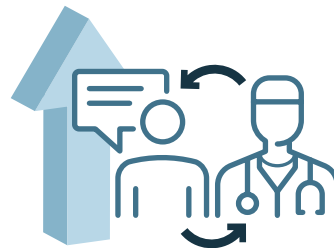
look to AI to improve outcomes¹



Improved Operational Efficiency



Increased Charting Accuracy



Better Patient Engagement



Higher Clinician Satisfaction

Benefits of ambient clinical documentation in practice.

communications for use in secure-messaging portals. While realizing the benefits of this automation, human clinicians remain at the center of care, validating and refining the AI-generated content.

By streamlining the documentation of clinical visits, Gen AI helps relieve the burden of low-level tasks on staff, improving the overall efficiency of the practice. The automation enables physicians to focus their attention more squarely on patients, even as it improves the accuracy of the information that goes into their charts. Together, these benefits combine to reduce physician burnout and improve the quality of care.

Transform with AI, starting where you are now

Medical facilities have already deployed PCs based on Intel® architecture to nearly every exam room, and this hardware is ready today to power Gen AI-based ambient clinical documentation solutions. Intel has enabled software across the solution ecosystem to deliver high performance and energy efficiency on mainstream client CPUs. The AI acceleration built into both client and server processors has now been developed and improved over several technology generations, dramatically improving speed and responsiveness.

Intel processors can handle other demanding AI workloads alongside Gen AI workloads for ambient clinical documentation, all without the additional cost of discrete graphics cards or other hardware accelerators. Intel's edge-to-cloud vision ensures that AI inference can be shifted to Intel-based public cloud instances or client-cloud hybrid models while maintaining high performance and security.

As healthcare facilities increasingly come under attack by cybercriminals, AI is augmenting defenses with new generations of security tools that detect suspicious patterns of activity and ward off threats. For example, endpoint detection and response providers are enabling their products for Intel® Threat Detection Technology (Intel® TDT). This hardware-based capability applies AI algorithms to hardware telemetry data, searching for anomalies that could indicate malware.

To support the growing footprint of AI solutions in clinical exam rooms, Intel® Core™ processors provide an excellent foundation today. As the sophistication and demands of these solutions grow, the capabilities of Intel platforms will continue to grow alongside them, including with AI PCs based on Intel® Core™ Ultra processors.

Conclusion

Ambient clinical documentation solutions based on Gen AI help reduce the workloads on overburdened clinical staff. They improve the quality of patient records while reducing physician burnout and enabling doctors to engage more fully with patients instead of their charts. The Intel-architecture-based PCs already in most exam rooms all over the world provide the hardware foundation for this functionality and the other AI functions that will continue to improve efficiencies and information security as they revolutionize patient care.

Learn more

[Intel Healthcare and Life Sciences Solutions](#)

¹ Athenahealth, February 21, 2024. "Almost All U.S. Physicians Surveyed Feel Burned Out on a Regular Basis, with Many Having Considered Career Change, according to Recent athenahealth Physician Sentiment Survey." <https://www.athenahealth.com/press-releases/us-physicians-surveyed-feel-burned-out-on-a-regular-basis>.

² Medical Economics, June 10, 2024. "Physicians say documentation burdens are impeding patient care." <https://www.medicaleconomics.com/view/physicians-say-documentation-burdens-are-impeding-patient-care>.

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