A Systems Approach to Operational Redesign

Workbook

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MASSPRO

Making an Impact.
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. We have included an appendix that contains additional materials related to operational redesign that may be helpful to you.

Audience
This workbook is designed to help practice managers whose practices have chosen an EHR system begin the process of relooking at their practice from an electronic point-of-view.

At the end of this session, the participants will be able to:
- List at least five benefits of operational redesign.
- Identify the greatest workflow problems in their office and describe at least two approaches that can be used to analyze them.
- Document a simple workflow diagram for one workflow problem.
- Describe a possible approach to the development of a document organization process for the office.
- Identify two ways that the EHR will change the flow of patients in your office.

Using this workbook
This workbook is meant as a companion to the DOQ-IT operational redesign presentation. 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 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. The appendix includes a case study of a fictitious practice 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.
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 a 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?”
### Analysis of the Provider Visit

#### 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 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?

Describe:
### 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 diagnoses 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

### 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):

<table>
<thead>
<tr>
<th>Visits</th>
<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 for to see this patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection/Immunization</td>
<td></td>
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<td></td>
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<tr>
<td>Patient Education</td>
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<tr>
<td>Lab Test</td>
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<td></td>
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<td></td>
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<tr>
<td>Ear Irrigation</td>
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<td></td>
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</tr>
<tr>
<td>Other (List):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Do the nurse/MA work under any protocols for the ordering of any tests?  
☐ Yes  ☐ No
If yes, describe:

Where are charges/diagnoses captured for this visit?

Are patient education handouts given during the Nurse/MA visit?  
☐ Yes  ☐ No
Describe:

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

Where are the charges/diagnoses captured for the visit?

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

**Check-Out**

Are there any changes from the provider visit?  
☐ Yes  ☐ No
If yes, describe:
### Key Questions to Ask: Lab-Only Visit

<table>
<thead>
<tr>
<th>Lab/Clinical</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a separate draw station/room?</td>
<td>☑ Yes</td>
<td>☑ No</td>
</tr>
<tr>
<td>If no, describe how this is handled.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who can perform the lab draws or in-office tests?</td>
<td>☑ Any trained staff can perform</td>
<td>☑ Only specific staff trained</td>
</tr>
<tr>
<td>☑ Other (describe):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What labs/tests are done in the office?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What labs/tests are resulted in the office?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What information is documented in the chart?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the provider have any involvement with these visits?</td>
<td>☑ Yes</td>
<td>☑ No</td>
</tr>
<tr>
<td>If yes, describe how the provider is notified of the need for to see this patient.</td>
<td></td>
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<tr>
<td>Where are charges/diagnoses captured for this visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are any paper logs kept for specimens gathered?</td>
<td>☑ Yes</td>
<td>☑ No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Check-Out

<table>
<thead>
<tr>
<th>Check-Out</th>
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</thead>
<tbody>
<tr>
<td>Are there any changes from the provider visit?</td>
<td>☑ Yes</td>
<td>☑ No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
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</tr>
</tbody>
</table>
Vision and Goals

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

Discussion questions

- Is the 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 Vision and Goals:

Check-In: _____________________________________________________________
___________________________________________________________
___________________________________________________________

Rooming Patients: ____________________________________________________
___________________________________________________________
___________________________________________________________

Provider Visit: _______________________________________________________
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___________________________________________________________

Check-out: __________________________________________________________
___________________________________________________________
___________________________________________________________

Nurse/MA visits: _____________________________________________________
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Lab/test visits: ______________________________________________________
___________________________________________________________
___________________________________________________________

General: ____________________________________________________________
___________________________________________________________
___________________________________________________________
Assessment

The most important change in the office workflow will be the advent of 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.

Our primary concern is for patient safety and satisfaction, so you will see that many suggestions err on the side of caution. The most important thing to remember when implementing an EHR, is that the computer does not take the place of common sense. For each workflow that you change, remember that the same systems you had before for urgent issues can still be used. They just need to incorporate an electronic way of documenting that care.

Best Practices

Below, we will look at some options for incorporating EHR into your office.

Best Practices

Check-in

- The best practice would be to have your practice management system sending 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 have a trigger that notifies clinical staff when the patient has been “arrived” in the practice management system. It is important to verify that there is a trigger in place, and that the process is covered in the Staff Training section of this book.

- It’s also important to consider any forms you give the patient to complete. You need to determine if and how those fit into the EHR. If the patient is given a review of systems or past medical history form, can this be entered into the EHR by nurse/provider when they see the patient? There may not be a need for this form if a clinical person can review the forms within the EHR.

- Co-pays should be collected at the time of visit. Check-in is usually the best place to capture the co-pays.

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

- Establish a policy/procedure for rechecking of data on a regular basis.

- Tracking of HIPAA forms should be possible in the EHR.
**Best Practices**

**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.
- Templates should exist for the most common visit types seen in the practice.
- Validation of medications and allergies should be done at each visit.
- Drop-downs 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.

**Check-Out**

- Staff responsible for check-out should verify the charges as the patient visit concludes.
- 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.
- The practice should have an established nightly reconciliation of appointments and charges.
**Best Practices**

**Laboratory Visits**

- There should be an interface between the practice and the major laboratories and radiology centers used by the office.
- EHR should have 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 – Quest or the hospital lab.
Using the current state workflows, the goals of the practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for the practice.

Notes:

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Patient Flow

Plan

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

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

Based on your assessment of the needs of the 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. These documentation procedures have evolved over time, and they work well. But 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 evolved 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.

