Introduction to Operational Redesign

Introduction

The introduction of an electronic health record (EHR) into a practice presents great operational challenges, as well as opportunities, for the improvement of patient care. This presentation and workbook will help you to successfully implement an EHR in your office, meet these challenges, and improve the delivery of care in your office.

The purpose of this workbook is to provide you with a user-friendly guide to assist you in examining your current office processes, look at areas for improvement or change based on the transition from paper to computer, and to implement these changes in your office. It is beyond the scope of this workbook to include every topic relevant to operational redesign.

Audience

This workbook is designed to help practices who are planning to implement an EHR system begin the journey of redesigning their processes from an electronic point-of-view.

With the help of this workbook, participants will be able to:

- Document medical office workflows in a clear, understandable format
- Assess current processes in a medical office in order to determine the level of operational efficiency
- Identify problem areas with current processes and learn methods to improve them
- Anticipate the operational requirements and improvement opportunities of EHR implementation
- Develop new workflows based on current office environment, organizational goals, and best practices

Process

This workbook’s approach to operational redesign involves the use of structured methods as well as a case study approach. This workbook will guide you through five key areas of operational redesign: patient flow, point of care documentation, in-office communication, chart abstraction, and document management.

Using this workbook

This workbook is designed to be a self-paced guide to redesigning the operations of your practice. Each section of the workbook focuses on a specific area of operational redesign. Each section is organized in the following manner:

- An overview of the topic with key discussion points
- A case study example
- A methodology to help you envision a new state
- A plan to develop that new state

Appropriate tools will be introduced in each section to guide you through these steps. A case study of a fictitious practice will be used to further highlight tools and processes for operational redesign.

The intent of this presentation is that once you become familiar with the basic concepts of operational redesign, you should be able to apply them to your own office.
Happy Valley Medical Practice Offices

Note: Drawing is not to scale
Happy Valley Medical Practice – A Case Study

Background Data

The practice is located in an upper middle-class suburban community and has a practice management system and a laboratory for drawing blood. There are eight health care professionals, including physicians (two of whom own the practice, two additional), two physician assistants, and two nurses. There are 20 other full and part-time staff members, including an office manager, medical assistants, medical records staff, and administrative support staff. The turnover rate at the front desk is high; one patient voiced a typical feeling that “every time you come here a different woman is working the front desk.”

The senior partner in the practice sees the EHR as a tool to increase efficiency during the clinical encounter by eliminating a recurrent problem of lost charts, while providing better management of complex patient data. For him, “the more information is in there, the more reliable it is… and there are complex patients I have in here who have 12 medications and 12 diagnoses, and I come into the room and I save immeasurable time…I plot out blood pressures to show patients, and weights and heights and things and… that has been very well received I think, by the patients.”

The junior partner in the practice also sees the EHR as improving efficiency, but his focus was on how the system affected patient flow through the practice. As he put it, “We always wanted to… help prevent some of the congestion… signing in vs. checking out…. Well, we cannot expand the office… [and] the only place that was deemed removable would be the charts…. The hope is… that now we can collect co-pays when the patients are coming in, which was harder to do before, because the person who was doing check-in was also doing check-out… [and] having to answer the phones.”

The office manager reports that the paper charts have reminder stickers on them to monitor screening, prevention, and disease management. This has worked very well for them. “I can see some of the advantages, but we can’t afford to disrupt the entire office for months.”

This is a fictional practice and bears no resemblance to any people, place, or location. The quotes for the Senior and Junior partners were excerpted from - Crosson Jesse C, Stroebel Christine, Scott John G, Stello Brian, and Crabtree Benjamin F. Implementing an Electronic Medical Record in a Family Medicine Practice: Communication, Decision-Making, and Conflict. Annals of Family Medicine. 2005;3:307-311.
Quick Reference Guide to Process Mapping

Office processes have often evolved over the years as changes have been grafted on to established work practices. Process maps can be used in your office for two important reasons during the operational redesign:

1) Document and analyze current state of processes in your office
2) Design future state of processes in your office

The following is a quick review of some of the symbols and ideas behind process mapping.

- **Terminator** - indicates the beginning or end of a program flow in your diagram
- **Any step in a process**
- **Decision point between two or more paths in your flowchart**
- **Can represent any type of data in a process**
- **Document that can be read by someone**
- **Predefined process - often a reference to another process map**
- **Terminator - indicates the beginning or end of a program flow in your diagram**
Patient Flow

Introduction

In this part of the workbook, we will look at the ways the EHR will change the flow of patients in your office. This will help you think about the most efficient method for moving patients through the office for scheduled visits. We will specifically look at provider, nursing and lab visits.

Document the Current State

In order to analyze the patient flow processes for your practice, you have to first document the current process. In many practices, this step results in statements like “I never knew you did that” or “Why is (staff member) the only person able to do this?”

We will use the Happy Valley Case Study to provide a detailed overview of the strengths and limitations of the current processes used by this practice. At the end of this section, you should have gathered key information about the flow for the provider visits, nurse visits, and lab visits.
Assessment

The most important change in your office workflow will be the advent of the EHR. All patient care will be handled in the EHR. This represents a fundamental change to the way the office operates and interacts with the patient.

‘Patient flow’ refers to how patients are moved through the office when they come to your practice to receive services. This includes check-in procedures, rooming the patient, any movement of the patient during the visit (for example to an in-house lab), and check-out procedures. In most offices, the triggers that move patients from one part of the process to the next will change drastically as the paper chart is replaced by a computer screen.

In order to prepare for the changes to patient flow, which will occur after implementing an EHR, it is imperative to first document current processes and evaluate them for efficiency and patient satisfaction. This documentation and analysis is most effective when a team member from each functional area at the practice has an opportunity to contribute.

If an EHR vendor has not yet been selected, these workflows can be used to select a product which matches the patient flow in your office. Once current processes are understood and improved, future electronic workflows should be designed. Resources to assist with future workflow design may include pre-training from the EHR vendor, DOQ-IT staff or other consultants, or your physician organization. It is important that these workflows are developed prior to your EHR training, as the trainer can be asked to train the staff using your newly redesigned workflows.

As with all parts of the EHR process, patient safety must be at the forefront of each workflow decision. Processes for urgent patient care matters should be evaluated prior to implementing an EHR, but in many cases they will remain the same with the electronic documentation occurring after the fact. It is important that all staff members understand that electronic workflows, while useful in most situations, should not take the place of common sense when it comes to patient safety.
Happy Valley Medical Practice – A Case Study

Patient Flow

Check-In Comments

“It is so congested at the front desk and everybody is trying to do everything.”
– Frannie, front desk

“Patients sometimes sit in the exam rooms for 10 minutes without being seen.”
– Tim, medical assistant

“The lab is always backed up in the morning. Patients frequently wait 15 minutes after seeing the physician to get their blood drawn.”
– Jen, lab tech

“Every visit, I have to verify everybody’s name, address, and insurance. I’m the only person who does the on-line verification or telephone verification for the coverages. I can be held up for up to 15 minutes on a call.”
– Frannie, front desk

“The patient comes to the desk first, waits in line until I’m free, then I go through the demo and insurance checks. If it’s a new patient, I’ll have them fill out a paper history form and sign all of the release forms. Then I’ll have them come back to me and I’ll enter in all of the information into the PMS. This is so time consuming when there are patients waiting to be seen right now. I wish we had a better way to handle these new patients.”
– Judy, front desk

“I have a devil of a time getting all of the charts prepped for the next day. Someone is always grabbing them for refills, calls, or reviews. My filing is never done. And the fax seems to go all day! I would say that about 1 person out of 20 is seen without a chart.”
– Sara, medical assistant

Rooming/Visit Comments

“I am always behind the eight ball – Dr. X is always unhappy because his patients aren’t getting their EKGs done quick enough. I am always running behind and never know when he wants me to do what with his patients.”
– Sara, medical assistant

Check-Out Comments

“I bet ¼ of the patients forget to stop by and see me to check out. I miss co-pays; I miss charges because they forget to bring the superbill out or else Dr. G forgets to give them the paperwork and it’s stuck in the chart somewhere.”
– Frannie, front desk
Analysis of the Provider Visit - Happy Valley

Check-In

What type of information is gathered by the front desk at check-in?

- Verification of name and address
- Verification of insurance
- Copy of insurance card
- HIPAA forms
- Other:

If you are using a Practice Management System (PMS), what information must be entered or checked at each visit?

Address, insurance information

List any information that goes forward with the chart after check-in.

- Superbill
- Extra labels
- Patient Hx/ROS Forms
- if new patient
- Other:

Do you collect co-pays at check-in?  

Other:

How does the clinical staff know that the patient has arrived?

- Chart is in the rack
- If patients back up in waiting room, front desk staff go find the MA

Rooming the Patient

Who takes the patient to the exam room?  

- MA
- MD
- Nurse
- Other:

Is the chart reviewed for outstanding tasks by the rooming staff?  

Other:

How is this information communicated to the provider for action?

- MA creates list on sticky-posted on outside of chart

What information is gathered before the provider sees the patient?

- Reason for visit
- Vital signs
- Medications reviewed
- Allergies reviewed
- Other:

Are any tests done before the provider sees the patient?  

Other:

Glucose, A1c for diabetics

Is the information gathered written on a specific type of form?  

- Yes
- No

If yes, is the form specific to a type of visit?  

- Yes
- No

How does the provider know that the patient is ready to be seen?

Describe:

- Chart on the outside of the door
Analysis of the Provider Visit (continued)

**Provider Seeing the Patient**

What information does the provider review prior to entering the exam room?

- **Last visit, recent consults, meds, vitals, allergies**

  Where is this information located/accessed?
  - *All in the chart*

  Where are medications and problem lists maintained?
  - *List on the front page of the chart*

  What forms (if any) are used during a visit?
  - **New pt visit note, established patient note**

  Where are the charges/diagnoses captured for the visit?
  - **Encounter form - also includes labs drawn at the visit**

  Are patient education handouts given during the provider visit?  
  - ☒ Yes  ☐ No

  Who delivers services like the immunizations, ear irrigations, etc?
  - ☐ Provider  ☐ MA  ☒ Nurse  ☐ Other:

  If not the provider, how does that person know that the patient needs these services and is ready for them?

  Describe:  **Provider moves the chart to processing stack w/note attached. Contacts front desk staff to ensure follow-up.**

  If the patient requires specific follow-up (an appointment, a referral to a specialist, or a test), how does the provider communicate this?

  - **Provider writes down follow-ups for patient**

**Check-Out**

Do you collect co-pays at checkout?  
- ☒ Yes  ☐ No

What information does the patient bring back to the front desk?

- **Follow-up appts, procedures, tests, referrals**

  How do you handle future appointments?
  - ☐ Have patient complete a postcard that we file and then send as a notice  
  - ☒ Make a future appointment, but only if less than 6 months out  
  - Other:  

  - ☐ Do you schedule appointments for referrals to other providers or for tests?  
  - ☒ Yes  ☐ No
  
  If yes, how do you do this?

