EMR Implementation Expectations

The leadership, management, and process of any EMR implementation into an organization should be a true partnership effort between your vendor providing system and implementation expertise and you, their customer, the organization they are supporting. You bring expertise of business and clinical processes and the needed content. While the goal is to make any EMR implementation successful, the ideal one is when both parties compliment each other's expertise.

Work with your EMR vendor for support and guidance with the following:

- Project Management and guidance through the implementation process with supporting implementation tools
- Change management consulting
- Workflow review assistance, including providing standard workflow diagrams
- Templates for data collection to configure the system to meet the you the customer's needs; templates should include data already in your PM application
- Assistance with configuring your system within the specified parameters to meet your needs.
- Guidance and council about how to train all staff including providers identified to use the system(s) (Note: A train-the-trainer model is the most economically and operationally sustainable for any organization)
- Assistance with some sort of "dress rehearsal" (walking through their practice processes and using the system without patients present) to prepare them for go-live.
- Provides on-site expert support at go-live and for a pre-determined period time to coach users and assist any inevitable workflow modifications
- Provides billing/billing integration followup as part of standard implementation product.
- Trains and mentors EMR application site Specialist(s) in their pre-implementation and implementation roles

- Provides standard data extracts in a reporting and analysis database and a standard set of reports for customer access through reporting software
- Provides templates for annual UDS and OSHPD reporting
- Provides ongoing training and support to Site Specialist(s) and facilitates interaction with organization to facilitate continued learnings as system enhancements are made, clinical processes change, and new staff and employees are hired into the clinics.

Organizations implementing EMR are generally responsible for the following:

- Project leadership and some sort of a clinical Implementation Team (CIT) that includes business and clinical process and content expertise. For EMR, identification of lab business process owners to negotiate contract with lab resulting agency and for interface and lab operations work group.
- Network configuration for appropriate connectivity and purchase, your vendor specifications.
- Organizational change management leadership
- Workflow reviews and related decision-making for OCHIN to configure the system and design training that meets their needs
- Timely completion of data collection templates and handoff to vendor
- Hold/clear staff and provider schedules to ensure their availability at dress rehearsal, training, and implementation
- Develops and communicates to all staff new (or confirms existing) policies and procedures related to organizational processes impacted by the new system
- Communicates/negotiates changes to all stakeholders- suppliers, community organizations, and patients
- Hires application site specialist to support the planning process, implementation, and optimal use of the system by business and clinical operations and patient care teams on an ongoing basis. Assigns full-time or contracted IT liaison and reporting staff member.
- Allocates a set amount of clinic time, without patients, for Order Transmittal testing

- Closes clinic for designated time for dress rehearsal, just prior to go-live

- CIT attends preview training and provides feedback to ensure correct training for staff/providers

- Ensures that all staff and providers using the system will attend appropriate training

Forming an EMR Implementation Team

The selection of your Clinical Implementation Team (CIT) is an important step in planning and implementing your EMR. Your team, along with invited internal and external subject matter experts, will be examining and modifying your clinic workflows, making system configuration and training decisions, communicating the progress of planning activities to your providers and staff, and leading your organization through a significant change.

Following are brief descriptions of the recommended members of your clinic implementation team.

Member Implementation Team

- **Project Leadership**

Clinical Implementation Team (CIT); Successfully implementing an EMR into clinical practice requires overt and unwavering clinic leadership to serve as the co-captains of the ship--making workflow and system configuration decisions, securing the necessary resources for a timely go-live, and leading the change anticipated in the everyday working lives of providers and staff. The engagements of the clinic manager and physician champion(s) in this team are critical to the project's success. They must meet with the rest of the CIT on a routine basis for project team meetings. They will also participate in many of the workflow review sessions, and attend preview training and end-user training sessions the month before go-live. The clinic manager often has overall project management responsibilities for the implementation, coordinating internal resources, facilitating information gathering, and communicating with organizational leadership.

Leadership Team; Large organizations where coordination of decisions and services is required, Leadership Team meetings may take place at least three times—at the beginning, middle, and end of the planning process. Besides the clinic manager and physician champion, participants in these meetings might include Program, IT, and Operations or Executive directors, and the CFO.

- **Nursing and Operations Leads**

The nursing lead and/or operations lead of a clinic are important members of the Clinical Implementation Team. They are also critical members of the

workflow review sessions where they—along with project leadership and subject matter experts—will make decisions that direct configuring the system and designing the training to support their clinic practice. Also, they are often the practical advocates in preparing staff for using the new EMR system.

- **Site Specialist**

The site specialist may represent a new role for the clinic and is pivotal as it plans for and prepares to implement the EMR. Following implementation, this dedicated position remains permanently on-site as an applications expert who supports the introduction, integration, acceptance, and optimal use of the system by clinical operations and patient care teams. It is important to fill this role very early in the planning process since the site specialist is often a primary resource to the member's project manager. A description of the recommended site specialist responsibilities is included in your implementation manual.

- **Lab Contact**

A reliable and consistent lab contact is key to establishing your lab interface(s) throughout the design/build/testing processes and implementation. Each clinic going live will be in close contact with your lab contact for ongoing troubleshooting once the lab interface is turned on. If your organization has multiple clinic sites using a central lab, it is helpful to designate a responsible person that can work with your system Lab Analysts and your Site Specialist to work the lab results that "error" out and fall into some sort of error pool. A designated lab contact will also be helpful to make sure you have the requisite system preference lists and to keep them updated and mapped to the ever evolving lab codes.

- **Subject Matter Experts**

It is essential to have subject matter experts attend CIT meetings. Staff and/or managers who are experts in their part of the clinic's practice should attend relevant workflow review sessions. For example, the lead lab technician or lab manager will want to attend any review sessions relevant to lab workflows. Other examples of subject matter experts who will participate in specific workflow reviews are the lead x-ray technician, referral coordinator, and medical records lead.

- **IT Representative**

The IT representative is a key participant in an EMR implementation and will need to attend the kickoff CIT meeting. This staff member is responsible for ensuring that the clinic network is working and has the required connectivity and that

appropriate Vendor icons are installed to desktops for testing and rehearsal activities, and ultimately for go-live. The IT representative will also identify needed hardware or software purchases (for example, PCs, printers/trays, scanner), manage those purchases if needed, and set up or change hardware based on workflow needs. They will participate in a clinic walkthrough once the equipment has been installed and participate in OCHIN equipment and order transmittal testing as clinic IT experts for problem solving as needed.

- **Help Desk**

If your organization has a Help Desk, it will be important for their involvement in coordinating support processes with the Site Specialist.

Implementation Team

Following are brief descriptions of the members of the OCHIN implementation team:

- **Project Manager**

It is essential to have a project manager for your EMR implementation. They will be the primary contact for all things related to your EMR implementation. Your project manager will guide you through each detail of the planning and implementation process, in accordance with your agreed upon milestones and timelines. It is the project manager's responsibility to ensure that the appropriate staff are resourced to your implementation and are attending the CIT meetings, workflow review sessions, and other activities required for your successful implementation.

- **Trainers and Go-Live Support Staff**

You will need to work with your vendor to understand their recommended training schema. In general, it is highly recommended to have at least two trainers for EMR "preview training" for CIT members. You will need to determine the number of trainers needed for your end user implementation training. This calculation has many variables not the least of which is budget, size of your clinic, and training format. Once your determine your training format you can lay out a plan for go-live support and how you will incrementally decrease site support as your staff become proficient with the EMR. Your EMR trainers will likely become your on-site applications specialists following go-live activities

- **Workflow Analyst**

It is strongly recommended that you identify a person who can serve as a clinici workflow analyst. This requires someone with EMR experience (ideally with your

EMR application) and familiarity with clinic workflows. More often than not this help comes from your vendor or is a temporary contracted position the purpose of which is to observe all clinic workflows (activities) and perform a gap analysis between the standard application workflows and the core workflows they observe in your organization. Only when this information has been obtained can the CIT fully understand the remaining application build and/or workflow redesign that is necessary to transition from paper to electronic workflows.