In this Section

- Documentation Responsibilities and Common Practices
- Physical Analysis of Space
- Vision and Goals
- Assessment
- Plan
You want to have a picture of the current documentation “culture” at the practice. This analysis will help you determine staff preferences and patterns that will help you 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>
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</thead>
<tbody>
<tr>
<td>MD</td>
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<td>NP</td>
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<tr>
<td>RN</td>
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<tr>
<td>MA</td>
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<tr>
<td>Secretary</td>
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<tr>
<td>Phlebotomist</td>
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</tbody>
</table>
Discussion Questions

1. Are finances something that will limit the practice’s ability to purchase POC solutions (wireless network, tablets, pocket PCs, etc.)?

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2. Are providers (MD, NP, PA) expecting changes to the way they interact with patients? How do they feel about these changes?

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3. Are staff members (RN, MA, secretaries) expecting changes to the way they interact with patients? How do they feel about these changes?

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

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

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6. 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?

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7. What patient scenarios do you see as being inappropriate for POC documentation? What might be an acceptable approach to using the EHR in these situations (even in a limited manner)?

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8. 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?

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_____________________________________________________________________________
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.
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, 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 to 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 lay out of the practice’s space?

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The overall layout of the exam rooms?

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

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Vision and Goals

Before we set goals for POC documentation, we need to first build the case for its implementation. Is it in the 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?

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

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How might office efficiency improve from POC documentation?

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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 the practice for point of care documentation.
Assessment

Point of care documentation with a computer is a fundamental change to the way that providers care for patients. The computer introduces new challenges to the patient-provider relationship for the practice. Practices must devise new strategies to cope with these challenges.

Best Practices

- “Paperless offices can increase patient satisfaction by reducing patient waiting times because doctors spend less time on paperwork and retrieving medical data. Patient registration information and patient history data can be filled out online even before a patient visits the office, freeing up the patient encounter with the physician so the physician can focus on the presenting problems and treatments. Physicians can quickly supplement their advice to patients with the wealth of patient education material software vendors include with their packages, as well as Internet health-related Web links. Physicians can click on the desired information and have it printed out for patients to take home with them. These disease- and treatment specific printouts help patients understand their illnesses, the plan of treatment, and the proper use of medications—all aimed at making the patient an active participant in his or her care and boosting patient care compliance. Patients can even self-educate themselves in the office waiting areas with available computer terminals, which can query Web sites about their specific conditions. After an office visit, to help ensure a higher level of patient compliance, the system can send out automatic reminders to patients (by e-mail or letter) of forthcoming appointments; needed lab tests; and preventive therapy, such as flu shots.” - American College of Physicians. The Paperless Medical Office: Digital Technology’s Potential for the Internist

- “While exam room computing may provide benefit to clinician, patient, and health system, there are potential adverse impacts as well. In a review of research on exam room computing, Sullivan and Mitchell noted that doctors tend to talk slightly more while patients talk slightly less in the presence of a computer, a situation that could lead to decreased patient involvement in their health care. Further, using the EMR during the visit can interrupt the flow of conversation between clinician and patient. In addition, patients have concerns about the confidentiality of the EMR. With regard to exam room computing, patients have 2 critical questions: What are you doing (and what does it have to do with me)? And will my medical information be kept safe from prying eyes? Although these questions usually go unasked, the physician must anticipate and answer them.” – Laurence H Baker, PhD, and Vaughn Keller, EdD. Connected: Communicating and Computing in the Examination Room

- Tablets can be great tools for the clinic, but they do present a few unique challenges. Most tablets rely on some handwriting recognition to input data. While the handwriting recognition software is quite good, it can be tricky for some users. They also can 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 so that they have a chance to adapt to this unique way of entering data.
The following tool will help you analyze the practice’s state of readiness to adopt electronic point of care documentation.

Will the current facility accommodate changes made to the exam rooms?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Are finances something that will limit your ability to purchase POC solutions (wireless network, tablets, pocket PCs, etc.)?
_________________________________________________________________________________
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Are providers (MD, NP, PA) expecting changes to the way they interact with patients? How do they feel about these changes?
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Some practices operate well without documenting the entire visit 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 solutions, refer to the Site Visits on pages 107-110.
Plan

Describe how you would plan for the practice’s documentation. Include information on who will use what type of device where in the 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 resulting.

Document the Current State
In order to analyze the In-Office Communication for the 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?”

In this Section
- Document the Current State
  - Prescriptions
  - Telephone Calls
  - Results
- Vision and Goals
- Assessment
- Plan
### Document the Current State

**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:

____________________________________________________________________________________
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____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

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Page 30
<table>
<thead>
<tr>
<th>Phone Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a telephone triage system?  □ Yes  □ No</td>
</tr>
<tr>
<td>If yes, describe triage tree:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many of each type of phone message do you receive on a daily basis?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab results</td>
</tr>
<tr>
<td>Scheduling</td>
</tr>
<tr>
<td>Medical Advice</td>
</tr>
<tr>
<td>Billing</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who is involved in the phone message process?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe how each phase is completed (including where chart is placed):</td>
</tr>
<tr>
<td>Intake Call</td>
</tr>
<tr>
<td>Chart Pull</td>
</tr>
<tr>
<td>Clinical Action</td>
</tr>
<tr>
<td>Follow-up</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Describe the strengths and limitations of the current system:</th>
</tr>
</thead>
<tbody>
<tr>
<td>[________________________________________________________________________________________]</td>
</tr>
<tr>
<td>[________________________________________________________________________________________]</td>
</tr>
<tr>
<td>[________________________________________________________________________________________]</td>
</tr>
<tr>
<td>[________________________________________________________________________________________]</td>
</tr>
</tbody>
</table>
### Test Results

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you offer testing (lab/rad) in your office?</td>
<td>Yes  No</td>
</tr>
<tr>
<td>What primary testing facilities do your patient use? Please List.</td>
<td></td>
</tr>
<tr>
<td>How are test results received from the primary locations?</td>
<td>Direct print</td>
</tr>
<tr>
<td></td>
<td>Fax</td>
</tr>
<tr>
<td></td>
<td>Mail</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>How do test results get to the provider?</td>
<td></td>
</tr>
<tr>
<td>How are results communicated to the patient?</td>
<td>Phone call</td>
</tr>
<tr>
<td></td>
<td>Email</td>
</tr>
<tr>
<td></td>
<td>Letter</td>
</tr>
<tr>
<td></td>
<td>Visit</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td>Describe the strengths and limitations of the current system:</td>
<td></td>
</tr>
</tbody>
</table>

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

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**In-Office Communication**

A Systems Approach to Operational Redesign

Page 32

[DOQ-IT]
Vision and Goals

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

Discussion questions

- Is the practice adopting an EHR to improve communication throughout the office?
  - What “vision” do 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 is most concerned about during this transition?
  - Are there any issues that would-be deal-breakers?