  What happens to charges for today's visit?

  - **Sent to billing staff for submission and coding**
Happy Valley Case Study

Current State Process Flowsheet: Provider Visit

Patient arrives for the appt

Patient signs in, is called, demographics verified, billing information verified

Eligibility checked by Internet or phone call

Co pay?

Yes → Collect the co-pay

No → Patient returns to waiting room; Front desk notifies the MA verbally that the patient is here and puts the medical record, superbill, and labels in a tray

MA documents findings in the paper chart

MA checks the vital signs, asks about the reason for the visit, verifies medications and allergies

MA takes the record and rooms the patient

Provider sees patient, reviews MA documentation; writes needed prescriptions, updates medications, writes requisitions for tests, jots notes on the superbill

Provider hands the patient scripts, requisitions and superbill

Does patient stop at the Front Desk as requested?

END Patient and subsequent data lost to the system

Yes → Front desk gets the superbill, verifies the charges, and sets up any needed follow-up

Patient leaves

Is visit complete?

No → Provider still has outstanding documentation for the visit - not usually done until the end of the day

Yes → Send record and superbill to billing

Provider completes documentation

END
## Analysis of the Nurse/MA Visit - Happy Valley

### Check-In
Are there any changes from the provider visit type at check-in? □ Yes □ No
If yes, describe:

### Rooming the Patient
Are there any changes from the provider visit type for rooming the patient? □ Yes □ No
If yes, describe:

### Nurse/MA visit
What information does the MA/nurse review prior to entering the exam room?

#### Provider’s last note, orders

<table>
<thead>
<tr>
<th>What types of visits are done routinely as Nurse or MA visits only?</th>
<th>Injection/Immunization</th>
<th>Patient Education</th>
<th>Lab Test</th>
<th>Ear Irrigation</th>
<th>□ Other (List):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>What information is documented at each of these visits?</th>
<th>How is this information documented?</th>
<th>Describe any provider involvement for these visits.</th>
<th>Describe how the provider is notified of the need to see this patient.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Injection/Immunization</th>
<th>Location, medication, lot #</th>
<th>Handwritten in the chart, log</th>
<th>None usually; if reaction, yes</th>
<th>Physically locate</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Patient Education</th>
<th>Topic, who was taught, documents given, assessment of pt knowledge</th>
<th>In a note</th>
<th>None</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Lab Test</th>
<th>With INR, document questions for assessment</th>
<th>In a form</th>
<th>None unless pt has a specific problem outside of protocol</th>
<th>Physically locate</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Ear Irrigation</th>
<th>Procedure results, pt response, instructions</th>
<th>In a note</th>
<th>Rare</th>
<th></th>
</tr>
</thead>
</table>

| Other (List): | BP, orthostatic, any pt education | Flowsheet | None unless outside of protocol | Physically locate |
Analysis of the Nurse/MA Visit (continued)

Do the nurse/MA work under any protocols for the ordering of any tests? ☑ Yes ☐ No
If yes, describe: DM-glucose; A1C; BP monitoring; urinalysis + cultures

Are patient education handouts given during the Nurse/MA visit? ☑ Yes ☐ No
Describe: File cabinet w/forms designed by office + from outside sources

What forms (if any) are used during a visit?
List:
VS flowsheets, Coumadin form

Where are the charges/diagnoses captured for the visit?
Superbill

If the patient requires specific follow-up (an appt, a referral to a specialist, or a test), how does the provider communicate this?
Comment section on superbill

Check-Out
Are there any changes from the provider visit? ☐ Yes ☑ No
If yes, describe:
Analysis of the Lab-Only Visit - *Happy Valley*

**Lab/Clinical**

Is there a separate draw station/room?  ☑ Yes  ☐ No

If no, describe how this is handled.

Who can perform the lab draws or in-office tests?  ☐ Any trained staff can perform  ☑ Only specific staff trained  ☐ Other (describe):

What labs/tests are done in the office?


*We draw for all tests sent to outside labs or the hospital lab.*

What labs/tests are completed with results recorded in the office?

CBC, A1C, urinalysis, glucometer, spirometer, EKG (cardiologist)

What information is documented in the chart?

Placed on flowsheet or in note. Specimen manifest completed for outside tests (outside lab + hospital).

Separate requisitions completed for outside lab + hospital

Does the provider have any involvement with these visits?  ☐ Yes  ☑ No

If yes, describe how the provider is notified of the need to see this patient.

Where are charges/diagnoses captured for this visit?

We try to capture the drawing fee, not always successful. Use superbill.

Are any paper logs kept for specimens gathered?  ☐ Yes  ☑ No

If yes, describe:

Log + manifest. Manifest goes w/the specimens to outside labs + the hospital lab.

**Check-Out**

Are there any changes from the provider visit?  ☐ Yes  ☑ No

If yes, describe:
Happy Valley Case Study

Current State Process Flowsheet: Lab-Only Visit

Patient leaves exam room with a lab test to be done → Patient stops at the front desk? → No → How does the ordered test get tracked?

Yes → Front desk looks at the test requisition.

Is the test done/drawn here? → Yes → Depending upon the location for the test, apt may be made or patient may have to call and make an apt.

No → Front desk files the requisition under the appropriate date for the patient.

Appt made for patient to come in for a lab-only visit → Front desk person pulls the requisition and carries it to the lab along with the labels.

Lab staff comes and gets patient and brings them to the drawing station → Lab staff verify the identity of the patient → Lab staff reviews the requisition to determine if an ABN is needed

Patient must sign the ABN → Yes → Depending upon the location for the test, apt may be made or patient may have to call and make an apt.

No → Test is drawn → Specimen is labeled, bagged and documented in the log → Patient leaves the lab.
Analysis of the Provider Visit - *Your Practice*

**Check-In**

What type of information is gathered by the front desk at check-in?
- Verification of name and address
- Verification of insurance
- Copy of insurance card
- HIPAA forms
- Other:

If you are using a Practice Management System (PMS), what information must be entered or checked at each visit?

List any information that goes forward with the chart after check-in.
- Superbill
- Extra labels
- Patient Hx/ROS Forms
- Other:

Do you collect co-pays at check-in?  
- Yes
- No

How does the clinical staff know that the patient has arrived?

**Rooming the Patient**

Who takes the patient to the exam room?  
- MA
- MD
- Nurse
- Other:

Is the chart reviewed for outstanding tasks by the rooming staff?  
- Yes
- No

How is this information communicated to the provider for action?

What information is gathered before the provider sees the patient?
- Reason for visit
- Vital signs
- Medications reviewed
- Allergies reviewed
- Other:

Are any tests done before the provider sees the patient?  
- Yes
- No

If yes, please list:

Is the information gathered written on a specific type of form?  
- Yes
- No

If yes, is the form specific to a type of visit?  
- Yes
- No

How does the provider know that the patient is ready to be seen?
### Provider Seeing the Patient

What information does the provider review prior to entering the exam room?

Where is this information located/accessed?

Where are medications and problem lists maintained?

What forms (if any) are used during a visit?

Where are the charges/diagnoses captured for the visit?

Are patient education handouts given during the provider visit?  
- [ ] Yes  
- [ ] No

Who delivers services like the immunizations, ear irrigations, etc?

- [ ] Provider  
- [ ] MA  
- [ ] Nurse  
- [ ] Other:

If not the provider, how does that person know that the patient needs these services and is ready for them?

Describe:

If the patient requires specific follow-up (an appointment, a referral to a specialist, or a test), how does the provider communicate this?

### Check-Out

Do you collect co-pays at checkout?  
- [ ] Yes  
- [ ] No

What information does the patient bring back to the front desk?

How do you handle future appointments?

- [ ] Have patient complete a postcard that we file and then send as a notice  
- [ ] Make a future appointment, but only if less than 6 months out  
- [ ] Other:

Do you schedule appointments for referrals to other providers or for tests?  
- [ ] Yes  
- [ ] No

If yes, how do you do this?

What happens to charges for today’s visit?
## Analysis of the Nurse/MA Visit - Your Practice

### Check-In
Are there any changes from the provider visit type at check-in?  
- Yes  
- No
If yes, describe:

### Rooming the Patient
Are there any changes from the provider visit type for rooming the patient?  
- Yes  
- No
If yes, describe:

### Nurse/MA visit
What information does the MA/nurse review prior to entering the exam room?

What types of visits are done routinely as Nurse or MA visits only?  
- Injection/immunization  
- Patient education  
- Lab test  
- Ear irrigation  
- Other (list):

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### Analysis Tool

**Analysis of the Nurse/MA Visit (continued)**

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### Check-Out

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## Analysis Tool

### Analysis of the Lab-Only Visit - Your Practice

#### Lab/Clinical

- Is there a separate draw station/room?  
  - Yes  
  - No

  If no, describe how this is handled.

- Who can perform the lab draws or in-office tests?  
  - Any trained staff can perform  
  - Only specific staff trained  
  - Other (describe):

- What labs/tests are done in the office?
  - We draw for all tests sent to outside labs or the hospital lab.

- What labs/tests are completed with results recorded in the office?
  - CBC, A1C, urinalysis, glucometer, spirometer, EKG (cardiologist)

- What information is documented in the chart?
  - Placed on flowsheet or in note. Specimen manifest completed for outside tests (outside lab + hospital).
  - Separate requisitions completed for outside lab + hospital

- Does the provider have any involvement with these visits?  
  - Yes  
  - No

  If yes, describe how the provider is notified of the need to see this patient.

- Where are charges/diagnoses captured for this visit?
  - We try to capture the drawing fee, not always successful. Use superbill.

- Are any paper logs kept for specimens gathered?  
  - Yes  
  - No

  If yes, describe:
  - Log + manifest. Manifest goes w/the specimens to outside labs + the hospital lab.

#### Check-Out

- Are there any changes from the provider visit?  
  - Yes  
  - No

  If yes, describe:
Vision and Goals - Your Practice

To be successful, you have to have a vision of what you want your practice to look like after the EHR is implemented. Describe what you think the goals could be for your practice.

Discussion questions

- Is your practice adopting an EHR to improve patient flow throughout the office?
  - What “vision” did you get from the physician leaders?
  - What specific problems do you think the EHR can help them with?

- Any time a new system is implemented, a somewhat painful transition period can be expected.
  - What do you think the staff are most concerned about during this transition?
  - Are there any issues that would be deal-breakers?

Description of the Goals:

Check-in:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Rooming patients:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Provider visit:

________________________________________________________________________
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________________________________________________________________________
Check-out:

________________________________________________________________________
________________________________________________________________________
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Nurse/MA visit:

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Lab/test visit:

________________________________________________________________________
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General:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Below, we will look at best practices for incorporating an EHR into your office workflow.

### Best Practices

#### Check-in

- Have your practice management system send demographic and scheduling information into the EHR. The EHR would then send billing information back to the practice management system.
  - If billing information is sent back to the practice management system, there is no need for a paper encounter form/superbill. This form is generally a trigger in the paper environment to notify staff that a patient is checked-in. Most EHRs electronically notify clinical staff when the patient has been checked into the practice management system. Ask your EHR vendor how to identify patients who are ready to be seen.