- **Application Specialists**

You will need to cultivate system analysts who will be responsible for configuring your EMR to support your clinic practices. They use the data you supply—ranging from preference lists of labs, meds, and E&M codes to user lists to requisition (ordering form) information—to set up the system to support the needs of your providers and clinical support staff, ancillary services staff, and outside suppliers.

IT Staff

Your designated IT representative will coordinate with the rest of your IT staff on connectivity, equipment and hardware needs, security of circuits, firewalls, desktop access to an Vendor login prompt, scanning and printing needs assessment based on clinic workflows.

EMR Implementation Activities

There are many important activities involved in planning for your EMR implementation. Descriptions of some of the most essential ones are below:

- ## Kick off Meeting
  The Clinical Implementation Team(CIT), composed of your Project Manager, Clinic Manager, Lead Clinician, Lead Nurse, Billing Manager, Site Specialist and IT representative along with OCHIN's Project Manager, will meet to discuss the implementation process, project milestones, deliverables and tasks required for your implementation. At this meeting the CIT team will receive the Implementation Guide to serve as your resource for planning and implementing the OCHIN EMR.

- ## On-site Observation
  We will ask you to complete an "EMR Clinic Overview and Demographics Survey" provided prior to the kick-off meeting. Once we have your responses, members of your OCHIN Implementation team will visit your facilities to observe the physical setup and your current clinical workflows. The information we obtain from this on-site observation will help us evaluate how to most effectively guide you through a major system change.

  As part of the on-site observation, we would like you to provide a sample medical chart including all forms used in the clinic or received from outside agencies to inform our document discovery process. OHIN analysts will review these paper forms to determine which ones will be replaced by the EMR and which ones will be scanned into the integrated Document Management System. (The analysis is an OCHIN deliverable at a subsequent CIT meeting.)

- ## Clinical Implementation Team Meetings
  CIT meetings will occur every two weeks at the beginning of the implementation and then weekly in the month prior to training. These meetings will primarily be to discuss the progress of the project plan, the deliverables, and to assist the clinic with emerging issues.

- ## All-Staff Demo
  OCHIN's Project Manager will help you coordinate an all-staff demonstration of the EMR system. This will likely be the first time many of your providers and staff will have an opportunity to observe the new

system and it provides a forum for them to ask questions about the change that is coming.

- **Workflow Review Meetings**
  These meetings will focus on reviewing your current workflows in comparison to the standard OCHIN EMR workflows. An OCHIN workflow analyst will participate with you in reviewing those workflows that may be more complex such as those for medication requests/refills, lab orders/processing, telephone encounters, and referrals. Our Project Manager will work with your Project Manager on a calendar of workflow reviews so you are able to schedule the appropriate subject matter experts for the right sessions—pharmacy techs, triage nurses, lab techs, etc. It has been our experience that when the workflow changes are communicated with the staff effected prior to training, it smoothes the implementation process.

- **Connectivity and Equipment Testing**
  Our OCHIN IT staff will test connectivity from your site(s) to the OCHIN server. OCHIN IT staff will perform this test from the OCHIN office with your IT staff assisting from your clinic location(s).

- **Equipment Walkthrough**
  An equipment walkthrough will be scheduled for OCHIN IT staff and your IT staff once the equipment has been purchased, installed and configured per OCHIN specifications.

- **Preview Training**
  OCHIN may provide Preview Training to members of the CIT in advance of end-users to ensure that workflows trained are accurate and supported by internal policies/procedures communicated to staff, and to facilitate additional system and support expertise by leadership.

- **End-User Training**
  OCHIN will train providers, clinical support staff, and ancillary services staff for your implementation. (For larger member organizations, OCHIN will train your site specialist(s) to do so.) Front Desk and Billing staff receive integration training to prepare them for the changes when EMR is integrated with your OCHIN Practice Management system. All staff must attend complete training to receive a sign-on and password.

Order Transmittal Testing

OCHIN and your Site Specialist(s) and desktop and printer IT support will test the accuracy of the Order Transmittal setup in your system prior to go-live. Order Transmittal testing involves testing each workstation in your

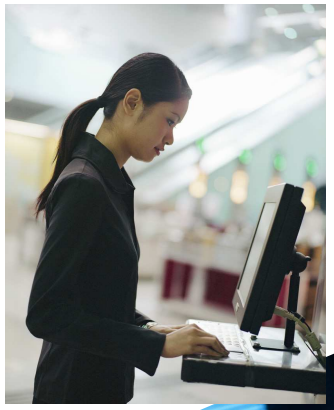
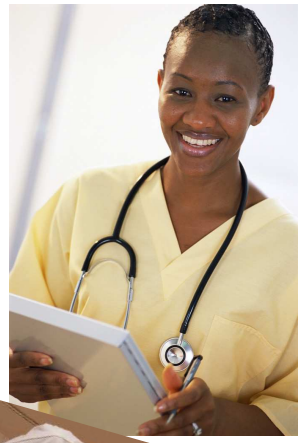
facility(s) to make sure that each type of electronic order/message transmits to the intended printer or electronic InBasket and displays as designed. Examples of items tested are lab and xray requisitions, specimen labels, after visit summaries (for the patient), referrals, outside procedure requisition, and letters. This intense testing requires that your clinic **be closed while this activity takes place. (This has worked well if it is on a staff meeting day when patients are not in exam rooms.)**

Dress Rehearsal

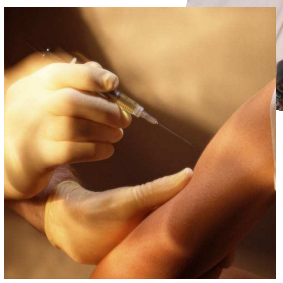
OCHIN will guide your providers and clinical support staff through a Dress Rehearsal, where they will practice charting and ordering in the electronic medical record. Dress Rehearsal is a dry run of the system to test security levels, printing, and an opportunity for staff to practice what they have learned in their own clinic environment. Using fictional scenarios, clinic administrators and ancillary services staff will play patients. Front desk and registration staff will check them in and check them out after their visit with the provider.

Dress rehearsal occurs a few days before the go-live day. The clinic will need to be **closed for half a day** and all clinic providers and staff will have key roles in the exercise.

