

Implementation Planning for a Successful Electronic Health Record System

Once you have spent the time and gone through the process of evaluating and selecting your Electronic Health Record (“EHR”) system vendor, it is very tempting to immediately begin implementing the system with hopes of gaining full use within a few months. Before acting on this impulse, however, it is important to keep the following in mind:

Leading industry surveyors report:

- ❑ Only between 20% and 30% of system implementations are completed successfully – on time, within budget.
- ❑ Of the 20% – 30% that were judged successful, only 42% of them include implementation of all of the features initially planned.
- ❑ The biggest contributing factors to implementation failure were lack of:
 - Proper planning
 - Clear shared vision and realistic expectations in terms of goals and timeframes
 - Resources and time to dedicate to implementation success

These statistics are included here not to dissuade you from moving forward, but to caution you about doing so without full, careful planning and clear goals. The following tips will help you plan and address the key decisions/tasks necessary to assure that your EHR install is one of the implementation success statistics.

1. Establish an Effective Implementation Team

Although most individuals within your practice will be pulled into some portions of the implementation efforts, several members of your practice will need to lead and devote significant time to the efforts in order to assure success. These roles need to be held by key resources within your practice who are, most likely, already overcommitted and working long hours. They are, however, the individuals with the knowledge, skills and leadership necessary to push your EHR system solution forward. For success, the implementation team needs to include the following:

- ❑ Clinical “Champion” who is a visionary, respected leader who can take on the responsibility for establishing the “big picture” plan for the EHR system and for leading clinicians in template, clinical workflow, standardized documentation and other decisions necessary to implement the best possible EHR system.
- ❑ Project Manager who is an enthusiastic, highly organized leader with excellent understanding of your specific practice who can manage the responsibility of coordinating, facilitating and serving as “task master” to assure all vendor and practice tasks are completed accurately and on time.
- ❑ A set of Project Team participants with in-depth knowledge within their specific area with responsibility for designing and testing the system flow, templates, coding structures, interfaces, hardware and tools needed to adequately support their area of practice responsibility.
- ❑ An experienced Network Design/Technical Support Analyst, often an outside contractor, with responsibility for assuring all hardware, equipment, tools and security are implemented and working effectively.
- ❑ A Trainer who will be responsible for working with the vendor to tailor initial training to your unique requirements and implementation decisions as well as on-going training and support once the initial vendor training is complete.

It is important to remember that each of the roles outlined above does not necessarily represent separate individuals. In a smaller office environment, many of these roles are played by 2 - 3 individuals. In larger practices many more individuals will participate. When an individual is assuming multiple roles within the project (e.g., project manager/trainer), it is critical to keep aware of the time commitment requirements and be realistic when planning your implementation timelines.

2. Finalize EHR Goals & Priorities

Ideally, during your system selection process your practice team developed a clear vision for your EHR system and defined a set of goals you expect the system to help you achieve. If not, it is critical to the success of your EHR implementation to do so before moving forward. Which of the following goals are important for your practice?

- Increased clinical and operations efficiency/productivity
- Increased revenue
- Improved patient care
- Reduced opportunity for error
- Improved access to information
- Reduced administration & clinical costs
- Competitive advantage
- Other?

If you did develop the vision and goals during system selection, it is important to revisit them in light of the final vendor choice, information gained during the selection process and the current practice environment and constraints. Have priorities changed? Does the practice continue to share a common set of EHR goals?

Once confirmed, it is critical to communicate the vision and the detailed goals of the EHR implementation to all personnel within your practice and highlight the contribution of these EHR capabilities to your larger business goals and objectives. If everyone fully understands what the practice is working to achieve, they can better support the Project Team and the overall practice in getting there.

3. Establish Implementation Strategies

A key part of the implementation planning effort requires determining the best approach for achieving the EHR goals and the strategies for introducing change to the practice. Careful consideration needs to be given to the following two sets of questions:

- How much of the available system functionality should be implemented immediately and over time? Can the practice absorb large blocks of change or is it better to introduce change slowly and incrementally? What increments of time are appropriate for introduction of new functionality not included in the “day one” plans?
- Who should go first with the initial functionality? Is there one individual or area that is more ready than the others to move ahead and how will doing so impact the other areas of the practice? What is the appropriate timing for moving a second, third, etc. group/individual forward if a “big bang” (i.e., all individuals and areas at the same time) approach is not used?