- When designing workflow for patient check-in, consider the forms that you give to the patient to complete and determine if and how those fit into the EHR.

- Collect co-pays at the time the patient checks in for the visit.

- Cross-training of staff for eligibility checking eliminates bottlenecks around this process.

- Recheck demographic and insurance information on a regular basis.

- Tracking of HIPAA forms should be possible in the EHR. Check with your vendor.

- Insurance card scanners, that send a copy of both sides of the insurance card directly into the patient record in the EHR, greatly improve front desk efficiency and improve the ability to clearly read the patient’s insurance information, which copying and scanning the copy don’t always provide.

#### Clinical

- The flow of the screens should enhance the workflow of the provider and the nurse/MA working with the provider.

- Electronic communication should be in place to inform staff of the patient’s readiness for whatever the next step is in the visit process.

- Work with your vendor to develop templates for the most common visit types seen in your practice.

- Validate medications and allergies at each visit.

- Drop-down or pick lists should exist for commonly used data entry fields.

- Preference lists should exist for fields commonly entered such as: **diagnosis, chief complaint/reason for visit, orderable lab test, and orderable procedures.**
### Best Practices

#### Check-Out

- Providers should communicate electronically to the check-out staff as much information as possible about follow-up needs such as **referrals, appointments, and tests**.
- Electric documentation of referrals can speed up this process and provide a tracking mechanism.
- Staff responsible for check-out should verify the charges as the patient visit concludes.
- Establish a nightly reconciliation of appointments and charges.

![Check-Out](image_url)

#### Laboratory Visits

- An interface between your practice and the major laboratories and radiology centers used by the office will maximize your efficiency.
- Work with your vendor to develop a structured template or screen for the lab staff to enter results done at the office (if there isn’t an interface for the on-site lab).
- Results should be flexibly routed to the provider or a group.
- EHR should facilitate the auto-collection of charges based on the lab/radiology orders.
- EHR should provide a mechanism for the tracking of specimens being sent to an outside lab or the hospital lab.
Using the current state workflows, the goals of your practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for your practice.

Patient Flow

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________________________________________________________________________________
Plan

Based on your assessment of the needs of your practice, design a new process map for a **Provider Visit**.
Plan

Based on your assessment of the needs of your practice, design a new process map for a Nurse/MA Visit.
Plan

Based on your assessment of the needs of your practice, design a new process map for a **Lab-Only Visit**.
Point of Care Documentation

Introduction
Most documentation in a practice is done on paper at the point of care (POC). Anyone who sees the patient brings a sheet of paper into the exam room (or triage room or waiting room) onto which they document the visit. One of the most obvious changes in an office with an electronic health record (EHR) is that a computer replaces the paper. The processes that evolve around paper will need to be changed, and in the following section, we will examine these changes. Through careful planning, you can make the EHR a positive influence on the documentation of visits, provider quality of life, and provider-patient interaction.

Document the Current State
We will use the Happy Valley Case Study to provide a detailed overview of the strengths and limitations of the current processes used by this practice. At the end of this section, you should have gathered key information about how Happy Valley currently documents patient care and what technology will best help them meet their EHR vision.
Assessment

In order for an electronic health record implementation to be most successful, it must be used by every member of the clinical staff for point of care (POC) documentation. This represents a fundamental change for providers, because not only does it disrupt the efficiencies that they have developed in paper charting and dictation, but it brings an unfamiliar electronic tool into the exam room.

When developing a strategy for POC documentation, it is important that clinical staff be an integral part of the process. Decisions that have to be made include the type of hardware used during the visit, the type of information that should be entered, and the format of that information (discrete data or free text) as well as the documentation responsibilities for each member of the care team. As with the other parts of operational redesign, it is important to begin this process by looking at current workflows, reviewing them for efficiency, and designing future workflows consistent with the goals of the practice.

An often overlooked part of POC documentation is the effect of the computer on the patient-provider relationship. The presence of a computer in the exam room enhances patient care from a clinical viewpoint, but it must be perceived as positive by the patient in order to be a successful addition to your practice. Strategies that are helpful include introducing the computer to the patient with a positive attitude, maintaining eye contact with the patient as much as possible, and showing the patient graphs (growth charts, lab values over time, etc.).

Educating providers about this facet of POC documentation will be key in achieving high levels of patient satisfaction with the new system.
Happy Valley Medical Practice – A Case Study

Point of Care

“We can’t expand the clinic or make big changes in the office layouts. As you can see, we are really cramped in some of the exam rooms, but the private offices have more space.”
– Patty, office manager

“I’m really concerned about how this new technology is going to interfere with my patient communication during the exam.” – Dr. Senior

“I have heard from some other clinics that patients don’t feel they get the same attention when a computer is in the exam room – that the staff are focused on the computer and not the patient.”
– Tim, medical assistant

MAs at Happy Valley conduct patient medical history interviews when the clinic gets especially busy. They are somewhat familiar with medication names, although physicians estimate that they correct 1 out of every 5, and that they often add meds that the MAs did not discover. MAs’ skill sets vary significantly.

All eight providers have computers at home:
- One does not use their home computer at all
- One uses the computer only for email
- Two use the computer for email and web surfing
- Four use the computer for email, web surfing, desktop publishing, and managing finances

Most providers also use PDAs to manage their schedules.

All providers have identified efficiency and improved quality of work life as primary reasons for EHR adoption. Although they recognize that documenting visits with the patient in attendance is important, they are uncomfortable with the prospect of actually doing it.
Physical Analysis of Space

You will need to examine and evaluate your physical space before you begin your EHR implementation. This is a good time to evaluate the layout of the offices and exam rooms, as well as the staff work areas, with an eye towards optimizing your space. In addition, you will need to look at the following areas:

1. Electrical power needs – new devices may need power
2. Office furniture requirements – new devices may need to be mounted or placed on a cart or table
3. Storage/computer room requirements – storage will be needed for extra devices and you will need to have a place to house your server and network equipment

Using the office blueprint and the sample exam room layout, what recommendations would you make for:

The overall layout of your practice’s space?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

The overall layout of the exam rooms?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Possible location of a storage area and/or a computer room?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Space Analysis Tool
Tracking Chart Movement in the Office

You can use this type of tool to demonstrate the spatial aspect of a medical record workflow. Using a spaghetti diagram, you can track physically who had the chart and where it has traveled in the office from the start of a patient encounter to the production of a bill. Using a map of the office, draw a spaghetti diagram that shows the movement of the paper chart through the office during a patient encounter.

Happy Valley Medical Practice Offices

Note: Drawing is not to scale
# Documentation Responsibilities and Common Practices by Role

You want to have a picture of the current documentation “culture” at Happy Valley Medical Practice. This analysis will help to determine staff preferences and patterns that will help to determine where devices should go and what types of devices should be used in different areas.

In the table below, detail each role’s documentation responsibilities at the practice.

- Who documents patient information?
- What parts of the visit do they document?
- Where in the office do they document?
- At what point in the visit (or during the day) do they complete their documentation?

<table>
<thead>
<tr>
<th>Role</th>
<th>What</th>
<th>Where</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>Clinical documentation assessment, plan, subj., obj.</td>
<td>In exam room</td>
<td>At the time of the visit, after the visit</td>
</tr>
<tr>
<td>NP</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>RN</td>
<td>Patient histories, procedures administered, education given, vitals, phone calls</td>
<td>In exam room, procedure room, nurse’s station</td>
<td>At the point of care, some documentation after pt leaves, phone calls w/pt on line</td>
</tr>
<tr>
<td>MA</td>
<td>Vitals, medications</td>
<td>Exam room</td>
<td>With the patient</td>
</tr>
<tr>
<td>Front desk staff</td>
<td>Phone messages, registration info</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phlebotomist</td>
<td>Labs drawn</td>
<td>Draw station</td>
<td>With the patient</td>
</tr>
</tbody>
</table>
Discussion Questions

The following tool will help you analyze your practice’s state of readiness to adopt electronic point of care documentation.

1. Will the current facility accommodate changes made to the exam rooms?

2. Are providers and staff members expecting changes to the way they interact with patients? How do they feel about these changes?

3. What roles could be expanded to facilitate documentation in patients’ charts?

4. How do you think patients will react to having a computer in the exam room? How might you encourage patient acceptance of the EHR?

5. What questions will need to be answered and/or what issues need to be addressed before the office agrees to document using computers in exam rooms?

6. Some practices operate well without documenting the entire visit at the POC. What parts of the visit do you feel would be easiest to document at the POC, and what might be left for providers’ offices?

For more ideas about possible Point of Care solutions, refer to the Site Visits on pages 40-42.

This would also be a good time to review the ‘End User Hardware Options’ guide.
## End User Hardware Options

The following End User Hardware guide will provide information about various hardware options for Point of Care documentation. For more ideas about possible Point of Care solutions, refer to the Site Visits on pages 40-42.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
</table>
| **Desktop** | - Inexpensive  
- Powerful  
- Larger screens  
- Full use of the EHR  
- Can be point of access for patients | - Large footprint = workspace constraints  
- Stationary  
- Potentially clumsy patient-provider interaction  
- Noise / heat  
- Can be point of access for threats |
| **Tablet** | - Highly mobile  
- Facilitates flexible workflows  
- Familiar work style  
- ‘Cool’ factor  
- Handwriting recognition | - Expensive compared to desktops  
- Can be damaged  
- Require wireless networks to be most efficient  
- Battery life  
- Requires training for handwriting recognition, general use  
- Need to find a solution for supporting clinical staff (MAs) |
| **Laptop** | - Highly mobile  
- Facilitates flexible workflows  
- Familiar work style  
- Smaller footprint  
- More durable than tablets  
- Battery life longer than tablets | - Expensive, albeit less than tablets  
- Battery life  
- Require wireless networks to be most efficient  
- Can be heavy  
- Mobile technology requires special security  
- Need to find a solution for supporting clinical staff (MAs) |
| **PDA** | - Highly mobile – extend beyond the office  
- Facilitates flexible workflows  
- May be a good solution for MAs | - A bit too mobile – easily lost, stolen, and damaged  
- Battery life  
- Limited screen size and clarity = limited functionality |
Site Visits

Before going ahead with planning the process changes, you may decide to conduct site visits to see how other practices in the area have addressed POC documentation. The following scenarios are different ways that practices are attempting to speed clinical documentation, with varying degrees of success. Discuss the challenges and benefits of each scenario. At the end of this exercise, you may find things about each scenario that can be used at your practice.

Scenario #1
Each exam room is outfitted with a desktop computer. Monitors are fixed to the walls on adjustable arms. Each staff member uses the computer when they are in the room with the patient.

