

EHR Consolidation: Streamlining and Making EHR Useful

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Optimization

op · ti · mi · za · tion

NOUN

the action of making the best or most effective use of a situation or resource.



Optimizing the EHR

- Simply put, EHR optimization is the process of refining an install of existing EHR software to better serve user's own needs and tends to focus on clinical productivity and efficiency.
- A central reason for the continued need for such enhancement is pretty evident. Doctors and nurses still don't like their EHRs.
- Common complaints are that EHRs add work, decrease face time with patients, reduce the quality of relationships with patients, create usability slowdowns, and cause new errors. These physicians complain that the EHRs are not designed for the way they think and work.



Dissatisfaction with EHR

Study shows electronic health records leave doctors and patients unsatisfied

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August 17, 2018

Electronic Health Records are intended to streamline and improve access to information - and have been shown to improve quality of care - but a new study shows they also leave both doctors and patients unsatisfied, even after full implementation.



From KLAS ARCH Collaborative

- Physicians that reported spending significant amounts of time on charting and clinical documentation reported lower satisfaction
- But less than 50% of personalization options are utilized and this had significant impact on user experience
- Specialties with in clinic procedures and high volumes of documentation had the lowest satisfaction scores



The difference between technology and slavery is that slaves are fully aware that they are not free.

Nassim Nicholas Taleb

But There is More to The Story

RESEARCH ARTICLE

HEALTH INFORMATION TECHNOLOGY

HEALTH AFFAIRS > VOL. 37, NO. 7: CHRONIC CARE, PRESCRIPTION DRUGS & MORE

Electronic Health Records Associated With Lower Hospital Mortality After Systems Have Time To Mature

Sunny C. Lin¹, Ashish K. Jha², and Julia Adler-Milstein³

AFFILIATIONS 

PUBLISHED: **JULY 2018**  **No Access**

<https://doi.org/10.1377/hlthaff.2017.1658>

EHR Maturity and Impact on Outcomes

- ▶ “We used data for the period 2008–13 to assess the relationship between EHR adoption and thirty-day mortality rates. We found that baseline adoption was associated with a 0.11-percentage-point higher rate per function. **Over time, maturation of the baseline functions was associated with a 0.09-percentage-point reduction in mortality rate per year per function. Each new function adopted in the study period was associated with a 0.21-percentage-point reduction in mortality rate per year per function.** We observed effect modification based on size and teaching status, with small and non-teaching hospitals realizing greater gains. **These findings suggest that national investment in hospital EHRs should yield improvements in mortality rates, but achieving them will take time.**”



Wind extinguishes a candle and energizes
fire

- Nassim Nicholas Taleb

A decorative graphic on the left side of the slide. It features a dark blue vertical bar on the far left. A black arrow points to the right from the top of this bar. Below the arrow, several thin, light blue lines curve upwards and to the right, creating a sense of movement and flow.

Patience and Diligence

- ▶ Hospitals should expect that most performance-related gains from EHR adoption will take time to be realized and that these effects may be maximized when coupled with greater EHR support and EHR-enabled quality improvement efforts.

A dark grey arrow points to the right from the left edge of the slide. Below it, several thin, curved lines in shades of blue and grey sweep across the left side of the slide.

From Design Thinking

- You're never done: Anticipate, create, innovate, iterate — and repeat
- Perpetual Optimization Is What we should plan for



EHR Optimization Requires Organizational Commitment

- ▶ About 76 percent of physician practices with 25 or more clinicians reported that they are eager to apply EHR enhancements in value-based payment innovation as well as functionality and service by the second quarter of 2016.
- ▶ A recent KPMG survey of CHIME members found that 38 percent of CIOs are investing in EHR Optimization Projects this year
- ▶ Many organizations are not willing to make the investment or commitment

