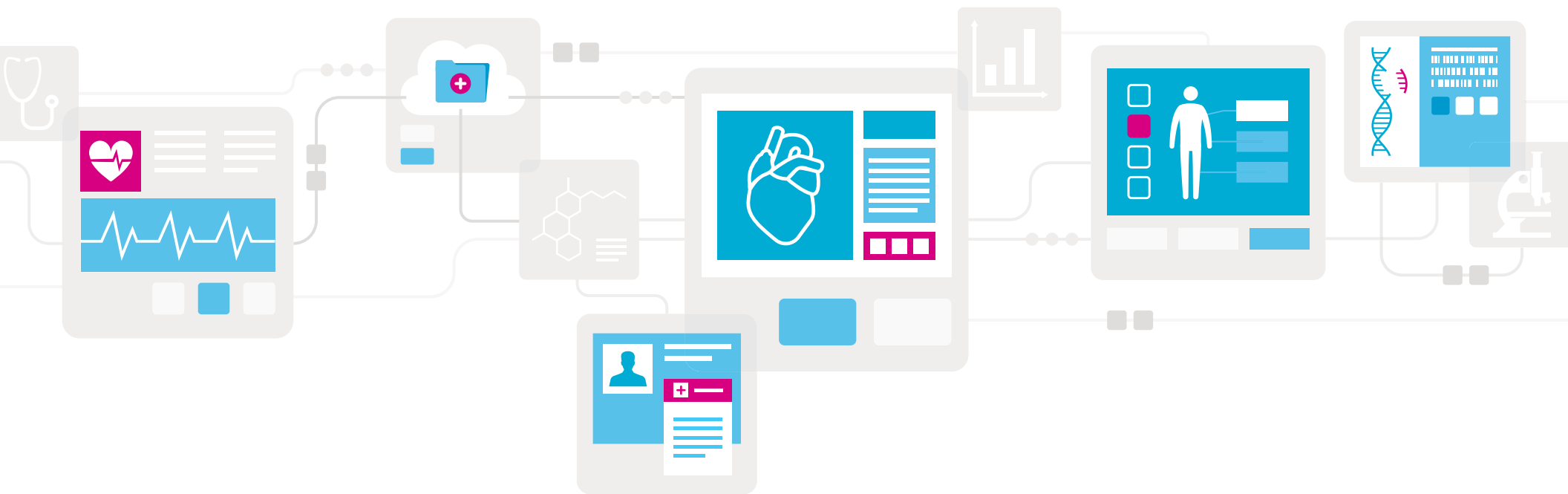


EHR OPTIMIZATION PLAYS A CRITICAL ROLE IN ENHANCING BOTH THE PATIENT AND CLINICIAN EXPERIENCE



Sponsored by:





TABLE OF CONTENTS

- 3** Clinicians Are Adding Their Voices, and Their Ideas, to EHR Updates
- 7** Dictation Software Improves the Doctor-Patient Relationship
- 12** Poor EHR Experience Linked to Higher Clinician Turnover
- 14** ONC Chief Defends Health IT Investment Despite Cost of Ownership Concerns

CLINICIANS ARE ADDING THEIR VOICES, AND THEIR IDEAS, TO EHR UPDATES

BY: SCOTT MACE

Healthcare providers are partnering with electronic health record companies to create upgrades that make the technology platform more responsive to clinical needs.

KEY TAKEAWAYS

- > EHRs and clinicians haven't always gotten along, with clinicians saying they weren't developed with their input or their workflows in mind.
- > EHR companies are now working with health systems to design updates that meet four clinical goals: Simplicity, basic task completion, controlling alerts, and patient focus.
- > While these upgrades are designed to be customizable to the health system, they won't be personalized to a point that they interfere with clinical care.

Healthcare providers are working with electronic health record companies to “co-create” updates that improve the EHR platform and help clinicians make better use of the technology.

At [Hendrick Health](#) in Abilene, Texas, clinicians have been studying day-to-day interactions on the health system's Sunrise EHR and using that feedback to fine-tune the software.



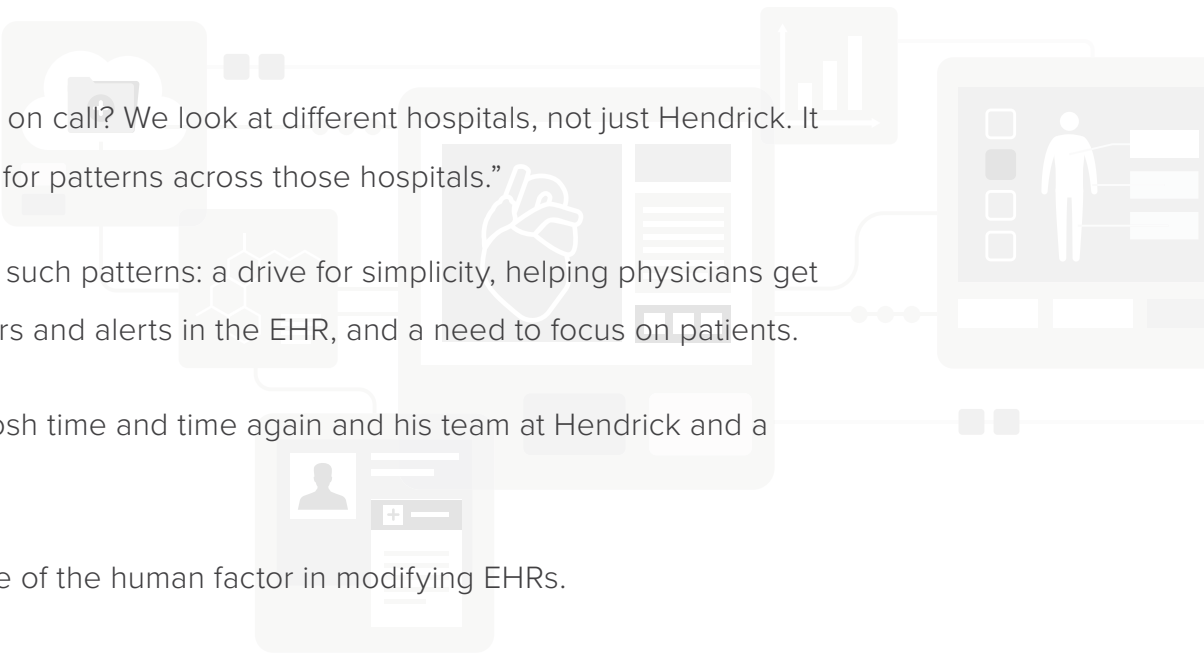
The EHR industry “has not been sensitive to the clinician’s input of the data, how it is stored, and how clinicians can review the data on the back end,” says Joshua Reed, DO, the health system’s medical director of case management and utilization review.