What would you expect for the cost of this hardware?
______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

Do you think providers would easily adapt to this scenario?
______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

How will patients react to this?
______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

Do you think this would make the office more/less efficient?
______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________

Would you expect that it would facilitate complete visit documentation?
______________________________________________________________________________________

______________________________________________________________________________________

______________________________________________________________________________________
Scenario #2
Providers sketch notes on paper during the visit in the exam room. After visits, they use the computers in their office to complete full documentation. MAs use computers at centrally located nursing stations to enter meds, allergies, and vitals.

What would you expect for the cost of this hardware?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Do you think providers would easily adapt to this scenario?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

How will patients react to this?
______________________________________________________________________________________
______________________________________________________________________________________
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Do you think this would make the office more/less efficient?
______________________________________________________________________________________
______________________________________________________________________________________
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Would you expect that it would facilitate complete visit documentation?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
Scenario #3
Tablets are given to providers for visit documentation. MAs are each given a pocket PC to enter vitals, update medications, and check immunizations and upcoming tests.

What would you expect for the cost of this hardware?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Do you think providers would easily adapt to this scenario?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

How will patients react to this?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Do you think this would make the office more/less efficient?
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Would you expect that it would facilitate complete visit documentation?
______________________________________________________________________________________
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Documentation Responsibilities and Common Practices by Role

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<tbody>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front desk staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phlebotomist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Vision and Goals - Your Practice

Before we set goals for POC documentation, we need to first build the case for its implementation. Is it in your practice’s best interest to document at the point of care?

How might the clinical interaction with the patient be improved by documenting visits at the POC with a computer?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

How might providers’ quality of life be improved by documenting visits at the POC with a computer?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

How might office efficiency improve with POC documentation?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Describe a perfect experience for both patient and provider. Think of things that each person might have access to, what information their conversation would cover, and what would make the situation most satisfying.

Patient experience

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Provider experience

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
Describe what you think the vision and goals could be for your practice for **point of care documentation**.

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Below, we will look at Best Practices for Point of Care documentation.

- Documenting in the EHR at the point of care (POC) facilitates workflow efficiencies during the patient visit, and generates greater patient involvement in their own medical care.

- Workflow that enables the support staff to review and enter certain information into the EHR prior to the provider’s visit, enables the provider to increase efficiencies by eliminating the search for key information and allowing them to discuss pertinent information during the patient visit.

- Thoughtful clinical redesign prior to implementation will enable the practice to identify the appropriate hardware and configuration of the office to facilitate POC documentation.

- Tablets can be great tools for the clinic, but they do present a few unique challenges. Most tablets rely on some handwriting recognition to enter data. While the handwriting recognition software is quite good, it can be tricky for some users. Using a tablet can also be awkward at first. In our experience, you should consider purchasing the tablets well before you need to begin using them. Loan the tablets out to everyone who will be using them regularly for POC documentation, so that they have a chance to adapt to this unique way of entering data.

- If you will be working with wireless devices, make sure network connections are not interrupted when traveling from one exam room to another. Addressing this issue prior to go-live will avert staff frustration and facilitate staff efficiency and satisfaction with this significant operational change.

- Establish policies regarding the safe use of mobile devices, putting in place required safeguards for computers that may be left unattended in an exam room or hallway. Some computer security measures include automated screen savers, password protected screen lockout, strict adherence to sign-in and sign-out procedures, and password usage.

**Best Practices**

**Point of Care Documentation**

- Introducing a computer into the exam room changes the provider-patient dynamic during a patient visit. This can be challenging for the provider, however there are many advantages to be gained, such as having instant access to pertinent information and the ability to share important health data with the patient. When providers are first learning, they often find that they are focusing on the computer and not on the patient. There are techniques that can ease the transition and facilitate maintaining or building a strong provider-patient connection.

  - Prior to entering the exam room, review the patient summary screen. This enables the provider to make comments to the patient that are personal and knowledgeable and helps establish a closer relationship with the patient.

  - Personally greet your patient upon entering the exam room and before turning on the computer. Remember to have eye contact with the patient, as it establishes a connection that needs to be maintained while adjusting to having the computer in the exam room.

  - Patients have concerns regarding the security of their health information. The provider should address these concerns, even if the concerns are unspoken.

  - Explain what you are doing on the computer during the visit. Refer to the computer as "your record" and use that frequently when referring to patient information on the computer.

  - With the provider’s attention turning to the EHR, there is a perceived interruption in the patient visit. Use bridging statements to tell the patient what is happening to help maintain the connection with the patient in the absence of eye contact, such as, “Let me look up your most recent lab results.” Also, while entering the plan and orders into the computer, stating what you are doing aloud maintains the patient connection. For example, “I am ordering an MRI and a consult with the orthopedist, which the front desk will help to schedule, as well as some lab work, which you can have drawn at the end of our visit. I will contact you with the results and would like to see you again in one month.”

When possible, invite the patient to sit where they can see the information on the computer screen. By documenting in the EHR at the POC and using the computer as a tool to work together, the provider is able to share thoughts and information, and encourage the patient to actively participate in developing their health care plan to prevent or manage their disease. Increasing the patient’s own involvement in their care positively affects patient satisfaction and adherence to the agreed upon plan of care.

When experiencing a slow connection or other computer frustration during a patient visit, refrain from complaining in the presence of the patient. If the staff and/or providers express a positive point of view regarding the change to EHR, the patient tends to also view the change as positive.

After securing the computer and turning attention back to the patient, the provider can review the patient visit and plan, and gauge the patient’s understanding of what was discussed. Advise the patient as to what the next steps are and close the visit by making eye contact and using the patient’s name as you say goodbye.

A general guideline is to allow for a three to six month period of adjustment for the provider to feel comfortable documenting in the EHR at the POC, and that their patient visit is patient-focused and not entirely computer-focused.

Plan

Describe how you would plan for your practice’s documentation. Include information on who will use what type of device where in your practice, as well as what changes will be needed in the physical space to accommodate your design.

**Physician**

| Hardware: |  |
| Parts of the visit documented: |  |
| Where/when/how: |  |
| Challenges: |  |
| Opportunities: |  |

**Nurse**

| Hardware: |  |
| Parts of the visit documented: |  |
| Where/when/how: |  |
| Challenges: |  |
| Opportunities: |  |

**Medical Assistant/Intake**

| Hardware: |  |
| Parts of the visit documented: |  |
| Where/when/how: |  |
| Challenges: |  |
| Opportunities: |  |

**Front desk staff**

| Hardware: |  |
| Parts of the visit documented: |  |
| Where/when/how: |  |
| Challenges: |  |
| Opportunities: |  |
In-Office Communication

Introduction
In this part of the workbook, we will look at the ways the EHR will change office communication. This will help you think about the most efficient and safe way to send messages. We will specifically look at phone messages, prescription refills, and lab results.

Document the Current State
In order to analyze the in-office communication for your practice, you have to document the current process. In many practices, this step results in statements such as “I never knew you did that” or “Why is (staff member) the only person able to do this?”

We will use the Happy Valley Case Study to provide a detailed overview of the strengths and limitations of the current processes. At the end of this section, you should have gathered key information about the flow of communication in the office.
Assessment

Each physician practice has created its own unique way of communicating information within the practice. Once the electronic health record is implemented, the practice will have the ability to use the electronic communication tools embedded within the application. This will be one of the most significant changes in the current office workflow and will fundamentally change the way the office operates. One of the benefits of this change is that all patient-related communications will automatically attach to the patient record, thus removing steps in the current administrative processes.

In order to maintain patient safety and satisfaction, it is imperative that the practice identify the current communication workflow for each type of communication, redesign each workflow, and communicate the changes to everyone at the practice prior to the implementation.

The most important thing to remember when implementing electronic messaging is that the computer does not take the place of common sense or the need to verbally communicate with one another. For each process that you change, remember that the same system you had for urgent issues before the implementation of the EHR can continue to be used. The new process will need to incorporate the electronic documentation of the issue, which may occur after the urgent situation has been communicated to the appropriate staff member.
Happy Valley Medical Practice – A Case Study

In-Office Communication

“In our current practice, we use the pink telephone slips and put them in a rotating wheel. Half the time, they get lost or people forget to look for them.”
– Frannie, front desk

“When critical lab values come in, I pull the chart and track down the provider and put it in his hand.”
– Nancy, office nurse

“Refills are a nightmare for us. I have one person pulling charts all day just for this. We can do up to 90 refills per day.”
– Susie, medical records supervisor

“Patients sometimes wait on the phone for 10 minutes before I can get to them.”
– Frannie, front desk

“I am always wasting time tracking down charts for phone messages and refills.”
– Sally, medical records

“I frequently wait on the phone for 5-10 minutes to call prescriptions into the pharmacy.”
– Tim, medical assistant

“I have a difficult time keeping up with all the lab results coming into the office. I have to pull the labs off the fax or printer, pull the chart and then place the chart for the physician to review. This process takes several hours a day for me to complete.”
– Sally, medical records

“I’m constantly getting calls from patients to get their lab results. My staff frequently has to call the hospital to get it or go through a stack of papers to be filed to figure out where the lab results are. This is wasting a good deal of time on my part and my staff.”
– Dr. Jones

Janice, the clinical supervisor recently did a survey to determine the amount of incoming phone calls, prescriptions and lab results. She found the following breakdown:

- Incoming phone messages non-prescription related: 15-18 calls per provider per day
- Prescription related telephone calls or faxes: 10-12 calls per provider per day
- Incoming laboratory/test results: 20-25 test results per provider per day
### Document the Current State - Happy Valley

#### Prescriptions
How do refills come into the office and what is the volume?

<table>
<thead>
<tr>
<th>Prescription Type</th>
<th>How many</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone calls from patient</td>
<td>50</td>
</tr>
<tr>
<td>Phone calls from pharmacy</td>
<td>35</td>
</tr>
<tr>
<td>Faxed forms from pharmacy</td>
<td>30</td>
</tr>
</tbody>
</table>

Who is involved in the prescription process?

Describe how each phase is completed (including where chart is placed):

- **Intake call**: Front desk staff pulls chart, takes message
- **Chart pull**: Front desk staff places chart on provider chair
- **Clinical action**: MD authorizes, returns chart to chart room
- **Follow-up**: 
- **Other**: 

Describe the strengths and limitations of the current system:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar</td>
<td>Providers return calls at the end of the day</td>
</tr>
<tr>
<td></td>
<td>Chart-dependent; long delays in handoffs</td>
</tr>
<tr>
<td></td>
<td>Hard to track refills</td>
</tr>
</tbody>
</table>
### Phone Messages

Do you have a telephone triage system?  
- Yes  
- No

If yes, describe triage tree:

<table>
<thead>
<tr>
<th>Type of Message</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab results</td>
<td>5</td>
</tr>
<tr>
<td>Scheduling</td>
<td>15</td>
</tr>
<tr>
<td>Medical Advice</td>
<td>15</td>
</tr>
<tr>
<td>Billing</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
</tr>
</tbody>
</table>

Who is involved in the phone message process?