Getting Started

- ▶ "But now that the dust has settled and many providers have successfully hurdled their initial implementations, those providers are objectively assessing their EHR systems and identifying areas that may not have delivered the value they had hoped for," the report stated. "It is a prudent approach, because there are typically opportunities to enhance EHR systems at any stage of an implementation — with the ultimate goal of improving outcomes."
- ▶ You need to critically evaluate your EHR implementation prior to embarking on an ambitious optimization project. "Lipstick on a pig"
- ▶ **Achieving the basics: reliability, usability, security, privacy, training, and application support. These are IT blocking and tackling**



How Do You Optimize the User Experience

- ▶ **Analyze** your EHR Configuration and Physician Utilization
- ▶ **Engage** Physicians-Direct input and Observation
- ▶ **Execute** a Data driven optimization plan
- ▶ **Observe** the impact of interventions
- ▶ **Iterate**



Preparation

- Before true optimization, users and your builders/analysts need to be comfortable with effectively utilizing basic EHR functionality in current clinical workflows before embarking on an ambitious optimization project
- So first look at your training and assess its effectiveness. Assess current state of your user effectiveness as well as the capabilities of your team. Can your team handle an ambitious optimization, or will you need outside expertise via your vendor or consultants?



The Need for Collaboration

- First and foremost, EHR optimization is a collaborative effort, both internally and externally. A critical step for many practices is connecting with their EHR vendors to start the ball rolling. Vendors generally have resources to support optimization



Start with Data

- ▶ What Sources of Data do you have to help to measure how physicians use the EHR?
- ▶ You need pre and post intervention data at physician, specialty, practice level
- ▶ User surveys of self reported efficiency and confidence with the system are very useful to track
- ▶ Your Vendor likely has Data about time spent in the EHR and in various activities within it. Also how much time Physicians spend in the record after hours?



Data

- ▶ Measure the Use of Personalization and Efficiency Features in Clinical Documentation, Orders Management, InBasket and Communication Management, as well as optimizing screen and data displays
- ▶ Consider the Use of Time-Motion studies for very specific activities or workflows



Success Factors

- ▶ EHR optimization opportunities will vary based on practice and can range from simple to complex. However, one obvious one is reducing the number of clicks—a widespread complaint of physician EHR users across the country.
- ▶ Having a strong medical informatics team and/or leadership that understand workflows and how EHR design impacts them is a key success factor
- ▶ **Involve physicians and nurses who understand that Technology can help them transform care, and want to see it happen. Need true buy in and engagement as well as clinical champions**



Other Considerations

- You should also could consider a specialty based approach to optimization, which focuses on specialty specific workflows
- Analyze key data entry and review activities and workflows. Are there opportunities to use tools to reduce user friction (eg, use of voice recognition, appropriate use of templates)?
- In Ambulatory space, is the practice focused on leveraging the whole team to create overall efficiencies (top of license) from team based care
- What could be automated? (eg, prescription refill protocols)




Workflows, workflows, workflows


- Need to truly understand the clinical user workflows and user interaction for entering and reviewing data. This most often requires some at the elbow assessment as data review won't create understanding of user workflows and their frustrations

A man in a blue t-shirt and tan shorts stands on a grassy hillside, looking out over a vast mountain range. He has a large backpack on the ground next to him. The sky is bright blue with large, white, fluffy clouds. The mountains in the distance are rugged and partially covered in snow or light-colored rock.

**“A Journey of a Thousand Miles
Begins With a Single Step.”**

-Lao Tzu

- 
- ReTraining of physicians
 - Analysis of data from EHR reports (PEP, Signal, reporting workbench, etc)
 - Pre and Post surveys are key
 - Self rated Confidence in ability to utilize the EHR
 - Options for multiple training tools (Web based, YouTube videos, on demand, ideally at point of use)



“The secret of getting ahead is getting started. The secret of getting started is breaking your complex overwhelming tasks into small manageable tasks, and then starting on the first one.”