According to Reed, he has seen “a widening gap between what [technology] I would use at home and what I would use at the hospital” since 2006, when he started medical school. “Instead of that gap shrinking the way we would expect through multiple iterations or upgrades, it almost kept getting wider,” he says.

EHRs have “really highlighted kind of the brokenness of medicine,” Reed says. “We’ve moved away from patient-centered elements of care, and we moved purely into a regulatory means of checking boxes and things like meaningful use.”

In an effort to remedy this, Allscripts in 2020 turned to a veteran software designer, Jenna Date, an adjunct professor at the [Human-Computer Interaction Institute at Carnegie-Mellon University](#) who specializes in human-centered design. The company hired her as chief experience officer for healthcare solutions, and she remains CXO and vice president with the sale of its hospital and large physician practices business unit to [Harris](#). The unit has now been renamed to Altera Digital Health.

“We use ethnography to be able to go in and spend hours with clinicians,” Date says. “We’re focused on the bigger picture. What happens when you come in in the morning? What happens, what’s the first thing that you try



and get done? What happens at night? What happens on call? We look at different hospitals, not just Hendrick. It was a few hospitals that we visited. And then we look for patterns across those hospitals.”

The collaboration with Hendrick Health identified four such patterns: a drive for simplicity, helping physicians get back to basic tasks, corralling regulation-fueled triggers and alerts in the EHR, and a need to focus on patients.

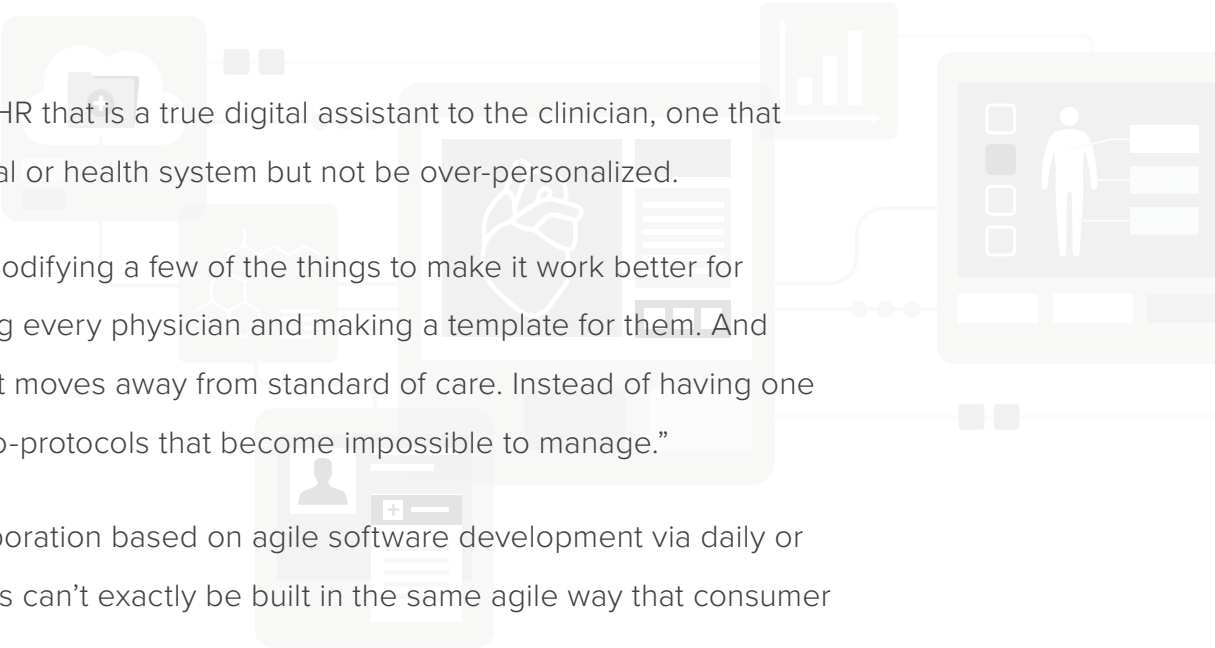
“Over the course of two years, we’ve come back to Josh time and time again and his team at Hendrick and a multiple of other connections,” Date says.

Other healthcare leaders have echoed the importance of the human factor in modifying EHRs.

“As a former software programmer and EMR analyst turned chief information officer, I found it refreshing to see Jenna Date and her team’s innovative approach to making our EMR better,” says [Andrew Watt, MD, FACEP](#), vice president, chief information officer, and chief medical information officer at Granite One Health and Catholic Medical Center in New Hampshire.

“She came to our health system, sat with our physicians, and watched their daily workflows,” he says. “Her team took that insight and challenged her company, which designs using programmers, to be open to ideas on what is really important for caregivers on the screen. She let our providers play with working prototypes. Her team solicited feedback and observed how our people interacted with these prototypes. She is advancing the idea that design can reveal function for the first time in our EMR.”

Reed likens most EHRs to “digital shoeboxes” that don’t bring the most relevant and useful information to clinicians’ attention. And that, he says, hinders clinicians in using the platform to improve care outcomes.