Incremental Functionality vs. Full System Implementation

Each practice has a differing ability to assimilate the many practice changes associated with an EHR system implementation. Some practices prefer a “one-time shake up” with the potential for more rapid Return on

Investment (ROI), while others prefer a longer, more incremental introduction of features and functions over time that lets physicians/clinicians and others gain proficiency in one area of system functionality before moving on to the next. To evaluate the best approach for your practice, you will want to consider the following:

- How ready are the physicians/clinicians for full automation in terms of system competency, enthusiasm and commitment? Are they ready to “dip their toes in the water” or are they ready to “dive in”?
- Is one larger financial hit due to reduced productivity easier for the practice to handle than a more drawn out, but less severe financial hit over time?
- Are there other critical demands that require full functionality immediately (e.g., opening of a new clinic or a department, merging with a practice that is already fully automated)?

While incremental rollout of functionality will prolong the implementation period and require multiple processes to address the converted vs. non-converted activities, it will also significantly decrease the level of risk for the practice in terms of financial impact due to reduced clinical productivity and implementation failure due to physician/clinician resistance and frustration.

Rollout vs. “Big Bang”

To fully understand the implications and viability of implementing one individual/set of individuals before rolling out the EHR system across the entire practice, you will want to consider the following:

- Practices with multiple delivery sites or relatively autonomous specialty areas often consider implementing one site/area at a time. This can be a viable approach as long as patients primarily receive care their care within one site/area (i.e., avoiding a situation of a patient’s record becoming part paper-based and part electronic) and as long as individual clinicians primarily work at only one site/area (i.e., avoiding situations where a clinician who has not yet been trained on the EHR system cover for a clinician whose patients’ records have been converted to electronic).
- Implementing an individual clinician or clinician team (i.e., physician and nurse) can also be a viable approach, however, this will only work if:
 - Patients are primarily seen by only one physician/clinician within the practice and physicians/clinicians are not required to cover for each other during the implementation period (i.e., clinicians who have not yet been trained on the EHR system having to see patients whose records are electronic can be avoided).
 - If nurses and medical support staff work primarily with one physician/clinician or one set of physicians/clinicians as a team and do not cover for other physicians/clinicians (i.e., nursing or medical support staff who have not yet been trained on the EHR system are not placed in the position of supporting physicians/clinicians who now use the EHR system).

More detailed discussion of these considerations can be found in a separate document, “Incremental Adoption of Electronic Health Records”.

While incremental rollout of an EHR system will prolong the implementation period and require multiple processes to address the converted vs. non-converted patients and physicians, it will also significantly decrease the level of financial impact due to reduced clinical productivity and increase the opportunity for success and positive acceptance.

4. Document the Agreed Strategy and Scope

Once the strategies have been defined by the implementation team, it is very important to document, in detail, the agreed strategy and scope recording the team decisions. This scope document needs to clearly articulate what will be included and excluded from the initial phase and each subsequent phase of implementation, which EHR goals will be addressed in which phases of the implementation effort and which individuals/groups will gain access to those benefits within each phase. It also must include a general timeline for each implementation phase. Refinement of dates will occur during subsequent implementation planning meetings with the vendor.

It is also very important that the scope document be well communicated throughout the practice to ensure expectations are aligned with the project plan and that everyone within the practice is clear on the direction for implementation.

Throughout implementation, requests and temptation to increase project scope and “add just one more small function” or “just one more user” are a constant threat to implementation success. This “scope creep” typically occurs without adequately thinking through the ramifications to the larger strategy analysis and without fully considering the critical time constraints on team members and other practice personnel. Scope creep inevitably results in implementation delays, increased costs and rework. It is the reason behind many system implementation failures and especially EHR system failures where there are so many significant changes being introduced to the practice that need to be carefully balanced and supported.

