Optimization Strategies for Successful EHR Adoption


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INTRODUCTION

The healthcare industry in the United States has experienced an exponential increase in electronic health record (EHR) adoption within hospital settings as well as physician private practices in recent years (KLAS 2011). Governmental incentives for EMR implementation as well as planned financial penalties for not switching to electronic documentation have added to the motivation for transition within the medical industry (Centers for Medicare & Medicaid Services 2011).

Government agencies, private consulting/training firms and leaders within the healthcare system have directed extensive resources toward communicating the benefits of EHR adoption to physicians and patients, however a large number of failed implementations are still experienced nationwide. The material included in this guide hopes to arm key leaders and organizations with the tool necessary to ensure a positive and successful transition to EHR technology within a healthcare setting.

This guide includes training and consulting materials focused on engaging physicians and their staff, addressing the benefits and fears of adopting EMR technology, and encouraging a smooth transition to EHR utilization that will allow participants to fully reap the benefits of leading edge technologies to improve the quality of patient care. Included as well are details of specific training and consulting approaches intended to encourage change and assist organizations, trainers, specialists and anyone acting as a key leader for implementation (the consultant) to address the needs of each individual affected by an EHR transition and to solidify appropriate clinical workflows for each office environment.

The sections of this guide are presented in an order in line with the steps for completing a successful EHR implementation. However, the information and guidance provided in the entire guide is necessary for a consultant to grasp before engaging in the EHR adoption process. Therefore, it is recommended that a consultant review this guide in its entirety before embarking on an EHR implementation with an organization, then continue to refer to specific sections throughout the adoption process.
IMPLEMENTATION PROCESS
Outline of recommended steps to EHR adoption

A brief summary of the recommended EHR implementation steps is outlined below. As a part of this guide details and materials for completing each step are provided in the pages that follow.

- **Step 1: Introductory Meeting** — between the EHR consultant and organization to discuss implementation process, identify key players/champions, goals of the organization and initial project steps.

- **Step 2: Clinical Observation** — Onsite meeting(s) within the clinic attended by the consultant to observe the current clinical workflow, come familiar with organization processes and engage with staff and champion users.

- **Step 3: Implementation Plan & Schedule Development** — Organization and consultant mutually agree to an implementation plan and schedule which both parties agree to perform accordingly.

- **Step 4: Clinical Process Determinations & EHR Solution Configuration** — Consultant and organization determine necessary and desired changes to clinical processes, workflow and policies to be implemented as a part of EHR implementation based on clinical observations and EHR capabilities. EHR solution is prepared and customized as possible and appropriate to meet the needs of the clinic in preparation for go-live.

- **Step 5: Pre-EHR Process Changes** — Gradual changes to current clinical processes implemented where possible and appropriate prior to EHR go-live.

- **Step 6: Training** — Customized and engaging training for all key players, champions and staff.

- **Step 7: Go-Live** — The organization goes live with the EHR system. Consultant is on-site to address any process, training and utilization issues. Providers may reduce schedule initially to develop a comfort level with the EHR.

- **Step 8: Support & Follow-Up** — Recommend consultant available onsite within organization to act as resource during clinical operations for at minimum one week (5 business days) following go-live. Contracted and agreed upon follow-up and support to follow.
THE ROLE OF THE CONSULTANT

In order for an EHR implementation to be successful, at least one key leader must take on the role of consultant within an organization. This individual will act as planner, change manager, facilitator for each step in the adoption process to allow for appropriate adjustments, and assist the organization in navigating hurdles. This guide assumes that the consultant has the ability and authority to engage directly with individuals within the organization, make decisions in conjunction with providers and staff regarding implementation processes as well as provide valuable recommendations for clinical workflow for the successful utilization of the selected EHR solution.

Limitations of the consultant also must be considered, and may be affected by a number of factors including technical capabilities of the chosen software solution, available hardware components as well as the abilities and willingness of the individuals to be trained. While not all caveats of implementation are discussed in this guide, the main aspects of implementation are addressed including those pieces in which a lack of attention to during the adoption process can likely result in under utilization of the solution or a failed implementation.