The result of the Sunrise redesign, Reed says, is an EHR that is a true digital assistant to the clinician, one that can be customized to the needs of a particular hospital or health system but not be over-personalized.

“Customization is taking a basic set of software and modifying a few of the things to make it work better for that system,” he says. “Personalization is literally taking every physician and making a template for them. And that’s the wrong direction, in my opinion, because that moves away from standard of care. Instead of having one protocol, you now have hundreds of individual pseudo-protocols that become impossible to manage.”

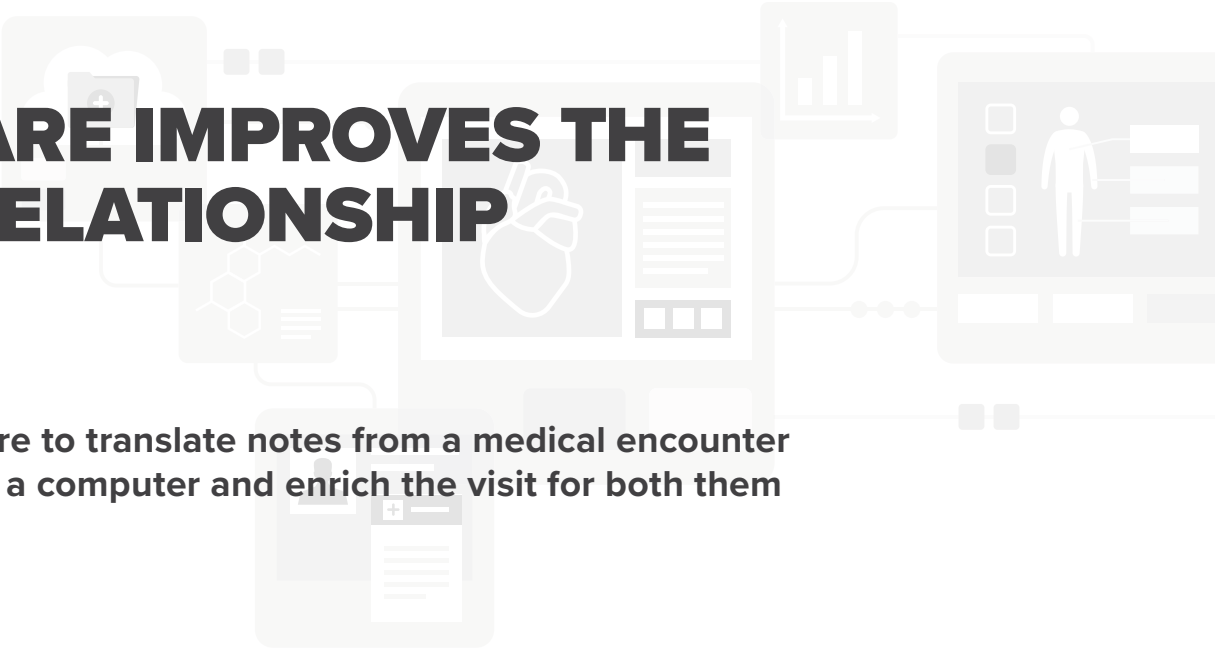
Although modern software is often a developer collaboration based on agile software development via daily or weekly software development sprints, healthcare apps can’t exactly be built in the same agile way that consumer apps are built these days, Date says.

“We have sort of like a waterfall agile, where we do our due diligence to be able to put requirements in place early, give designers the time to be able to do all of that work and usability test it, and then we have enough to go into a sprint where we say okay, development, this is what it should look like,” Date says.

Measuring the effectiveness of the redesign is the next challenge for Reed and clinicians at other Allscripts Sunrise-powered facilities, who will be going live with the Sunrise 22.1 update during June.

“Instead of hardcore metrics, my brain goes more to the anecdotes of, if I’m in the physician lounge, I’m hearing less complaining,” Reed says. “I’m seeing more time to go see patients, less burnout, and some of the indirect measures.” ■

DICTATION SOFTWARE IMPROVES THE DOCTOR-PATIENT RELATIONSHIP

A background illustration featuring various medical and technology icons. It includes a cloud with a plus sign, a heart with a pulse line, a bar chart, a person icon, and a document with a plus sign. These icons are connected by lines, suggesting a network or data flow.

