

 **PRIMER**

for U.S. health care providers

How AI and automation can help clinicians practice at top of license

Three advantages of AI-enabled solutions

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Key takeaways:

- AI can connect silos of data, assume repetitive tasks, relieve documentation burdens, and focus clinicians' expertise on care-related problems in ways that are not possible for people or alternate technologies.
- AI and automation solutions cue up relevant and unique information about a patient to help physicians add value to every conversation.
- As AI and automation technologies improve and help liberate clinicians to do the work they want to do, they will be increasingly essential to attract and retain clinicians.
- Automated solutions don't only have to be about monitoring clinicians into compliance; they should also be about identifying and learning from high performers.

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Definitions

Top of license

To practice to the full-extent of one's education and training—making the greatest contribution each individual can make—rather than spending time doing non-value-added work.

Artificial intelligence

AI is a broad term, representing our intent to build humanlike intelligent entities for selected tasks. The goal is to use fields of science, mathematics and technology to mimic or replicate human intelligence with machines.

AI comprises components such as machine learning, neural networks, computer vision, natural language processing, sensors, human-AI interactions, planning and reasoning, and autonomy.

Intelligent automation

AI-enabled process automation.

Intelligent automation combines adaptive elements of AI like predictive classifiers, natural language processing, and computer vision with execution-focused capabilities of RPA to perform repetitive, logic-based tasks.

It uses AI capabilities to take in and act on structured and unstructured data in a human-like manner and learns from historic data to improve accuracy and efficiency.

Why it's so hard to work at top of license

Doctors and nurses want to be with patients. They want to be caregivers. The problem is that they are tasked with too many other things that make it difficult for them to work at top of license.

Top of license work has long been an aspiration of our clinical workforce. We want all of our clinicians' education, training, and expertise to be put to use. We want to steer their work and workflows away from things where all of that training and expertise doesn't add any value.

Advisory Board's research on top-of-license work for nurses and care teams across the past decade has consistently said the same thing: there are competing and consistently escalating demands on clinicians that make it hard to practice at top of license. The reality is that we need clinicians practicing at top of license because care complexity continues to increase in terms of the number of conditions, comorbidities, medications, and providers a patient has.

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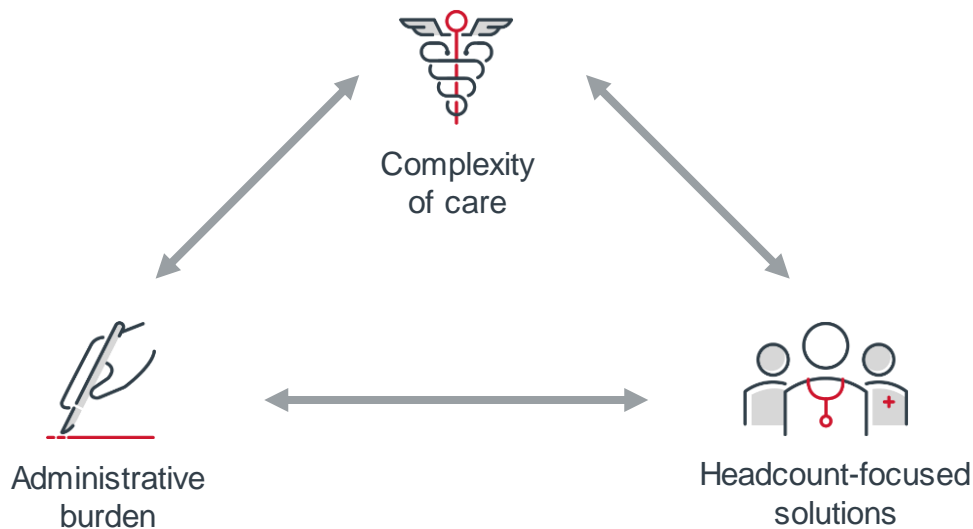
Fatigue rarely comes from the specific thing people are supposed to be or want to be doing, like patient care. It comes from all of the additional [things] we ask them to do, typically administrative, not top-of-license stuff.

Health system executive

At the same time, the administrative burden on clinicians is enormous. “Too many bureaucratic tasks” is the top contributor to clinician burnout: nearly three out of five physicians say it is the biggest contributor to their feelings of burnout. That’s not a surprise: between one-third and one-half of physicians’ time is spent reviewing medical records and writing notes.

Unfortunately, most health care organizations see hiring more staff as the only way to address the complexity of care and to relieve the administrative burden. The reality of provider finances and labor markets is that they can’t add staff—they can’t afford it, or qualified candidates aren’t available, respectively. Nine out of every 10 nurses say that they have considered leaving the nursing workforce, mostly because of staffing constraints.

