Managing Your Practice's Transition from Paper to

EHR

by Carolyn P. Hartley, MLA

Hematologists and oncologists approach the transition to electronic health record (EHR) software somewhat differently than other specialties because in the oncology field, data—vital to informed clinical decisions—come in from multiple sources.

For years practitioners have measured the benefits and challenges of EHR adoption against the financial incentives. Often, the process of transitioning from paper to an EHR seems so daunting that it can appear to be unachievable. The process is complex. However, when the paper-to-digital transition is compartmentalized into manageable tasks, the process is achievable. After more than a dozen years of field experiences in health information management, our implementation team has categorized data migration from paper to EHR into eight attainable milestones. We've identified eight "I's" of EHR implementation (see Figure 1) and developed migration strategies to guide practices from an ever-expanding chart room through the "Go-Live" with an EHR—irrespective of the system you select.

Milestone 1: Introspection

This milestone centers on research and strategic planning. Without a solid implementation strategy for your practice, the EHR vendor is left to direct and manage the process. This strategy is not productive because the vendor's primary focus is on installation and training.

During the "Introspection" milestone, you should complete a readiness assessment for your practice. This assessment includes workflow analyses for clinical, administrative, and billing processes. When conducting a workflow analysis, assign one person to shadow administrative, clinical, and billing staff and document what these staff members do. Use circles, squares, and arrows to connect departments to each other. Figure 2 (page 34) is an example of how staff members might interact with each other and the patient to create a lab order.

Conduct the workflow analyses in a non-threatening way by saying something like—"*As we transition to an EHR, we want to know what each person does so that we*

Figure 1. The 8 "I's" of EHR Implementation™

Red = Cancer Program; Yellow = Vendor; Orange = Cancer Program and Vendor Together
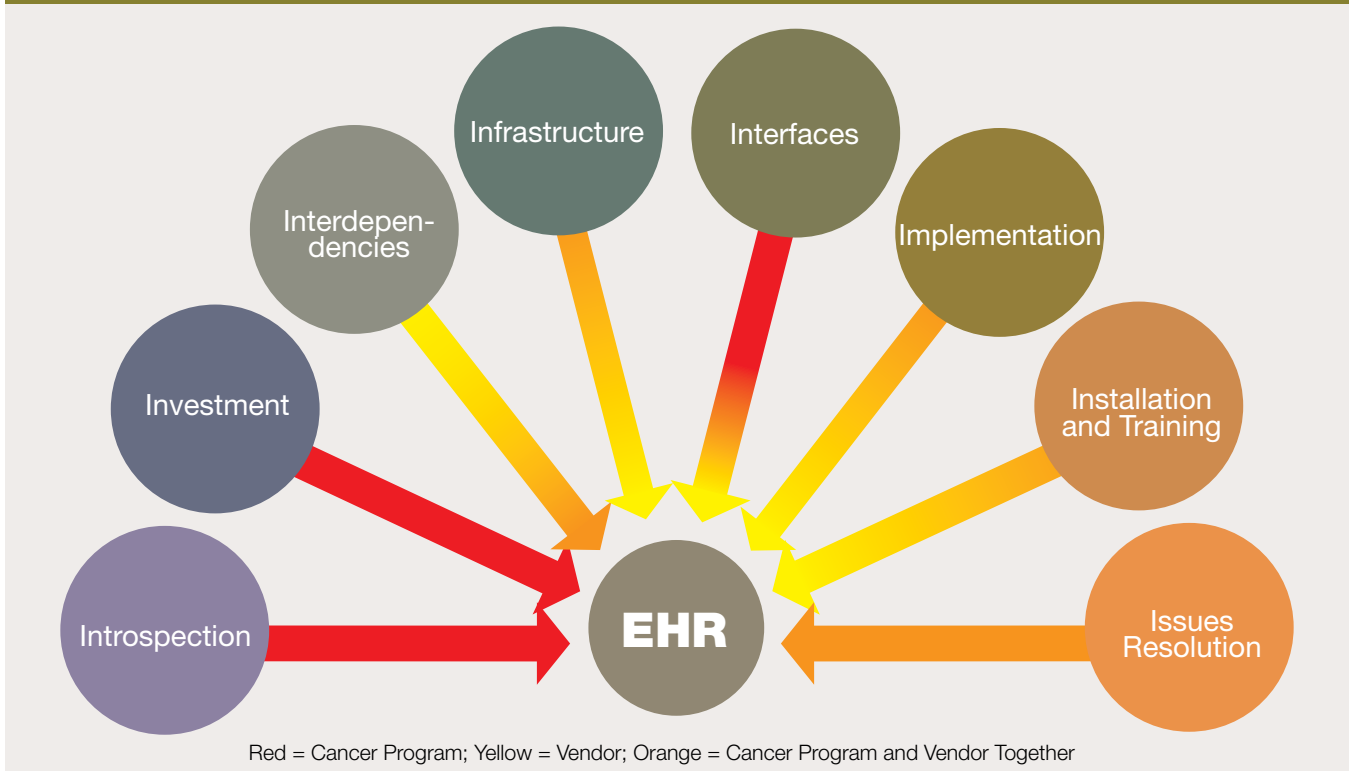
can build the highest efficiency and quality of care into the system without dropping important tasks." The wrong approach might be saying something like—"We're hiring an auditor to evaluate how we do things." As you conduct your analysis, ask the following questions:

■ What do you do?
■ How long does it take?
■ How do you know when the task is done?
■ What happens when you've completed your task?
■ What do we do that makes your work inefficient?

An outside individual, such as a director of nursing from another clinic or a consultant with knowledge of clinical workflow, can view your work processes from a fresh perspective and can help you identify not only inefficiencies but also process redesign recommendations, ensuring that you do not drop vital information as you transition to the EHR.

For example, consider a three-physician practice in which each practitioner wanted a different workflow for ordering and viewing lab results. After the physicians looked at the workflow maps, they chose not to replicate inefficiencies in the EHR and agreed on a standard process for ordering labs and posting results. The process redesign then served as a roadmap for selecting, building, and training staff on lab orders and results posting.

In this example, the workflow assessment also showed physicians how individual physician preferences affected the front office's chart preparation process, which had become complicated and inefficient. When entering an exam room, physician A wanted to see the lab results first. Physician B wanted to see the problem list, including diagnosis and staging. Physician C wanted to see the nursing notes from the patient's last infusion. So the afternoon before the patients' visits, a medical assistant would organize the paper chart into a specific order to accommodate each physician's preference. When physicians were shown the EHR, they could see how to easily find the information they needed through a series of short clicks into the patient record.

In the process of transitioning to an EHR, practices should evaluate the following clinical workflows:

■ Demographics import into EHR
■ CPOE orders: lab, imaging, pathology, standing orders, and recall and results management
■ Variations in treatment regimens and protocols
■ Standing orders
■ Chemotherapy administration, modifications, and approvals
■ Default patient history data capture.

In addition, evaluate the following cross-departmental workflows:

■ Check in and check out
■ New patient registration
■ Prescription refills
■ Messaging
■ Reports, letters, and forms generation
■ Referral letters
■ Chart prep and storage
■ Billing and charge master updates with new codes
■ Consents built into system
■ Encounter-billing reconciliation at end of day and month.

During the "Introspection" milestone your practice should identify what you want from an EHR and when you want it. Lack of this introspective process can lead to a doubling or tripling of your budget. Consider, for example, a private practice in which one physician wants to use speech recognition software, another wants handwriting recognition, and all physicians want medical-grade portable computers that will still function if fluid spills on them. These types of practice-specific decisions will affect the cost of third-party software, server capacity, interfaces, training, and hardware selection.

During the "Introspection" milestone, you will also complete a security-risk analysis, complete the budget projections, line up your internal teams, and make an initial assessment of your staff's computer literacy.

When measuring computer literacy, do a quick check on who has an MP3 player, smart phones such as iPhones or Blackberries, who is using social media, or who needs help opening email. A computer-challenged physician may be less resistant to change if you can provide one-on-one coaching.