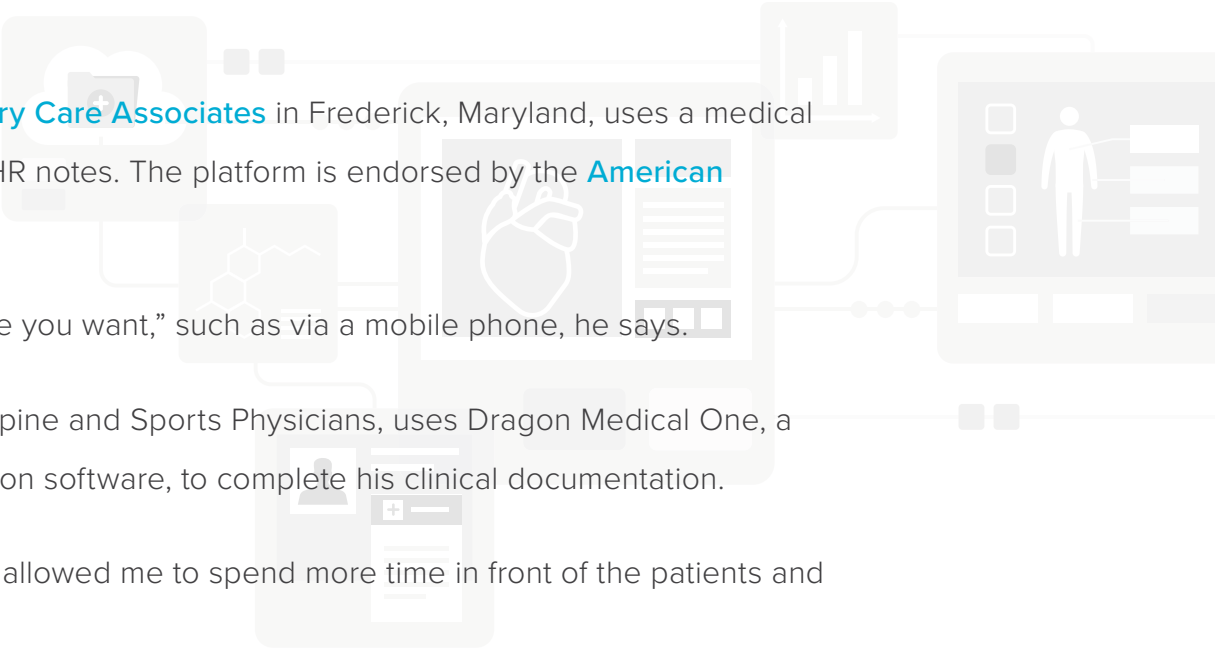
BY: SCOTT MACE

Two physicians use speech dictation software to translate notes from a medical encounter into the patient record, reduce their time on a computer and enrich the visit for both them and their patients.

KEY TAKEAWAYS

- > Healthcare providers are now using speech dictation software to translate their notes right after the patient visit, enabling them to more quickly update the medical record.
- > Some are also “training” the technology platform to recognize text macros that expedite EHR note building.
- > A study by the American Association of Family Physicians found a 72% reduction in median documentation time per note using this technology.

A family physician in Maryland is improving his documentation (and spending less time doing it) with technology that combats physician burnout.



Anuj Bhatnagar, MD, a physician with [Frederick Primary Care Associates](#) in Frederick, Maryland, uses a medical dictation and AI software to populate athenahealth EHR notes. The platform is endorsed by the [American Association of Family Physicians](#) (AAFP).

“The most important thing is you can dictate anywhere you want,” such as via a mobile phone, he says.

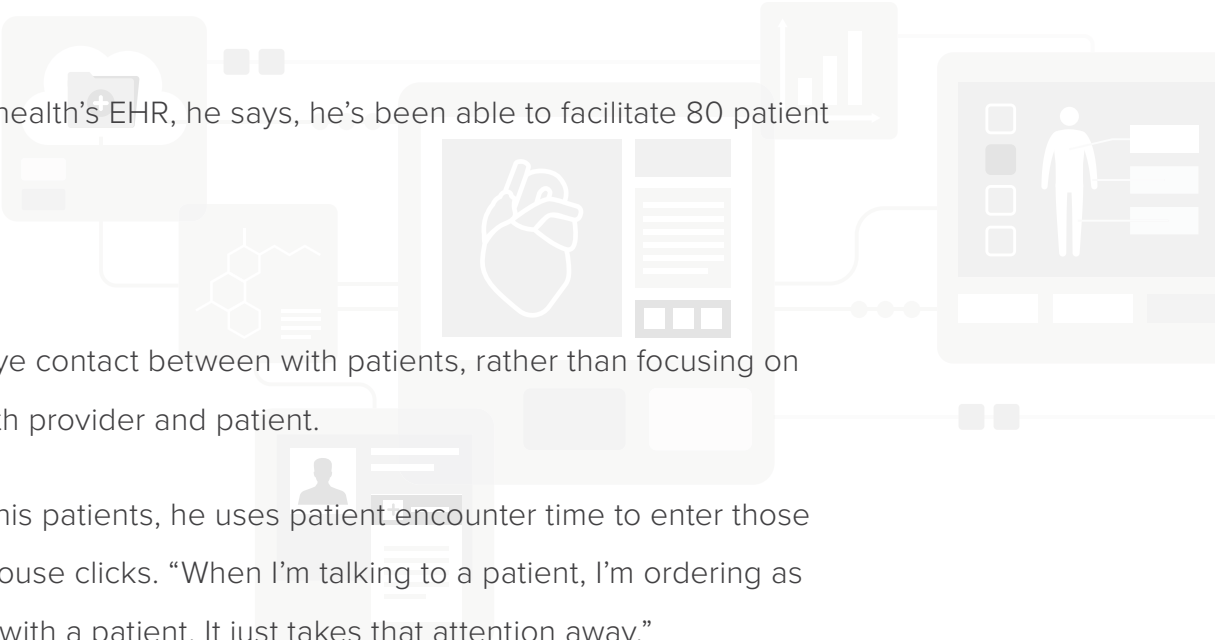
Dr. Michael Greene, MD, a physician with Peachtree Spine and Sports Physicians, uses Dragon Medical One, a conversational AI workflow assistant and documentation software, to complete his clinical documentation.

“Dragon Medical One has made me very efficient. It’s allowed me to spend more time in front of the patients and less time doing documentation” he says.

As Dr. Greene notes, “because Dragon Medical One is so fast and allows me to edit on the spot, if I have a referring doctor who sent a patient to me, I’m able to get that note back to that doctor quickly.”

Dragon Medical One has integrated voice skills that make workflows work as physicians do. The solution helps take the monotony out of repetitive tasks with custom voice skills that enrich the physician workflow experience with automated shortcuts, easier access to specialized information, and seamless navigation of the EHR.

The software Dr. Bhatnagar uses is one of several technology solutions designed to improve clinician workflows by translating notes into the EHR. Dr. Bhatnagar says he’s used other platforms in the past, including Dragon with Epic, and likes their current software for its ability to help providers who use English as a second language.



In the year that he has used the software with athenahealth's EHR, he says, he's been able to facilitate 80 patient encounters per week.

"I dictate for at least 95% of my patients," he says.

These technologies enable clinicians to make more eye contact between with patients, rather than focusing on their computers, thus enriching the experience for both provider and patient.