Understanding Organizational Needs and Navigating Change

Clifford Geertz (1977) described culture as “a set of techniques for adjusting both to the external environment and to other men” (p. 5). Individuals play unique roles within each healthcare organization, and contribute to the organization’s cultural system adding specific behaviors, approaches and communication styles to the daily interactions of the group. It is vital for the consultant to consider the organizational life as a cultural system in order to appropriately determine the most effective approach for ensuring positive change within each organization.

Theories such as Geertz’s assess that “culture is not something an organization has; culture is something an organization is” (Griffin, 2009, p. 253). Therefore, the consultant should approach each organization as an individual culture with specific norms, understandings and folklore. With this strategy an outside consultant can understand the important aspects that allow the organization to function and gain a holistic perspective on the challenges faced by members. This will be especially important during a large transition such as an electronic health records (EMR) adoption.

Understanding the key players within an organization and analyzing the roles and needs of individuals affected by the change within the group will allow for the most effective plan of action. “The external consultant can identify much of the cultural symbols most of the organization members take for granted, using native members of the culture as a source of information” (Pacanowsky, 1983, p. 255). For example, some organizations may include technically savvy and motivated individuals in which advancements and changes are embraced, while others may view transitions and new processes in a negative light and express great resistance.
**Introduction to the Organization**

In order to learn the organizational culture, begin building a map of the roles of individuals and their relationships within the group from the first interaction with the organization. Ask questions along the way to clarify these roles and try to tactfully uncover potential office politics that may create hurdles to adoption plans. Keeping a record with details, such as the following example worksheet, may be helpful in identifying key aspects of the organization that will instruct the adoption plans.

<table>
<thead>
<tr>
<th>Organizational Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization Name:</strong></td>
</tr>
<tr>
<td>No. of Providers: _____</td>
</tr>
<tr>
<td>Medical Specialty(s):</td>
</tr>
<tr>
<td>Notes:</td>
</tr>
<tr>
<td><strong>Name:</strong></td>
</tr>
<tr>
<td>Reception</td>
</tr>
<tr>
<td>Technical Comfort:</td>
</tr>
<tr>
<td>Notes:</td>
</tr>
<tr>
<td><strong>Name:</strong></td>
</tr>
<tr>
<td>Reception</td>
</tr>
<tr>
<td>Technical Comfort:</td>
</tr>
<tr>
<td>Notes:</td>
</tr>
</tbody>
</table>

Just as cultural differences outside of organizations leave room for many ways of accomplishing tasks and approaching life, understanding organizational norms does not imply judgment. Remain objective and descriptive in order to learn as much as possible about how and why the organization runs as it does.

**Introductory Meeting**

The initial meeting between consultant and organization to explore steps to EHR adoption, especially if the consultant is external to the organization, should be treated as an opportunity for discovery. The consultant must first understanding the individuals to be involved in the implementation process, the motivations and goals of adoption, as well as the basic technical aspects before an appropriate plan can be developed.

The Discovery Meeting may occur after a formal agreement for engagement with the consultant has been reached, or may be required prior to such an agreement to learn if
appropriate match between consultant and organization exists. Regardless, the meeting agenda should guide the discussion and allow the consultant to gather enough details to determine what the expectations of the organization are and to draft an appropriate implementation plan based on this initial meeting. Below is an outline of recommended goals for a Discovery Meeting with an organization:

<table>
<thead>
<tr>
<th>Introductory Meeting Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introductions</strong></td>
</tr>
<tr>
<td>- Consultant: provide brief details of credible background and approach.</td>
</tr>
<tr>
<td>- Organization: learn key players, attendees and their specific roles within the organization.</td>
</tr>
<tr>
<td><strong>EHR Solution</strong></td>
</tr>
<tr>
<td>- What EHR has been selected?</td>
</tr>
<tr>
<td>- What is the IT set up? Is there an onsite IT resource available for technical questions and issues?</td>
</tr>
<tr>
<td><strong>Implementation Goals &amp; Expectations</strong></td>
</tr>
<tr>
<td>- Initiate discuss regarding reason/motivation for adopting EHR.</td>
</tr>
<tr>
<td>- Has the organization set specific metrics for success?</td>
</tr>
<tr>
<td><strong>Implementation Steps</strong></td>
</tr>
<tr>
<td>- Review implementation steps and learn go-live schedule expectations.</td>
</tr>
<tr>
<td>- Discuss specifics of time needed for meetings and key resources.</td>
</tr>
<tr>
<td><strong>Identify Key Sources / Champion Users</strong></td>
</tr>
<tr>
<td>- Discuss which individuals within the organization will act as EHR super-users/champions.</td>
</tr>
<tr>
<td><strong>Next Steps</strong></td>
</tr>
<tr>
<td>- Consultant engagement.</td>
</tr>
<tr>
<td>- Schedule onsite clinical observations meetings.</td>
</tr>
</tbody>
</table>