EMR
Clinic Implementation Team
Tool Kit





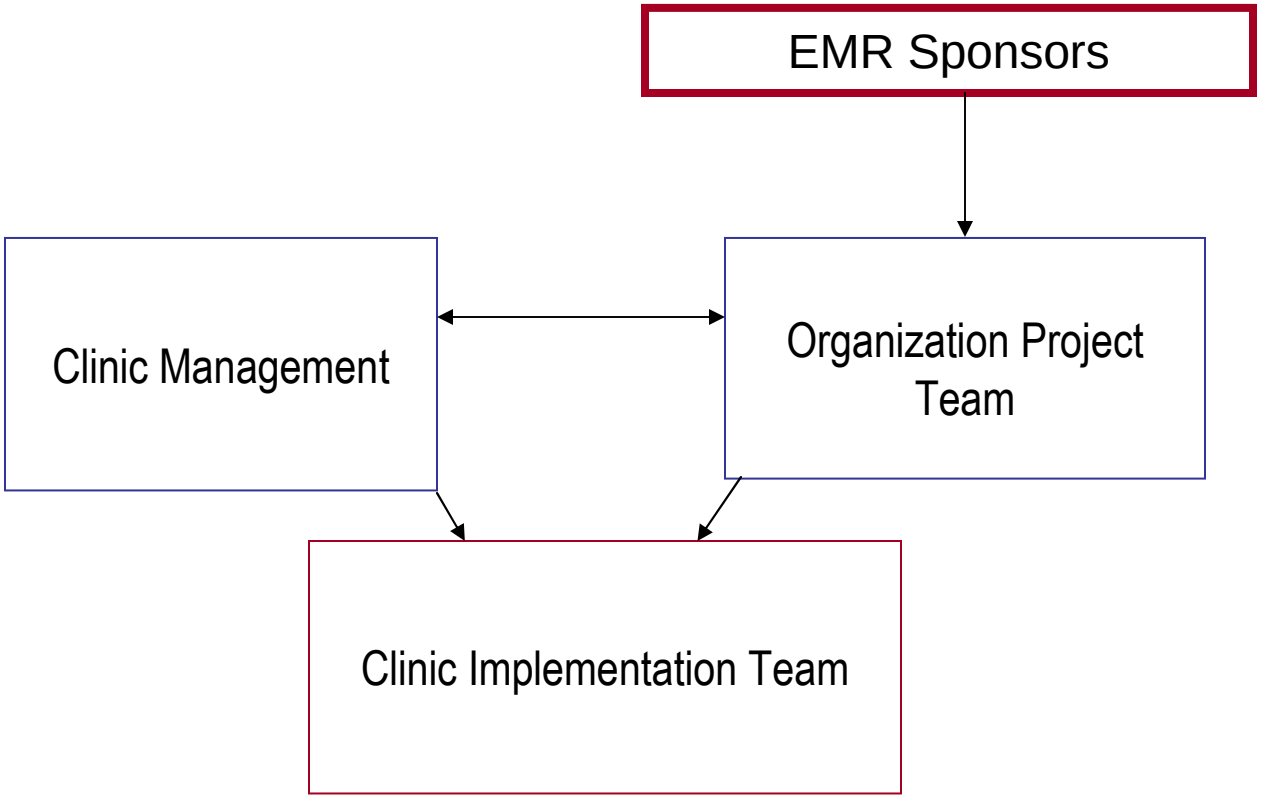
EMR Implementation Plan & Team Accountabilities

	6 Months Prior **Leadership & CIT Engagement**	***5 Months Prior*** **Engagement; Work Processes** **CIT meets monthly**	***4 Months Prior*** **Communication, Logistics, Work Flows** **CIT meets biweekly**	***3 Months Prior*** **Communication, Readiness** **CIT meets biweekly**	***2 Months Prior*** **Communication, Hardware** **CIT meets weekly**
Major Activities	• Understand Clinic implementation activities from now until post rollout • Orient Clinic leadership to Clinic rollout toolkit • Orient Clinic leadership to EMR features to be rolled out • Identify patients of the Clinic implementation team for the site • Acquire leadership commitment • Conduct initial site readiness survey (6month) • Develop communication plan • Conduct walkthrough for workstations, printers	•Conduct first clinic implementation team meeting; clarify roles, responsibilities, assignments, meeting schedule •Schedule CIT visit to "buddy clinic" if appropriate •Review ambulatory workflows, identify changes, and process for agreement •Complete 5month site readiness survey •Implement communication plan- initial demo lunch sessions •Identify training, support workspaces	•Understand the training approach; communicate and discuss with staff/clinicians •Schedule staff and clinicians for training •Design and amend workflows •Site support assigned; present at the clinic •Complete the 4Mo. readiness survey •Understand patient communication plan •Complete lunch demos	• Hardware installation plan finalized; hardware ordered for installation 60 days prior • Implementation team meetings conducted weekly • Vacation/time off guidelines discussed with staff/MDs • Complete the 3Mo. readiness survey & 90 day checklist • Staff, clinician and locum schedules for training and support finalized • All clinic meeting and live demonstration; workflows • Identification of physician and staff champions • Engage medical records staff; plan for transitions	• Hardware installation including exam room computers • Finalize and lock into place the training schedule, locum schedule • Conduct operational workflow meetings with all teams • Complete 2 Mo. readiness survey and 60 day checklist • Identify locum offices, if appropriate • Conduct exam room computing training • Implementation team meets weekly; second "buddy" visit • Clinic communication plan
Deliverables	• Clinic Leadership support • Map for WS and printers • Communication plan • Complete 6month readiness survey • Implementation team ID'd • List of all providers/staff	• Visit to "buddy" Clinic • Implementation minutes & assignments • 5 Mo. Readiness survey • Agreed upon workflows • Lunch demos • Workspaces identified	• Training schedule completed and communicated • Backfill/locums plan approved • patient communication plan • 4 Mo. readiness survey • Implementation team minutes • Lunch demos	• Hardware ordered, scheduled for installation • Implementation team minutes • 3Mo. readiness survey and 90 day checklist • All clinic demonstration/kickoff • Medical records plan	• Hardware installed • Training schedule complete; locums secured • 2 Mo. readiness survey & 60 day checklist • ERC training • Implementation team minutes
Milestones					

EMR Implementation Plan & Team Accountabilities

	1 Month Prior **Communication, Logistics** **CIT meets weekly**	***1 Week Prior***	***Go Live***	***30 Days Post***	***90 Days Post***
Major Activities	• Launch patient communication plan • Finalize all work flows and communicate to clinicians/staff • Train CIT team prior to staff and clinician training • Order and stock a supply of downtime forms; communicate downtime process • Confirm logistics are all in place e.g. equipment, etc. • Conduct final lunch session demos • Confirm training schedules & appropriate access • Attend CIT meetings • Complete 1 month readiness survey and 30 day checklist	•Lead and support transition activities •Resolve any outstanding issues •Confirm leadership well informed		• 30-day post go live readiness survey • Epic 30 day walkthrough if appropriate • Attend CIT post go live meeting • Conduct weekly “huddles” with staff and clinicians	
Deliverables	• 1 month readiness survey • 30 day checklist • patient communications • Lunch demo sessions • CIT meeting minutes • Training plan • Ambulatory record access codes ready for assignment			• 30 day post go live readiness survey • Epic 30 day post go live walkthrough if appropriate • Implementation team minutes	
Milestones					

EMR Implementation Structure



Clinic Implementation Co-Chairs

Roles and Responsibilities

- Co-Chair the Implementation Team.
- Champion every aspect of the EMR implementation process.
- Gain comprehensive knowledge of the EMR application and associated workflows.
- Work with Clinic administration and physician leadership to identify and address site-specific issues and opportunities.
- Coordinate implementation team activities, other clinic activities related to the rollout at the site including training schedules, communication planning, demo's, work flow modifications and communication/ training.
- Coordination of EMR project manager, clinic site Support, and core EMR team for the Clinic to conduct all implementation activities.
- Assigned full time to the implementation 45-60 days prior to go live.
- Serve as the primary point of contact between the EMR project manager and executive leadership.

Clinic Implementation Team (CIT) Membership

Vendor Project Team

- ✓ Clinician Expert
- ✓ Project Manager
- ✓ Application Manager
- ✓ EMR Trainer
- ✓ Others as required

Clinic EMR Project Team

- ✓ Clinic Implementation Lead Co-Chair
- ✓ Physician Champion Co-Chair
- ✓ Project Manager
- ✓ Clinical Supervisor
- ✓ Nursing
- ✓ Medical Assistant or LPN
- ✓ Medical Records
- ✓ Ancillaries (Lab, Imaging, Pharmacy)
- ✓ Labor Representative
- ✓ Practice Management expert
- ✓ Patient Services
- ✓ Scheduler

Clinic Implementation Team

Roles and Responsibilities

- Attend and actively participate in all implementation team meetings and activities.
- Ensure all aspects of a successful implementation.
- Conduct status reports, identify, mitigate and plan for actual/potential risks.
- Communicate timely, complete, honest information about the implementation to staff, providers and to patients.
- Participate in clinic demonstrations, kick off, staff meetings.
- Clearly understand, validate, and when appropriate revise existing clinic workflows to ensure a smooth transition from paper to electronic processes and optimize operational efficiencies.
- Leverage and apply learnings from “buddy” clinic.
- Assist Co-chairs in efforts to coordinate and schedule all training for all staff & clinicians.
- Escalate any local issues to the EMR leadership and project manager.
- Acknowledge contributions and celebrate successes.