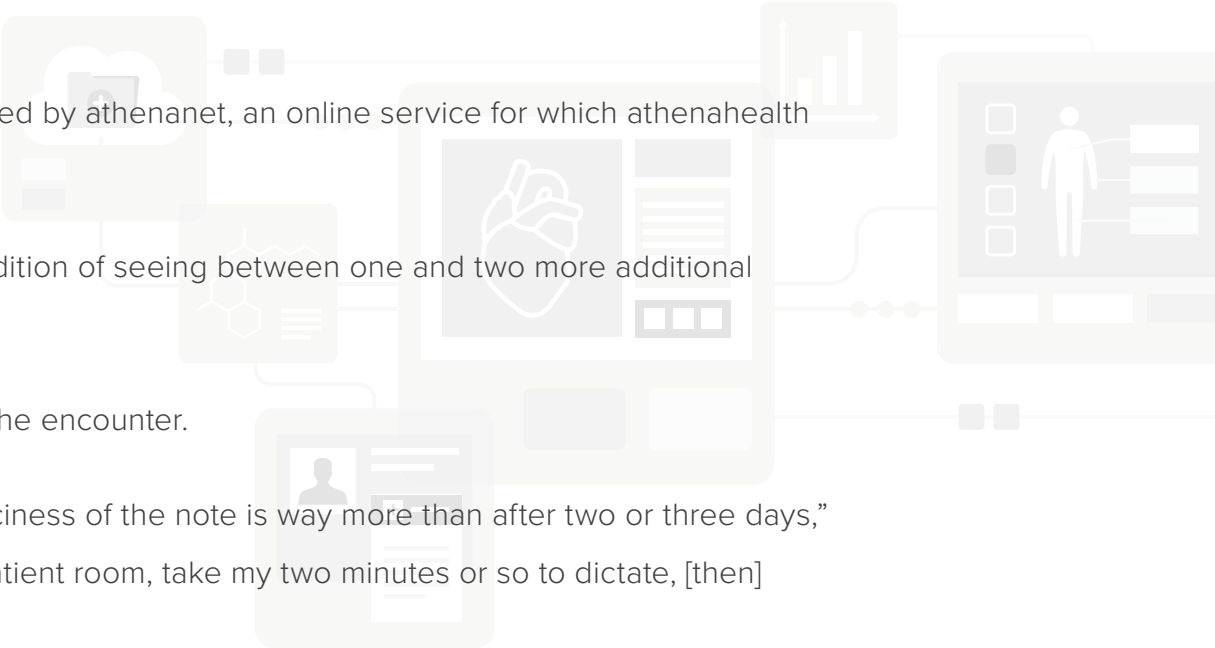
Dr. Bhatnagar notes that with the approval of most of his patients, he uses patient encounter time to enter those orders, including e-prescriptions and lab tests, with mouse clicks. "When I'm talking to a patient, I'm ordering as I'm talking," he says. "I never tend to dictate when I'm with a patient. It just takes that attention away."

"It's a mixed bag," he adds, "but I believe in giving the control to the patient, saying, 'Hey, would you mind if I just have my ears and not my eyes towards you?'" Some patients prefer the eye contact instead, he notes.

He also likes the ability to invoke the technology from within different parts of the medical record, rather than relying upon the software to make sense of where in the medical record parts of the conversation are intended to go.

He says he has also trained the software to recognize athenahealth smart texts or text macros, pre-populated portions of notes, to expedite note building in his EHR.

"Even with the new technology, it took some time," he says. "I think it was learning my accent. But in the last eight months, I realized it is just catching it pretty easy."



Some macros he built himself, while others are provided by athenanet, an online service for which athenahealth requires a subscription.

The cost, he says, is more than made up for in the addition of seeing between one and two more additional patients per day.

He notes that dictation works best immediately after the encounter.

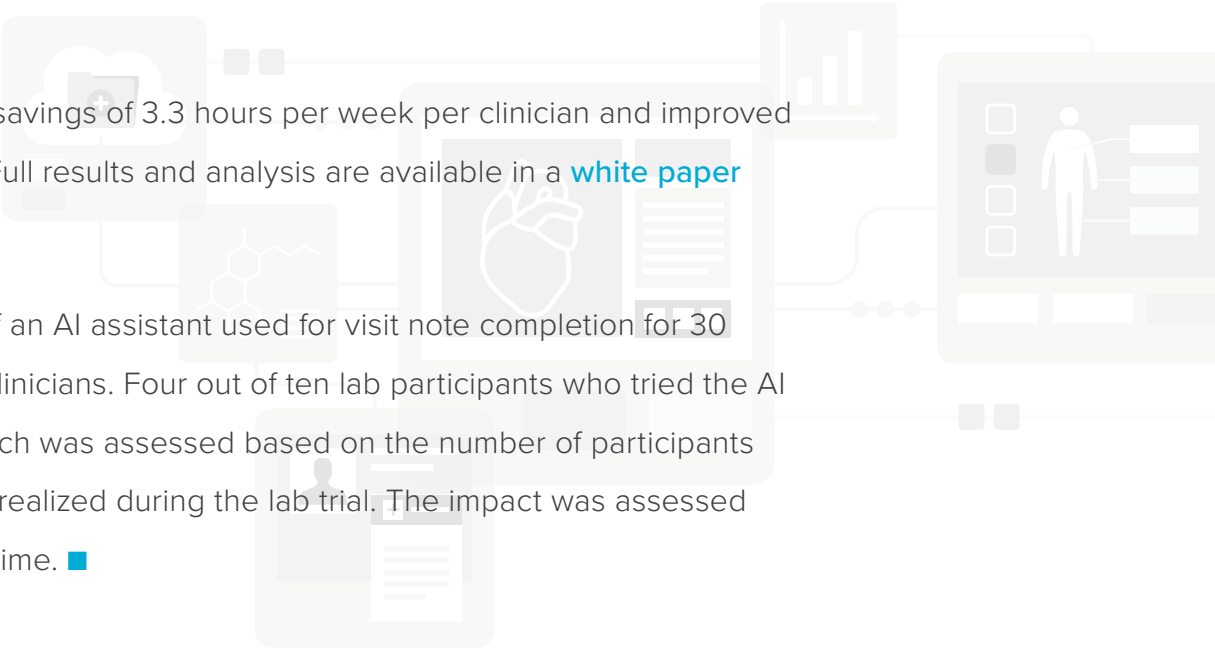
“If we saw a patient and we dictate right away, the juiciness of the note is way more than after two or three days,” he says. “After the patient leaves, I stay back in the patient room, take my two minutes or so to dictate, [then] come out and see the next patient.”