5. Conduct Internal Planning Meetings and Document Decisions

Just as it was important to have a clear understanding of practice requirements prior to deciding on a vendor EHR solution, it is very important for the practice’s implementation team to have a clear, shared understanding of the best implementation steps and approaches for the practice prior to vendor influence in vendor planning meetings. While the practice will want to remain open to ideas and options presented by the vendor, it is too easy for a vendor who cannot fully appreciate the unique needs of your specific practice to minimize risks and overlook impacts during planning discussions that may jeopardize the success of your EHR system implementation. Your implementation team needs to spend the time and effort to carefully think through a number of key considerations prior to vendor planning meetings in order to assure consistent agreement across the team and be adequately prepared to present issues and understand risks during meetings with the vendor.

The areas of key consideration for internal planning are:

- ❑ Interface requirements by implementation phase (i.e., which interfaces are needed to achieve the EHR goals for each phase of the implementation and what must each of these interfaces be able to support).
- ❑ Hardware requirements and placement by implementation phase (e.g., which users will have access to which devices, what will be portable vs. stationary, how will the exam rooms be equipped for best support of physicians and patients).
- ❑ Medical record conversion approach and timing by implementation phase (e.g., what will be scanned, what will be abstracted and entered, what is the appropriate timing for the conversion activity for patient records required for each implementation phase, who will be responsible for managing and completing conversion activities and what will be needed to ensure those individuals have adequate time to complete these activities).
- ❑ Training requirements by implementation phases and resources (e.g., who needs to be trained on what aspects of the EHR system during each implementation phase, what additional skills might the individuals need to master in order to effectively use the system and how might these be developed, who will be designated as the internal trainer for on-going clinical training once the vendor has completed their training programs and how can the practice back-fill that individual’s internal responsibilities, if any, to allow them the time to devote to the training effort).
- ❑ Testing responsibilities by system function and implementation phase (e.g., who are the best individuals with the best knowledge to develop testing scenarios, who is appropriate to execute the testing tasks, what additional training or support might they need to effectively handle testing responsibilities and what will be needed to ensure those individuals have adequate time for completing testing tasks).
- ❑ Patient communication strategy and approach (e.g., how best can the practice explain to its patients the key patient-related goals for moving to an EHR system, who will be responsible for this communication, who will be responsible for answering any questions or concerns the patients may have about the EHR system, data security, etc.).
- ❑ Internal communication (e.g., who within the practice will have the most difficulty with the changes within each phase and what can be done to reduce the challenge/fear/skill deficits for these individuals, who will take on these tasks, who will take overall responsibility for practice-wide communication on status and progress).

- ❑ Schedule constraints within the practice (e.g., when is the least busy time for the practice to better accommodate reduced patient visits for physician/clinician implementation activities and “live” learning curve requirements, who are the key resources for each key implementation responsibility and when are their vacations scheduled, how much time is available for each of these key individuals to devote to the implementation and what is needed to assure they can devote the effort).

These decisions as to tasks, responsibilities and timeframes need to be documented, preferably as an addendum to the scope document, for future reference and discussion with the vendor.

6. Conduct Detailed Vendor Planning Meetings

The early detailed planning meetings between the practice’s implementation team members and those of the vendor are critical for establishing the overall parameters for the project and setting a positive tone for the on-going relationship. These meetings require significant time from key stakeholders at this early point in the project, but will save the practice many hours and many headaches later on. To gain the most from these meetings and begin the project on the best possible note, plan on the following:

- ❑ Begin initial meetings on the most open and collaborative tone possible. The practice will spend endless hours with the vendor team over the course of the implementation. The more collegial the relationship, the easier discussions and the overall implementation will go.
- ❑ Dedicate significant time to sitting with the vendor team to:
 - Fully understand their approach and recommendations
 - Ensure that the vendor understands your expectations, issues and restrictions
 - Clearly discuss and reach consensus as to the vendor’s and the practice’s responsibilities for each set of tasks
 - Understand the time requirements of each practice responsibility based on the experience of the vendor and modify the requirements based on practice schedule restrictions
- ❑ Take copious and complete notes on each decision and the reasoning behind the decisions. Having these notes to refer to will save you the time and frustration of revisiting the same discussions multiple times as the project moves forward.

