WHITE PAPER

EHR Usability:
How to Recognize It and Where to Find It

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Contents

Executive Summary

Every modern profession experienced an unprecedented increase in productivity as it adopted computer technology. Think of accountants and spreadsheets, architects and computer-aided drafting, lawyers and word processing.

There has been just one notable exception: physicians and the Electronic Health Record (EHR).

In a recent survey,[1] physicians were asked, "How has the EHR affected the number of patients you can accommodate per day?" An astonishing 36.9 percent claimed to see fewer patients. Only 11.7 percent said they saw more patients, while 51.4 percent saw the same number of patients.

In other words, fewer than 12 out of every 100 physicians are more productive with the use of EHRs, while three times as many (37 out of 100) actually see their productivity go down.

By reading this white paper, you will learn:

- Why EHR usability is the key to physician productivity;
- How to define and measure EHR usability; and
- How to find a usable EHR.

EHR usability is the key to physician productivity

Why do so many physicians see a permanent drop in productivity when they start using an EHR? Why can't they use an EHR to complete a note during the patient visit the way they could with a paper chart?

In a 2014 JAMA survey,[2] family practice physicians reported an EHR-associated loss of 48 minutes of free time per clinic day. Similarly, an IDC Report published in 2013[3] found that the top reason for physician dissatisfaction with EHR software was lost productivity. Among doctors who were dissatisfied, the top causes reported were:

- EHRs require doctors to spend more time on documentation
- Doctors can see fewer patients compared to before they adopted electronic records

According to a 2013 Rand/AMA Study[4] on factors affecting physician professional satisfaction, aspects of current EHRs that were particularly common sources of dissatisfaction included:

- Poor usability
- Time-consuming data entry
- Interference with face-to-face patient care

Poor usability and badly designed interfaces are clearly the main culprits. If software is difficult to use and forces users to take extra steps, it must by definition slow them down. The extra time spent typing and clicking takes away from the finite amount of time physicians can spend focused on patients and looking them in the eyes.

1 http://www.physicianspractice.com/technology-survey/2015-technology-survey-results
2 http://archinte.jamanetwork.com/article.aspx?articleid=1901114
3 http://www.healthcarebusinesstech.com/pros-and-cons-of-ehr/
4 http://www.rand.org/pubs/research_reports/RR439.html

The burden of the unfinished note

If a note cannot be completed by the time the patient leaves the office, additional time is required between patient visits, thus reducing the number of patients that can be seen each day.

Alternatively, the physician sees the same number of patients each day, but then stays late in the office trying to recall the details of each visit, finishing notes and missing dinner yet again.

No wonder poor usability is a leading cause of physician dissatisfaction with EHRs – it makes them feel like the world's highest-paid data entry clerks.

How to define usability in an EHR

Ask physicians what they want from an EHR system and the first thing they usually say is:
"I want an EHR that's easy to use."

But what does that really mean? How can you define usability?

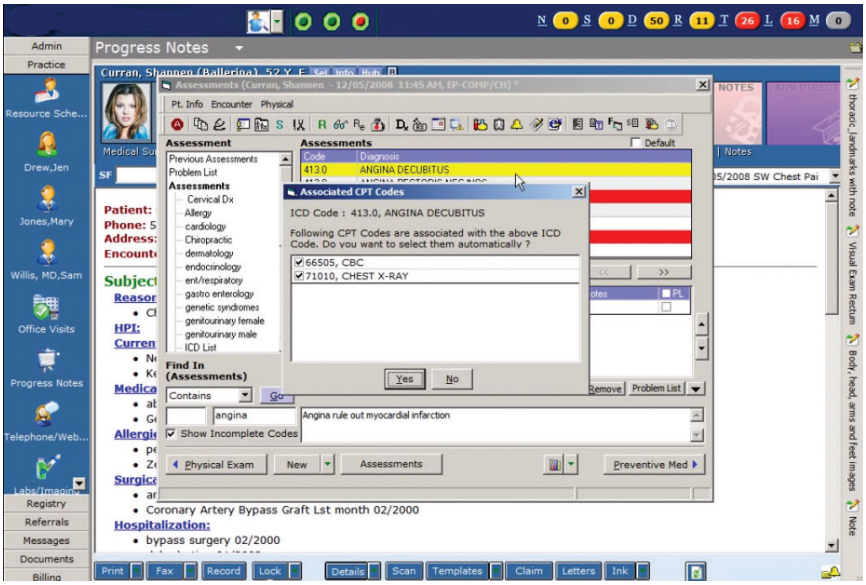
Look at the user interface

The User Interface (UI) is the first element of usability. The UI is literally what a user sees on a screen, from the layout of text boxes and controls like buttons, to the choice of graphics like colors and fonts, to the use of navigational elements like menus and icons. Each of these components must be optimized individually as well as integrated into a cohesive whole.