Describe how each phase is completed (including where chart is placed):

- **Intake call**: Front desk staff takes call / RN takes call
- **Chart pull**: Front desk staff pulls chart, gives to appropriate provider / RN requests chart
- **Clinical action**: RN, MD - returns message to front desk staff w/chart
- **Follow-up**: 
- **Other**: Front desk staff refiles chart

Describe the strengths and limitations of the current system:

<table>
<thead>
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</tr>
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<td></td>
<td>Hard to track refills</td>
</tr>
</tbody>
</table>
### Test Results

Do you offer testing (lab/radiology) in your office?  
- Yes  
- No  

UA, glucose, all else sent out to hospital

What primary testing facilities do your patients use? Please List.

Local hospital, private lab

---

How are test results received from the primary locations?  
- Direct print  
- Fax  
- Mail  
- Other _______________________________

How do test results get to the provider?  

Test result chart pull; review to determine priority; determines action needed

How are results communicated to the patient?  
- Phone call  
- Email  
- Letter  
- Visit  
- Other _______________________________

Describe the strengths and limitations of the current system:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need the chart to call back</td>
<td>Patients complain if don’t hear back - even if normal</td>
</tr>
<tr>
<td>No good way to track missing results</td>
<td>Duplicates</td>
</tr>
</tbody>
</table>

---
Happy Valley Case Study

Current State Process Flowsheet: Incoming Calls

1. Patient calls
2. Front Desk answers the call
   - Is it for a medication refill? Yes → Goes to the triage staff
   - No → Triage staff take down all of the needed information.
3. Front desk requests the chart and puts the note with the chart in the “In” holder for the provider
4. Provider reviews the “In” holder in between patients/end of day
5. Front desk takes down the message and writes note to the provider
   - Is it for a test result? Yes → Triage staff call for the medical records needed in batches of 10-15
   - No → Is the medication “on protocol” for refills?
5a. Yes → Referral person makes the referral.
5b. No → Front desk completes a message and puts it in the box of the appropriate person
   - Front Desk completes a message and puts it in the box of the appropriate person
   - Provider reviews the note and request and sends chart back with a note to the triage staff.
   - Put note with the medical chart and put it in the provider’s “In” record holder outside their office.
6. Is request approved? Yes → Call the pharmacy or fax refill
   - No → Call the patient
7. Document in the patient’s chart
Document the Current State - Your Practice

Prescriptions

How do refills come into the office and what is the volume?

- Phone calls from patient  How many? _______
- Phone calls from pharmacy  How many? _______
- Faxed forms from pharmacy  How many? _______

Who is involved in the prescription process?

Describe how each phase is completed (including where chart is placed):

- Intake call
- Chart pull
- Authorization
- Follow-up
- Other

Describe the strengths and limitations of the current system:

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
Phone Messages

Do you have a telephone triage system?  □ Yes  □ No

If yes, describe triage tree:

How many of each type of phone message do you receive on a daily basis?
Lab results_________________
Scheduling_________________
Medical Advice______________
Billing____________________
Other____________________

Who is involved in the phone message process?

Describe how each phase is completed (including where chart is placed):

  Intake call_________________
  Chart pull_________________
  Clinical action_________________
  Follow-up_________________
  Other_________________

Describe the strengths and limitations of the current system:
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
## Test Results

Do you offer testing (lab/radiology) in your office?  □ Yes  □ No

What primary testing facilities do your patients use?  Please List.

<table>
<thead>
<tr>
<th>How are test results received from the primary locations?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Direct print  □ Fax  □ Mail  □ Other  ____________________________</td>
</tr>
</tbody>
</table>

How do test results get to the provider?

<table>
<thead>
<tr>
<th>How are results communicated to the patient?</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Phone call  □ Email  □ Letter  □ Visit  □ Other  ____________________________</td>
</tr>
</tbody>
</table>

Describe the strengths and limitations of the current system:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Vision and Goals - Your Practice

To be successful, you have to have a vision of what you want your practice to look like after the EHR is implemented. Describe what you think the goals could be for your practice.

<table>
<thead>
<tr>
<th>Discussion questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Is your practice adopting an EHR to improve communication throughout the office?</td>
</tr>
<tr>
<td>• What “vision” do you get from the physician leaders?</td>
</tr>
<tr>
<td>• What specific problems do you think the EHR can help them with?</td>
</tr>
<tr>
<td>• Any time a new system is implemented, a somewhat painful transition period can be expected.</td>
</tr>
<tr>
<td>• What do you think the staff is most concerned about during this transition?</td>
</tr>
<tr>
<td>• Are there any issues that would-be deal-breakers?</td>
</tr>
</tbody>
</table>

Description of the Goals:

Prescriptions:

<table>
<thead>
<tr>
<th>Intake</th>
<th>Chart pull</th>
<th>Authorization</th>
<th>Follow-up</th>
</tr>
</thead>
</table>

Phone Message:

<table>
<thead>
<tr>
<th>Intake</th>
<th>Chart pull</th>
<th>Clinical action</th>
<th>Follow-up</th>
</tr>
</thead>
</table>

Test results:

<table>
<thead>
<tr>
<th>Incoming</th>
<th>Review</th>
</tr>
</thead>
</table>
Below, we will look at best practices for ePrescribing, messaging and lab results.

**Best Practices**

**Prescription Refills**

- Utilize electronic prescribing for refilling and writing new prescriptions. This will greatly decrease the amount of time spent pulling charts and contacting pharmacies by allowing clinical staff to send and receive prescriptions directly to/from the EHR.

**Other options/considerations:**

- Electronic faxing is also an option if the vendor does not offer electronic prescribing. This method greatly decreases the amount of time spent pulling charts and contacting pharmacies and allows prescriptions to be faxed from the EHR directly to the pharmacy.
- Entering medications in a “field” format or as discrete data is imperative for the electronic prescribing or electronic faxing to work.

**Phone Messages**

- Capture all incoming phone messages in the electronic record. The messages should be sent electronically to the appropriate staff member or provider with no chart pull. (*See transition period note below). Put policies and procedures in place to clarify who is responsible for follow up on any electronic messages left at the end of day.

**Other options/considerations:**

- The implementation of electronic phone call messaging fundamentally changes the way front desk staff deliver information. How can you alleviate their transition pains while keeping the implementation moving?
- For urgent phone calls, make sure to follow-up on urgent calls with the phone call recipient. For instance, if an urgent call comes in, the front desk staff should document the call in the system, then track down the physician/nurse to handle the call. The documentation can still be done in the system, but notification should be done to ensure safety.

* There will be a transition period where front desk staff will need to complete the message in the EHR, but also pull the paper chart for physician review. It is important to consider this as part of the EHR workflow. Decide what type of messages will require a chart pull along with routing the electronic message.
## Best Practices

### Lab Results

- Having a lab interface between your hospital or outside laboratory service provider and your EHR will increase office efficiency. Lab results are sent directly into the EHR through the interface. The most important thing when working with interfaced lab results is to structure the workflow such that results are always reviewed. Electronic reminders will alert the provider that lab results have come into the system.

- Communication of lab results back to the patient is a great tool for increasing contact with patients and improving satisfaction. Some clinics have implemented a 'lab letter', generated in the EHR, to achieve this goal. Consider implementing a lab letter in your practice.
  - In the beginning, you may want to set up an auditing system to ensure that all results are reviewed and signed off. Ask your vendor to develop this report.
  - There are situations where the person who submits the lab order is not the patient’s primary physician. Consider how you will deal with this in the EHR with guidance from your vendor.

### Other options/considerations:

- Some labs will not be interfaced. If you have an interface with your primary lab, there will still be labs from specialists (or PCPs) that are not electronically directed to your lab or EHR.
  - These labs are often treated like other outside documents that need to be scanned into the system. Ensure that your new scanning workflow will be efficient enough to deliver lab results in a timely manner.
  - Develop a system for specific paper lab values to be entered as discrete data so that these results can be used in reporting and trending the lab results, especially for HbA1C results for your diabetics, BUN and creatinine results for renal patients, etc.

- For labs that are processed in your office, work with your vendor to understand how the lab results will be entered into the EHR and how the results will be forwarded to the ordering physician for review.

- For sites that only perform a minimum number of labs, the most common entry method is to have a template available for the lab tech to enter the results. This template should link to specific values in the system. This will significantly impact the lab workflow. When the activity in the office does not permit entry of the results as the labs are being done, develop a process within the lab workflow to allow for the delayed entry of the lab values into the EHR.
In-Office Communication

Using the current state workflows, the goals of your practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for your practice.

In-Office Communication

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Plan

Based on your assessment of the needs of your practice, design a new process map for a Prescription Refill.
In-Office Communication

Plan

Based on your assessment of the needs of your practice, design a new process map for a **Phone Message**.
Plan

Based on your assessment of the needs of your practice, design a new process map for Test Result Communication.
Chart Abstraction/Migration

Pre-Loading Clinical Data

Introduction

In this part of the workbook, we will look at populating the EHR with key clinical data from the paper record. Pre-populating the electronic patient record with clinical data, such as allergies, problem lists, medication lists and health maintenance data, will ease the stress of seeing patients for the first time using the EHR. We will look at different types of data and the various methods of entering the data into the EHR. Careful planning in the area of migrating data from a paper record to the electronic record will facilitate your ability to retrieve data from the EHR.
Assessment

Each practice stores information in the paper medical record in different ways. When implementing an EHR, there is value in standardizing the clinical data that will be available when the provider first sees the patients using the EHR.

Your office will need to decide what information users have available to them in order to efficiently provide care when they first see a patient in the EHR. This information may include allergies, medications, immunizations, a problem list, and medical, surgical, and family histories or other things important to your practice. Once you know what information you want, a plan can be developed for extracting this information from the paper chart and entering it into the EHR prior to go-live.

Pre-loading patient clinical information may be done by clinical or non-clinical personnel prior to go-live and may continue after go-live, until providers are comfortable entering necessary patient information during the patient visit. If data is entered into the EHR by non-clinical personnel, all entered data needs to be verified as correct by the clinical person. Pre-loading may be an ongoing process if information is determined to be important to the management of patient care. The length of the pre-load process will be determined by many factors, including the amount of data to be entered, who will be doing the data entry, the ease of finding the information to be entered into the EHR, and the number of charts that need to be entered.
The staff at the Happy Valley Practice spend a lot of time looking for charts, sometimes not locating them for days. They are getting quite anxious though, looking at all of the paper charts that need to be entered into the EHR.

“We have so many charts that are 2-3” thick. How could we possibly have the time to get all of that information into the EHR?”
– Susie, medical records supervisor

“I know where to find the information I need in the chart. I don’t have time to keep a separate summary sheet updated at the front of each chart.”
– Dr. Senior

“I rely on my patient summary sheet when I open any patient chart. In one place, I can find all of the information that I need to know about that patient.”
– Dr. Junior

“Some of the medical assistants know the names of medications. Some of them misspell them most of the time.”
– Nannette, office nurse

“We have thousands of charts. How can we possibly get all of that information into the EHR before we go-live?”
– Patty, office manager

“We have so much mail and paper that comes into the office by fax. Where will we put all of this information if we don’t have a paper chart?”
– Franny, front desk

The staff will need to understand the difference between entering discrete data and scanning in the data. Some decisions will need to be made regarding what information needs to be entered into the EHR.
Discrete Data vs. Image Data

Data, or information, can be stored in the EHR in two basic formats. It is important to understand the difference between these types of data and how it will affect your future ability to access the information in the EHR.