The introspection stage is also a time to gauge your leadership's enthusiasm and commitment to the EHR transition. Unless you have buy-in from your practice leadership, EHR implementation will face multiple failure factors. Leadership buy-in includes:
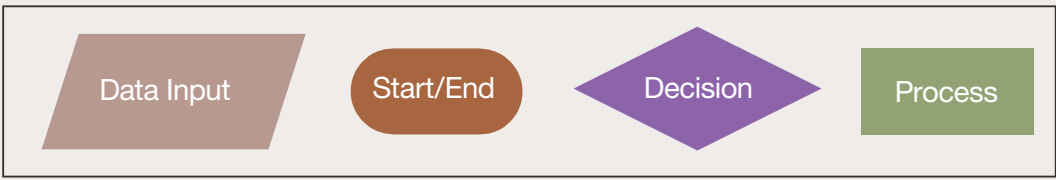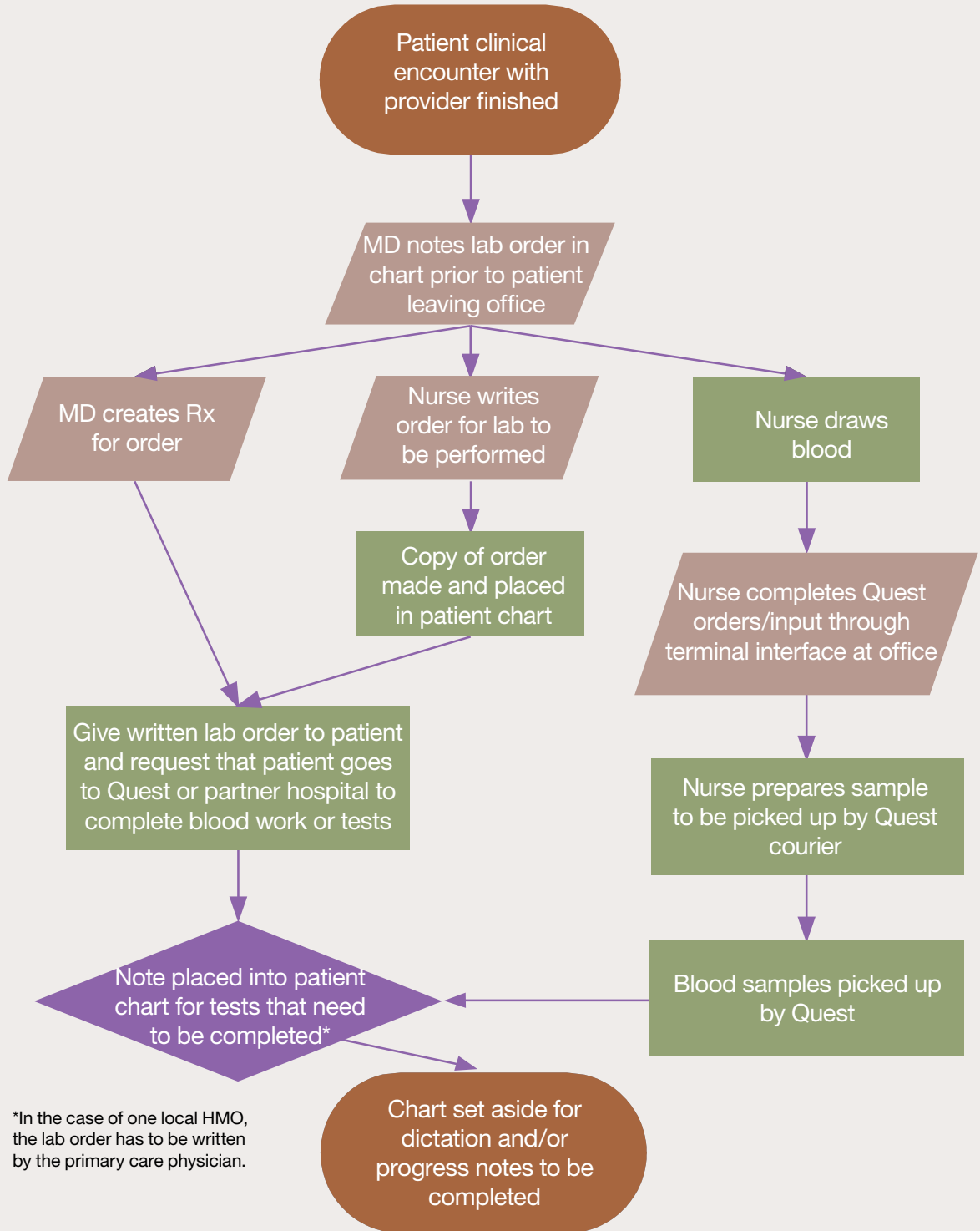
■ Assigning an EHR team, including one person from each department.
■ Planning for reduced productivity for a specified period. (All physicians will be affected by lowered productivity during the transition to EHR, so all performance bonuses will be equally impacted.)
■ Committing internal and external resources to implement the technology and ensure the process is completed on time and on budget.
■ Mandating training time to learn how to use and customize the system.