CIT Meeting & Attendance Schedule

6 Months Prior to Go-Live

- Identification of CIT members, approval from organization leadership
- Confirmation of CIT membership with selected participants

5 Months Prior to Go-Live

- One meeting – initial engagement, expectation setting
- Initial visit to "buddy" Clinic
- Lunch time demo's for staff and providers

4 Months Prior to Go-Live

- Bi-weekly CIT meetings
- Balance of lunch time demo's for staff and providers

3 Months Prior to Go-Live

- Weekly CIT meetings- 1 hour in length
- All clinic meeting and live demonstration

CIT Meeting & Attendance Schedule

- **2 Months Prior to Go-Live**
  - Weekly CIT meetings
  - Second "buddy" clinic visit
- **1 Month Prior to Go-Live**
  - Weekly CIT meetings
  - Attend ambulatory record training
  - Staff and provider meeting
- **GO-LIVE**
  - Ad hoc meetings
- **1 Week Post Go-Live**
  - Status meeting
- **30 Days Post Go-Live**
  - Status meeting
- **60 Days Post Go-Live (if desired)**
  - Status meeting

Resources: Sample Agendas

- Prior to Go-Live
  - 5 Month
  - 4 Month
  - 3 Month
  - 2 Month
  - One Month
  - One Week
- Post Go-Live
  - 1 Week
  - 30 Days

EMR Clinic Status Reports

- 6 Months Prior
- 5 Months Prior
- 4 Months Prior
  - In addition, 120 day readiness checklist if appropriate
- 3 Months Prior
  - In addition, 90 day readiness checklist
- 2 Months Prior
  - In addition, 60 day readiness checklist
- 1 Month Prior
  - In addition, 30 day readiness checklist

EMR Implementation Milestones Chronological

Sample for a 2-clinic implementation

April

April 14	Joint Leadership Team kickoff meeting
April 28	Clinical Implementation Team kickoff meeting

May

May 10	EMR Demonstration for all providers and staff
May 10	Site Specialist hired in place and trained
May 10	Lab agency commitment on implementation date
May 10-July18	Workflow review sessions (variable reviewers)
May 31	Lab Interface Technical Requirements/Codes verified

June

June 1	PC/printers/scanning specs verified
June 1	Schedule training space (classrooms)
June 30	2-way lab interface communication established

July

July 10	Equipment ordered
July 14-25	Lab unit testing
July 19	Hardware walkthroughs for installations completed
July 21 & 31	Labs mapped
July 24	Data gathering/review/approval
July 28	Final workflow approvals
July 28	Final training schedule in Place

August

Aug 1	Charting tools review completed
Aug 1-15 & 15-21	Lab results testing
Aug 4	All equipment installations completed
Aug 10	Vendor device testing completed
Aug 8-11	Preview training for CIT
Aug 16	EMR policies in place and communicated
Aug 16	Preliminary go/no-go decision
Aug 21 & 31	EMR order transmittal testing complete
Aug 21-Sept 7	Implementation training

September

Sept 5 & 19	Lab interface turned on for results only
Sept 5-7	Abstracting from paper chart
Sept 7	Final go/no-go decision
Sept 8	Dress rehearsal 1st clinic
Sept 12	Go-live 1st clinic
Sept 22	Dress rehearsal 2nd clinic
Sept 26	Go-live 2nd clinic

EMR Implementation Milestones By Topic

Sample for a 2-clinic implementation

Getting Started	
Join Leadership Team kickoff meeting	April 14
Clinical Implementation Team kickoff meeting	April 28
EMR Demonstration for all providers & staff	May 10
Site Specialist hired, in place & trained	May 10
Lab Interfaces	
Lab agency commitment on implementation date	May 10
Lab interface tech requirements/codes verified	May 31
2-way interface communication established	June 30
Unit testing	July 14-25
Labs mapped	July 21 & 31
Results testing	Aug 1-15 & 15-21
Lab interface turned on for results only	Sept 5 & 19
Equipment	
PC/printers/scanning specifications verified	June 1
Equipment ordered	July 10
Hardware walkthroughs for installations completed	July 19
New equipment installations completed	Aug 4
Epic device testing complete	Aug 10
EMR order transmittal testing complete	Aug 21 & 31
Workflow Reviews	
Workflow review sessions (variable reviewers)	May 10-July18
Final workflow approvals	July 28
Data Gathering/Review/Approval	
Preference lists (dx, rx, orders, LOS)	July 24
Requisition reports & Order Transmittal Rules	
Provider records, user records, and pools	
Charting tools	Aug 1
Training	
Schedule training space (classrooms)	June 1
Final training schedule in place	July 28
Preview training for CIT	Aug 8-11
Implementation training	Aug 21-Sept 7
Abstracting from paper chart	September 5-7
Pre-Go-Live and Go-Live	
EMR policies in place and communicated	Aug 16
Preliminary go/no-go decision	Aug 16
Final go/no-go decision	Sept 7
Dress rehearsal 1st clinic	Sept 8
Go-live 1st clinic	Sept 12
Dress rehearsal 2nd clinic	Sept 22
Go-live 2nd clinic	Sept 26

Communications Plan

To better insure the success of an EMR implementation, your organization will require a communication plan. We recommend that your plan includes all stakeholders. Make sure the implementation team is completely on board with the project and has a positive attitude toward the upcoming changes. It will spread to all levels of your organization.

Stakeholders' Communication Suggestions

- **Staff and Provider Communications**
  A good way to manage the change in your organization is to keep all staff informed as you move along with the planning process and implementation. If your organization already has a newsletter, this can be an effective tool for communicating information routinely. We are including a couple of samples showing what other members have done. For more direct and complete information, we suggest staff meetings in which managers and other members of your implementation team can answer questions and detect any apprehension or concern that would need to be addressed. Ensure that management staff and—for EMR implementations—the provider champion are well informed and prepared and ready to answer questions.

  During go-live week your implementation team will be having a daily debrief meeting. As a group you will be working through any issues that come up. It is helpful if any decisions or changes made during these debrief sessions are communicated back to all staff on a daily basis so they understand that issues are being addressed in a timely manner. We have included a couple of samples of a daily go-live communication to staff and providers for an EMR implementation for your reference.

- **Provider Communication for Practice Management Implementations**
  Providers' workflow may not be as affected with the Practice Management implementation as they will be during an EMR implementation. Still, they provide the rest of the organization with key information which needs to be captured in a reasonable amount of time. If your encounter form will be modified during the transition, your providers will have to be on board too. Their role therefore is very important, especially if you are considering adding EMR to your capabilities down the road. Since all our products interface with each other, keeping providers apprised of the changes taking place will lead to an overall smooth transition.

- **Patient Communication**
  During the go-live week your patients will notice different procedures and vendor support staff in your clinic. We recommend using clear signage and/or leaflets in your reception area indicating that you are implementing a new system. Bring them on board to the project by indicating how these changes will benefit them.

  Don't forget to thank them for their patience and understanding while the staff becomes comfortable with the new system.

  Depending on your organizational workflow, for a Practice Management implementation, you may also want patients to come in early during go-live week to get fully registered in the new system. If you are transitioning to EMR, you will want to consider the time allotted for each provider's appointment. Patient schedules are reduced to allow providers and clinic staff the time to finish their work using the new system.

- **Stakeholder Communication**
  There are many other stakeholders that may be effected by your system change. Administrators, commissioners, board members, and granting organizations are a few you will want to consider. Keep them informed of the progress of the implementation.

  For an EMR implementation, you will also want to consider what kind of communication to have with community hospitals, suppliers, laboratories, and community pharmacies. Their orders and scripts will now look different because they will be printed from the system.

User Roles Can Change with EMR

User Roles

Registration
The registrar fully registers the patient, verifying income, address, guarantor accounts, and coverage and then enters them into the system.

This role will not change when you have an EMR.