**Discrete Data**

Discrete data is individual pieces of information that are entered into a specific field in the EHR. Each piece of information has a unique place in the database. Every time this piece of information is entered into the EHR, it can be accessed in the EHR and can be reported on. Example: If the patient’s weight is entered into the individual field for “patient weight” in the EHR, each weight at each visit can be compared to the last and displayed as a graph, list, table, etc. A patient has labs drawn at the hospital, and the report comes back with three results: INR 2.7, Potassium 4.0 and HbA1C 8.0. If these results are entered into the EHR as discrete data, you will be able to view the lab results of today, compare them with the results from one month and two months ago, and graph them.

It is important to carefully consider what information should be entered discretely into your EHR. As a general guideline, you should include pieces of information that you will want to easily access and compare over several patient visits. In addition, you will want to enter discrete data for information that will be used for report generation. Some examples of reports that your practice may choose to run on a regular basis may include patients who are late for their yearly physicals, patients who need follow-up for high blood pressure, or practice performance measures for insurance companies.

**Image or Scanned Data**

Image or scanned data is information that is entered into the EHR as a block of text or an image (picture) and it is filed in the EHR as a scanned document. Information entered into the computer by this method can be viewed and appears just as it did when it was scanned. The information cannot be compared or graphed by the EHR, as it is a picture of the information only. Example: The patient’s last physical exam is scanned into the EHR. Within the EHR, you will be able to view the document to see what the patient weighed at that visit, but it will not be information that you can use in the EHR to compare to future weights entered during other patient visits. If that patient’s lab results return with three results and the results are scanned into the EHR, you can view that scanned report, but will not be able to compare or graph the information, as it is only a picture of the page of lab results.

It is important to carefully consider what information should be entered into your EHR as scanned or image data. As a general guideline, only scan the historical information that will need to be referred to in order to care for the patient. Some examples of information to scan would be recent consult reports, past EKG reports, medical histories, discharge summaries, and correspondence from outside providers.
Discussion Questions: Chart Abstraction

1. How many active patients does your practice have and how many charts will need to be entered into the EHR?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

2. Have any staff members expressed having past experience or a willingness to learn how to do data entry?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

3. Are the paper charts organized and is the patient information easy to find?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

4. Are the face sheets accurate and current?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

5. Will there be an interface with the laboratory? Will the interface be bi-directional?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________

6. Will pre-built templates be used to pre-load information into the EHR?

________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
________________________________________________________________________________
Directions for the Chart Abstraction Tool

Each section of the tool is focused on individual key data elements that your practice may want to include in the chart abstraction. The clinical staff should work together to decide which data is needed or preferred. Other than the patient allergies, medications, etc., some other information to consider abstracting would be the date of last Pap smear, last mammogram or last colonoscopy, last flu, pneumococcal or Tetanus immunization, most recent HbA1Cs for your diabetic population or LDL cholesterol results, height, weight, consent forms, living wills, etc. The tool will help you to organize your thoughts around the information to be abstracted and the chart abstraction process itself. The following areas should be considered when deciding the what, where, who, and how of data abstraction.

Location in paper record

Indicate where each section’s data can be found in the paper chart.

Who can identify and enter the individual data?

Some information is very clearly documented in the paper chart and easily located within the record; some information requires clinical interpretation in order to translate it into the standardized language in the EHR. For example, the problem list in the EHR may be based on individual ICD-9 codes. The problem list in the paper record may be found in various locations in the chart and be more loosely defined. Depending on the organization of your current paper record, a non-provider may be able to identify and abstract the information or may not be qualified or able to do so.

Who can validate the data?

If the data abstraction is completed by a non-provider, the provider should validate the abstracted information before it becomes a permanent part of the patient record in the EHR.

View as an image or as discrete data

Identify if the data can be scanned into the EHR or if it needs to be entered discretely. For example, a consult note from an outside provider could probably be scanned into the EHR where the patient’s height and weight should be discretely entered if you want the EHR to be able to calculate a drug dosage or body surface area. (If your EHR will be interfaced with lab or radiology, data may be imported into the EHR through the interface.)

Assign a priority

Determine how important it is to have each type of medical data abstracted from the paper record and entered into the EHR.

How often is this document referenced?

The placement of the document in the EHR may be decided based on the frequency that it needs to be referenced for patient care.

How many occurrences do you estimate this data needs to be recorded per patient record?

Knowing this will help you to determine the volume of data entry to be done and may assist you to reconsider its importance.
### Medications

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
<th>Discrete data to capture</th>
<th>Priority</th>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face sheet</td>
<td>Yes</td>
<td>Medication name</td>
<td>Critical for patient care</td>
<td>Frequently</td>
</tr>
<tr>
<td>Medication list</td>
<td></td>
<td>Instructions</td>
<td>Will save time</td>
<td>Occasional</td>
</tr>
<tr>
<td>Body of notes</td>
<td></td>
<td>Prescribing MD</td>
<td>Nice to have</td>
<td>Rarely</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Start date</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Last refill</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pharmacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Who can enter medication data?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

#### Who can validate medication data?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

Estimated # of meds per patient: ___

### Allergies

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
<th>Discrete data to capture</th>
<th>Priority</th>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face sheet</td>
<td>Yes</td>
<td>Allergy name</td>
<td>Critical for patient care</td>
<td>Frequently</td>
</tr>
<tr>
<td>Allergy list</td>
<td></td>
<td>Include non-med allergies</td>
<td>Will save time</td>
<td>Occasional</td>
</tr>
<tr>
<td>Body of notes</td>
<td></td>
<td>Reaction</td>
<td>Nice to have</td>
<td>Rarely</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Onset date</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Who can enter allergy data?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

#### Who can validate allergy data?
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

Estimated # of allergies per patient: ___
## Problem List

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
<th>Discrete data to capture</th>
<th>Priority</th>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face sheet</td>
<td>Yes</td>
<td>Problem description</td>
<td>Critical for patient care</td>
<td>Frequently</td>
</tr>
<tr>
<td>Problem list</td>
<td></td>
<td>ICD-9 code</td>
<td>Will save time</td>
<td></td>
</tr>
<tr>
<td>Body of notes</td>
<td></td>
<td>Past Hx diagnosis</td>
<td>Nice to have</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Family Hx diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>md</td>
<td></td>
<td>Dx from other physicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td></td>
<td>Onset date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front desk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temp data entry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Estimated # of Dx per patient:** ________

## Previous Labs

You will need to determine which labs to enter into the system. After making that determination, use this tool to document what will be entered about each lab.

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
<th>Discrete data to capture</th>
<th>Priority</th>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowsheet</td>
<td>Yes</td>
<td>Value</td>
<td>Critical for patient care</td>
<td>Frequently</td>
</tr>
<tr>
<td>Lab tab in chart</td>
<td></td>
<td>Date of test</td>
<td>Will save time</td>
<td></td>
</tr>
<tr>
<td>Body of notes</td>
<td></td>
<td>Other</td>
<td>Nice to have</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>md</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front desk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temp data entry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Who can enter previous labs?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Who can validate previous labs?**
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

**Who can enter previous labs?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Who can validate previous labs?**
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other
## Previous Tests/Procedures

You will need to determine which test/procedures to enter into the system. After making that determination, use this tool to document what will be entered about each test.

### Location in paper record
- Flowsheet
- Results tab in chart
- Body of notes
- Other

### Image or scanned data?
- Yes
- No

### Discrete data to capture
- Result
  *Note: You may want to enter “Done” or Normal/Abnormal instead of the entire result. The document can be scanned, in addition to entering a data element.
- Date of test
- Other

### Who can enter previous tests/procedures?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

### Who can validate previous tests/procedures?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

### Immunizations

### Location in paper record
- Flowsheet
- Immunization sheet
- Body of notes
- Other

### Image or scanned data?
- Yes
- No

### Discrete data to capture
- Value
  *Note: You may want to enter “Done” as the value for some immunizations.
- Date of immunization
- Other

### Who can enter immunizations?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

### Who can validate immunizations?
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

### Priority
- Critical for patient care
- Will save time
- Nice to have

### Frequency of reference
- Frequently
- Occasionally
- Rarely
### Office Visits

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes section of chart</td>
<td>Yes</td>
</tr>
<tr>
<td>Flowsheet</td>
<td>No</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can enter office visits?</th>
<th>Discrete data to capture</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>Date of last exam</td>
</tr>
<tr>
<td>RN</td>
<td>Height</td>
</tr>
<tr>
<td>MA</td>
<td>Weight</td>
</tr>
<tr>
<td>Front desk</td>
<td>Blood pressure</td>
</tr>
<tr>
<td>Temp data entry</td>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can validate office visits?</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>Critical for patient care</td>
</tr>
<tr>
<td>RN</td>
<td>Will save time</td>
</tr>
<tr>
<td>MA</td>
<td>Nice to have</td>
</tr>
<tr>
<td>Front desk</td>
<td></td>
</tr>
<tr>
<td>Temp data entry</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Image or scanned data?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Discrete data to capture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of last exam</td>
</tr>
<tr>
<td>Assessment of consult exam</td>
</tr>
<tr>
<td>Disease specific values</td>
</tr>
<tr>
<td><strong>diabetic foot checks, eye exams, etc.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical for patient care</td>
</tr>
<tr>
<td>Will save time</td>
</tr>
<tr>
<td>Nice to have</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
</tr>
<tr>
<td>Occasionally</td>
</tr>
<tr>
<td>Rarely</td>
</tr>
</tbody>
</table>

### Consult Letters

<table>
<thead>
<tr>
<th>Location in paper record</th>
<th>Image or scanned data?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral section of chart</td>
<td>Yes</td>
</tr>
<tr>
<td>Other</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can enter consult letters?</th>
<th>Discrete data to capture</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>Date of consult exam</td>
</tr>
<tr>
<td>RN</td>
<td>Assessment of consult exam</td>
</tr>
<tr>
<td>MA</td>
<td>Disease specific values</td>
</tr>
<tr>
<td>Front desk</td>
<td><strong>diabetic foot checks, eye exams, etc.</strong></td>
</tr>
<tr>
<td>Temp data entry</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can validate consult letters?</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>Critical for patient care</td>
</tr>
<tr>
<td>RN</td>
<td>Will save time</td>
</tr>
<tr>
<td>MA</td>
<td>Nice to have</td>
</tr>
<tr>
<td>Front desk</td>
<td></td>
</tr>
<tr>
<td>Temp data entry</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency of reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently</td>
</tr>
<tr>
<td>Occasionally</td>
</tr>
<tr>
<td>Rarely</td>
</tr>
</tbody>
</table>
### Hospital Documents

**Location in paper record**
- Hospitalization section of chart
- Other

**Who can enter hospital documents?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Who can validate hospital documents?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Image or scanned data?**
- Yes
- No

**Discrete data to capture**
- Date of admission
- Date of discharge
- Dx on admission
- Medications on discharge

**Priority**
- Critical for patient care
- Will save time
- Nice to have

**Frequency of reference**
- Frequently
- Occasionally
- Rarely

---

### Advanced Directives

**Location in paper record**
- Legal section of chart
- Body of notes
- Other

**Who can enter advanced directives?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Who can validate advanced directives?**
- MD
- RN
- MA
- Front desk
- Temp data entry
- Other

**Image or scanned data?**
- Yes
- No

**Discrete data to capture**
- Living will
- Healthcare proxy
- Do not resuscitate (DNR)
- Other

**Priority**
- Critical for patient care
- Will save time
- Nice to have

**Frequency of reference**
- Frequently
- Occasionally
- Rarely
Use of a Pre-Load Abstraction Worksheet

Use of a standardized worksheet to extract clinical data from the record prior to the pre-load process can substantially speed up the actual entry of data into the EHR. When a pre-load worksheet is used, it is usually placed in the front of the chart and the provider or a nurse can add the needed data to the pre-load worksheet as patients are being seen in the office. This process can start as soon as the practice begins the implementation process. This can give the clinic up to 3 months to capture data on the patients. The data entry staff can then use the pre-load worksheets to enter data into the EHR rather than having to look through the record for the details and then add the information to the EHR. In addition, the practice can identify specific patients to complete the pre-load worksheet on, independent of whether they are being seen for routine care during the pre-load period.