Milestone 2: Investment

You've completed the contract negotiations, and the EHR vendor has begun to communicate with your internal EHR team. Now it is time for you to secure a low-interest loan through the bank or a state low-interest funding program. (Nearly every state offers a low-interest loan for EHR start up funding. Consult your state medical society to determine how to access low-interest or short-term loans that will carry you over until you can apply for "meaningful use" reimbursement funds.) Now your checkbook needs a boost. Plan your return on EHR investment by:

■ Assigning a dollar amount to time spent in inefficient workflows, such as searching for records, refilling prescriptions, tracking new patient information, and re-creating education handouts and patient intake forms that have been over copied.
■ Ensuring revenue will be well managed by your EHR. New or expanded documentation strategies will help with better billing, such as documenting medical necessity and completing the diagnosis information. (See "The 7 Deadly Sins of Infusion Center Documentation" in *Oncology Issues,* March/April 2010, available at *www.accc-cancer.org.*)
■ Participating in the American Recovery and Reinvestment Act (ARRA) "meaningful use" reimbursement will help in your financial recovery process.

Figure 2. Sample Workflow Analysis for Creating a Lab Order

Patient clinical encounter with provider finished

↓

MD notes lab order in chart prior to patient leaving office

↓ (branches to three)

MD creates Rx for order

Nurse writes order for lab to be performed

Nurse draws blood

↓

Copy of order made and placed in patient chart

↓

Nurse completes Quest orders/input through terminal interface at office

↓

Give written lab order to patient and request that patient goes to Quest or partner hospital to complete blood work or tests

↓

Nurse prepares sample to be picked up by Quest courier

↓

Note placed into patient chart for tests that need to be completed*

↓

Blood samples picked up by Quest

↓

Chart set aside for dictation and/or progress notes to be completed

*In the case of one local HMO, the lab order has to be written by the primary care physician.

Legend:
- Data Input
- Start/End
- Decision
- Process

One way to build enthusiasm about ROI (return on investment) is to map out policies that will govern your paperless strategy. Some policies that other clinics have adopted include:

■ Identifying a date by which your practice will be paperless.
■ Ensuring that physicians have confidence that clinical information will be scanned into the medical record.
■ Choosing a day in which clinical data is entered electronically prior to the patient visit. (For example, clinical data will be entered into the EHR four days prior to the patient visit.)
■ Scanning paper into the patient record before it is routed to the physician.
■ Mandating that documentation for infusion will be entered electronically during the patient visit.
■ Deciding when patient records for billing purposes will be closed out. (For example, patient records will be closed out within 24 hours of the patient visit.)

Many oncology practices use the transition to EHR as an opportunity to evaluate and redesign inefficient workflow processes and build quality and efficiency into the new EHR.

Milestone 3: Interdependencies

Interdependencies begin the day you sign the EHR contract and determine a projected "Go-Live" date. Once that date is determined, all parties begin scheduling activity around your Go-Live.

How is the Go-Live date fixed? Once you sign the contract, your EHR vendor will assign its own application specialist (project manager) who, with your guidance, builds a "scope of work" or timetable that plots the tasks and interdependencies for the team to complete. The scope of work typically begins with the projected Go-Live date and then works backward to where you are today—eager to transition from paper charts. This date will become the baseline for your implementation timeline (Milestone 6: Implementation) into which you will embed your tasks.

Set up weekly or bi-weekly EHR team calls with your EHR vendor's project manager. These calls need only last 20 to 30 minutes unless there are outstanding issues, but they are an excellent way of maintaining communication about the process. (Remember, you will have begun regular communication with your internal EHR team in Milestone 1, and you would have brought the EHR vendor into the communication process in Milestone 2.) In Milestone 3, one member of your team should document and map the interdependencies. Name department heads to be part of these bi-weekly calls, or assign someone to participate in their absence.