- Mark Twain



Don't Neglect Continuous Learning

- Create and highlight tools, resources and programs to support your Physicians in improving the User Experience, Supporting them in achieving *Mastery* in use of the EHR. You need to go to where Physicians are and offer them options
- Can we take them from Dissatisfaction to Delight?
- Build a Toolkit to support this ongoing self-improvement. Offer multiple options for multiple training tools (Web based, YouTube videos, on demand, ideally at point of use)



Prime areas for optimization

- **Data review** (including integration of patient specific data from disparate sources, create efficient data presentations to take advantage of screen real estate)
- **Clinical documentation** (Dictation, Scribes-virtual or physical, partial voice recognition, structured documentation templates and tools for recurrent documentation)
- **Order entry** (Standardized evidence-based order sets with personalization options)
- **Inbasket/Letters/Prescriptions** (EPrescribe, Integration with state PDMP, Prescription Refill Protocols)
- **Delivering Point of Care Training/Education**



Can EHR Optimization Drive Innovation

Harvard
Business
Review

OPERATIONS

How the EMR Is Increasing Innovation and Creativity in Health Care

by [A. James Bender](#) and [Robert S. Mecklenburg](#)

OCTOBER 10, 2017



Emerging Technologies: Coming Soon?

Epic Systems: Machine Learning Is the EHR Usability Solution

Can machine learning, interoperability, and the Judy Faulkner touch bring joyful usability to electronic health records?

Intuitive **data visualizations**, sleek drag-and-drop interfaces, and more natural input methodologies such as voice recognition are poised to change the way physicians, nurses, and patients interact with their records, she said.



Amazon Secret Healthcare IT Tech Team Focuses on EHRs, Alexa

Amazon's secret healthcare IT Tech team is in the beginning stages of developing healthcare IT specific tools for EHR data sharing and migration as well as apps for Alexa.



Help the Doctor

- ▶ Cleveland Clinic launched a pilot in its internal medicine department with Google Glass to use virtual scribes to enter medical records for doctors while they are with patients.

How Google, Microsoft, Apple Are Impacting EHR Use in Healthcare

Tech companies are going to continue to impact EHR use and how healthcare providers are adopting new technologies, a Kalorama report shows.

APPLE

Apple Health Records was launched early this year, allowing users the ability to view patient-centered EHRs on iOS devices. Patients at participating hospitals and clinics can view their health data from multiple providers at any time.

While Google, Apple, and Microsoft are primarily thought of as technology companies, the ever-evolving healthcare industry is proving to be a good sector in which to invest. Healthcare organizations of all sizes can benefit from the increased mobility and security options, and can also utilize improved ways to offer patients better care.


The need for digital patient engagement and the push for nationwide interoperability are forcing healthcare organizations to find effective tools and applications to **improve EHR use**. Large technology companies are likely going to keep being major players in the industry as they work to meet the growing needs of providers.

Leverage the Patient

Using a New EHR System to Increase Patient Engagement, Improve Efficiency, and Decrease Cost

Article · August 23, 2018

Patients and providers are frustrated with seemingly endless data entry and with interfacing more with computer screens than with each other during face-to-face visits. A Northwestern University study demonstrated that physicians who utilized electronic health records (EHRs) in their exam room spent 1/3 of their time looking at the computer screen. Recent studies have shown that data entry can consume up to 49.2% of a physician's workday.



Time is a commodity that both patients and providers can appreciate. Engaging patients to actively participate in helping to enter their medical information is one way for both groups to realize this benefit.”



In Summary

- ▶ Make the Commitment and drive Engagement
- ▶ Analyze EHR configuration and physician utilization.
- ▶ integrated functionality and technology..
- ▶ Engage physicians with on-site and remote observations and support. Guide success with on-going assessments.
- ▶ Execute metric driven improvement plans.



In Summary

- Develop focused specialty specific outcomes to meet individual departmental goals.
- Commit to ensuring optimal build is in place to enable physicians to thrive.
- Advance use of EHR functionality itself and utilize additive value of technology and innovation.



What Are you Doing? Questions?

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