It is important to identify motivated and positive leaders within the group who can act as “champions” for the transition and support the organization throughout the change. “One of the most important factors in the successful implementation of new computer systems is having a ‘local expert’ in place to support their team at critical points in the project” (“RiO Champion Users”, 2011, para.1). Therefore, a consultant should consider identifying such “champion users” an integral aspect of examining the organizational culture and developing a strategy for assisting in organizational change.

Goals of implementation can vary drastically between organizations. For many, meeting Meaningful Use guidelines and other regulatory measures provide motivation for adopting EHR technology. For others, internal initiatives guide the purpose for adoption which can include patient safety, efficiency and cost savings, or modernization goals. For others, EHR adoption may be an initiative that has been mandated by executives within an organization but has not received buy-in from providers and staff. As a consultant it is pertinent to understand the motivations for adoption as well as any possible metrics for measuring success.

If an organization has not mapped out specific measurements for what will be deemed a successful implementation, initiate this discussion early and identify measures of success early.
Clinical Observations

Before changes can be made to the clinical processes of an organization, the current tasks and clinical workflow must be understood so appropriate new policies can be put in place. Gaining an understanding of daily activities within the clinic will allow the consultant to further understand the organizational culture as well as to make recommendations for EHR preparation and utilization to ensure a smooth transition. Clinical observation meetings are intended to be just that, an opportunity for the consultant to observe and learn.

As a first step following discovery, schedule time at each location to pull up a chair and watch as the providers and staff complete their daily tasks. This will also allow individuals within the organization to become familiar with you and can begin to build important relationships with each person that will be affected by the change to EHR. It is important to take notes and ask questions when needed and appropriate. Giving staff members the opportunity to explain why certain processes are done in specific ways can better advise how these same processes maybe completed within the EHR.

The following questions may act as a guide to understanding the unique processes of the organization. If certain processes are not observed during these meetings, the consultant should follow-up directly with the key contacts within the organization to learn more.

<table>
<thead>
<tr>
<th>What to Look for When Observing a Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Front Office Work Flow Questions</strong></td>
</tr>
<tr>
<td>___ What is done when a patient first arrives?</td>
</tr>
<tr>
<td>___ What forms are filled out by the patient?</td>
</tr>
<tr>
<td>___ What information is collected from the patient?</td>
</tr>
<tr>
<td>___ Does the front office staff complete any referrals? If so, what is the process?</td>
</tr>
<tr>
<td>___ Does the front office staff do any chart prep? If so, what do they do?</td>
</tr>
<tr>
<td><strong>Back Office Work Flow Questions</strong></td>
</tr>
<tr>
<td>___ What is the referral tracking process?</td>
</tr>
<tr>
<td>___ What forms do you use?</td>
</tr>
<tr>
<td>___ What aspects of your duties require communications with the MA’ s? providers? Staff?</td>
</tr>
<tr>
<td><strong>MA Work Flow Questions</strong></td>
</tr>
<tr>
<td>___ What forms do you use?</td>
</tr>
<tr>
<td>___ What duties do you perform to prepare the patient for the provider?</td>
</tr>
<tr>
<td>___ How do you receive orders from the provider?</td>
</tr>
<tr>
<td>___ How do you communicate within the office?</td>
</tr>
</tbody>
</table>
Addressing Concerns & Understanding Benefits

Many benefits for computerizing the healthcare field have been cited by legislators including increases in patient care quality, decreases in healthcare costs and added efficiencies within the clinical setting (HIMSS, 2007). However, numerous potential drawbacks are consistently addressed within the industry as well, including concerns of cumbersome training and implementation processes, steep financial costs for adoption and negative effects on the precious physician-doctor relationship with the introduction of a computer into the exam room (HIMSS, 2007).