Let's focus on just one element of UI design, namely screen layout. The visual presentation of an EHR has a significant impact on usability.

For example, a cluttered screen with too many options can slow down the physician by making the features they want to access quickly hard to find, while forcing them to whack their way through thickets of less necessary data fields to get to what they do need (see Figure 1).

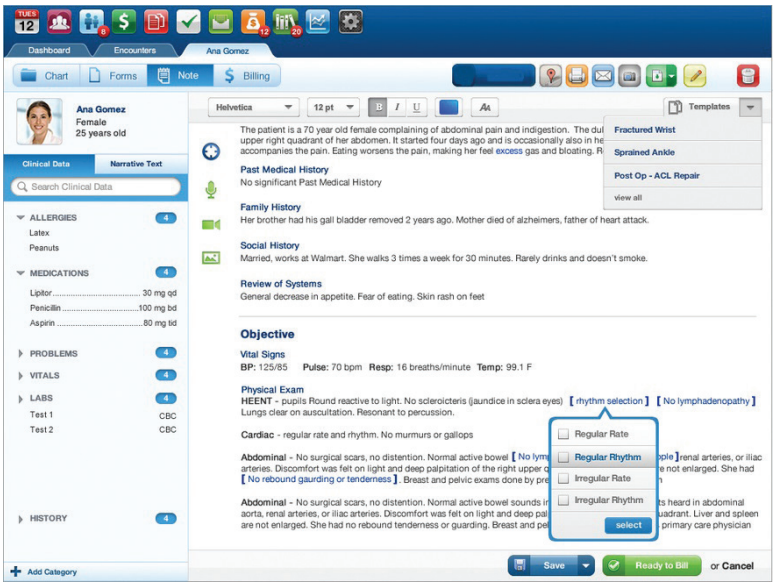
Figure 1: Example of a "cluttered" EHR screen layout



These screens are too clunky, too busy, too confusing, too ungainly in their presentation of data, too counterintuitive -- altogether too overwhelming. Rather than support the clinician's cognitive processes during the documentation process, these EHR systems can actually lead to cognitive overload for the physician, reducing their ability to make sound evidence-based medical decisions.

On the other hand, an overly simplistic screen with too few options forces the physician to click back and forth between multiple menus and windows, again slowing them down (see Figure 2).

Figure 2: Example of an overly simplistic EHR screen layout



*Amazing Charts license for one clinician, plus annual maintenance, plus Amazing Charts in the Cloud for five seats.

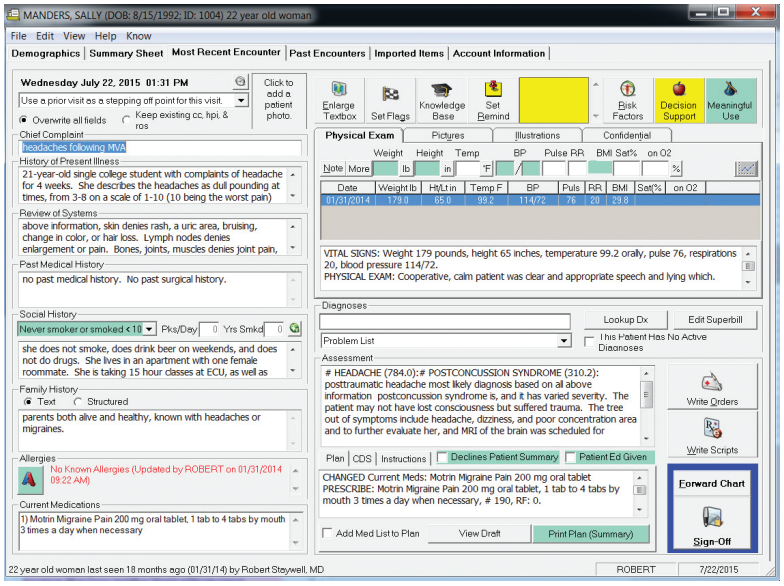
**http://www.eclinicalworks.com/products-pricing.htm

***Cost projection includes EHR and PM solution, based on phone call with eMDs sales on 5/21/2013.

This simplistic approach is a hallmark of some cloud-based EHR systems, which use web browsers to present information. The time to download and render each page in the browser varies depending on the network connection. A significant amount of time is wasted if the physician is forced to click through screen after screen.