Scheduler
The appointment scheduler collects minimum demographic information from new patients at the time they call for an appointment or walk in to be seen.

There will be a change, however, if there are internal referrals to be scheduled, such as social work or nutritionist. Usually when the provider makes the referral, the Medical Assistant will schedule the appointment before the patient leaves the clinic. If the appointment does not get scheduled before the patient leaves the clinic, the referral information should be visible in the record so the scheduler is alerted to the need for the appointment.

Check In
The person in this role checks in the patient to be seen for an appointment and completes or verifies registration. This activity is completed with the patient in person. In some clinics, the person in this role will collect a minimum fee or co-pay from the patient. They reconcile the cash drawer at the end of each day.

This role will not change when you have an EMR.

Check Out
The person in this role checks out patients in the system, schedules follow up appointments, enters services from the encounter form into the system to process charges, and collects remaining fees for the visit or past amounts due.

Since the providers will be entering encounter information into electronic medical records, charges will no longer need to be entered into charge entry at check out. A new screen at check out will appear with orders that the provider has entered into the EMR. This form will include the sliding fee and the walkout statement for the patient. Follow up scheduling and /or other information for the check-out staff will be on the orders form within the check-out screen instead of being written on paper.

Medical Assistant

The Medical Assistant role checks the arrival list, rooms the patient and removes the patient from the arrival list. In some clinics, the person in this role schedules follow-up appointments as well.

EMR will change the Medical Assistant role significantly. The Medical Assistant will now follow the provider's schedule instead of the arrival list. Once the patient has checked in, the MA should be able to see that appear on the provider's schedule. The MA will select the patient from the schedule to open the electronic chart and record the chief complaint(s), vitals, nursing notes, etc.

Nurse

Depending on the nurse's role—triaging the patient, rooming the patient, and/or seeing the patient—the nurse has access to all the functionality provided for medical assistant and provider roles, as well as appointment scheduling.

EMR can change the Nurse role significantly. Depending on the application, the Nurse will likely have the ability to follow the provider's schedule instead of the just an arrival list.

Provider

If you haven't decided already, you need to decide what type of access if any you will give your providers to your Practice Management system such as demographic sections where they could during a visit indicate homeless status, etc. Many organizations give Providers view-only access to non-clinical portions of the record.

EMR will change the Provider role significantly. Providers will document all patient charting information in the EMR including diagnoses, procedures, lab orders, problems lists, medical history, prescriptions, progress notes, patient instructions, etc. The point of the EMR is real time documentation and instant retrieval of that information at point of care. Most EMR applications facilitate transcription services however the delay in getting visit information into the health record can now turn into an issue when it wasn't as much in the paper world.

Referrals

The referral coordinator documents referrals in the system based on the referral request ordered by the provider. The coordinator works from the Referral Report obtaining approval, if necessary, scheduling referrals appointments, and adding other information pertaining to the referral. Each referral is updated by the coordinator as information becomes available—for example, specialist request for information or completion of the referral.

EMR changes this process. When the provider orders the referral, the referral is created, and much of the information is filled in. The referral clerk works from the

Referral Report obtaining approval, if necessary, scheduling appointments, adding notes. When the appointment has been scheduled, the information to be faxed with the Referral Summary to the external provider (the notes and labs) is printed from EMR.

Medical Records
Currently charts are pulled every day for clinic, as well as for lab results and correspondence. The MR staff uses out guides and chart pull lists, and the paper chart is tracked in Vendor.

With EMR providers will document all new patient visits in the electronic medical record and each organization will decide whether and for how long they will continue to pull the paper chart. With laboratory interfaces, test results will be transmitted electronically to the EMR. Correspondence and reports will be routed to the provider for initialing, without the paper chart, and then routed to Medical Records for scanning. The MR Staff will prepare documents for scanning and scan documents into the system.

Charge Review Work queue Management
This role can be filled by either check-out staff or billings staff. It involves the clean up of encounters entered into the system with errors: a missing diagnosis, , prices not in the fee schedule, billing consents not signed, CVR or CHDP data not completed, etc. Regardless of the EMR, there must be some methodology for working this encounters that had errors.

EMR will change this only by the amount of encounters dropping into the workqueue. Since providers are entering encounter data into the EMR, the front-end edits that are set in Vendor at the charge entry level will be moved into back-end rules to allow errors to drop into the charge review workqueues directly. When necessary, InBasket messages will need to be sent to the provider or medical assistant to make changes to the chart.

Billing Specialists
The Billing Specialists perform a variety of billing tasks such as charge review workqueues, posting payments, processing claims, voiding and reposting, resubmitting claims, working denials, collections, etc.

EMR will change this role only in how account maintenance is viewed, depending on whether the charge is being dropped from EMR or from Charge Entry.

Levels of EMR System Access Grid

This document is for selected distribution and use by the Clinical Design Team (CDT), only. It is intended to inform security levels. It is not provided as an assessment of legal and regulatory requirements.

Principles:

1. The EMR will be built to the highest or most permissive level of professional licensure or scope of practice responsibility.
2. Permissiveness may be altered in the future.
3. All responsibility and accountability for managing the scope of practice for licensed and non-licensed providers and staff is the sole responsibility of organizational policy and procedure, meaning the EMR will not be used to "police" access.
4. For the initial build, the Clinical Design Team will make a good faith effort to build the EMR according to current regulations and laws.
5. Ad hoc and routine audit reporting will be made available to monitor access and EMR actions by providers and staff. A print group will be added to the encounter summary report displaying the access audit trail for the encounter.
6. If at any time state, federal, and/or regulatory agency laws and regulations change, the EMR system will be changed to meet those changes.
7. Drug Assistance Program (DAP): Security and scope of practice to support DAP programs will be managed by security class.

Levels of EMR System Access – DRAFT												
Professional Activity	*MD*	*NP*	*PA No DEA**	*PA w/DEA**	*RN*	*LPN*	*RPh or PharmD*	*CA or MA*	*Social Worker*	*Nutritionist*	*QA/ Coders*	*RX Tech*
Documentation:												
Document in Nursing Notes, Progress Notes, Telephone Encounters	X	X	X	X	X	X	X	X	X	X	X	X
Diagnoses Entry:												
Enter encounter diagnoses	X	X	X	X	X	X	X	X	X	X	X	
Enter diagnoses on problem list	X	X	X	X	X	X	X	X	X	X	X	
Orders:												
Pend procedures	X	X	X	X	X	X	X	X	X	X	X	X
Order and sign procedures (labs, radiology, other procedures)	X	X	X	X	X	X	X	X	X	X		
Procedure orders require co-signature												
Non-Controlled Medications:												
Red check all (controlled and non-controlled active medications	X	X	X	X	X	X	X	X	X	X	X	
Pend non-controlled prescriptions	X	X	X	X	X	X	X	X			X	X
Order and sign non-controlled prescriptions Post to patient's current medication list	X	X	X	X	X	X	X					
Discontinue non-controlled medications	X	X	X	X	X	X	X				X	
Change non-controlled medications	X	X	X	X	X	X	X					

Professional Activity	*MD*	*NP*	*PA No DEA**	*PA w/DEA**	*RN*	*LPN*	*RPh or PharmD*	*CA or MA*	*Social Worker*	*Nutritionist*	*QA/ Coders*	*RX Tech*
Re-order non-controlled medications	X	X	X	X	X	X	X					
Non-controlled RX co- signature												
Schedule III-V Controlled Medications:												
Pend CIII-V prescriptions	X	X	X	X	X	X	X	X				X
Order and sign CIII-V prescriptions Post to patient's current medication list	X	X		X	X		X					
Discontinue Schedule III-IV medications	X	X	X	X	X		X				X	
Change Schedule III-IV medications	X	X		X	X		X					
Re-order CIII-V prescriptions	X	X		X	X		X**					
CIII-V prescriptions require co-signature					X		X					
Schedule II Controlled Medications:												
Pend CII prescriptions	X	X	X	X	X	X	X	X				X
Order and sign CII prescriptions; sign hard copy. Post to patient's current medication list	X	X		X								
Discontinue Schedule II medications	X	X	X	X	X		X				X	
Change Schedule II medications	X	X		X								

Professional Activity	*MD*	*NP*	*PA No DEA**	*PA w/DEA**	*RN*	*LPN*	*RPh or PharmD*	*CA or MA*	*Social Worker*	*Nutritionist*	*QA/ Coders*	*RX Tech*
Re-order CII medications	X	X		X	X							
CII prescriptions require co-signature												
Level of Service:												
Enters appropriate LOS code for appropriate encounter type	X	X	X	X	X	X	X		X	X	X	
External Referrals:												
Pend referrals	X	X	X	X	X	X	X	X	X	X	X	
Order and sign referrals	X	X	X	X	X	X	X	X	X	X		
Encounter												
Close Exam/Office Visit Encounters	X	X	X	X	X	X	X	X	X	X	X	X
Close Other Encounters	X	X	X	X	X	X	X	X	X	X	X	X

Abstracting Recommendations

Abstracting is a movement of information currently held in the paper chart into the electronic health record. The information may be entered manually, some may be scanned.