As a consultant, perceived benefits and drawbacks are bound to be discussed throughout engagement with organizations at various points within the implementation process. It is important to be aware of potential concerns as well as to reduce anxiety and resistance for individuals by appropriately addressing and resolving issues. Becoming familiar with the common hurdles as well as the possible benefits is important for positively affecting change within an organization.

To assist with this, the following section details perceptions, both positive and negative, associated with EHR adoption within the healthcare industry today.

Perceived Benefits and Drawbacks of EHR Adoption

Neil Postman discusses physician concerns in *Technopoly*, a book that focuses on the effects of advancing technologies. "A serious objection raised by physicians... is that interposing an instrument between patient and doctor would transform the practice of medicine” (Postman, 1993, p. 99). This discussion was not addressing concerns regarding EHR adoption, but rather the type of fears expressed by physicians when the stethoscope was first introduced as a tool for use in physicians’ general examinations. At the time, doctors were worried that stethoscope technology would negatively impact their ability to provide quality patient care, sentiments also heard widely regarding the push for EHR adoption. "Doctors would lose their ability to conduct skillful examinations”, Postman (1993) continues in his mention of the adoption of the stethoscope, “and rely more on machinery than their own experience and insight” (p. 99).

While it is generally accepted that the stethoscope is a valuable diagnostic tool, if not also an icon of patient care in modern times, it is insightful to note that objections and skepticism for technological advances within the medical field have been present for a long time. Susan Wieczorek (2010) highlights similar concerns within the healthcare industry when detailing the history of and negative perceptions held by many clinicians with regard to electronic mail (e-mail) usage between physicians and patients. Wieczorek (2010) discusses that perhaps deeper concerns are held by clinicians which imply that technologies will not only hinder the provider’s ability to appropriately diagnose their patients, but may also diminish the patient’s belief in the necessity of physician involvement in their care, which could be costly, if not dangerous, for many patients (p. 324).

However, in addressing concerns physicians may have regarding a computer taking their place in caring for patients, a study conducted by the Mayo clinic in 2006 found that patients prefer doctors with characteristics only a human can provide (Bendapudi, Berry, Frey, Parish, & Rayburn, 2006). Researchers in the study concluded that a good doctor is "confident, empathetic, humane, personal, forthright, respectful and thorough” (Bendapudi et al., 2006, p. 3).

Additionally, studies examining the effects of EHR use on quality of patient care have found valuable improvements. One study, conducted by Robert Miller and Ida Simms (2004) found that EHR technology contributed to the ability of physician practices to execute more quality improvement programs than possible with paper charting. Others have found that EHR
use can improve patient care through the drastic reduction of medication errors with the utilization of electronic prescribing functionalities (Hale, 2011).

Also, increases in efficiency and the ability to share pertinent medical information between care providers made possible with EHR use has been shown to improve patient outcomes (Rourke, 2011). EHR’s can also enhance patient care through more practical measures, such as the ability to back up patient health information easily, where paper charting leaves room for accidental misplacing or destruction of medical data (Rourke, 2011).

Financial burdens have been noted as potential drawbacks to EHR adoption including the purchase of the software and user licenses, hardware upgrades, training costs, decreases in the number of patients seen during implementation, and software and IT support costs (Lawrence, 2005). However, costs for implementation vary greatly, from Kaiser Permanente’s $4 billion transition (the largest private sector EHR adoption) (Versel, 2010), to minimal subscription fees for functional software within private physician practices.

Ideally, healthcare organizations experience profit increases with the implementation of an EHR. A Fitch ratings report found that total revenue was generally significantly higher for hospitals with advanced EHR usage versus those that had not adopted or were early in the implementation process (Simmons, 2011).