If your practice is the cause of delays, most other deadlines will also be subject to a complex domino effect. A good project management software tool, along with an experienced project manager, will document your progress and keep you moving forward to meet your deadlines. For example, when your practice wants to start scanning paper documents, the interdependencies include:

1. Purchasing a high-performance scanner, but do so when purchasing other software in order to receive a quantity discount
2. Customizing your EHR system, but first come to an agreement on protocols
3. Building interfaces between the scanner and software
4. Determining what is to be scanned and what requires data entry
5. Training users on indexing and scanning.

One way to manage these interdependencies is through an off-the-shelf project management tool.

Keep in mind, implementation is not a linear process; rather most milestones are dependent on the tasks completed in reaching other milestones. Your workflow analyses completed in the "Introspection" milestone will be your most valuable tool to manage the interdependencies. As another example, training (Milestone 6: Implementation) is dependent on having lab interfaces developed, tested, approved, and in production mode (Milestone 5: Interfaces). Lab interfaces cannot be built until you sign agreements with labs. If you are participating in an organized health information exchange (HIE), ask your EHR vendor if they are certified to facilitate your lab orders and results posting through the HIE.

Milestone 4: Infrastructure

In this milestone, you build the infrastructure that will keep you connected to your data. This process includes assessing and purchasing hardware, software, third-party software, and the wireless structure. Your practitioners will also determine how they plan to access medical records when they are not in the clinic, a decision that will help guide the server configuration, network design, database licenses, and hardware. Most EHR vendors provide a specification list on their websites; they also provide a list of hardware and software that are compatible with their systems. Your project manager and/or IT consultant can help you meet this milestone.

Milestone 5: Interfaces

The workflow analyses you completed in the "Introspection" stage are a vital component of interface development. Identify your health information exchange partners (labs, imaging, pathology, hospitals, referring providers, infusion centers), and then negotiate the cost of the interface for each during contract negotiation with your EHR vendor. Labs are essential in oncology; and you'll want to identify internal and external labs. Most lab companies will pay for the interface, but depending on your patient volume, you may find your clinic is on a long waiting line. Count on a minimum of 60 days for the interface to be built, tested, approved, and moved into production. Be aware that the 60 days can easily turn into 120 days if unsupervised.

In transitioning from paper-based orders to computerized provider orders, tasks are not only assigned but are also auditable. CPOE in most oncology EHR systems will send reminders if results are not received and/or posted in the physician's queue in a timely fashion.

Milestone 6: Implementation

This milestone requires perseverance.

Implementation is a team effort that includes the EHR vendor, your EHR project manager and physician champions, the interface development team, hardware and software, and the IT team that manages your network.

When you purchase an EHR, you purchase a well-designed wire frame that serves as a guide for the vendor to upload your content. During your pre-purchase EHR

demonstrations, you saw the results of another oncologist's or another oncology clinic's content customized into the system. Now it's your turn to customize details from your practice.