While it is tempting to want to abstract large volumes of paper data into electronic records, that it is not what is generally recommended. What is recommended is a small core subset of agreed upon information (allergies, current medications and active problems) be abstracted on all patients leaving it to each providers discretion to abstract more data as clinically indicated on a patient-by-patient basis. It is also recommended that the paper chart be pulled for the first three visits following EMR go-live or one year, whichever comes first giving the health care team three visits in which to abstract what clinical data is deemed necessary. This recommendation comes with the proviso that a provider can at any time ask for the paper record to be pulled for a longer period of time.

If you plan on having existing staff abstract clinical data, we recommend a just in time model of abstraction rather than en mass ahead of time. The rationale for this approach is so that abstracting patient data be done on those patients' who have not cancelled their visit ahead of time leaving the abstraction efforts to those patients' most likely to actually be seen the following day. If on the other hand you plan on hiring clinical staff to abstract it becomes more feasible to do so on a larger scale and go beyond the just in time approach.

It is always more desirable to abstract information into the EMR rather than scan information into the chart. Abstracted information goes into discreet information fields from which you can obtain reports and trend & graph information. Any document that is scanned will become a static graphic image that can be viewed from the chart but is not able to be incorporated into chronological timelines or trended information. The provider cannot search on the contents of a scanned item. It cannot be used for setting alerts or ticklers, and it cannot be used for flowsheets. While scanning is a helpful way to get some information into the health record you can't get in any other way, you must recognize that it is hugely restrictive and often frustrating to retrieve for health care providers.

On a cautionary note- Organizations that have scanned historical information into the electronic chart say, in hindsight, that they would not do that again citing that scanned images have none of the application functionality that they need. Furthermore, organizations that have chosen to scan large volumes of information into the EMR rather than a small subset report that they virtually never refer to those scanned documents and that when they try to it is cumbersome at

best. They also report that were they to do it over they would rather pull the old paper record from archives than try to wade through scanned documents. in advance of the patient being seen. Some clients ask the provider at the visit (some pull the chart for the first visit only, others for three visits post-go-live) to flag items to be scanned as historical into the EMR.

Once the chart has been abstracted and the appropriate documents added into EMR, a (red) cover, or other obvious marking system, is applied to the paper chart. After that time, no new documents are added to the paper record.

The order of the charts being abstracted is determined by the clinic or organization.

Some options:

- Abstract the charts one day or up to a week prior to appointments, wherever possible. This can be done by utilizing the upcoming schedules. Adequate resources are required. You will need to determine how long you will do this.

- Begin at the beginning of the chart shelving order (terminal digit or alpha or numerical), and work through the shelves in order. This approach is costly and may result in unnecessary abstracting. None of the organizations we have talked to or worked with have gone down this road due to the expense and asynchronous correlation with actual patient visits.

- Continue to move the paper chart for X amount of time post go-live and the provider or designee summarizes and populates the key information.

- Have the clinic support do a modest amount of the abstracting and the provider do the rest. Questions you need to answer are: Scope of practice & liability issues? Will providers accept the information abstracted?

- Have the providers mark and approve the chart contents – for completeness and legibility, and have the abstracting done by a service (or by nursing staff and/or RHIT). We do not recommend scanning content into the EMR that can go into a discreet data field.

- Each provider will determine what information will be abstracted into health record and will do it themselves. We know of one organization that used this approach and felt that it was quite successful relative to quality and quantity of information abstracted and increasing provider expertise with use of system.

Major factors will be cost, time commitment, provider comfort and acceptance of one way or another; quality of paper record documents and

ability to abstract content and finally legal and accrediting body implications.

To get the conversation started here are some questions that need to be agreed upon :

- What information needs to be in the EMR for all patients? Why?
- What are the ramifications if the information is not in the EMR? Options?
- What is the most efficient way to get the information into the EMR?
- How will you mark each paper chart to indicate abstracting needs?
- How will you allow time for abstracting regardless of chosen option?
- What is the cost of each option for my organization?
- If there is a need to see this information, how long will the paper chart be available in the clinic? At what point will you move the paper charts to archival storage (still available to be pulled as necessary)?
- Does the provider need to search on the information or utilize it for health alerts or flowsheets?
- Will you abstract charts of inactive patients? Or wait until the patient is scheduled?
- If you choose to hold the charts for one year and then send them off site storage, (many organizations utilize this time frame), how much/many of the charts can be abstracted within a year? Does that matter?
- If you decide on an expansive scanning option, is your organization budgeted to pay for the additional storage (static images require a large amount of storage space) and labor (scanning documents, QA processes around quality of image, indexing schema)?

Document Management

In healthcare, the ideal is to have all the information about your patient instantly retrievable at the point of care. You will need to determine what kind of document management software (DMS) you will require to integrate all necessary documents into the EMR, clinical and non-clinical alike. DMS should be able to integrate consulting provider reports, imaging, lab results and consent/refusal to treatment forms into your EMR. The system should be fully integrated with EMR to ensure instant access to electronic documents and the integration also allows the end user to view documents with a single sign on. Your providers and administrative staff should have immediate access to all of the clinical and non-clinical information they need in one single place and only one click away.

These are some of the benefits of a truly integrated EMR and DMS:

- Timely access to historical medical and surgical documents, referral reports and hospital discharge summaries
- Immediate access to eligibility information and/or alternative medication coverages
- Instant access to photographic images of skin conditions, bruises and wounds
- Reliable access to questionnaires, forms, letters and other documents pertinent to your patient's health care

Electronic DMS should offer your clinic with enhanced security and privacy features simply unavailable in the paper world. You should select a DMS solution that has robust audit trails and access controls. In an effort to reduce data entry and indexing errors, it is strongly recommended that you consider adding barcode recognition to your DMS schema. You will need to identify specific quality assurance measures that you can apply to monitoring the accuracy and reliability of your DMS functionality itself as well as your scanning and indexing workflows. Your DMS application functionality and all associated scanning and indexing workflows must be held to a high degree of accuracy and reliability or your providers will quickly loose confidence in ability to retrieve a document.

Part of your EMR CIT planning and preparation activities should include careful review of all documents created and received at your clinic. Within this document discovery process, you will need to thoughtfully consider what documents and process can be phased out as it is replaced satisfactorily by the functionality of the EMR system. Likewise, you will need to thoughtfully consider and agree upon the paper documents that will be scanned and integrated into your EMR. You will want to develop a scanning process that validates image quality and that is capable of scanning double sided documents automatically. Lastly, you will need to decide whether to centralize or decentralize both

scanning and indexing activities. Reduced medical records activities and necessary real estate for paper charts can be replaced with scanning and indexing responsibilities. Key variables will be timeline for continuing paper chart pulls, what will be required to retrieve archived paper charts, and cost benefit analysis of centralizing verses decentralizing these activities.

