

HiMS Health Information Management Systems

THE REMEDY LIES IN USABILITY

The electronic health record (EHR) is a revolutionary advance in health care productivity and excellence. But it's also been blamed for endemic clinician burnout, onerous red tape, and negation of the benefits it was designed to deliver.

Deservedly so. The EHR is too often a monolithic administrative monster that clinicians and staff constantly feed to secure payment, satisfy regulators, and run a solvent business. Physicians feel like data clerks.

"Many EHR products were designed with billing, payer requirements, and meaningful use criteria in mind rather than clinician use, resulting in a user experience laden with data entry that causes decreased productivity and efficiency, and a diminished patient-physician relationship," researchers wrote in the *Journal of the American Medical informatics Association* in 2019.

That's an understatement, because a bad EHR experience imposes a heavy cognitive load on clinicians, leading to medical errors, oversights, information gaps, fatigue, limited patient access, and dismal outcomes.

THE EHR USER INTERFACE IS WHERE THE RUBBER MEETS THE ROAD.

The UI should, and truly can, be an engine for patient satisfaction, provider performance, and value-based care. But it needs to be radically different than it has been. It needs to serve the user instead of the other way around, whether the user in question is a new patient making an appointment, a clinician seeing an anxious teen, a claims specialist securing reimbursement, or an analyst extracting insights from troves of data.



AN AESTHETICALLY PLEASING UI LEADS TO A BETTER UX

Since UIs drive user experiences, the UI needs to be designed so that everyone in a practice or integrated health system who touches it sees the EHR as a personalized hub to improve health, enhance communication, collaborate more efficiently, and deliver better care. Like your smartphone, with all the functions you need arranged in just the way you like them, the EHR should optimize your ability to get important things done and hide any functions you'll never use.

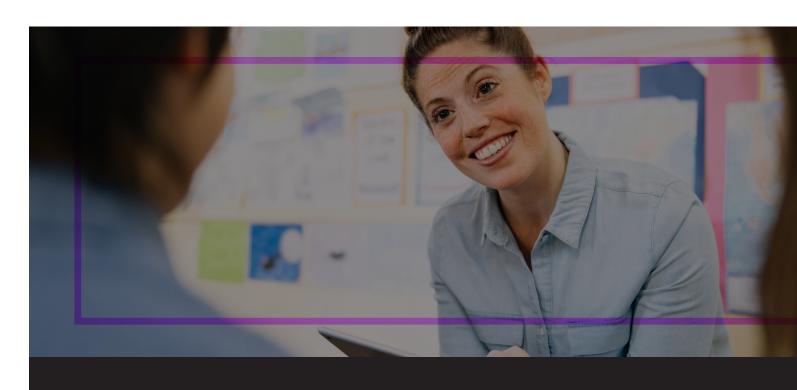
A smartphone's apps, icons, buttons, sliders, colors, fonts, controls, and accessibility features are all arranged to streamline your daily activities – e.g., text, email, voice, phone, social networks, budget keeping, banking, payments, steps, games, spreadsheets, whatever. Anything that gets in the way you can delete forever.

The EHR should do the same. To provide better care at lower cost, care teams want less screen time and more face time. They want more patient interaction and less clicking, scrolling, page-switching, and application-toggling. They want usability, a subject to which a vast body of research has been dedicated. Think about the

word *usability*. It's awful to think that a "solution" that you invest thousands or millions of dollars into, might actually be ... unusable.

But it often is. Many clinicians find their EHR almost useless for:

- Finding relevant information on a patient's history prior to a visit, during an appointment, or when other providers need it.
- Deciphering patient notes that have been assembled by multiple team members, and finding actionable information in these records.
- Efficiently prescribing medication, imaging, or lab orders.
- Completing simple, common tasks in a rigid, ponderous user interface that demands too much scrolling, clicking, page-switching, and toggling. (This burden is magnified in pressurepacked environments like emergency care.)
- Exchanging information with peers and peer institutions using smartphones and tablets, the devices they naturally use.





ALL ACTIONS NOW ACCESSIBLE FROM ONE SCREEN

Unlike your typical EHR, your smartphone is usable five minutes after you remove it from the box. It's an object that is at the very least as personal as your wallet or purse, and as necessary. Your smartphone apps and settings can be customized to your own preferences.

That's what the EHR should be: so much your own and so useful that you feel deeply connected to it. We believe it can be.

At HiMS, we've invested thousands of hours studying how physicians, nurses, psychiatrists, psychologists, assistants, and office staff do their jobs. We've learned that every role is different and every health care organization is unique. Thus, we've continually improved our Axiom EHR solution based on feedback from people who use it every day. What they really need is a new breed of EHR that is fully configurable and customizable – not just by an IT department but by each user. We'll unveil it soon as Axiom 2.0.

From a billing clerk to a CFO, clinician, or social worker, each user will be able make the EHR his or her own by intuitively arranging functions, features, apps, etc., where they like, hiding the ones they don't need, and driving all of it by voice command if they wish.

At the same time, we've also addressed some universal user needs: less clicking, more intelligence, more automation. Our approach is aligned with the values of computer science professor Cal Newton's "digital minimalism" as espoused in a New England Journal of Medicine essay [paywall]. "The philosophy has three tenets: 'clutter is costly, optimization is vital, and intentionality is satisfying," the journal authors write. "The current [legacy] approach is often focused on saying 'yes' to each additional form of technology, without considering the cumulative impact...."

INNOVATIVE DESIGN DIRECTLY IMPACTS WORKFLOWS AND PRODUCTIVITY

Owing to this clutter-reduction effort, our Axiom EHR software will be your own personalized EHR shortly after you switch it on. Although it's all configurable, you'll see a variety of carefully considered enhancements. For example, your individualized user priorities will be on the home page, as they should be.

Clinicians will be able to hover over patient icons to call up consolidated records for any client. Al-developed thumbnail patient summaries will refresh the care team's memories at a glance. Split screens will let clinicians juggle two things at once – e.g., two patients or processes – without a lot of toggling and switching of screens and apps.

You'll also have enhanced voice-enabled functionality and the ability to issue any command by words spoken in the presence of any activated device. Al will capture conversations between clinicians and patients, distilling the exchange into succinct transcribed notes that can be accepted or edited. Notes will be able to trigger suggested billing codes, and key terms will be normalized (e.g., changing the word *patient* to *member* or vice versa, depending on organizational preference).

Transcript clean-up will be informed by Al having processed millions of patient records, a process refined by on-the-fly feedback from

real users. Clinical suggestions will be based on machine learning of past patient interactions and, again, clinician feedback. Clinician notes will also be categorized by sentiment: positive, negative, or neutral.

In the spirit of reducing click burden, common, multiparameter searches can be saved as filters. Complex, often-repeated processes requiring a lot of separate commands and selections can be captured by users as one-click macros, saving screen time and increasing face time.

Importantly, value-based care will a lot easier to achieve, measure, and execute. For example, users will help populate a unique Compliance Dashboard that tracks payors' reimbursement criteria, which increasingly include value-based care actions such as:

Diabetes care	\odot
Breast cancer screening	⊘
Post-hospitalization follow-up	\otimes
ASAMs	⊗
Crisis plannings	⊘
Demographic analysis	\odot
PCP Notification	\otimes
SDOH capture	⊘
Service planning	⊘

Our award-winning software promise to you: usability, flexibility, intelligent automation.

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TO LEARN MORE ABOUT HOW A
SEAMLESS USER EXPERIENCE AND
AI CAN INCREASE PRODUCTIVITY,
AND ULTIMATELY, ENHANCE
PATIENT CARE.