Electronic Health Record Implementation in Your Emergency Department

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Pre-Implementation

Creating a Culture of Change

Change is inevitable in all things, and in health care new trends evolve in disease, patient populations, technology, medical knowledge, and legislation. The sad truth is that change, especially when initiated by forces external to your department or poorly planned, is cumbersome, expensive, and often seen as a means to correct a deficiency rather than an opportunity to enrich the experience of physicians and patients. This may seem like framing, and it is. But that is exactly what emergency department (ED) leaders must do when planning the implementation of a new electronic health record (EHR). Leaders need to have a very deliberate and structured approach to a new EHR.

John P. Kotter, retired Harvard Business School professor and definitive expert on the topic, introduced the steps in the process of change in his seminal article "Leading Change" (Figure 1).[1] Kotter states that most efforts at change fail not because the ideas or projects being implemented are inherently bad, but because leaders fail to appreciate the phases of the transformative process and therefore make several missteps. As a result, most implementation projects are rejected by core stakeholders even before the process begins, assuring failure. As an ED leader, the adoption and implementation of an EHR is a ripe opportunity for you to either shine or fail miserably.

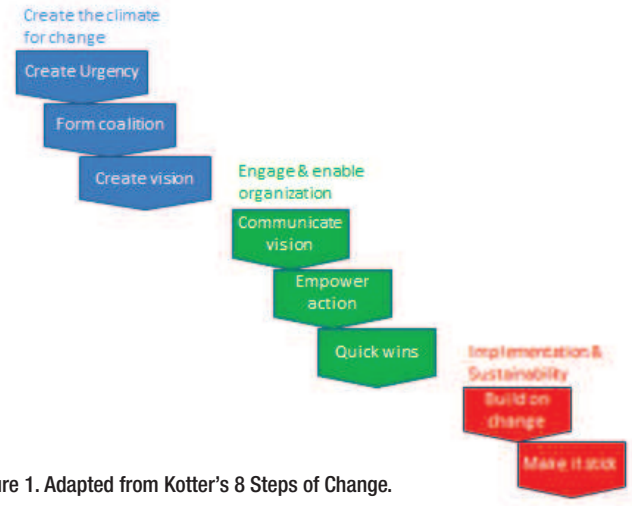

Figure 1. Adapted from Kotter's 8 Steps of Change.

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Electronic Health Records as a Catalyst for Change: Creating Urgency

Some of the benefits of moving to an electronic record are clear. Computerized order entry and integrated clinical decision support dramatically reduce the number of medication dosing errors.[2] Standardized electronic order sets can make complex care easier — improving the use of tPA in acute stroke, for example.[3] Capturing data for research and mandated reporting is also simplified using an EHR.

Yet prior to 2008 fewer than 10% of United States hospitals had even a basic EHR.[4] Then, in 2009, the federal government catalyzed the rapid adoption of EHRs through the Health Information Technology and Economic and Clinical Health (HITECH) Act, which offered initial financial incentives for providers and hospitals to adopt an EHR and eventual penalties in Medicare reimbursements if they failed to do so.[5] To comply, hospitals must attest to "meaningful use" of their EHR — meeting set criteria that become increasingly complex over time.[6]

Beyond the other potential benefits of moving to an EHR, health care organizations and providers risk the loss of billions of Medicare and Medicaid dollars if they fail to comply with the HITECH Act. You must communicate this urgency to your department and hospital administration.

Disseminating a Vision

Your coalition includes clinicians, nurses, and other staff who can cohesively represent the needs of your department to hospital leadership. Clinical leaders in the ED should be deeply engaged in selecting the EHR, to ensure that the unique demands of the ED are met.

Once an EHR is selected, its success depends on the support and engagement of your coalition during and after implementation. Early on, identify and engage clinical champions and provide them protected time to participate in EHR implementation. After building momentum and communicating a clear vision for implementation, allow this select group to proselytize the vision of your department. Empower this group with the right level of enthusiasm and skill, to build momentum and support for implementation.

Avoid the temptation to hire only outside consultants. Consultants often lack the clinical expertise of your own staff, and are not familiar with workflows that are unique to your institution. Instead consider training a core of providers, who can then help train the rest of the providers in your practice. While an outside consultant should also be present during the training sessions to help answer EHR-specific questions, your clinician trainers (or peer educators) will be best suited to teach with your department's workflows in mind.

Implementation

Training, Staffing, and Planning

A major component of any EHR implementation is training. Work with your implementation team to ensure that training materials match your ED's workflows. Be aware that training is time-intensive, expensive, and not comprehensive. Encourage your users to practice on their own time, with exercises such as "shadow charting." Consider practicing high-stress, time-sensitive workflows — such as a major trauma resuscitation — on mock patients before you go live with the EHR.