The following is a sampling of implementation tasks you will manage and those the EHR vendor will manage.
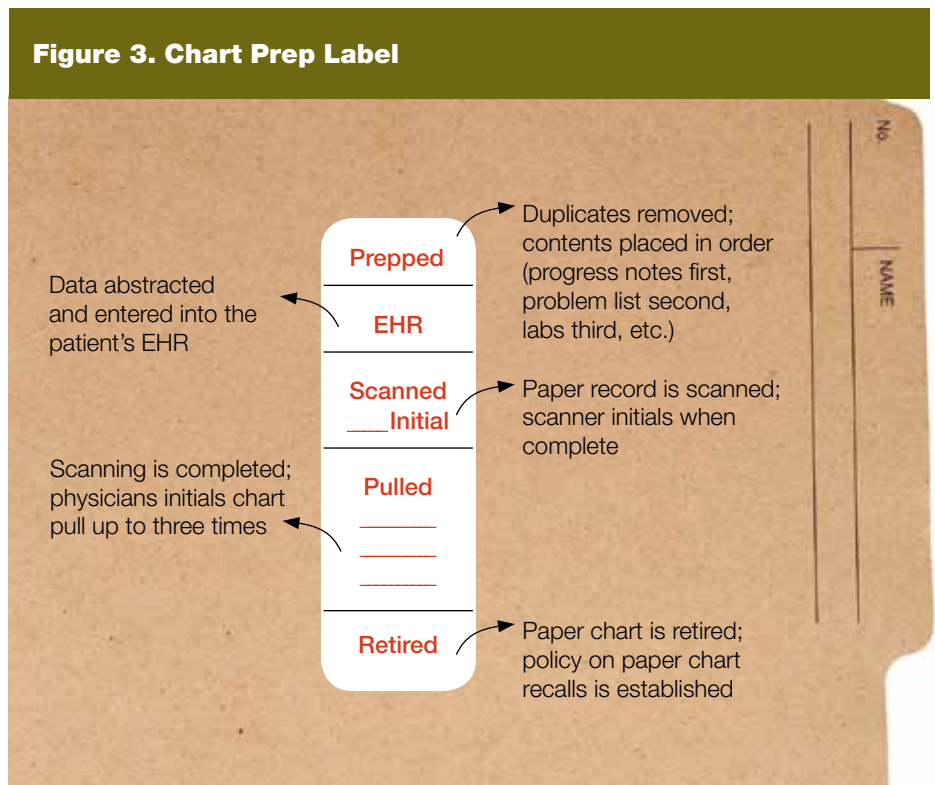
Clinic-managed implementation tasks (typically spread out over several months):
- Build a list of users, IDs, and super users.
- Accommodate super users' schedules for initial training, and then internal staff training.
- Manage hardware and software purchases (printers, scanners, portable computers, servers).
- Install servers, cables, wireless, and wired networks.
- Verify that HIPAA privacy, security, and breach notification policies and procedures are in place and working.
- Develop internal training material (vendor may provide some of this) and help desk support.
- Reach internal consensus on protocols and regimens you want built into the system, and acceptable lab ranges.
- Upload chemotherapy order sets; i.e., purchase templates from another oncology practice or reconstruct them.
- Create templates such as billing aliases. For example, after seeing a patient, the physician may use [ICD-9-CM] diagnostic code 280.1 for "iron deficiency anemia secondary to inadequate dietary iron intake," but your clinical staff may call it "anemia" or "diet-induced anemia" on your paper encounter form. In renaming this code for simplicity, you have given the code an "alias." When purchasing an EHR, you have access to the entire library of ICD-9 and CPT codes as originally catalogued, making searches complex and time-consuming. Your implementation team will show you how to build aliases (rename) from lengthy clinical terms into terms more familiar to your staff.
- Transition paper records into scanned or key-stroked data.

EHR-vendor managed tasks (typically spread out over several months):
- Build the database with your customized data
- Upload software on to server
- Facilitate interface development
- Set up accounts and initial set of permissions for all users, print queues, scanners, VPN connection, access rights, and required third-party software
- Map scanners to customized fields
- Convert demographic data into EHR
- Train your super users on how to use the software

Figure 3. Chart Prep Label

Prepped → Duplicates removed; contents placed in order (progress notes first, problem list second, labs third, etc.)

Data abstracted and entered into the patient's EHR ← EHR

Scanned ___ Initial → Paper record is scanned; scanner initials when complete

Scanning is completed; physicians initials chart pull up to three times → Pulled

Retired → Paper chart is retired; policy on paper chart recalls is established

- Provide maintenance and technical support after each Go-Live stage.

Milestone 7: Installation and Training

During this milestone, all the work your practice and the EHR vendor team have completed finally starts to make sense.

Your paper-to-EHR transition strategy can be done before, during, and after the system is installed. For example, before installation your staff can begin prepping your patient charts. During installation, staff can determine what information can be scanned in and what information needs to be key stroked. After installation is complete, staff will begin scanning paper records into the system.

Prepping the patient charts.
Here's how to prep your charts for transition to EHR. First, determine which patient records will be prepped and scanned. We suggest selecting active patients seen in the last 18 months. Give priority to your current chemotherapy patients (weekly, bi-weekly, and monthly), patients with high-risk blood diseases, and your frequent callers. We suggest holding off on scanning patients not seen in the last 18 to 36 months.