Description of the Goals:

Prescriptions:

Intake

Chart Pull

Authorization

Follow-Up

Phone Message:

Intake

Chart Pull

Clinical Action

Follow-Up

Test Results:

Incoming

Review
Assessment

The most important change in the office workflow will be the advent of electronic communication. All messaging related to patient care will be handled in the EHR. This represents a fundamental change to the way the office operates.

Our primary concern is for patient safety and satisfaction, so you will see that many suggestions err on the side of caution. 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 workflow that you change, remember that the same systems you had for urgent issues before can still be used. They just need to incorporate an electronic way of documenting that care.
**Best Practices**

**Prescription Refills**

- The best practice would be to 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 also greatly decreases the amount of time spent pulling charts and contacting pharmacies. This allows you to fax prescriptions from the EHR directly to the pharmacy.
- Entering medications in a “field” format is imperative for the electronic prescribing or electronic faxing workflow.

**Best Practices**

**Phone Messages**

- The best practice would be to capture all incoming phone messages in the electronic chart. The notes should be sent electronically with no chart pull (*See Transition period note). Policies and Procedures should be 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 secretaries 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 secretary 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 secretaries will need to complete the message in the EHR but also pull the paper chart for physician review. It’s important to consider this as part of the EHR workflow. Will all messages require a chart pull along with the electronic message?*
Best Practices
Lab Results

- The best practice would be to have a lab results interface from the hospital lab in which they were processed to the EHR. The most important thing when working with interfaced lab results is to structure the workflow such that results are always reviewed. Interfaced lab results come into the system via electronic reminders.

- Communication of lab results back to the patient is a great tool for increasing contacts with patients and improving satisfaction. Some clinics have implemented a ‘lab letter’, generated in the EHR, to achieve this goal. How might you implement the 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. Can your vendor develop this report?

- Are there situations where the person who submits the lab order is not the patient’s primary physician? How will you deal with this in the EHR?

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 were not electronically directed to your lab.

- These labs are often treated like other outside documents that need to be scanned into the system. Will your new scanning workflow be efficient enough to deliver lab results in the timely manner?

- Are there paper lab values that need to be electronically stored? HgbA1C for diabetics, EF for CHF patients, amylase/lipase for liver patients, BUN and creatinines for renal patients.

- There may also be labs done in your office. The results of these labs also need to get into the EHR and to the ordering provider.

- 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. Will the staff in the lab have time to complete this information? If not, what will the process be?
Using the current state workflows, the goals of the practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for the practice.
In-Office Communication

Plan

Based on your assessment of the needs of the practice, design a new process map for a prescription refill.
Plan

Based on your assessment of the needs of the practice, design a new process map for a phone message.
Plan

Based on your assessment of the needs of the practice, design a new process map for test result communication.
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.

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.

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?”

In this Section
- Document Management Data Gathering Tool
- Scanning Capacity Analysis
- Vision and Goals
- Assessment
- Plan
Ongoing Document Processing

In order to understand more about the 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 the practice:

Document Management Data Gathering Tool

1. Is there dedicated medical records staff or are those responsibilities split over multiple staff roles?
2. How many outside documents come into the 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 the 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>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consults</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mammograms</td>
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<td></td>
</tr>
<tr>
<td>EKGs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Letters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge Summaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-ray results</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other procedure results</td>
<td></td>
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<td></td>
<td></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.

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

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

- How many scanning workstations will be available? __________________
Vision and Goals

What are the 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.

What additional questions do you need to ask to determine the vision for the 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 _____

Does their EHR software have an integrated document imaging management (DIM) system?

- If so, have they explored the functionality of this DIM?

Discussion questions:

Do they plan to become a paperless (or a less-paper) office?

- If yes, what gains do they hope to see from the paperless environment?

- If yes, are there any paper documents they might foresee allowing in the office?

What do they want to change about their current manual document process?
Describe the practice’s vision and primary goals for an improved document management workflow.

**Document Management Vision and Goals**

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Assessment

Electronic document management represents a significant change for the medical records staff in the practice, as the EHR becomes 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

The following best practices and analysis will guide you through the process of identifying the strengths and weaknesses of the practice.

### Best Practices

#### Document Management

- 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 is in the EHR. It does not mean that every office note has to be completed in the EHR, but that anything completed in paper is scanned, not filed.

- Filing backlogs can significantly complicate the above process of conversion. It will be much easier to locate documents later if you've cleared these 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 file and prep in the paper chart. In the beginning, however, as staff members learn the scanning system, it will take longer than your prep time for the 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, then sorting the documents, a fax server allows you to go straight to the sort process. It requires, however, that physicians review documents electronically, which can be a big change for some physicians.

For more ideas about possible solutions, see the Site Visits on pages 107-110.
Each workflow above highlights certain goals and opportunities for each practice. Using what you know about the practice and the workflows described above, define the key components for a new document management workflow for the practice.