Expect and plan for a decrease in productivity of up to 30% during EHR implementation.[7] For the first two weeks, increase staffing during the busiest times (Figure 2).[8] To reduce the risk of shifting bottlenecks, increase staffing for clinicians, nurses, and support staff.

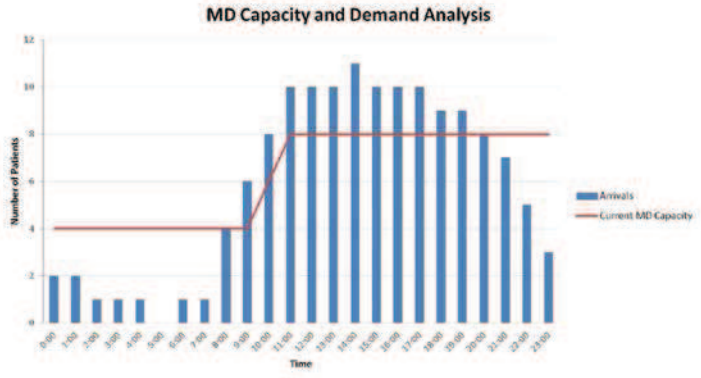

Figure 2: Analysis of patient arrivals per hour and physician capacity of seeing 2 patients an hour.

The reduction in productivity after an EHR implementation may last for three months.[9] In one study, 44% of a clinician's time was spent on data entry with only 28% spent on direct patient care.[10] As a result, consider instituting a scribe program to help recoup some of this productivity loss.

If you are the referral center in the region, consider limiting ED transfers. This should be done starting at least a week prior to EHR implementation, especially if your hospital has an inpatient boarder problem. This is important, since depending on your hospital's average inpatient length of stay, it may take a week of discharges and reduced admissions to create necessary capacity for the expected EHR implementation date. Local EMS services should be notified, and you should work with neighboring hospitals so they can anticipate increases in volume. During the first three days of implementation, consider denying all ED-to-ED transfers.

For institutions which are moving from one EHR to another, review your cutover procedures and have multiple dress rehearsals to prepare. This change is more complicated than simply turning one system off and turning another on. There may be many hours before the new system can be accessed and used. Educate staff and prepare for this downtime.

Inquire about a Help Ticket system. A robust Help Ticket system should be available 24/7. Help Tickets should be separated between Incidents and Requests. Incidents are "bugs" or "break/fixes" that affect patient care, finances, or workflow. Expect to have a lot of Incidents over the first several days, with a gradual decrease to baseline over the first three weeks of implementation. Primary issues during this time include users' ability to log in the system and see their role-appropriate tools, the mapping of orders to medications stocked in your dispensing cabinets, and the mapping of computers with the appropriate printers. Requests are enhancements that staff members believe could make the system easier to use. Try to limit new Requests during "go-live" so that your IT staff can first fix what's broken. It is also important for a point person or physician commander to keep track of Help Tickets, so trends can be noted and issues prioritized more efficiently.

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Trouble Shooting

Make sure that you have support staff (or super-users) in the ED 24/7, ideally for two weeks. Super-users should come from your own institution, but also consider hiring outside consultants specifically for "go-live." Make sure the super-users cover all roles in the ED, including nursing and administrative staff. Ideally, every clinician should be scheduled multiple shifts during the first two weeks to expose them to the new EHR system during a time of both increased staffing and at-the-elbow support.

It is important to have daily meetings or huddles during implementation. One meeting should ideally take place in the morning, to discuss events that occurred the evening and night before. The team should then meet with the IT people to discuss new high-priority items and any important issues that were recently resolved. Be sure to participate in hospital leadership meetings, to make ED-specific issues that jeopardize your workflows and patient care a priority.

A person or team should be designated to provide your users with regular email updates. Try to avoid multiple emails sent by multiple people, as this can lead to mixed messages or the circulation of incorrect information. Of note, while email is the easiest way to spread information to a large number of providers, staff members may quickly become inundated with emails and develop email fatigue. As a result, consider scheduling a discipline-specific staff meeting one week post go-live to provide re-education and address any questions.

Sustainable Change

Finally, take advantage of easy wins and emphasize user friendliness, mobile applications, improved practice management, easy and seamless provider or patient communication, improved research applications, standardized physician order entry, and medication management. Leaders must spread the credit and praise staff for incorporating or anchoring the new changes and embracing change as part of the organization's culture.

The process of change and EHR implementation is a long, arduous, and expensive process and morale can suffer if these early improvements are not celebrated. But take care not to mistake easy, short-term gains as the ends rather than means to successful implementation.

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