Vendor planning meetings will include detailed discussion of many of the same areas addressed in the practice’s internal planning meetings, but will focus more specifically on vendor and system detail and requirements. Some parameters to the implementation approach, timeline and responsibilities will, most likely, have been addressed within the practice’s contract with the vendor. However, specific detail on how to work within these parameters will be the responsibilities of the two teams. The following topics will need to be thoroughly discussed and confirmed during these detailed vendor planning meetings:

- ❑ Implementation sequencing and approach – The vendor will have definite opinions on implementation sequencing, incremental stages and rollout that should be heard by the practice’s implementation team members. However, it is important to keep in mind that these will, in all likelihood, be significantly biased by payment parameters and competing vendor team schedules. It is very important to hold to the key scope and approach decisions developed during initial internal planning meetings. Minor adjustments may be feasible in light of additional information from the vendor and reduction of scope may be appropriate based on information gained through team training. However, compromise on the part of the practice that results in larger initial implementation scope will only result in a more complex and troublesome Go-Live, a “live” configuration that does not truly meet the needs of the practice or a major implementation failure.
- ❑ Team training – The practice’s implementation team members need to have a more thorough training on the EHR system capabilities and the vendor’s team members need to be given a complete understanding of the practice’s goals, environment, workflow processes, partner/vendor relationships, schedules, etc. Training for the practice team can either be held on site at the practice or at the vendor’s training center with focus on three key areas:

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- Technical training to explain requirements for network and hardware set up for practices choosing an in-house model for information technology (IT) support and equipment troubleshooting for all practices regardless of IT support model.
- Data base configuration training to address specific system features, options and implications and educate participants on how each features/option is initially established and later maintained within the system.
- System functionality training to understand the available system features and impacts to the practice's workflow redesign.

It is important to include multiple individuals from the practice in all three training sessions to ensure full coverage for related project tasks and avoid reliance on one individual for future understanding and day to day support. If, following the implementation, the vendor is required to train additional personnel or support the system, this can expect to result in additional costs to the practice.

Training for the vendor's team should include a formal presentation of the background, organization (e.g., departments, backgrounds on key project resources, physician/clinician approaches and key partner/vendor relationships – especially those involving system interfaces or access) and demographics of the practice (e.g., specialties, patient volumes, most common diagnoses, insurance parameters, etc.). Training will need to include an in-depth presentation of the goals, scope and initial planning documents for the practice. It should also include a detailed walk through of the physical space.

- ❑ Hardware placement and delivery schedules – Since the practice's implementation team will have already completed the majority of this planning during internal planning meetings, the discussions with the vendor will focus more on specific delivery schedules for the equipment and the placement of equipment within the physical facility. These discussions create an excellent opportunity to review patient flow and workflow considerations and talk through other options for system accessibility based on the vendor's experience.
- ❑ Software delivery schedules – Timing of software delivery may have been addressed contractually and will only need to be confirmed in these meetings. However, if the schedule has yet to be determined, the practice should arrange for software delivery with the completion of their team training. Since typically some portion of payment is due with the delivery of the software, it is advisable to only incur that expense once the practice is in a position of benefit. It is also important to discuss the vendors schedule for software upgrades that may impact the practice's implementation schedule. Depending on the version of software purchased and the functions to be implemented at any point in time, introduction of new upgrades may need to be included in the project activities.
- ❑ 3rd party reference and software requirements – Current diagnosis, procedure, HCPCS and other code tables will needed to be loaded into EHR databases as part of the system configuration. Other 3rd party software may also be required (e.g., Crystal/other report writer, medication data base) to support some of the functionality envisioned for the practice. Detailed discussion regarding requirements, individual responsibilities for ordering/implementing and schedules need to be conducted and agreements reached.
- ❑ Interface specifications and schedules – All interfaces required for passing or exchanging data with any vendors, partners or other organization need to be defined during implementation planning discussions. Many of the more detailed specification discussions will need to occur between the technical resources on both teams. The full teams, however, should be in agreement as to the data that is to be exchanged, the type of interface design (e.g., one way, real time vs. batch, etc.), the timing for development and delivery of each interface and the responsibilities for testing and accepting each interface.
- ❑ Medical records conversion approach and schedules – Again, since significant consideration was given to the records conversion strategy and approach during the practice's internal planning meeting, the discussions with the vendor should focus on helping to refine timing estimates for the work based on the vendor's broader experience and review of completion of these activities within the broader project schedule.
- ❑ Contingency planning – Contingency plans describe the steps necessary to keep business going when unexpected problems occur. Depending on whether the practice has chosen an in-house or ASP model for IT support, responsibilities for developing and executing contingency plans will vary. Regardless, the practice will want to fully explore options for protecting data and preventing practice downtime and assure the best solutions are included in implementation activities.