On average, it takes 18 minutes to complete a chart abstraction and enter it into the EHR.
Pre-Load Abstraction Worksheet

Template to Organize Paper Record in Preparation of Pre-load

**Patient Name:** ____________________________________________ **DOB:** ______________

### Problem/Dx List

<table>
<thead>
<tr>
<th>Description</th>
<th>Onset Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex: Hypercholesterolemia</td>
<td>2003</td>
</tr>
</tbody>
</table>

### Immunizations

Expand as needed to include other immunizations

<table>
<thead>
<tr>
<th>Immunization</th>
<th>Date Given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetanus</td>
<td></td>
</tr>
<tr>
<td>Pneumovax</td>
<td></td>
</tr>
<tr>
<td>Hep B</td>
<td></td>
</tr>
<tr>
<td>Meningitis</td>
<td></td>
</tr>
<tr>
<td>Influenza</td>
<td></td>
</tr>
<tr>
<td>MMR</td>
<td></td>
</tr>
<tr>
<td>Polio</td>
<td></td>
</tr>
</tbody>
</table>

### Medication List

<table>
<thead>
<tr>
<th>Description/Dose</th>
<th>Sig</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex: Lipitor 20mg</td>
<td>1 po qd</td>
<td>5/5/2005</td>
</tr>
</tbody>
</table>

### Allergies

<table>
<thead>
<tr>
<th>Description</th>
<th>Onset Date</th>
<th>Reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex: Penicillin</td>
<td>1995</td>
<td>Hives</td>
</tr>
</tbody>
</table>

### Histories

- Past Medical Hx:
- Surgical Hx:
- Family Medical Hx:
- Social Hx:
  - Marital Status: Single Married Divorced Widowed
  - Employment Status:
  - Children:
  - Tobacco Use: Y N Previous Amount ____________
  - Alcohol Use: Y N Previous Amount ____________

### Flowsheet

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cholesterol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LDL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triglyceride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pap Smear</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mammogram</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone Density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HgBA1c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sigmoidoscopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colonoscopy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hemoccult</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Best Practices
Pre-Loading Patient Information

- The practice goals and productivity expectations need to be weighed against the amount of work to be done and resources required to pre-load the charts into the EHR. If there is no information pre-loaded prior to go-live, the benefit to the provider will be slower than if some clinical information were available in the EHR at the time of patient visits and calls. The more information that is pre-loaded, the sooner the practice can stop pulling paper charts for patient visits and calls.

- Patients must exist in the EHR before the pre-loading of patient information can begin. The patient charts are usually created either by a demographic interface with a practice management system or by manual registration of the patients directly into the EHR. If you will be transferring demographic information from another system into the EHR or are having an interface built, check with your vendor or billing company to make sure that you receive the information in the appropriate format for uploading into the EHR or that the interface will be ready, giving your practice enough time to pre-load an adequate number of charts prior to go-live.

- The practice needs to determine the minimum information that will be entered into the EHR for each active patient. The decision regarding what information will be pre-loaded should be based on what information the provider will need to have available for the first phone call or visit with the patient using the EHR.

  - Important information to have available would be:
    - Patient problem lists, medications lists, allergies, or advanced directives.
    - Select immunizations, vital signs or lab results that would be used in protocols or for tracking purposes.
    - Select test dates, such as last mammogram or colonoscopy, that could impact protocols.

  - Other information that would be helpful if entered would be:
    - Medical and surgical histories
    - Social and family histories

- It is tempting to plan to pre-load all pertinent patient information, but be sure to take into consideration the amount of time it will take to enter the information into the EHR, especially for those new to data entry. Be reasonable with your decision making.

- If the existing paper charts are not organized, and the problem lists, medications and allergies are not easy to find or are not current, the use of a pre-load abstraction worksheet will organize the information and lessen the time it will take for a non-provider to enter the data.
In addition to manual entry of patient data, there are other ways to pre-load some clinical information into the EHR. Your lab system, e-prescribing or transcription services may retain historical data that could be imported into the EHR electronically prior to go-live. Speak with your laboratory services provider, e-prescribing or transcription company to explore possible options for data loading.

Some practices have each provider dictate a summary note on each of their patients and then import the transcribed note into the EHR as a means of transferring patient information. Remember that this is scanned (image) data and not available data to appear in reports.

To facilitate the provider using the EHR for patient visits at go-live, the practice should start the data entry process by pre-loading the clinical information of those patients scheduled for appointments within the first month after go-live, as well as the practice’s chronic patients that are seen on a frequent basis.

A practice often uses non-clinical staff to pre-load the clinical information into the EHR. This can be a good use of resources, but realize that it necessitates subsequent review and verification of accuracy by clinical staff before the data is included in a medical note or used to make a medical decision. Determine who has the authority to sign off on these notes and communicate this process to the entire staff.

Ideally, those doing discrete data entry into the EHR should have some medical terminology and medication knowledge and be detail-oriented to facilitate the accurate entry of information. Correcting data that has been entered incorrectly is time consuming, and in some systems can be difficult.

Scanning of historical medical information should be kept to a minimum. The paper chart will be available for reference and is usually delivered to the provider for at least the first patient visit post go-live. Providers should determine which information they would like scanned into the EHR, such as a recent consult note or latest EKG. The provider can communicate this to the staff after reviewing the record at the first visit post go-live and flagging the pages that are to be scanned.

Develop a method to indicate on the front of the paper chart if the pre-load has been completed, if scanning is completed, and to indicate when the chart is closed, or no longer the legal record. Communicate this to the entire staff.

In order to keep the level of productivity of the providers and staff at a high level, some practices continue to pre-load data into the EHR after go-live. The length of time that this is done varies by practice and is usually determined by the resources available to sustain the effort. Those patients who are seen on a same-day urgent basis and have not had any of their medical information pre-loaded into the EHR prior to the visit, should have their information verified by the provider during the visit. The information should then be entered during or after the visit that day.
Plan

List the data sets that your practice has decided to enter as discrete data.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Outline your practice’s plan for abstracting clinical information (data) from your paper charts.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Outline the process you plan to use for pre-loading clinical data into the EHR and verification of information as correct.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
List the types of documents you have decided to pre-load by scanning into your EHR.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Outline your plan of how charts will be pre-loaded after go-live.

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Document Management

Introduction
In your current office, document management only involves the flow of paper around the office and into the chart. When you implement an EHR, many of these documents will be stored, transferred, and/or reviewed in an electronic format. This will result in a fundamental change in the way the office manages documents. We often hear practices say that they wish they had spent more time examining the issues around document management, so this section should be useful as you move forward.

Document the Current State
In order to develop a document management plan for a practice, you have to record the current process of receiving, organizing, and processing documents. In many practices, this step results in many statements like “I never knew you did that” or “Why is (staff member) the only person able to do this?”

We will use the Happy Valley Case Study to provide a detailed overview of the strengths and limitations of the current processes in use by this practice. At the end of this section, you should have gathered key information about the flow of documents in the Happy Valley practice and about their chart abstraction process.

What are the key components of a document image management system (DIM)?
A document image management system indexes, stores, and manages all scanned and faxed documents within your EHR. Ideally, this is an integrated part of your EHR. The system includes hardware (scanners, faxes (fax server), software, and the staff that manage the process.

This part of the workbook will consider the workflow process around document image management by taking into account the goals for implementation, current document processing, and scanning. We will also consider the role of scanning as part of your chart abstraction process.

In this Section
- Assessment
- Case Study: Document Management
- Scanning Capacity Analysis
- Clinic Examples - Scanning Strategies
- Documentation Tools
  - Document Management Data Gathering Tool
- Vision and Goals
- Best Practices
- Plan
Assessment

Electronic document management represents a significant change for the medical records staff in your practice, as the EHR will become the legal document of record. When developing a document management plan, you will need to find a good balance between a few key attributes:

- Timeliness of review
- Adaptability of staff
- Reliability of document review process

Electronic document management is an essential aspect of your practice’s planning process prior to making the transition from the paper chart to the electronic chart. This process not only represents a significant change for the medical records staff within the practice, but also for the providers, as they are used to receiving and reviewing paper documents, not electronic copies of documents.

It is important to document the current process for each document type that enters the practice, identify how that will change with the implementation of the EHR, and document the new process for handling those pieces of information.

When considering your future document management plan, you should consider which outside sources will continue to send paper documents and how they will arrive at the practice, whether by mail or by fax. When possible, it is best to communicate with those outside sources prior to your go-live date, informing them that you are implementing an electronic medical record and that you would prefer future communications to be sent via fax. Documents that are faxed into your office can often be sent directly into your EHR, which will eliminate the need for scanning, but not for indexing.

The practice will need to identify who, among the staff, would be best suited for the role of scanning, indexing, and storing the information in the EHR. Decisions will need to be made regarding indexing and naming conventions of the documents, as well as reviewing the protocols for the various documents that the practice will receive.