**“Honestly speaking, I never bring work home,” he adds.
“I finish all my full 20 patients a day [on] the same day.”**

By having those records completed on the same day, the patient’s medical record is more quickly up to date, and can be access by another physician if that patient sees someone else.

“My colleague knows what my thought process was,” he says. “I think that seals the deal for us in this case.”

AAFP has used speech recognition technologies in its Innovation Laboratory to study the adoption, use and impact of an AI assistant for documentation by primary care physicians. According to an AAFP study, participants in family medicine and other primary care specialties saw a 72% reduction in their median documentation time



per note. Lab participants reported a calculated time savings of 3.3 hours per week per clinician and improved satisfaction with their workload and in their practice. Full results and analysis are available in a [white paper](#) on the pilot.

Phase 2 of the lab studied the adoption and impact of an AI assistant used for visit note completion for 30 days by over 132 family physicians and primary care clinicians. Four out of ten lab participants who tried the AI assistant for documentation adopted the solution, which was assessed based on the number of participants agreeing to purchase the technology, and the impact realized during the lab trial. The impact was assessed through a quantitative assessment of documentation time. ■

POOR EHR EXPERIENCE LINKED TO HIGHER CLINICIAN TURNOVER

BY: JAY ASSER

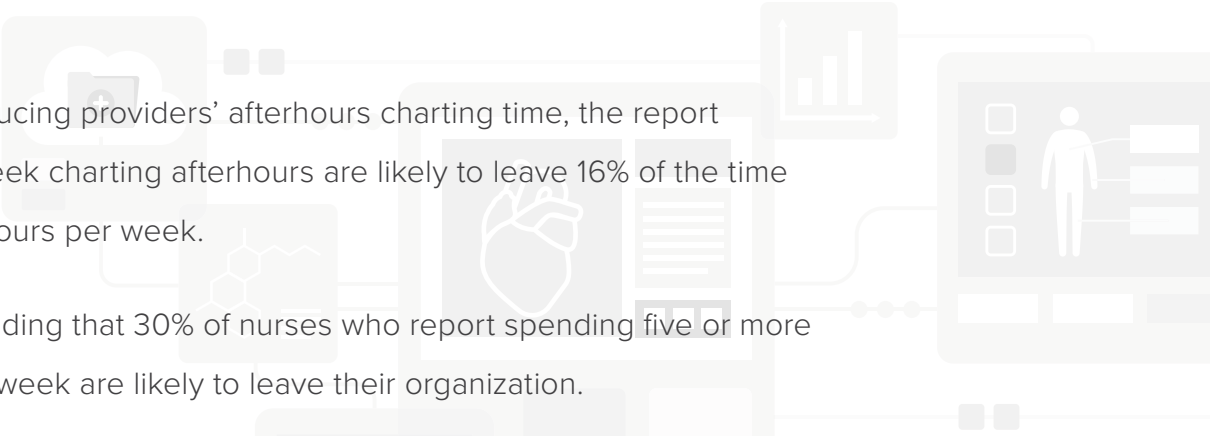
A KLAS survey found that dissatisfaction with electronic health records (EHR) is more likely to result in clinician resignations.

EHR satisfaction plays a significant role in clinicians' decision to continue at their organization, according to a report by [KLAS](#).

Based on 59,000 clinicians surveyed, [the research found](#) that providers who are very dissatisfied with their organization's EHR are nearly three times more likely to leave in the next two years compared to those who are very satisfied with the EHR.

The report also highlighted the importance of EHR training, finding that clinicians who strongly disagree their training was specific to their workflow are more than twice as likely to leave their organization compared to those who strongly agree.

Additionally, EHR vendor satisfaction can influence clinicians' decision to leave. According to the survey, 32% of clinicians who strongly disagree that their vendor has designed a high-quality EHR are likely to leave their organization compared to 12% who strongly agree.



One strategy that can improve EHR satisfaction is reducing providers' afterhours charting time, the report stated. Clinicians who spend zero to five hours per week charting afterhours are likely to leave 16% of the time compared to 24% for those who chart more than 25 hours per week.

Charting burden also affects nurses, with the study finding that 30% of nurses who report spending five or more hours doing duplicative or unproductive charting per week are likely to leave their organization.

“While some clinicians chart after hours by choice, those who are efficient enough in the EHR to complete most of their charting during business hours tend to be more satisfied with the EHR and less burned out,” the authors of the report wrote. “Charting efficiency can also be improved by implementing personalizations that are the most appropriate for each clinician’s workflow.”

EHR experience is far from the only factor causing clinician burnout, but it is an area hospitals and health systems have some control over to make the process easier for their providers.