- ❑ End-user training schedules and approach – Specific schedules and designation of individuals requiring training on specific system components and features need to be addressed and confirmed during these vendor planning meetings. Discussions should also include planning for how best to tailor the training based on the specific configuration decisions of the practice and the incremental functionality/rollout plans. Future practice-based trainers should be confirmed during these meetings with discussion for their more in-depth training requirements in order to effectively support the practice in the future.
- ❑ Acceptance testing – It is the responsibility of the practice to confirm that all software, hardware, interfaces and 3rd party tools/tables are functioning accurately and as planned prior to Go-Live. During vendor planning discussions, it will be important to discuss proposed acceptance criteria, confirm responsibilities for testing of each component and align project task schedules for each component.
- ❑ Team communication and issue tracking – Project success will depend on regular, open and clear communication between the vendor and practice team members. The detailed vendor planning meetings is the ideal place to establish communication parameters, schedules and escalation procedures should problems arise.

Open discussion and agreement on the above areas during planning will create an atmosphere for collaboration and ultimate system implementation success.

7. Finalize Your Implementation Plan Document

During the detailed vendor planning meetings, the vendor will work from a set of standard project planning documents that include the standard tasks associated with implementing their EHR system. While these are very comprehensive from the vendor task standpoint, they typically do not include a wide set of implementation activities key for the practice, but not specifically the responsibility of the vendor (e.g., internal practice and patient communication, construction to accommodate equipment, development of basic system skills for less advanced users, etc.). The vendor will either need to incorporate the practice-specific tasks and responsibilities into their overall project plan or the practice will need to develop its own internal project plan. If a separate practice plan is developed, it will need to be closely coordinated with the vendor's documents to maintain alignment of timing and dependencies for task areas where there is shared responsibility and/or hand-offs between the two teams (e.g., interfaces delivered by vendor to be tested by practice).

These documents will serve as the critical map for implementation success and will serve as a constant reference point for evaluating progress and detecting potential problems that will cause project delays, errors, additional costs, etc. It is critical that the practice's project manager continually review and update the project plan as progress is made, as further task detail is defined and as resources are juggled to complete day-to-day business in addition to multiple project demands.

As the last step in the vendor detailed planning meetings, both teams should be required to sign off on the project plan(s) to acknowledge understanding, responsibility and commitment to the timelines.

8. Establish Benchmarks to Measure Project Success

As the implementation effort moves forward, many eyes will be on the costs associated with the effort and looking toward reaping the expected benefits the system is expected to yield. Each goal for the EHR system has an expected improvement – whether in efficiency, revenue, reduced cost, ease of data access, etc. Before moving too far ahead, it is prudent to establish clear measurements of where the practice is “pre-EHR” within each of these goal categories. These measurements will be somewhat unique for each practice depending on how the physicians/clinicians and practice leadership focus on the issue. Examples of measurements could be:

- ❑ Measuring increased instances of higher coded office visits based on improved documentation if the focus is on reducing under coding.
- ❑ Measuring reduced cost by moving away from dictation/transcription to using templated documentation tools.

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- ❑ Measuring increased influenza and pneumococcal immunization rates for ESRD (End Stage Renal Disease).

It is important that the measurements to be used are available “pre-EHR”, that they are easy to identify and calculate over time and that they directly emphasize the key points of improvement the practice is expecting.

As implementation challenges occur and as time moves on, these initial “pre-EHR” benchmarks will help to remind everyone of where the practice started. Comparison of these to “post-EHR” measurements will help to show how far the practice has come in achieving its goals. It is important for everyone to keep in mind that efficiency, revenue and costs will increase during the implementation and early Go-Live learning curve period. The users of comparative measurement should take these shorter-term inefficiencies into consideration and time their measurements for a period of greater stabilization and proficiency.

Once the benchmarks have been established, publish and distribute the benchmarks to all team members. Refer to them often and celebrate success as each benchmark is raised over time.

By following the steps and tips outlined in this document, the practice will be well positioned for project success. Adhering to the plan will be the critical last step in assuring that success becomes a reality.