It is the hope of this guide that consultants will be able to appropriately address concerns and reinforce the benefits to assist providers in following the path of the stethoscope with regards to widespread physician willingness to incorporate EHR technology into their practice.
Implementation Plan & Schedule Development

Once the basic steps of an EHR adoption have been reviewed, and the consultant has gained an understanding of the needs and current processes of the organization through discovery and clinical observation it is time to outline the specifics of the implementation plan. This is a brief but important step in adoption and involves working with the organization to set goals for when go-live will occur. The consultant and organization must understand the technical needs, including when any hardware and EHR software will be installed, as well as the availability of super-users and users for training and go-live before the important Go-Live Day 1 goal can be determined.

Financial aspects may need to be considered as well, as implementation often necessitates a reduction in provider patient load (number of patients seen) for a period of time following go-live. While a reduced schedule can occasionally be avoided, especially if the provider user works to master the EHR processes well before go-live, often it can be difficult to predict the amount of time a provider will need to complete regular tasks in a live environment immediately following go-live. It is recommended that the consultant advise a reduction of at least one third to one half of the normal patient load for the first few days following go-live with the option to increase or schedule additional patients if appropriate.

It is important to set a realistic goal for go-live as a shifting date can cause unnecessary anxieties and frustrations.

If a number of users within an organization are novice computer users, be sure to plan for possible additional training sessions. The consultant should be sensitive to the fact that many users may be nervous about the change to EHR software, especially considering the day-to-day implications this transition can have for previously comfortable routines within an office environment. For some, concerns over job performance may play into frustrations with the new solution and any shift in the go-live schedule can accentuate these anxieties.

It is acceptable to create a rough estimate for go-live as other pieces are being finalized; if so, be sure to communicate clearly as such. However, determining a set go-live date is necessary for both progression in the adoption process and allowing the organization to mentally prepare for the upcoming change. Consultants may also find that once a go-live date has been set, motivation to attend training and master the skills of the new system will increase as well. The consultant must balance between keeping a tentative schedule open for planning and setting a solid date for go-live as early as possible for implementation.
Clinical Process Determinations & EHR Solution Configuration

The consultant should work with key individuals within the organization to review current processes and responsibilities. This may require meeting directly with the owners of specific tasks to learn how and why they do what they do in addition to the clinical observation meetings. Communicating these processes to the office manager or key decision maker(s) within the organization as well as recommendations for improvements will allow for positive changes as the group moves toward implementation.

The consultant should also learn if there are any processes that the office still completes but perhaps are outdated or have already been flagged for change by the organization. For instance, in some cases an office manager knows that a workflow is not effective but has not had the opportunity to alter the process.

Wherever possible, work with the organization to determine steps that can be taken before go-live to work toward bettering processes and incorporating tasks that can be carried on past implementation as a part of the new EHR workflow.

This will allow providers and staff to become familiar with new routines as much as possible and reduce the impact of the EHR adoption.

Additionally, the consultant should work to prepare the EHR solution for the organization’s use. In some cases, customizations in templates and workflows can be done to mimic the office processes and meet clinical needs. As much as possible, the EHR should be configured to workflow of the providers, as in most cases the providers’ processes must take precedence over other tasks.

This may require the consultant to work directly with the EHR software vendor to address configuration needs. The consultant should learn what the limitations of the software are, including limitations in customization, as well as what the organization has contracted with the vendor with regards to resources for making adjustments. Always be sensitive to these agreements, and be sure to balance the costs and benefits of requesting changes and enhancements to the EHR solution.
Training

The training phase of implementation can be the most cumbersome step; however, a solid training program for all individuals affected by the EHR transition is one of the most important aspects of a positive go-live experience and on-going utilization of the EHR tool. In some instances it may be appropriate for the consultant to take on the role of the trainer, in others, it may not. Factors such as familiarity with the chosen EHR solution, size of the organization and aggressiveness of the implementation schedule may all affect the ability for the consultant to take the lead on training. Regardless, the consultant must be involved and at the least participate as a super-user to fully understand and advise the processes and workflows being put in place within the organization.

This section focuses on providing tools for training and support during the training phase to ensure that providers and staff are prepared for go-live.