“Healthcare leaders should focus on improving the areas of EHR satisfaction with the most room to improve,” the authors wrote. “At a foundational level, organizations need to ensure their EHR has solid reliability (i.e., uptime) and quick response time, as these issues can overshadow even an otherwise good EHR experience.” ■

ONC CHIEF DEFENDS HEALTH IT INVESTMENT DESPITE COST OF OWNERSHIP CONCERNS

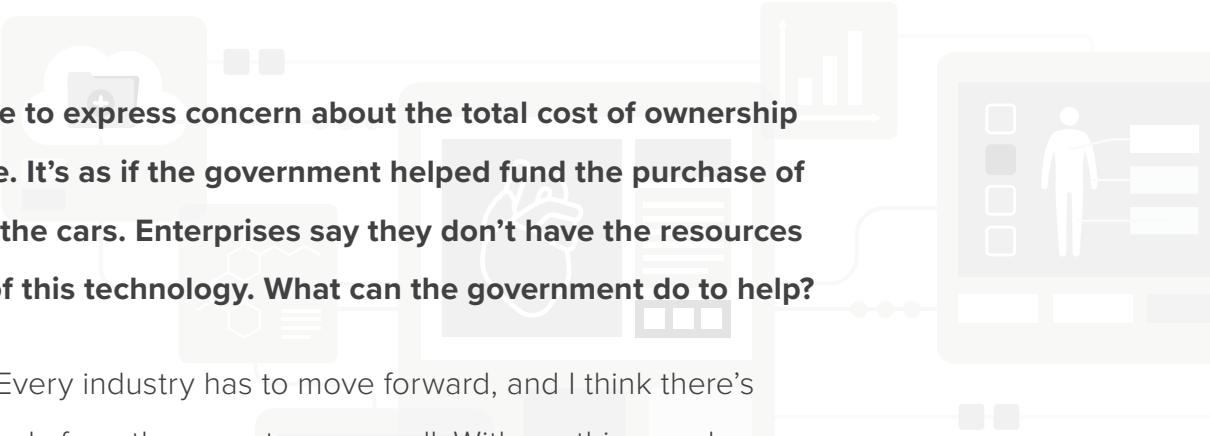
BY: SCOTT MACE

In the second of a two-part interview, Micky Tripathi points to resources to optimize best practices, but says the ONC could do more.

KEY TAKEAWAYS

- > Additional upside for healthcare enterprises is available through value-based purchasing incentives.
- > The conversational natural language process, though it adds more cost, can reduce the burden of too many clicks.
- > The ONC provides additional educational materials impacting safety and efficiency, and continues to look to aviation industry for inspiration.

Micky Tripathi, PhD, MPP, took the helm of the Department of Health and Human Services Office of the National Coordinator for Health Information Technology on the first day of the Biden administration in 2021. In a sequel to his [two-part conversation with HealthLeaders a year ago](#), Tripathi addresses ONC's top priorities. [Part 1, published yesterday](#), explored top ONC priorities including data governance, data sharing, security, and privacy. This interview that has been lightly edited for brevity and clarity.

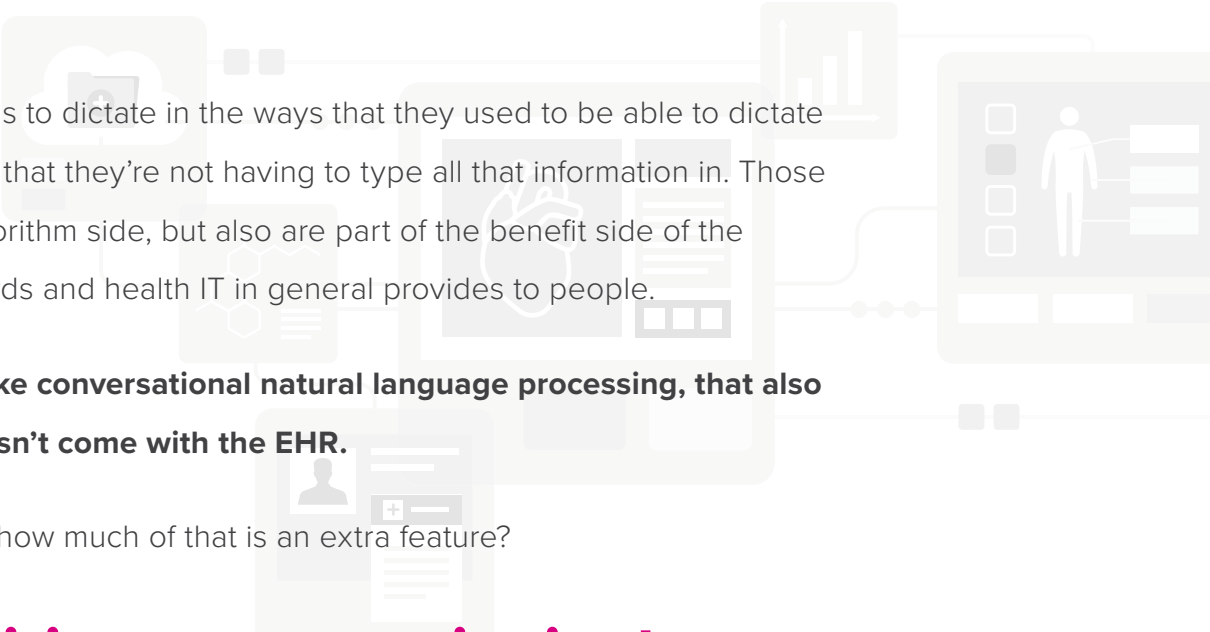


HealthLeaders: Some healthcare IT leaders continue to express concern about the total cost of ownership of digital health technology going on back a decade. It's as if the government helped fund the purchase of cars, but did not budget for funding for the fuel for the cars. Enterprises say they don't have the resources necessary to necessarily drive home the potential of this technology. What can the government do to help?

Micky Tripathi: I'm not sure I agree with the analogy. Every industry has to move forward, and I think there's a tremendous amount of value that's been gotten already from these systems as well. With anything, and particularly with technology, the costs are very, very clear and discrete -- what you pay eClinicalWorks or Epic or Cerner every month -- but the benefits are very diffuse. So your CFO doesn't see on their ledger, here is the return on investment that I got from that, even though there is a return in terms of quality, in terms of safety, and better documentation. So I disagree with the premise that that analogy is right. I don't think that there's a choice in that matter.