Then discard duplicates, such as faxed lab results. Your goal is to create a consistent sequence of paper from front to back. This practice will facilitate rapid scanning and data entry while keeping records accessible during the transition. For example, place paper from front to back in the following order:
1. Progress notes from last visit
2. Current problem list
3. Most recent lab results
4. Chemotherapy
5. Medication history, allergies, and reactions

6. Treatment plan
7. Medical, social, and family history
8. Discharge summaries
9. Consents
10. HIPAA forms.

Next, create labels for the front of each paper chart to identify its status. Figure 3 shows the function of each step in the transition process. In the "Pulled" category, the practitioner initials the chart pull according to your internal policies. Your policy may stipulate that a chart can be pulled three times by the same person before it is retired. Establish a policy for the number of chart pulls following clinical Go-Live. For example, after three chart pulls, the paper record will be retired.

The paper patient charts will then be retired to either a remote paper storage location or a scan-on-demand location. In a small to midsize clinic, scanning all records—once considered a best practice—may be more affordable with a scan-on-demand paper storage facility. (Be aware that a scan-on-demand service most likely falls under the HIPAA Business Associate requirements and therefore must also meet HIPAA Security Rule and Breach Notification Rule requirements.) Evaluate pricing for both paper and data storage in your area.

Determining what needs to be scanned or keystroked.
Depending on the EHR software, scanned documents may not be searchable, so current medications should be keystroked, not scanned. Your list of scanned information may include:

- Lab reports older than six months
- Medical and social history
- Discharge summaries and survivorship plans
- Referral letters
- Faxed medical records.

Ensure the EHR vendor trains at least three people in your clinic on how to scan documents into the EHR. Scanning requires regular monitoring and project management, as it is often something set aside to do when time allows. Scanning is a substantial quality control concern, so be sure a member of the clinical team and/or project manager oversees this task. If the EHR software does not provide recommended note types (scanning categories), you will develop your own. For example, what will you call a pathology report? An initial pathology report, correspondence, or another term you use internally?

Next, determine what live data will be keystroked into the record. Compare the list below with ARRA's "meaningful use" matrix so that you can extract data for Stage 1 reporting. (See *http://healthit.hhs.gov* for more on incentive payments for "meaningful use" of certified EHR technology under the American Recovery and Reinvestment Act of 2009). Typically, the following discrete data is keyed, not scanned, into the system:

- Demographics (imported from practice management system or present in an integrated system).
- Medications, including controlled substances.
- Allergies and adverse reactions.
- Patient's local pharmacy address, phone number, and fax number.
- Lab values from the last two to three results. (Some

EHR vendors can load these into your system retroactively once your interface is tested and approved.)
- Current conditions, e.g., diabetes, hypertension, patients with VTE prophylaxis.
- Vaccines.
- Relevant histories. Physicians determine what is important—may include diseases of immediate family, smoking, or other medical or social history.

Milestone 8: Issues Resolution
When you have completed all phases of Go-Live and clinicians are now using the system, several events occur:
- Your account will be turned over to the Technical Support and Maintenance Department
- Your balance will be due
- All interfaces will be in production—if they are not, the implementation milestone is not complete and you should not sign off on the account
- Your super users will become your internal trainers.

During implementation, your EHR vendor will develop an "issues log." Most clinicians do not ask to see the vendor's issues log. Some issues are internal only to the EHR vendor and may include issues to be resolved in updates or upgrades, but your project manager should be aware of them.

An issues log cannot be managed or resolved if the issues are not in writing. Interfaces are one of the most consistently unresolved issues. Be sure that your internal project manager has satisfactorily resolved outstanding concerns before making the final payment.

Before the official hand-off, schedule two or three conference calls with the EHR's project manager, the technical support contact, and your internal team to ensure your internal team is comfortable moving forward.

You will continue to need technical support, but after the hand-off, you'll find the EHR vendor's technical support team will bring tremendous value to you. It is common to eat up 50 percent of the technical support budget in the first six months, and after that your super users can take over many issues.

Moving Forward
These milestones present an overview of the process of transitioning from paper to an EHR. Physicians comfortable with the research and development stages of the "Introspection" milestone may be challenged moving into the "Investment" and "Interdependencies" milestones. To accommodate them, include team members who are excited about hardware and networking. Another team member will continue to express frustration with missing or incomplete charts and will drive the team through the "Installation" and "Issues Resolution" stages. Often discarding duplicate files will open up another wall in the chart room, a definite sign that the EHR process is progressing.

Implementation is a collaborative effort. Some days it will be more challenging than others, but your internal project management and clinical champions will help keep the entire process moving forward. ❧

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