Approach

Individual learning occurs through observation and participation within a group. “It is not so much that learners acquire structures or models to understand the world, but they participate in frameworks that have structure” (Smith, 1999, para. 1). Philosopher John Dewey approached education with a philosophy that effective learning can only take place when the student is actively involved in the lesson and the learning process (Neill, 2005, para. 1). Dewey’s “idea was that children came to school to do things and live in a community which gave them real, guided experiences which fostered their capacity to contribute to society” (Neill, 2005, para. 1). As a pragmatist, Dewey encouraged approaching all learning with an emphasis on linking theory and practice, thus all learning should be meaningful and not just a means to an end (“Pragmatism”, 2011, para. 1). In summary, Dewey believed “education is life itself” (Neill, 2005, para. 1).

In addition, psychologist Albert Bandura proposed the theory of social learning and theorized about the importance of social interaction and communication.

Bandura proposed that in order for individuals to learn, attention, retention, reproduction, and motivation to learn the new behavior must occur (“Learning Theories Knowledgebase“, 2011).

Therefore, humans learn through observation and social interaction, at the center of which is communication. Communication styles, dynamics and environmental factors within a community can impact this learning process.

Effective communication within an organization is central to positive change management, learning, and on-going success of the group as framed by John Dewey’s philosophy of education and Bandura’s theory of social learning. Therefore, this guide approaches EHR training with a mixture of assessing the current communication channels, modeling new skills and behaviors, and creating a framework for learning new actions and behaviors to facilitate positive change within an organization.

As a part of this approach to meeting the needs of learners, suggestions offered in this guide for developing a training curriculum include utilizing the techniques of active learning (Mel Silberman, 2004). “Active learning requires students to do meaningful learning activities and think about what they are doing” (Prince, 2004, p. 223). Example training schedules and worksheets for hands-on learning are provided below.

Successful Training Programs

Before a training curriculum and schedule can be developed for an organization, the specific training method must be determined. In general, there are two methods for training
which are employed during EHR implementations. These include either a direct training plan for all users, to be lead by a designated and often external resource, or a train-the-trainer approach in which the designated resource trains individuals internal to the organization who will then work directly with the remaining users to execute the training curriculum.

Regardless of the approach, super-users, or individuals who will be responsible for mastering specifics of usage and acting as a resources for a certain area or role within the organization, must be identified. Super-users will be vital to the on-going success and sustainability of an EHR adoption following the initial implementation.

**The consultant should ensure that super-users are identified early, participate in all appropriate training sessions, and master the necessary aspects of the EHR solution prior to go-live.**

Training sessions should be broken down by responsibilities and processes, which can generally be accomplished by developing sessions for specific roles within the organization. If the consultant will be leading training for a previously unfamiliar EHR solution, the consultant must master and prepare all training materials well in advance of the program start.

Training should mimic the processes to be completed following go-live and should allow for trainees to complete hands-on practice immediately following any demonstration. This generally results in a flow of active training sessions in which the trainer presents a new workflow or task via explanation and demonstration, followed by repetition and completion of the task by the trainees. Hands-on practice may be done simultaneously by all trainee attendees, such as on individual computers, or can be completed one at a time with all other participants given the opportunity to observe as they await a turn.

Below is an example training session schedule and accompanying worksheet for hands-on practice for an EHR adoption within a small physician group practice.

<table>
<thead>
<tr>
<th>Training Session Schedule: Providers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td>10:00 – 10:30 am</td>
<td>Review &amp; demonstration of e-Rx workflow</td>
</tr>
<tr>
<td>10:30 – 11:00 am</td>
<td>e-Rx workflow hands-on practice</td>
</tr>
<tr>
<td>11:00 – 11:15 am</td>
<td>Flex / break</td>
</tr>
<tr>
<td>11:15 – 11:45 am</td>
<td>Review &amp; Demonstration of EHR messaging process</td>
</tr>
<tr>
<td>11:45 – 12:00 am</td>
<td>EHR messaging process hands-on practice</td>
</tr>
</tbody>
</table>
**Hands-On Practice Worksheet: Provider e-Rx**

Please complete the following steps and processes within the EHR to become familiar with the e-prescribing workflow for your office.