**Document Management Assessment**

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________________________________________________________________________________
Plan

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

Outline the key milestones in your document management transition plans.
Draw the new process map of document processing based on document types, volume, and review procedure.
Appendix

In this Section

- Quick Reference Guide to Process Mapping
- Chart Abstraction and Pre-Loading Clinical Data
- Chart Abstraction Tool
- End-User Hardware Options
- A Case Study: Happy Valley Medical Practice
  - Patient Flow
  - Point of Care
  - In Office Communication
  - Document Management
Quick Reference Guide to Process Mapping

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

1) Analyze current state
2) Design future state

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.
Appendix

Chart Abstraction and Pre-Loading Clinical Data

Before you begin using the EHR with patients, you will want to populate the EHR with key clinical data taken from the paper records. Chart abstraction eases the stress of seeing patients for the first time in the EHR by pre-populating the patient records with clinical data like medications, problems lists, and health maintenance data. It is possible to scan some clinical data into the EHR to assist with this process.

Abstracting Clinical Data

Every practice is different but it makes sense to standardize the clinical data that will be available in the EHR when the providers first see patients. Once you know the data to be abstracted and entered, you need to determine the best way to get it into the EHR.

Discrete Data vs. Image Data

Data can be stored in an EHR in 2 basic formats:

Discrete data – each element is entered into a field and has a unique place in the database. Each occurrence of the element can be reported on. Example: A patient has a lab test done at the hospital that comes back with 3 results: HgA1c 6.0, Potassium of 3.5, and an INR of 3.0. If this data is entered discretely, then you should be able to view the HgA1c of today with the HgA1c from 6 months ago, graph them, etc.

Image data – the elements are entered as a block of text that cannot be retrieved at the level of the individual element. Data that is scanned is considered image type data, also known as “blob” type data. Example: A patient has a lab test done at the hospital that comes back with 3 results: HgA1c 6.0, Potassium of 3.5, and an INR of 3.0. If this lab result is scanned as a report, then you cannot isolate the HgA1c of today and graph it with the HgA1c from 6 months ago.

You need to determine what data needs to be entered as discrete data and what data can be scanned as an image or “blob”.

Discussion points:

- When implementing your EHR, it is important to determine how current problems, medications, allergies and significant past history from the patient chart will get into the EHR chart prior to go-live.
- It is important to determine what information users are going to need to see when they first start using your EHR. Once the content is determined, a plan needs to be developed for extracting this information from a paper chart, and entering it into the EHR.
- Preloading patient clinical information may be only required during the initial phase of the EHR go-live, until users are comfortable entering all necessary clinical information at the time of a patient visit.
- On the other hand, preloading may be an ongoing process if information is determined to be important. The length of the preload process will be defined by many factors including the amount of data to be entered, who will be doing the data entry, the number of charts to enter, etc.
**Decisions to be made:**

<table>
<thead>
<tr>
<th>Will clinical preloading be required by the enterprise prior to the EHR go-live?</th>
</tr>
</thead>
</table>
| Review the enterprise goals, particularly as they relate to provider productivity and continued use of the paper chart.  
If there is no information preloaded prior to go-live, then 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 preloaded, the sooner the clinic can stop pulling paper charts for visits and calls.  
The amount of work required to preload charts needs to be weighed against the accomplishment of the enterprise goals. |

<table>
<thead>
<tr>
<th>How and when will patient charts be created in the EHR?</th>
</tr>
</thead>
</table>
| Patient charts must be created in the EHR before the preloading can begin. These charts may be created either via a demographics interface with a practice management system or through manual registration of the patients directly in the EHR.  
If using a demographics interface, coordinate with the responsible staff and vendors to make sure that the live date for the interface gives the practice enough time to preload an adequate number of charts. |

<table>
<thead>
<tr>
<th>For manual information entry, what is the minimum clinical information to enter, e.g., current problems, medications, allergies and directives? Past lab data? Chart summary?</th>
</tr>
</thead>
</table>
| Make your decisions regarding preloading based on what minimum information a provider will need to look at the first visit or first phone call with a patient using the EHR.  
The enterprise should determine the minimum information that will be entered for each active patient. For example:  
- Problems, medications, allergies, and directives  
- Selected lab data for tracking purposes or for use in protocols  
- Selected immunization or vital sign information for tracking purposes or for use in protocols  
- Selected test results, such as colonoscopies, that could impact protocols  
Be reasonable in your decisions; it is tempting to plan to preload all pertinent information, but be sure to take into account the amount of time it will take to enter the information into EHR, especially for novice users. |

<table>
<thead>
<tr>
<th>Are the paper charts ready to support clinical preloading?</th>
</tr>
</thead>
</table>
| Review the current status of the paper charts. Are problems, medication, and allergy list easy to find and current? Is the face sheet current and accurate?  
If not, determine how you might get the paper charts organized for abstracting. |

<table>
<thead>
<tr>
<th>Are there any electronic methods of preloading information into the EHR chart?</th>
</tr>
</thead>
</table>
| In addition to manual entry, there are other ways to preload some clinical information into the EHR. Your lab system and/or transcription service may retain historical data that could be imported into the EHR electronically prior to go-live. For example, the EHR could be preloaded with 1 year of previous lab data, or the most recently transcribed notes.  
In addition, some sites have the provider dictate a summary note for each patient and import the transcribed note into the EHR.  
Also, some information may be scanned into the EHR. |
Determine the preload workflow to fit your EHR.