There are a variety of federal programs that provide additional benefits. For example, participation in value-based purchasing, where there's upside potential for organizations that participate in those. You can't successfully participate in those if you don't have an electronic health record. And there's no way that you could do the kind of quality measurement, the kind of care coordination, the kind of care management that you're required to do to participate in those programs without the benefit of those systems. So that's where there's a lot of benefit. And I think we're going to start to see more and more.

We talked about algorithms. I have a little bit of a black box, and we need to worry about, are there unintended consequences for what's going on in there? There is a huge upside potential to what algorithms offer as well, when you think about the burden of too many clicks. Algorithms can work in the background, to try to make



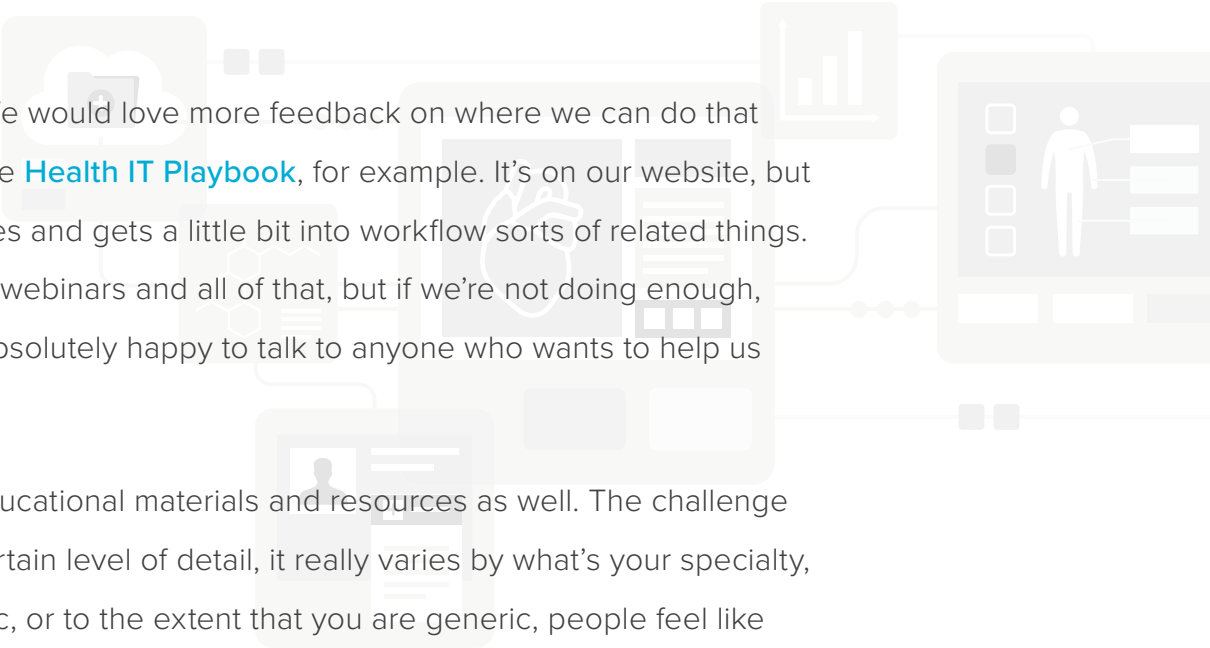
better sense of non-structured data to allow physicians to dictate in the ways that they used to be able to dictate into systems through natural language processing, so that they're not having to type all that information in. Those are all things that are tremendous benefits on the algorithm side, but also are part of the benefit side of the ledger, as we think about what electronic health records and health IT in general provides to people.

HL: Although to be fair, if you're adding elements like conversational natural language processing, that also adds to the cost side of the equation as well. It doesn't come with the EHR.

Tripathi: No, it doesn't. As data varies by the system, how much of that is an extra feature?

Like any other investment decision, every organization has got to make the decision of, do I want to hire a scribe, who will do that kind of data entry for me? Or do I want to invest in that technology? Or do I want to place that responsibility on the provider? And these are all sort of the regular automation versus labor intensity kinds of decisions that every organization has to make.

HL: The ONC and the government are best known for writing and implementing regulations. How can the government move beyond this, to offer more in the way of workflows, best practices, recipes for success, educational curriculum, and sample policies. Some say adding these would improve clinical workflow in ways that similar measures do for aviation by going beyond regulations.



Tripathi: Yeah, it's really an interesting perspective. We would love more feedback on where we can do that more. We try to do some of that more, like we have the [Health IT Playbook](#), for example. It's on our website, but that kind of walks through different types of capabilities and gets a little bit into workflow sorts of related things. We do a ton in the way of learning collaboratives and webinars and all of that, but if we're not doing enough, or if there are areas where we can do more, we are absolutely happy to talk to anyone who wants to help us with that.

We work with the AMA and others to develop joint educational materials and resources as well. The challenge with things like workflows is that once you get to a certain level of detail, it really varies by what's your specialty, and what EHR are you on. It's really hard to be generic, or to the extent that you are generic, people feel like that's just motherhood and apple pie, and doesn't apply to what they're trying to do.

One area that I think is an area that we're starting to look harder at, though, and since you mentioned aviation, is safety. Are there things where we can drill into more with respect to surfacing safety issues that might be common across EHRs, for example, and be able to surface those and make those available to others for them to learn and be able to make sure that they design certain things out of their systems? If that has popped up in one system, it seems like it could be an issue in other systems as well. And that's very much in line with the way that the aviation industry handles safety issues. Regardless of whether you're on Boeing or Airbus, or regardless of which avionics system you're using, being able to surface those issues so that others can learn from them, that's an area that we're starting to look at for sure. ■

ABOUT THE SPONSOR



Nuance Communications is a technology pioneer with market leadership in conversational AI and ambient intelligence. A full-service partner trusted by 77 percent of U.S. hospitals and 85 percent of the Fortune 100 companies worldwide, Nuance creates intuitive solutions that amplify people's ability to help others.

[nuance.com](https://www.nuance.com)