For more ideas about possible document management solutions, refer to the Site Visits on pages 94-99.
Happy Valley Medical Practice – A Case Study

Document Management

“We practice the loose file method – we have a pocket on the front of the chart where we put materials. Then the chart is pulled for a visit, we file the materials where they belong.”
– Susie, medical records supervisor

“Our fax machine goes constantly - in and out.”
– Nannette, office nurse

“I have to dig through people’s offices to look for reports that I need for patient care. They keep them to review them so they aren’t always with the chart.”
– Paulette, physician assistant

“I am very comfortable with the way the paper chart is laid out. While I realize that it is inefficient, I just know the paper chart best.”
– Dr. Senior

“We get probably 30% of our consults by fax, the rest by hard copy.”
– Patty, office manager

“I want as much information at my fingertips as possible when we start this new EHR.”
– Dr. Junior

Susie, the medical records supervisor, recently completed a survey of documents in the practice. She found the following breakdown:

<table>
<thead>
<tr>
<th>Valley Hospital (40%)</th>
<th>Johnson Memorial (25%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labs: 80%</td>
<td>Labs: 20%</td>
</tr>
<tr>
<td>Tests / Procedures: 15%</td>
<td>Tests / Procedures: 70% (Primarily preventive screening [mammos, bone mineral density, colonoscopies, etc.])</td>
</tr>
<tr>
<td>Consults: 5%</td>
<td>Consults: 10%</td>
</tr>
<tr>
<td>Patients: 5%</td>
<td></td>
</tr>
<tr>
<td>Consults from specialists: 20%</td>
<td></td>
</tr>
<tr>
<td>Skilled nursing facilities: 10%</td>
<td></td>
</tr>
</tbody>
</table>

Three medical records staff (manager and two clerks) are responsible for prepping the chart and filing loose documents. The practice spends approximately 95 hrs/week prepping charts and filing documents. There is a backlog of unfiled documents 40 inches high – this represents approximately one week. When things get too bad, medical records requests help from other support staff to assist with filing.

When documents arrive at the practice, they are immediately sent to physicians for review. Physicians initial the documents, and then put them in designated baskets for medical records. These baskets are picked up at the end of every day.
Ongoing Document Processing - Happy Valley

In order to understand more about the Happy Valley Medical Practice's capacity to handle workloads, we need to quantify their current document processing. The following tool will help us collect the necessary information about the practice:

Document Management Data Gathering Tool

1. Is there dedicated medical records staff or are those responsibilities split over multiple staff roles? 
   **Split over roles**

2. How many outside documents come into your practice every week?
   - _____ <100
   - _____ 101-200
   - _____ 201-300
   - _____ 301-400
   - _____ 401-500+

3. Estimate the time spent filing paper per day: ________________ (hrs.)

4. How many days before the visit do you prep charts? _______

5. How much time is devoted to prepping charts per day? ____________ (hrs.)

6. Are there higher volumes of documents on certain days? __________

7. Define the documents that come into your practice. Use the following matrix to help organize your data.

### Incoming Document Matrix

<table>
<thead>
<tr>
<th>Document type</th>
<th>Origin (hospitals, outside labs, other providers, patients, etc.)</th>
<th>Source (fax, mail, hand delivery by patient)</th>
<th>Volume</th>
<th>Percentage of total</th>
<th>Future source with the EHR in place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab results</td>
<td>Hospitals (mainly local), patient</td>
<td>Fax, mail</td>
<td>100</td>
<td>25</td>
<td>Interface, fax server</td>
</tr>
<tr>
<td>Consults</td>
<td>Outside physicians</td>
<td>Fax, mail</td>
<td>75</td>
<td>20</td>
<td>Paper</td>
</tr>
<tr>
<td>Mammograms</td>
<td>Local hospital</td>
<td>Fax</td>
<td>25</td>
<td>6</td>
<td>Paper</td>
</tr>
<tr>
<td>EKGs</td>
<td>Local hospital</td>
<td>Fax</td>
<td>25</td>
<td>6</td>
<td>Paper</td>
</tr>
<tr>
<td>Letters</td>
<td>Outside MDs, pts, VNA, nursing homes</td>
<td>Fax, mail</td>
<td>50</td>
<td>12.5</td>
<td>Paper</td>
</tr>
<tr>
<td>Discharge summaries</td>
<td>Local hospital</td>
<td>Fax</td>
<td>10</td>
<td>2</td>
<td>Paper</td>
</tr>
<tr>
<td>X-ray results</td>
<td>Local hospital, radiology</td>
<td>Fax</td>
<td>10</td>
<td>2</td>
<td>Look up on hosp system</td>
</tr>
<tr>
<td>Other procedure results</td>
<td>Local hospital</td>
<td>Fax</td>
<td>75</td>
<td>20</td>
<td>Paper</td>
</tr>
</tbody>
</table>
What is your scanning capacity going to be?

- Based on the # of estimated documents from the Incoming Document Matrix, determine the # of documents to be scanned per day.
  
  225

- What resources will be dedicated to batch scanning? (# staff x # hours) \( \frac{3}{\text{day}} \)

- What resources will be dedicated to sorting documents from the batches into patient records? (# staff x # hours) \( \frac{8}{\text{day}} \)

- How many scanning workstations will be available? \( \frac{1}{\text{day}} \)
Clinic #1 Scanning Strategy

This first example is for a multi-site community health center (CHC). Their challenge was to integrate documents coming from many locations into a central processing facility. (If your site does not have more than one site, review the process as if your practice is only the CHC.)
Clinic #1:

What are the strengths of this model?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

What are the weaknesses of this model?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Would this process work for your practice? Why or why not?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

What effect would this process have on document turnaround time?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

What problems do you foresee in the handoff process?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Could the ‘illegible documents handling’ procedure fit into the workflow of your practice?
Would it be necessary? Why or why not?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Clinic #2 Scanning Strategy

The second example is a pulmonary clinic with five physicians and a high patient volume. Their challenge was to balance volume processing with safe review.

Example 2 - Scanning process

- 
  **No review needed**
  - Office-generated documentation
  - H&Ps
  - Discharge notes, dictated consults from in-patient hospital visits
  - PFTs

- 
  **Physician-reviewed documents**
  - Lab results, radiology
  - Correspondence from outside providers
  - Medical histories from outside offices

- 
  **SCANNING:** Documents are scanned into reasonably sized batches (<150 pages) and named by date and scanner

- 
  **Support staff sort batches of documents as available**

- 
  **Support staff sort batches of documents as available**

- 
  **Support staff sort batches of documents as available**

- 
  **Physician review of document**
Clinic #2:
What are the strengths of this model?
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What are the weaknesses of this model?
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Would this process work for your practice? Why or why not?
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What effect would this process have on document turnaround time?
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What problems do you foresee in the handoff process?
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Could the ‘illegible documents handling’ procedure fit into the workflow of your practice? Would it be necessary? Why or why not?
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Clinic #3 Scanning Strategy

The third example is a six-provider internal medicine practice. They decided to remove a certain set of documents from the paper record before the patient arrived, then scan those documents into the EHR. They also expect to get some documents through a fax server, through which the documents never become paper. Their biggest challenge is to manage the many different types, volumes, and origination of documents.
Clinic #3:

What are the strengths of this model?
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What are the weaknesses of this model?
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Would this process work for your practice? Why or why not?
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What effect would this process have on document turnaround time?
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What problems do you foresee in the handoff process?
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Could the ‘illegible documents handling’ procedure fit into the workflow of your practice?
Would it be necessary? Why or why not?
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Ongoing Document Processing - Your Practice

In order to understand more about your practice’s capacity to handle workloads, we need to quantify the current document processing. The following tool will help us collect the necessary information about your practice:

1. Is there dedicated medical records staff or are those responsibilities split over multiple staff roles?

2. How many outside documents come into your practice every week?
   - _____ <100
   - _____ 101-200
   - _____ 201-300
   - _____ 301-400
   - _____ 401-500+

3. Estimate the time spent filing paper per day: ________________ (hrs.)

4. How many days before the visit do you prep charts? _______

5. How much time is devoted to prepping charts per day? ________ (hrs.)

6. Are there higher volumes of documents on certain days? __________

7. Define the documents that come into your practice. Use the following matrix to help organize your data.

## Incoming Document Matrix

<table>
<thead>
<tr>
<th>Document type</th>
<th>Origin (hospitals, outside labs, other providers, patients, etc.)</th>
<th>Source (fax, mail, hand delivery by patient)</th>
<th>Volume</th>
<th>Percentage of total</th>
<th>Future source with the EHR in place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab results</td>
<td></td>
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<tr>
<td>Consults</td>
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<tr>
<td>Mammograms</td>
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<tr>
<td>EKGs</td>
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<tr>
<td>Letters</td>
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<tr>
<td>Discharge summaries</td>
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<tr>
<td>X-ray results</td>
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<tr>
<td>Other procedure results</td>
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</tbody>
</table>
What is your scanning capacity going to be?

Based on the # of estimated documents from the Incoming Document Matrix, determine the # of documents to be scanned per day.

- What resources will be dedicated to batch scanning? (# staff x # hours) ________

- What resources will be dedicated to sorting documents from the batches into patient records? (# staff x # hours) ______________

- How many scanning workstations will be available? ________________
Vision and Goals - Your Practice

What are your practice’s visions and goals for document image management? To be successful in operational redesign, you need to describe a vision and set clear goals about how the office should function after the implementation.

1. What additional questions do you need to ask to determine the vision for your practice? Here are some suggestions:
   How would they rate the following benefits? (1=low priority; 5=high priority):
   - Moving charts offsite ____
   - Eliminating chart pulls for visits ____
   - Eliminating chart pulls for telephone calls ____
   - Reducing document filing time ____
   - Reducing staff count/hours ____

2. Does your EHR software have an integrated document imaging management (DIM) system? If so, have you explored the functionality of this DIM?

3. Do you plan to become a paperless (or a less-paper) office? If yes, what gains do you hope to see from the paperless environment? If yes, are there any paper documents you might foresee allowing in the office?

4. What do you want to change about your current manual document process?
Below, we will look at Best Practices for Document Management.

**Best Practices**

- One of the most important dates in your project plan is the day that you decide to consider the EHR the legal document of record. This means that everything before that date is housed in the paper chart, and everything after that date is entered into the EHR. It does not mean that every office note has to be completed in the EHR, but that anything completed on paper is scanned into the EHR, not filed into the paper chart.

- Backlogs of paper needing to be filed can significantly complicate the above process of conversion. It will be much easier to locate documents if you’ve cleared the backlog of documents before go-live.

- In our experience, it takes approximately 1/3 as much time to scan and sort documents in the EHR as it does to prep and file in a paper chart. Initially, as staff members begin to learn the scanning process, it will take longer than your current prep time for charts. Some practices have needed to use overtime or temporary help to clear scanning backlogs.

- An incoming fax server can be a very effective tool in streamlining scanning procedures. Instead of pulling paper documents from the fax machine, scanning them into the system and then sorting the documents, a fax server shortens the process and allows you to go straight to the sort process. Using a fax server requires physicians to review documents electronically, which can be a big change for some physicians.

For more ideas about possible document management solutions, see the Site Visits on pages 94-99.
Each workflow highlights certain goals and opportunities for each practice. Using what you know about your practice and the workflows described, define the key components for a new document management workflow for your practice.

Document Management

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Plan

Discuss the features of a DIM that will make the review and distribution process harder/easier.

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Outline the key milestones in your document management transition plans.

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Document Management

Draw the new process map of Document Processing based on document types, volume, and review procedure.