**How will patient charts be selected for preload?**

Some example patient populations to begin with might include:
- Patients scheduled for appointments within the first month after go-live
- Chronic patients seen regularly

**Will the pre-built EHR preload templates be used?**

<table>
<thead>
<tr>
<th>If the answer is yes…</th>
<th>If the answer is no…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine if the templates need to be customized to the site, for example do the problem lists and medication lists need to be modified?</td>
<td>Determine what templates will be used.</td>
</tr>
</tbody>
</table>

**Will the provider be the final sign-off on all data, even if entered by other staff?**

<table>
<thead>
<tr>
<th>If the answer is yes…</th>
<th>If the answer is no…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine the process for notifying the provider of the preloaded information. Determine the process for training the Providers.</td>
<td>Determine who has the authority to sign off on these notes and communicate this process to the entire staff.</td>
</tr>
</tbody>
</table>

**How will the pre-load process be handled post go-live?**

Some practices continue to pre-load data after Go-Live in order to keep the level of productivity of the providers and staff up. The length of time that this is done varies by practice and is usually determined by the resources available to sustain the effort.
The following CHART Abstraction Tool can be used to help you determine what data is meaningful for a practice to abstract and the best way to enter it into the EHR.

**Directions for the Chart Abstraction Tool**

**Information:**
List the key data elements that a practice may want to include in chart abstraction. This can include data like: Problem list, Medications list, last Pap and result, Immunizations, last 3 HgBA1C (diabetics), family history, allergies, height, weight, Living wills, consents. You would work with your clinical staff to determine the needed data.

**Where is this located in the chart:**
Indicate where this data can be found in the paper chart

**Who can identify/validate this data:**
Some data is very clearly documented in the paper chart; some data requires interpretation to translate into the standardized language of the EHR. For example, the Problem List in the EHR may be based on the use of ICD9 codes. The Problem List in the paper chart may be more loosely defined. A non-provider may abstract the Problem List but the provider may need to validate the Problem List before it becomes a part of the EHR.

**View as an Image or Discrete Data:**
Identify if the data can be scanned or needs to be entered discretely. For example, height and weight should be discreetly entered if you want the system to be able to calculate a drug dose or body surface area.

**Assign a priority:**
Determine how important it is to have this data in each abstracted record.

**How often is the document referenced:**
The placement of the document in the EHR may be determined by the frequency it needs to be referenced.

**How many occurrences would you expect to record:**
This will help you determine the volume of entry to be done.
# Chart Abstraction Tool

## Medications

<table>
<thead>
<tr>
<th>Location in Paper Record</th>
<th>Image</th>
<th>Data Elements 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>❑ No</td>
<td>Instructions</td>
<td>❑ Will save time</td>
<td>❑ Occasionally</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>
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<tr>
<td></td>
<td></td>
<td>Pharmacy</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can enter?</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>MD</td>
<td></td>
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<td></td>
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<tr>
<td>RN</td>
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<td></td>
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<tr>
<td>MA</td>
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<td></td>
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<tr>
<td>Front Desk</td>
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<tr>
<td>Temp Data Entry</td>
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<td></td>
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<tr>
<td>Other</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Who can validate?</th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>MD</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>RN</td>
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<td>MA</td>
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<tr>
<td>Front Desk</td>
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<td>Temp Data Entry</td>
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<tr>
<td>Other</td>
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</tbody>
</table>

Estimated # of Meds per patient: ________

## Allergies

<table>
<thead>
<tr>
<th>Location in Paper Record</th>
<th>Image</th>
<th>Data Elements to capture</th>
<th>Priority</th>
<th>Frequency of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Sheet</td>
<td>❑ Yes</td>
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</tr>
<tr>
<td>Allergy List</td>
<td>❑ No</td>
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<table>
<thead>
<tr>
<th>Who can enter?</th>
<th></th>
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<tbody>
<tr>
<td>MD</td>
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<tr>
<td>RN</td>
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<tr>
<td>MA</td>
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<tr>
<td>Front Desk</td>
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<tr>
<td>Temp Data Entry</td>
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<tr>
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<table>
<thead>
<tr>
<th>Who can validate?</th>
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<tbody>
<tr>
<td>MD</td>
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<tr>
<td>RN</td>
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<td>MA</td>
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<tr>
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Estimated # of Allergies per patient: ________
### Problems

**Location in Paper Record**
- Face Sheet
- Problem List
- Body of Notes
- Other

**Who can enter?**
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

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

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

**Data Elements to capture**
- Problem Description
- ICD-9 Code
- Past Hx Diagnosis
- Family Hx Diagnosis
- Dx from other physicians
- Onset Date
- Other

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

**Frequency of Reference**
- Frequently
- Occasionally
- Rarely

---

### 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.

**Location in Paper Record**
- Flowsheet
- Lab Tab in Chart
- Body of Notes
- Other

**Who can enter?**
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

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

**Data Elements to capture**
- Value
- Date of Test
- Other

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

**Frequency of Reference**
- Frequently
- Occasionally
- Rarely
## Previous Test/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.

<table>
<thead>
<tr>
<th>Location in Paper Record</th>
<th>Image</th>
<th>Data Elements to capture</th>
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<tbody>
<tr>
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<tr>
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### Who can enter?
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

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

- Image
- Yes
- No

- Priority
- Critical for patient care
- Will save time
- Nice to Have

- Frequency of Reference
- Frequently
- Occasionally
- Rarely

### Data Elements to capture
- Result
- Date of Test
- Other

*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.*

---

## Immunizations

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<th>Location in Paper Record</th>
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### Who can enter?
- MD
- RN
- MA
- Front Desk
- Temp Data Entry
- Other

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

- Image
- Yes
- No

- Priority
- Critical for patient care
- Will save time
- Nice to Have

- Frequency of Reference
- Frequently
- Occasionally
- Rarely

*Note: You may want to enter “Done” as the value for immunizations.*
### Office Visits