1. Open the chart record for a test patient, such as ________________.
2. Create a new encounter note for this patient.
3. Click on the *prescription* tab within the encounter note template.
4. Select *New Rx* from the menu.
5. Search and select the desired medication.
6. Complete the details for this prescription including the form, strength, sig, dosage and quantity.
7. Confirm that the send method is marked for e-prescribing (*electronic send*).
8. Click *save and send*. This prescription will be electronically sent the preferred pharmacy saved in the patient record.
9. Close the encounter.
10. Access the *New Rx* icon directly within the patient’s *Chart Actions* tab (without opening an encounter note) and complete another e-Rx for this test patient.
11. Confirm that both medications appear on the patients *Med List*.
12. Repeat all the steps for a new test patient.

**Enhancing Communication in the Clinical Setting**

Many studies address the importance of communication within the healthcare field as well as how an EHR adoption may alter communication methods and impact patient care. The increases in sharing capabilities of patient medical information among clinicians are commonly noted as a benefit to adoption. However, in a study conducted in 2009, researchers found that providers’ perceived that the implementation of an EHR negatively affected the quality of communication between providers and providers, and providers and patients (Pagano, 2009). Thus, while providers may be able to access patient health information from another clinician more readily with EHR technology, they may not necessarily perceive an improvement in the quality of communication with the physician providing the information.

Additionally, while Pagano’s (2009) study does provide insight from the clinic side, it does not examine the impacts on patient perception of communication following an EHR adoption. An area to be considered when addressing concerns providers may have with EHR implementation.

- Advise providers to be aware of how they are presenting the EHR to patients.
- Highlighting the benefits of an EHR, such as increases in patient safety, can have positive effects and the patient may have more patience with the provider as they become familiar with the tool.
- Discourage any blatantly negative discussion about the EHR with patients; this can enhance the frustration for both patient and provider.

Alternately, McGrath, Arar and Pugh (2005) concluded that improvements in the quality of non-verbal physician-patient communication may be experienced with the use of an EHR.
during the patient visit. In the study, researchers examined the interaction between patient and physician during fifty visits at a Veterans Administration Hospital and rated them based on quality of interaction and inclusiveness of the activity. For example, some non-verbal communication gestures were deemed ‘opened’ others ‘closed’ with the assumption that more ‘open’ interactions resulted in increased quality of communication.

The results of this study also suggest possible EHR use styles which may allow for improved communication between physician and patient. Thus, altering the manner in which physicians incorporate the EHR into their patient visit may impact the quality of communication perceived by the patient, versus an all or nothing assumption of the impacts of EHR use on the quality of communication. The consultant should assume that perceptions of the impacts of EHR adoption on the provider-patient interaction play a significant role in provider’s willingness to adopt.

Addressing these concerns and communicating specific behaviors which will improve the quality of communication and interaction experience for the provider should be incorporated into the training program.

During the training and onsite follow-up encourage the provider to determine places within the EHR and clinical workflows where it may be appropriate to pause and direct attention to the patient.
Go-Live & Support

The first day of Go-live can be the most important day of an EHR implementation. This day can evoke excitement, anxiety, and intense frustration for all participants and the consultant will be a key player in assisting the organization in navigating the events of this day. Creating a positive environment from the beginning is vital and it is recommended to hold a brief onsite meeting at least the day before if the morning of implementation.

This brief gathering before official go-live is intended to allow the consultant to:

- Address any final questions or concerns
- Provide an overview of major processes
- Reiterate solutions to common workflow challenges
- Reinforce a positive environment.

The consultant should take on the role of motivator and always encourage users as they work through the new processes in a live environment.

Go-live should be considered an ‘all hands on deck’ day. The consultant should be in the clinic and available for questions as needed. All appropriate super users should also be available to assist others completing designated responsibilities and a technical resource, such as an IT consultant, should be available or any unforeseen hardware or software concerns.

To reduce the stress on super-users, providers, and consultant(s), it may be decided that go-live be executed over a period of time as a roll-out instead of everyone going live at once. If so, consider having staff users begin in the live environment first to ensure they are up to speed with their processes before a provider enters the equation. This can be a beneficial approach, especially for larger clinics in which the ratio of consultant or super user to provider and staff users could cause strain if numerous questions arise that need attention simultaneously.