One successful approach to screen layout is to mimic the "look and feel" of a traditional paper medical chart (see Figure 3). Not only are physicians comfortable with this familiar approach, it also allows the software designer to strike a balance between cluttered and overly simplified screens.

Figure 3: Example of an EHR screen that resembles a paper chart



Count the clicks

Workflow is defined as the sequence of steps or processes required to complete a task from initiation to completion. These tasks can be complex and demanding, such as documenting an assessment and plan during a patient visit, or relatively simple, such as writing an e-RX refill.

Obviously, physicians want to complete a task with as few steps as possible. This often translates into having fewer fields to fill out, fewer boxes to check, and fewer windows to click through.

TIP: When comparing EHR systems, you can count the number of steps required to complete a discrete task you do repeatedly throughout the day, such as documenting the History of Present Illness (HPI) or Review of Systems (ROS). The more steps, the longer it will take to complete a note.

Codify data only when necessary

Most EHR systems are designed by programmers and database administrators, not physicians. These software developers believe every bit of information deserves its own database field, which is not always feasible given the volume of material generated during a visit.

While medications, allergies, blood pressure, and other data needs their own place, being forced to check box after box to record "three days of dry cough" makes little sense. This "structured data" approach ensures physicians will have to spend more time using an EHR system than using paper charts (see Figure 4).

Figure 4: An example of an EHR with too many check boxes

Wherever possible, EHR systems should not require users to check a box or otherwise indicate that an observation has been made or an action has been taken if the data documented in the patient record already substantiate the action(s).

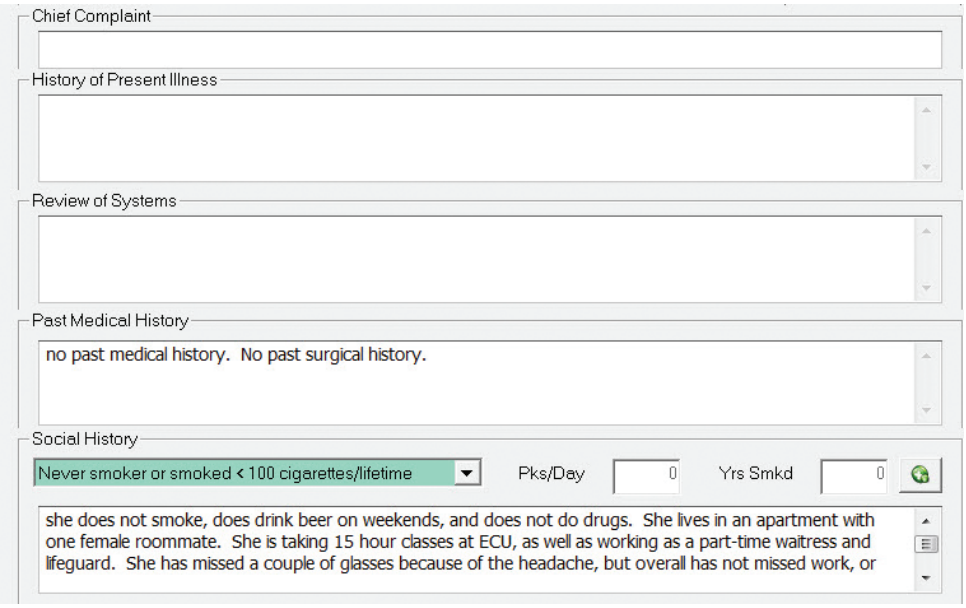
TIP: The most useful patient record will strike a good balance between structured data and a physician's narrative. Look for EHR systems that capture structured data only where they are useful in care delivery or essential for quality assessment or reporting.

Record the real narrative of the visit

According to the 2015 Clinical Documentation in the 21st Century report from the American College of Physicians[5]: "The clinical record should include the patient's story in as much detail as is required to retell the story."