Competing demands complicate top-of-license aspiration



Advisory Board has literally written the book on care-team redesign, and that undertaking is an important step in understanding and advancing top-of-license practice. But given the increasing complexity of the issue, it’s not unreasonable to think that health care has reached a point where clinicians simply can’t practice at top of license without a new approach to the problem.

Why artificial intelligence is a real solution

Artificial intelligence excels at repetitive tasks that humans usually perform as the connective tissue between silos of data and accountability. The solutions available incorporate many different kinds of technology—voice recognition, predictive classifiers, natural language processing, and computer vision are relatively common—which can then be layered on top of robotic process automation to create adaptive and resilient applications. These solutions can do repetitive tasks, but they can also learn and be taught to do them differently and better as needs change.

There's a pervasive misconception in health care that any implementation of AI is effectively handing over processes to an unaccountable, inscrutable bot that will ignore outliers and boss clinicians and staff around. We'd never hire a person like that, so why would we hire a computer to be that way?

A clear understanding of both AI's potential and its limitations can help health care leaders think about its uses in ways that will drive results. Health care has begun to embrace AI across the care enterprise to make business processes like revenue cycle and human resources more efficient. Those are worthy and necessary investments. But they do not help address the fundamental risk to both mission and margin that clinician burnout poses.

How AI and automation can help clinicians work at top of license

Artificial intelligence or automation—of any kind—in clinical care can be a sensitive subject. Neither providers nor patients want to lose the human connection of delivering and receiving care. The reality is that health care must deploy these technologies because, if for no other reason, clinicians are tired and must have more robust support.

Three ways AI is already working to enable top-of-license practice

01

ADVANTAGE

Help clinicians add value to patient interactions

02

ADVANTAGE

Reduce clinical documentation demands

03

ADVANTAGE

Make accountability more than just scolding clinicians into compliance

01 Help clinicians add value to patient interactions

Clinicians value time spent caring for their patients but in reality, a large portion of their time with patients is spent searching for the right information in the EHR. The problem for frontline clinicians is not a lack of data. It's too much data. The challenge is separating the vital few from the trivial many.

In conversations with clinicians who are using AI-enabled solutions, we have heard two consistent themes about what those systems allow clinicians to do.

“You came in to talk about cancer. So why would we spend time together talking about your history of allergies?”

Any time during the clinical visit that is spent talking about something other than the issue at hand is frustrating for the clinician and the patient. Automated pre-visit and intake solutions, enabled with AI to be adaptive to what the patient reports, can also cue up the relevant information to the clinician, without requiring the clinician to do the “librarian” work of gathering, collecting, and summarizing information.

“I can be more productive and more focused on the patient.”

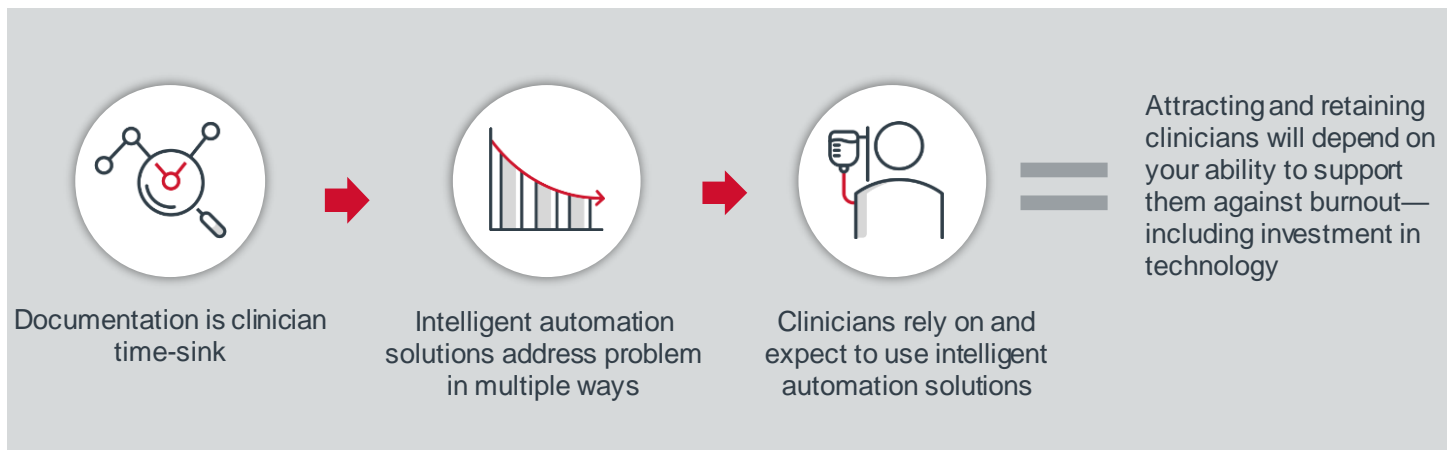
Even and especially for high-performing, high-productivity physicians, AI-enabled solutions can support them to add value to patient interactions that is truly unique to them. Their experience, expertise, and time is wasted if they are wading through screens in the EHR. From a throughput perspective alone, less time spent on documentation means more time with attention on patients—and potentially more patients..