Always remain conscientious of reducing the impact that Go-Live has on the organization and their patients. Unhappy customers, in this case patients, will add stress to the entire process and can cause major setbacks for adoption. Make on the spot adjustments as needed, and if patients begin to experience undesirable delays, consider temporarily reverting specific aspects of the clinic workflow for a period of time to allow the organization to catch up, with the goal of completing those skipped steps in the EHR at a more appropriate downtime.

The consultant should consistently provide positive feedback and offer help as needed. Answering questions politely and encouragingly is extremely important as this is the organization's first experience on the EHR in a live environment and can impact habits and perceptions moving forward, just like most first impressions.

As mentioned previously, the consultant should be prepared to act as a resource to the clinic onsite for several days following the initial go-live to ensure all processes are running smoothly. As the organization moves further into complete adoption, encourage and allow individual users the opportunity to work through questions on their own and rely on one another as resources. If additional training seems necessary for the group to reach their goals, address this as soon as possible with the organization and assist in appropriate planning and adjustments.

At the end of the day host another short meeting to debrief and address any new questions that may have arisen or comments that should be shared with the group. If a change was made to a process that should be implemented moving forward, take time to reiterate this to all those affected. Highlight as much as possible the positives of the day and engage staff in
expressing their views on the experience. While the process of transitioning to complete EHR adoption may not be complete, the consultant can provide congratulations as the clinic is officially live on the EHR!

### Recommendations for a Smooth Go-Live: Summary

- **Host a final meeting just before go-live** – address concerns and questions. Set precedence for a positive environment.

- **“All Hands on Deck”** – all key resources must be available for any issues during go-live.

- **Consider roll-out approach to go-live** if appropriate – if so, providers should go live after staff to ensure clinical processes will not hold up patient encounters.

- **Patients are a priority** – adjust plans a needed to ensure the patients are receiving the service and care the clinic promises. Patients are customers and vital players in the success of the implementation.

- **Be available** – there should always be someone available to quickly address process questions and work through snags. Any delay in the clinical workflow can cause frustrations and further hold-ups down the line. Super-users, trainers, and consultants should be reasonably available at all times during go-live to offer support.

- **Be patient, positive and encouraging** – the consultant can and should positively impact the go-live experience for all involved. Consistently reinforce the benefits of adoption and address concerns quickly.

- **Be Flexible** – reiterate the goals of the implementation and the achievements already met. If additional training or changes to the initial plans are necessary, communicate appropriately and adjust as needed.

- **Wrap up meeting** – review the events of the day, reiterate main processes, address questions and offer congratulations.

- **Continue Onsite** – onsite support should be available to the clinic for several days following initial go-live to address questions and reinforce clinical workflows.

If the consultant will not be providing on-going support following the go-live phase, it is still important that to ensure that a support plan is in place for on-going issues and questions. Support may be deferred to a prepared super-user, trainer or direct vendor resources. It can take months for a clinic to complete the transition to an EHR solution, depending on many factors including number of patients and frequency of visits, comfort with all processes at the end of the go-live phase, etc.

It is a mistake to assume that all questions can and will be addressed in the days following the initial go-live. Therefore, the consultant must assist the organization in planning accordingly to ensure on-going success.
Follow-Up

Continued follow-up with the organization after initial EHR implementation can allow for continued success and use of the EHR solution within the group. It may be necessary to review processes that are completed less frequently and make continued adjustments to workflows as individuals become more comfortable within the system. In some instances it may be appropriate to hold off on implementing all processes at once, and therefore, complete adoption may be not be achieved for several months. The key of a successful implementation is ensuring that, as new tasks are incorporated, previously adopted processes continue to improve.

As a final piece of implementation, the consultant should be sure to request feedback and input from the individuals in the organization. This can provide an opportunity to reflect on the successes and challenges of implementation and can provide knowledge for approaching future organizational changes, both for the consultant and the group members. Providing the organization with the tools to internally and independently address future hurdles will encourage the ongoing success of the group following EHR adoption.
References