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<tbody>
<tr>
<td>Notes section of Chart</td>
<td></td>
<td>Date of Last Exam</td>
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<td>Frequently</td>
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<td></td>
<td>Height</td>
<td>Will save time</td>
<td>Occasionally</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>Weight</td>
<td>Nice to Have</td>
<td>Rarely</td>
</tr>
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<td></td>
<td></td>
<td>Blood Pressure</td>
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<td>MD</td>
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<tr>
<td>RN</td>
<td></td>
<td>Will save time</td>
<td>Occasionally</td>
</tr>
<tr>
<td>MA</td>
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<td>Nice to Have</td>
<td>Rarely</td>
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<tr>
<td>Front Desk</td>
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<td>Frequently</td>
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<tr>
<td>RN</td>
<td></td>
<td>Will save time</td>
<td>Occasionally</td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td>Nice to Have</td>
<td>Rarely</td>
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<tr>
<td>Front Desk</td>
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### Consult Letters

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<td>Frequently</td>
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<td>Assessment of Consult Exam</td>
<td>Will save time</td>
<td>Occasionally</td>
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<tr>
<td></td>
<td></td>
<td>Disease specific values</td>
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<td>Rarely</td>
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<tr>
<td></td>
<td></td>
<td>**Diabetic Foot Checks, Eye Exams, etc.</td>
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</table>

<table>
<thead>
<tr>
<th>Who can enter?</th>
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<td>Frequently</td>
</tr>
<tr>
<td>RN</td>
<td></td>
<td>Will save time</td>
<td>Occasionally</td>
</tr>
<tr>
<td>MA</td>
<td></td>
<td>Nice to Have</td>
<td>Rarely</td>
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<tr>
<td>Front Desk</td>
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<tr>
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<table>
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<th>Frequency of Reference</th>
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<td>Frequently</td>
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<tr>
<td>RN</td>
<td></td>
<td>Will save time</td>
<td>Occasionally</td>
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<tr>
<td>MA</td>
<td></td>
<td>Nice to Have</td>
<td>Rarely</td>
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<td>Front Desk</td>
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### Hospital Documents

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<tr>
<td>☐ Hospitalization section of Chart</td>
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<td>☐ Occasionally</td>
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<td>☐ Nice to Have</td>
<td>☐ Rarely</td>
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<tr>
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<tr>
<td>☐ RN</td>
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<td>☐ MA</td>
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<td>☐ Front Desk</td>
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<tr>
<td>☐ MD</td>
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<td>☐ RN</td>
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### Advanced Directives

<table>
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<td>☐ Yes</td>
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<td>☐ Body of Notes</td>
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<td>☐ Occasionally</td>
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<tr>
<td>☐ Other</td>
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<td>☐ Do Not Resuscitate</td>
<td>☐ Nice to Have</td>
<td>☐ Rarely</td>
</tr>
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<td>☐ Other</td>
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<td>☐ MD</td>
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</table>
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 paced in the front of the chart and the provider or a nurse can add the needed data to the pre-load tool 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. 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.

The data entry staff can then use the pre-load forms 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.

On average, it takes 18 minutes to complete a chart abstraction and enter it into the EHR.
### Problem/Dx List

<table>
<thead>
<tr>
<th>Description</th>
<th>Onset Date</th>
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<tr>
<td>Ex: Hypercholesteremia</td>
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### Medication List

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<th>Description/Dose</th>
<th>Sig</th>
<th>Start Date</th>
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<tr>
<td>Ex: Lipitor 20mg</td>
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<td>5/5/2005</td>
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### Immunizations

Expand as needed to include other immunizations

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<tr>
<td>Pneumovax</td>
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<tr>
<td>Hep B</td>
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<td>Meningitis</td>
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<td>Influenza</td>
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<td>MMR</td>
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<td>Polio</td>
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### Allergies

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

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### Flowsheet

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<td></td>
<td>Tobacco Use:</td>
<td>Y N Previous Amount</td>
</tr>
<tr>
<td></td>
<td>Alcohol Use:</td>
<td>Y N Previous Amount</td>
</tr>
</tbody>
</table>

---

**Appendix**

**Pre-Load Abstraction Worksheet**

Template to Organize Paper Record in Preparation of Preload

Patient Name:  
DOB:  

<table>
<thead>
<tr>
<th>Problem/Dx List</th>
<th>Medication List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Description/Dose</td>
</tr>
<tr>
<td>Onset Date</td>
<td>Sig</td>
</tr>
<tr>
<td></td>
<td>Start Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Immunizations</th>
<th>Allergies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date Given</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Onset Date</td>
</tr>
<tr>
<td></td>
<td>Reaction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flowsheet</th>
<th>Histories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>PMH:</td>
</tr>
<tr>
<td>Value</td>
<td>Surgical Hx:</td>
</tr>
<tr>
<td>Date</td>
<td>FMH:</td>
</tr>
</tbody>
</table>

**MassPRO**

A Systems Approach to Operational Redesign  
Page 64
## End User Hardware Options

<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 |
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 physicians’ 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 in 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 would be checking in, would also be getting checked 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.
Happy Valley Medical Practice Offices

Note: Drawing is not to scale
Appendix - 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 a 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. Feel free to ask your facilitator questions about Happy Valley if you feel you need more information. At the end of this section, you should have gathered key information about the flow for the provider visits, nurse visits, and lab visits.
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 EKG’s 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

“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 its stuck in the chart somewhere.” – Frannie, front desk
Appendix - Patient Flow

Happy Valley Case Study

Current State Process Flowsheet: Provider Visit

- Patient appears 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:
    - 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
    - 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

- Provider Visit
  - MA documents findings in the paper chart
  - MA leaves the room to go tell the provider that the patient is ready
  - 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 and requisitions and superbill
  - Does patient stop at the Front Desk as requested?
    - No: 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 day
  - Yes: Send record and superbill to billing

- Send record and superbill to billing
- Patient leaves
- Provider completes documentation
- Provider still has outstanding documentation for the visit - not usually done until the end of day
- Is visit complete?
  - No: Patient and subsequent data lost to the system
  - Yes: Send record and superbill to billing
### Analysis of the Provider Visit

#### Check-In

<table>
<thead>
<tr>
<th>Information Gathered by the Front Desk at Check-In</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ Verification of name and address</td>
</tr>
<tr>
<td>✔ Verification of insurance</td>
</tr>
<tr>
<td>✔ Copy of insurance card</td>
</tr>
<tr>
<td>✔ HIPAA forms</td>
</tr>
<tr>
<td>☐ Other:</td>
</tr>
</tbody>
</table>

If you are using a 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?