Notice that none of this relies on an idealized end-to-end technology that replaces the primacy of the clinician’s expertise and judgment in the patient interaction. Just because AI can be deployed autonomously to complete a repetitive task over and over, that doesn’t mean AI has autonomy to act on its own. The power of these technologies is to liberate clinicians to do the patient-facing work they want to do, rather than the non-value-add work that they often have to do.

02 Reduce clinical documentation demands

The amount of time clinicians spend on documentation as part of their workday is a genuine time sink that contributes significantly to burnout. In 2013, Advisory Board researchers wrote about helping nurses practice at top-of-license, and the very first element of those recommendations was to streamline documentation demands. Nearly a decade later, the demands have only increased, both in terms of volume and complexity.

AI-enabled solutions can reduce the data that clinicians are responsible for collecting at the point of care and entering into the medical record. Voice transcription and scribing are increasingly prevalent and accurate. Newer asynchronous questionnaires employ branched logic to suggest triage and diagnosis while automatically populating the relevant fields in the medical record and writing the visit note. Real-time ambient technologies are available to transcribe the entirety of a patient-clinician interaction.





REDUCE CLINICAL DOCUMENTATION DEMANDS

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But the insight about these technologies is not that there is a documentation problem and that technology can reduce or eliminate it. The insight is about what happens as these technologies get better and cheaper. The answer: more clinicians will use them, and indeed begin to rely on them as a regular part of their practice.

Attracting and retaining clinicians in the future is going to depend heavily on how any health care organization supports them to deal with burnout—and part of that is going to be the technology that is provided to make their work easier. Clinicians will choose to work where automation allows them to spend more time on patient care, rather than documentation. They won't be willing to spend hours after work and over the weekend to complete documentation when automation technology can do all that work for them.

03 Make accountability more than just scolding clinicians into compliance

Even if systems can automate away many administrative tasks, clinicians will still bear the burden of completing some tasks for which they personally have few incentives but are important to the health system or other stakeholders. There's always someone who wants a clinician to complete another report or plan.

While AI can provide automated visibility into how well clinicians adhere to those processes, the opportunity isn't in monitoring clinicians in a far more pervasive if accurate way. It's not even in being able to send them more specific or robust alerts to scold clinicians into compliance. It can be about identifying high performers and learning from them.

Many solutions can prioritize and prompt...

...But miss an opportunity both to correct and recognize



Prioritize

Prompt

Correct

Recognize

Which manual decisions can be effectively automated?

Which processes require human intervention?
What actions are required?

Which actions and outcomes deviate from best practice and expectations?

Which actions and outcomes help reinforce commitment to and effectiveness of our processes?



MAKE ACCOUNTABILITY MORE THAN JUST SCOLDING CLINICIANS INTO COMPLIANCE

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We've seen systems that are designed to identify and automate clinical processes and reporting for things like discharge planning and scheduling, and even to prompt intervention from a clinician or staff member when appropriate. But we can also use this technology to close the accountability loop, not only by picking out adverse actions and outcomes for attention and escalation but also by identifying actions and outcomes that should be reinforced with recognition. Leaders can use this information to give high-performing staff kudos for a job well done. That's solving a problem of clinician experience that goes far beyond simply helping them spend less time on a tedious task.

Parting thoughts

Again, clinicians can be sensitive to AI of any kind in the clinical care setting. Too many clinicians think that AI and automation will make their jobs worse—either by introducing a clunky solution that requires more work on their part or by creating a workflow that replaces human touch with a digital solution. And without clinician support, any attempts to deploy these technologies will be unsuccessful. As you start to invest in and deploy these solutions, it's important to remind clinicians that the ultimate goal is to help them do their jobs better and to make their work more enjoyable. ▽

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