Electronic Medical Records Training Overview

Work with your EMR vendor to design a raining plan to best meet your needs. EMR training should be hands-on and role-based to focus on the specific needs of the learners.

Because the EMR is fully integrated with all of the practice management modules, update training should also be provided to Front Desk staff using your practice management registration, scheduling and billing modules. Reporting staff should also receive update training to understand the EMR data and to access and run related reports.

Before you schedule your staff, please consider these factors:

- **Changing current workflows**

  With the introduction of new software, how might this affect your current workflows? Changes in workflows will also bring changes in policy. How will you communicate these changes AHEAD of time so that there are fewer "surprises"?

- **Space availability for the training sessions**

  Do you have a dedicated training room? Does it have Internet access? This space will need to be dedicated for the length of the training.

- **Number of computers available for training**

  How many PCs do you have available for training? You will need them for the length of the training.

- **How will you organize training of all staff**

  How will you ensure that the vast majority of your staff will be available for EMR training? Will you decide to keep your clinic open during training? Will you split your provider and support staff so that half of them are training and the other half seeing patients? Will you close the clinic for training? How will you communicate that with your patients? What will you do with walk-ins during training? Do you need contingency plans to accommodate seeing patients during reduced schedules?

- **Reviewing the description of each training module as some of your staff may need to attend more than one training session**

  Do some of your medical assistants backfill for lab staff? For xray staff? For a referral coordinator? If you have questions, please ask your project manager.

- **Consider schedules of key people who need to be in additional classes as change leaders, policy experts, and staff support**

  Is your physician champion's schedule cleared to attend / support provider classes? Operations leaders for clinical support staff classes? Site Specialist for all classes?

- **How will you accommodate the inevitable family emergencies that preclude getting all staff to one of the planned training session**

  How many additional training sessions will you plan for outside of the bulk of your staff training? How will you address the prolonged decrease in productivity until training is completed?

- **How will your vendor assist with staff training, go-live support and optimization training**

  Review vendor contract. Work with vendor to support your initial trainings and to provide feedback about how to adjust for subsequent training.

- **How will you plan for new hire training? students? residents?**

  Training plan should include process for training new hires, student activities and supervisory oversight.

The KOD-EMR Report

Klamath Open Door Family Practice

Volume 1, Issue 4

December 14, 2005

Preparing for the EMR System "Go-Live"

With the "go-live" for the EMR (electronic medical records) system just around the corner, preparation has been stepped up a notch. Behind the scenes, John and Pedro have prepared all of the exam rooms, stocking them with slim mounted monitors, keyboards and CPU's. Printers have been tested to make sure that they are working correctly, paths have been created, and rechecked. New prescription paper had to be reordered, as the days of hand writing prescriptions are gone.

Informational brochures and posters have been created, and will be displayed at an information kiosk in the patient lobby. These brochures and posters will include the EMR slogan winner from the EMR Slogan Contest. The kiosk will hopefully help answer basic patient questions about the EMR system, as well as having information on the clinic transportation schedule. We are also preparing a message for the hold queue, for when patients call in, with information on the upcoming transition.

Signe and Adolfo recently attended an Epic Users Convention in Portland presented by OCHIN. They were very excited about the future of medical care, which includes Electronic Health Records. Also, Adolfo has just returned from his training at the Epic Training Facility in Madison, Wisconsin. There he completed a course on Ambulatory Fundamentals in preparation of the EMR training we will go through here at Klamath Open Door. Today, the CIT (clinical implementation team) is meeting with a team from OCHIN. They are here in Klamath Falls to do a walk through of the training facility in the new Work Connection building in order to better prepare our training courses for January.

John, preparing one of the 26 exam rooms for the EMR.

Remember, provider schedules will be slimmed down to 50 % during our clinics EMR training which begins the 30th of January. All the medical staff will be scheduled for training at this time.

EMR Slogan Contest Winner:

"Klamath Open Door—Bringing the Future of Medical Care to You"

Submitted by: Kim Bair

What to Expect

As we approach the "go-Live" date for the EMR system, there are some things that you should expect.

The CIT (clinical implementation team) has worked on patient communications, so with the visible posters and brochures, there is going to be more patient questions. Remember to be positive about the upcoming change over. If there is any questions a patient feels they need answered and you don't have a response, feel free to refer them to the site specialist.

Expect the skeptics, the doubter, and the disgruntled, expect the open minded and the technically savvy. Be positive and enthusiastic to all. Some patients may be skeptical at first, but together we can make them feel more at ease. This is the best thing to happen to their health care since rubber gloves. Remind your patients that security will be much improved, and that instant access to their charts will improve our ability to give them immediate care and updates.

Beginning January 30th, we will start training for the EMR system. The providers, nursing staff (including lab and x-ray techs), medical records, registration, billing, and administrative staff will all have schedules given to them for their training times.

Expect to learn a lot in the next few months, the process will get easier as time passes.

What's going on?

- Nov.28—Dec.21: Secret Santa Fun
- Dec. 24—Dec. 26: Clinic Closed for Christmas
- Dec. 31—Jan. 2: Clinic Closed for New Years
- Jan. 30: Begin EMR training
- Feb. 14: Go Live with EMR

December Birthdays:

- Dec. 4 Irma Avila
- Dec. 9 Cheryle Palmer
- Dec. 14 Afton Rogers-Witts

Employee Spotlight:

John Spillane, pictured above, has been employed at KOD for one and a half years. John joined our clinic after 25 years in the Klamath School district. He has been an instrumental part of the implementation team for the EMR system. John is always working behind the scenes, much of what he does goes unnoticed. Klamath Open Door is a better place because of him.

Words of Wisdom

Usually, it's easier to quote a wise man, than to be one yourself. A wise woman once said: "I've learned that everyday, you should reach out and touch someone." "People love a warm hug, or just a friendly pat on the back." "I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel."

-Maya Angelou

I think we'd all agree, that I couldn't have said it any better. Here's to a great holiday season.

-Adolfo Camacho, Site Specialist

EMR Update

New Developments on Multnomah County Health Department's Electronic Medical Records Roll-Out

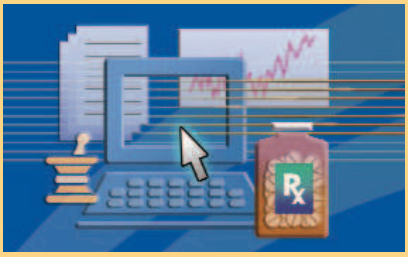
MESSAGE FROM THE DIRECTOR:

Better Care Through Better Technology

by Lillian Shirley

At the Multnomah County Health Department, we've prided ourselves on growing and changing to better serve our clients. This fall, we'll be taking a very exciting step in this direction by implementing an Electronic Medical Records (EMR) system. The EMR— collaboratively designed with EPIC software, OCHIN (Oregon Community Health Information Network) and a team of your peers—will replace paper charts, and allow us to synthesize patient information, diagnostic tests, prescriptions and more—in ways you never imagined possible!

This newsletter will provide some background information on the EMR, and hopefully will address some of the questions you may have about the system. The EMR team—Dr. Amit Shah, Diane Bloom, Cathy Gates, Wilma Smith, Lee Levy and Pramod Jacob—along with the Multnomah County Information Technology folks



— have worked very hard the last few months to get the system up and running, and to prepare the training program that will make it easy for you to integrate the system into your everyday routine.

I'm very confident that the EMR will make everyone's life easier. Practitioners will have pertinent patient information at their fingertips, whatever clinic a client visits. Back office staff will have far less paperwork to shuffle, and will be freed up to work on more meaningful tasks. And most importantly, our clients will receive a higher level of care made possible through a better exchange of information.

Kudos to North Portland

By Vanetta Abdellatif

It takes a certain leap of faith – a special form of bravery – to step up and be willing to try something new, something no one has ever tried before. We call these people pioneers, trailblazers, innovators.