Therefore, it is critical that an EHR system support the physician's ability to convey the narrative of the visit in a natural voice. This means having the ability to input free text — typed notes outside the templates — in the record (see Figure 5).

Figure 5: An example of an EHR with free text fields



TIP: Make sure your method of documentation doesn't create a barrier to telling the patient's story. Look for EHR systems that support speech recognition technology for even faster input of free text.

Use templates, but don't make cookie-cutter notes

When used appropriately, macros and templates can be valuable in improving the completeness and efficiency of documentation, particularly where that documentation is primarily limited to standardized terminology, such as the ROS and physical examination findings.

Overuse of templates, however, can result in cookie-cutter notes that all look and sound the same. There can even be a legal issue if clinical documentation is audited. Additionally, templates don't always support good documentation. This is especially true for more complex patients whose stories don't fit within the confines of standard templates.

TIP: Look for an EHR system that includes the ability to create customizable templates that support your practice's specific needs, and avoid EHR systems that minimize free text entry.

5 http://annals.org/article.aspx?articleid=2089368

How to get a usable EHR system

Now that you know how to identify usability in an EHR system, how do you easily and quickly find a usable EHR from among the hundreds of products in the market? There are three steps you can take to speed up the process.

Look at surveys of EHR users

When it comes to judging EHR usability, who can you believe? Will you believe software vendors? Or peers who have real-world experience using different EHR systems every day?

Surveys and studies provide the best way to measure EHR usability. Popular sources include KLAS Research, Blackbook Rankings, Medscape, and periodic surveys of members by medical associations such as the American Association of Family Physicians (AAFP).

Below is a sample ranking from a recent study by a research firm specializing in monitoring and reporting the performance of Healthcare IT vendors based on survey data of users (see Figure 6). Use rankings like this one to identify two or three vendors to evaluate in the next step.

Figure 6: 2014 Best in KLAS Awards: Ambulatory EMR (1-10 Physicians)

Vendor/Product	Overall Score	Trend	Konfidence Level
Cerner PowerChart	84.3	+13%	✓✓
Amazing Charts	**83.3**	**+4%**	**✓✓✓**
SRSsoft EHR	81.0	-11%	✓✓
athenahealth athenaClinicals	80.9	-7%	✓✓✓
Greenway PrimeSUITE Chart	79.1	-2%	✓✓✓
Aprima EHR	78.2	-1%	✓✓✓
ADP AdvanceMD EHR	78.0	+3%	✓✓✓
e-MDs Chart	74.0	-13%	✓✓✓
GE Healthcare Centricity Practice Solution EMR	73.8	+1%	✓✓
eClinicalWorks EHR	73.4	-7%	✓✓✓
Henry Schein MicroMD EMR	73.4	+4%	✓✓
NextGen Healthcare EHR	65.1	-3%	✓✓✓
Allscripts Professional EHR	64.7	-6%	✓✓✓
McKesson Practice Partner	48.0	-14%	✓✓

Test in your office with a full version

Once you've identified a few EHR systems for further evaluation, you need to get a free trial of the software to use in your office. Only by using a full version of the software – not a "demo" version – in your practice, seeing real patients, will you know if an EHR system meets the criteria for usability as documented in this white paper.

Ask potential EHR vendors if you can have a free trial for a few weeks. If they say "no," you should ask, "why not?"

Avoid long-term contracts that lock you in

Avoid signing a long-term contract that locks you into an EHR system for multiple years. Scrutinize any contracts offered to make sure they do not restrict access to your database, or charge an excessive fee for access to your own patient records. You want to feel free to switch to a better solution in the future.

Overcome the fear of switching

Over the past decade, many physicians have purchased costly EHR systems with poor usability. As a result, switching EHR systems has become commonplace, with some practices switching once, twice, and even three times.

While switching EHR systems frequently is not recommended, making the switch away from an unusable system is fully justified based on lost productivity and the professional dissatisfaction it generates among providers and staff.

And switching isn't as difficult as you probably think. There are migration tools that can help you move patient data from one EHR system to another. Many EHR system vendors will provide these free switching tools and other services as an incentive.

To Learn More

Amazing Charts is an EHR for independent physician practices that is ranked #1 for usability in multiple industry reports. To learn how Amazing Charts compares to other EHRs for ease of use, visit amazingcharts.com, email info@amazingcharts.com, or call 866-382-5932.

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