- ✔ Yes
- ☐ No

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

<table>
<thead>
<tr>
<th>Who takes the patient to the exam room?</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ MA</td>
</tr>
<tr>
<td>☐ MD</td>
</tr>
<tr>
<td>☐ Nurse</td>
</tr>
<tr>
<td>☐ Other:</td>
</tr>
</tbody>
</table>

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

- ✔ Yes
- ☐ No

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?

- ✔ Yes
- ☐ No

If yes, please list:

- 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
## Appendix - Patient Flow

### 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 diagnoses lists maintained?**

- List on the front page of the chart

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

- New pt visit note, established rate

**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 secretary 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

**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: Nurse/MA Visit

1. Patient appears for the appt
2. Patient signs in, is called, demographics verified, billing information verified
3. Eligibility checked by internet or phone call
4. Co-pay?
   - No
   - Yes
     - Patient returns to waiting room; Front desk notifies the nurse verbally that the patient is here and puts the medical record, superbill, and labels in a tray
     - Front desk gets the superbill, verifies the charges, and sets up any needed follow-up
5. Nurse performs needed treatment/procedure and documents findings in the paper chart
6. Nurse checks the vital signs, asks about the reason for the visit, verifies medications and allergies
7. Nurse takes the record and rooms the patient
8. Does patient stop at the Front Desk as requested?
   - No
   - Yes
     - Front desk gets the superbill, verifies the charges, and sets up any needed follow-up
9. Patient appears for the appt
10. Collect the co-pay
11. Nurse notifies provider verbally of need to see or consult on the patient
12. Nurse hands the patient any educational materials and the superbill
13. Does patient notify the provider verbally of need to see or consult on the patient?
   - No
   - Yes
     - Nurse notifies provider verbally of need to see or consult on the patient
     - Provider sees patient and documents in chart
14. Is visit complete?
   - No
   - Yes
     - Patient leaves
     - Send record and superbill to billing
     - Nurse still has outstanding documentation for the visit - not usually done until the end of day
15. Nurse completes documentation
16. END

END
## Analysis of the Nurse/MA Visit

### 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

What types of visits are done routinely as Nurse or MA visits only?

- Injection/Immunization
- Patient Education
- Lab Test
- Ear Irrigation

<table>
<thead>
<tr>
<th>Other (List):</th>
<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 for to see this patient.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection/Immunization</td>
<td>Location, medication, lot #</td>
<td>Handwritten in the chart, log</td>
<td>None usually; if reaction, yes</td>
<td>Physically locate</td>
</tr>
<tr>
<td>Patient Education</td>
<td>Topic, who was taught, documents given, assessment of pt knowledge</td>
<td>In a note</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Lab Test</td>
<td>With INR, document questions for assessment</td>
<td>In a form</td>
<td>None unless pt has a specific problem outside of protocol</td>
<td>Physically locate</td>
</tr>
<tr>
<td>Ear Irrigation</td>
<td>Procedure results, pt response, instructions</td>
<td>In a note</td>
<td>Rare</td>
<td></td>
</tr>
<tr>
<td>Other (List):</td>
<td>BP, orthostatic, any pt education</td>
<td>Flowsheet</td>
<td>None unless outside of protocol</td>
<td>Physically locate</td>
</tr>
</tbody>
</table>
### Analysis of the Nurse/MA Visit (continued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do the nurse/MA work under any protocols for the ordering of any tests?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, describe: DM-glucose; A1C; BP monitoring; urinalysis + cultures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where are charges/diagnoses captured for this visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encounter form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are patient education handouts given during the Nurse/MA visit?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Describe: File cabinet w/forms designed by office + from outside sources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What forms (if any) are used during a visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>List: VS flowsheets, coumadin form</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where are the charges/diagnoses captured for the visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superbill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If the patient requires specific follow-up (an appt, a referral to a specialist, or a test), how does the provider communicate this?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comment section on superbill</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Check-Out

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any changes from the provider visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Happy Valley Case Study

Current State Process Flowsheet: Lab-Only Visit

1. Patient leaves exam room with a lab test to be done.
2. Patient stops at the front desk?
   - Yes: Front desk looks at the test requisition.
   - No: ? How does the ordered test get tracked?
3. Depending upon the location for the test, an appointment may be made or the patient may have to call and make an appointment.
4. Appt made for patient to come in for a lab-only visit.
5. Front desk files the requisition under the appropriate date for the patient.
6. Patient comes in on the day of the test and waits in the hall until their name is called.
7. Patient is checked in - labels printed.
8. Front desk person pulls the requisition and carries it to the lab along with the labels.
9. Lab staff comes and gets patient and brings them to the drawing station.
10. Lab staff verify the identity of the patient.
11. Lab staff reviews the requisition to determine if an ABN is needed.
   - Yes: Patient must sign the ABN.
   - No: Test is drawn.
12. Specimen is labelled, bagged and documented in the log.
13. Patient leaves the lab.
### Key Questions to Ask: Lab-Only Visit