And, in the case of Multnomah County Health Department's EMR Roll-Out, we call such adventurous souls the employees of the North Portland Clinic (NPHC). NPHC staff have worked diligently with the EMR team and their associates to help make our pilot EMR program run as smoothly as possible. Along the way, they've offered considerable input into how the system can best complement the way they provide care. They've also displayed great patience, enduring any disruptions to their normal routines with a smile.

On behalf of Integrated Clinical Services and the Health Department, I want to extend a special thanks to these pioneers, these trailblazers. Their cooperation and hard work are helping to make our EMR system a reality.

EMRs – Here To Stay

By Pramod Jacob

Ask anyone involved with computers and health care about the most significant development in health care technology, and odds are quite good that they'll say "Electronic Medical Records." In the next few years the wide scale adoption of EMRs will have a profound impact on the delivery of health care services. And adoption is occurring at a rapid rate, and has gained attention at the highest levels of government. In his 2004 State of the Union Address, President George W. Bush said, "By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care." The White House has gone on to outline a plan to ensure that all Americans have electronic health records within the next ten years.

There are a number of reasons that the American health care system is moving rapidly toward EMRs, with improvement in patient care at the top of the list. Despite spending over $1.6 trillion on health care, the Institute of Medicine estimates that between 44,000 and 98,000 Americans die each year from medical errors, and many more suffer from inappropriate or missed treatments. In a time of vastly shrinking resources, studies have show that as much as $300 billion is spent annually on care that does not improve patient outcomes. These shortcomings are closely connected to our health care system's failure to use healthcare information technology to deliver

Continued on page 4

Building an EMR from the Inside

Q & A with Dr. Amit R. Shah

When it came time to build the Multnomah County Health Department EMR system, we felt it was extremely important to incorporate the ideas of the people that would be using it every day in the design—namely, YOU! To that end, we engaged a group of MCHD employees—practitioners, nurses, records staff and administrative staff—to provide us with their wish list of features, and to provide feedback as designs were created. One participant on the committee is Dr. Amit Shah from the East Portland site. We had a chance to catch up with Dr. Shah and discuss his feelings about the EMR.

Q: *How did you happen to become involved with the team that is designing the MCHD EMR?*

DR. SHAH: I have always had an interest in chronic disease management, and I strongly believe that implementing a systems approach would allow us to identify opportunities for quality improvements for our patient populations. The EMR was a natural fit for my interests in systems and in clinical content development. When I was asked by Dr. Patsy Kullberg (medical director MCHD) to join the design team, I jumped at the chance.

Furthermore, I always believed in ending disparities, and the EMR allows the health department to take medicine into the 21st century.

Q: *Why do you think it's important for the Clinical Design team to have input on the system?*

DR. SHAH: Each of us represents an area of expertise and together we form a team that is able to build a system to work for multiple partners. Without that input, "buy in" and "enculturation" of the EMR, I don't think the implementation would be successful.

Q: *Have the computer developers been open to adapting your ideas and ideas of others on the team?*

DR. SHAH: Yes—especially because WE ARE THE DEVELOPERS! EPIC provides us with the skeleton of the system, and we add the flesh. Our input is critical and results in changing the EMR continually. All of us on the design team have a great amount of respect for each other and we have learned that each person has much to learn from the other, so all ideas are treated equally and are carefully considered.

Q: *What development considerations were especially important to you?*

DR. SHAH: On the big picture level, it was most important to me that we create a system that allowed the provider to be efficient yet would allow us to maintain or improve the quality of care for each patient. On the detail level, there were a number of issues that were of great interest to me.

They include:

1. Charting tools. As a practitioner, these are especially important to me. In fact, I am the chair of the charting tool committee.

2. The ability to share information and collaborate between multiple medical systems, providers and administrators.

3. Flexibility. The system needs to empower providers with a tool that is flexible enough to allow them to deliver the best care in a way that fits their style

4. Workflows. The discipline that the design of the EMR required will help us to improve the design of our current workflows.

5. Increase utilization of evidence-based medicine. The EMR will facilitate this, which will drive quality improvements.

Q: *Do you think your fellow employees will be happy with the result?*

DR. SHAH: The EMR will probably be one the greatest changes we've seen at the clinic in recent years, but once the implementation is done I think everyone will be excited and realize how robust the system is, how its flexibility will help us improve efficiency, and how it will improve the quality of care for our patients.

Climbing The Learning Curve

By Tevor Gamble

IT Application Support,
Multnomah County Health Dept.

Learning a new software application can sometimes be a trying experience, especially one as sophisticated as an Electronic Medical Record system. MCHD staff should set realistic training

expectations for themselves as this will result in a smoother transition. Staff will not be expected to know everything after the first day. At the end of the training sessions, providers will have learned what they need to know to take care of their patients on a day to day basis. With continuous support, staff will progress quickly in the EMR, learning as they go. Over time, staff will become more comfortable with the system and will start enjoying the benefits of the EMR like finding a patient's medical record quickly and being able to review lab results and medications with just a few clicks of the mouse.

Things You Can Do To Help Climb The Learning Curve

Having trained users on software applications, I can give some helpful tips on how to prepare for your upcoming training:

- **Have patience with yourself**
- **Be open to change**
- **Ask questions at every opportunity**
- **Request cheat sheets and shortcuts**
- **At the end of the training:**
  - *Know who to contact when you're confused*
  - *Know who to contact to offer changes/suggestions/problems*
  - *Know how everything connects*
  - *Understand your responsibilities toward the system*

With the new EMR system, providers will be able to access patient records from a terminal right in the examination room.

Answers to Common Questions About Electronic Medical Records

Q: Why is MCHD implementing an EMR?

A: An Electronic Medical Records System provides complete and timely information to health care providers. We sincerely believe that the system will both improve client care and make our employees' work lives more rewarding.

Q: What will the EMR do?

A: It will let us integrate patient lab, radiology and pharmacy information with provider's notes. Information that will be included in the EMR includes medical problems, immunizations, prescriptions, laboratory test results and clinic notes.

Q: Will any MCHD workers be displaced as a result of the EMR?

A: No. There are no plans to lay off any employees with the implementation of the EMR. Once we adopt the system, the "paperwork" component of our job will be reduced, and we will all be freed up to work on more meaningful, satisfying tasks.

Q: Will confidential patient information remain confidential on the EMR?

A: Yes. The EMR system we developed with EPIC and OCHIN incorporates the highest level of computer security available.

Q: Do other clinics use EMR software built by EPIC?

A: Yes. Currently, more than 100 organizations use software developed by EPIC Systems for EMR, appointment scheduling, and medical billing. Kaiser Permanente Northwest has been using Epic for Electronic Medical Records for almost 11 years.

"I worked with an EMR system at another provider. It makes life much easier, and I'm very excited that we'll soon have our own." CNA, North Portland site

EMRs - Here to Stay

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medical care. Adoption of EMRs will go great lengths to help incorporate this information into our medical care system. Studies show that health care facilities that have adopted EMRs reap many advantages:

Increased efficiency: Using an EMR application makes patient records immediately accessible.

Improved accuracy: Test and lab results can be entered quickly, easily, and accurately into an EMR which can dramatically reduce the probability of error. Because the content is electronic, there is never an issue with illegible or unreadable text.

Improved patient care: EMRs can provide decision support at the point of care. They can also be used to track patient follow-up activity, patient compliance, and patient progress.

Security: Unlike paper records, access to EMRs can be restricted, so staff has access to records based on job function. Audit trails track record access and usage.

Accurate E/M coding: An EMR will automatically render/assign charge codes based on the provider's documentation and diagnosis.

Reduced malpractice costs: Using an EMR may reduce malpractice insurance because of the improved documentation, audit trails, and accuracy.

Regulatory compliance: EMRs aid in meeting HCFA as well as other regulations and guidelines.

More than 100 health care institutions in the nation have adopted the Epic EMR. Employees of the Multnomah County Health Department will be in good company!