#### Lab/Clinical

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a separate draw station/room?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If no, describe how this is handled.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Who can perform the lab draws or in-office tests?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any trained staff can perform</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Only specific staff trained</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (describe):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What labs/tests are done in the office?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBC, A1c, urinalysis, glucometer, spirometer, EKG, Chem8.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We draw for all tests sent to Quest or the hosp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What labs/tests are resulted in the office?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CBC, A1c, urinalysis, glucometer, spirometer, EKG (cardiologist)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What information is documented in the chart?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placed in flowsheet or note. Specimen lost manifest completed for outside tests (Quest + hosp.). Separate requisitions completed for Quest + hosp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the provider have any involvement with these visits?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, describe how the provider is notified of the need for to see this patient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where are charges/diagnoses captured for this visit?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>We try to capture the drawing fee, not always successful. Use superbill.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are any paper logs kept for specimens gathered?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Log + manifest. Manifest goes w/the specimens to Quest + the hosp lab.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Check-Out

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are there any changes from the provider visit?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>If yes, describe:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Vision and Goals

To be successful, you have to have a vision of what you want the practice to look like after the EHR is implemented. Using the case study, describe what you think the goals could be for the Happy Valley Practice.

Discussion questions

- **Is Happy Valley 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 Happy Valley staff are most concerned about during this transition?
  - Are there any issues that would be deal-breakers?

Description of the **Happy Valley Practice Vision and Goals:**

**Check-In:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

**Rooming Patients:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

**Provider Visit:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

**Check-out:**

_______________________________________________________________________
_______________________________________________________________________

**Nurse/MA visits:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

**Lab/test visits:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

**General:**

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
Assessment

The most important change in the office workflow will be the advent of 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.

Our primary concern is for patient safety and satisfaction, so you will see that many suggestions err on the side of caution. The most important thing to remember when implementing an EHR, is that the computer does not take the place of common sense. For each workflow that you change, remember that the same systems you had before for urgent issues can still be used. They just need to incorporate an electronic way of documenting that care.

Best Practices

Below, we will look at some options for incorporating EHR into your office.

<table>
<thead>
<tr>
<th>Best Practices</th>
<th>Check-in</th>
</tr>
</thead>
<tbody>
<tr>
<td>The best practice would be to have the practice management system sending demographic and scheduling information into the EHR. The EHR would then send billing information back to the practice management system.</td>
<td></td>
</tr>
<tr>
<td>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 have a trigger that notifies clinical staff when the patient has been “arrived” in the practice management system. It is important to verify that there is a trigger in place, and that the process is covered in the Staff Training section of this book.</td>
<td></td>
</tr>
<tr>
<td>It’s also important to consider any forms you give the patient to complete. You need to determine if and how those fit into the EHR. If the patient is given a review of systems or past medical history form, can this be entered into the EHR by nurse/provider when they see the patient? There may not be a need for this form if a clinical person can review the forms within the EHR.</td>
<td></td>
</tr>
<tr>
<td>Co-pays should be collected at the time of visit. Check-in is usually the best place to capture the co-pays.</td>
<td></td>
</tr>
<tr>
<td>Cross-training of staff for eligibility checking eliminates bottlenecks around this process.</td>
<td></td>
</tr>
<tr>
<td>Establish a policy/procedure for rechecking of data on a regular basis.</td>
<td></td>
</tr>
<tr>
<td>Tracking of HIPAA forms should be possible in the EHR.</td>
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</table>
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.

Templates should exist for the most common visit types seen in the practice.

Validation of medications and allergies should be done at each visit.

Drop-downs 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.

Staff responsible for check-out should verify the charges as the patient visit concludes.

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.

The practice should have an established nightly reconciliation of appointments and charges.
Best Practices
Laboratory Visits

- There should be an interface between the practice and the major laboratories and radiology centers used by the office
- EHR should have 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 – Quest or the hospital lab
Using the case study, the current state workflows, the goals of the practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for Happy Valley Medical Associates.

Notes:

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Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for a Provider Visit. Be prepared to discuss the key areas of change from the current state and why your group decided on them.
Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for a Nurse/MA Visit. Be prepared to discuss the key areas of change from the current state and why your group decided on them.
Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for a Lab-Only Visit. Be prepared to discuss the key areas of change from the current state and why your group decided on them.
Appendix - Point of Care Documentation

Introduction

At Happy Valley, most documentation 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. These documentation procedures have evolved over time, and they work well. But 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 evolved 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. Feel free to ask your facilitator questions about Happy Valley if you feel you need more information. 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 met their EHR vision.
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

MAAs 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 4 out of every 5, and that they often add meds that the MAAs did not discover. MAAs’ 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.
You want to have a picture of the current documentation “culture” at Happy Valley Medical Practice. This analysis will help you determine staff preferences and patterns that will help you 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?

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<thead>
<tr>
<th>Role</th>
<th>What</th>
<th>Where</th>
<th>When</th>
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<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>
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<tr>
<td>NP</td>
<td>&quot;</td>
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<td>RN</td>
<td>procedures administered, education given, vitals, patient histories, 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>
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<tr>
<td>MA</td>
<td>vitals, medications</td>
<td>exam room</td>
<td>w/the patient</td>
</tr>
<tr>
<td>Secretary</td>
<td>phone messages, registration info</td>
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<tr>
<td>Phlebotomist</td>
<td>labs drawn</td>
<td>draw station</td>
<td>w/the patient</td>
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</table>
Discussion Questions

1. Are finances something that will limit the practice's ability to purchase POC solutions (wireless network, tablets, pocket PCs, etc.)?

2. Are providers (MD, NP, PA) expecting changes to the way they interact with patients? How do they feel about these changes?

3. Are staff members (RN, MA, secretaries) expecting changes to the way they interact with patients? How do they feel about these changes?

4. What roles at Happy Valley could be expanded to facilitate documentation in patients' charts?

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

6. 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?

7. What patient scenarios do you see as being inappropriate for POC documentation? What might be an acceptable approach to using the EHR in these situations (even in a limited manner)?

8. 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?
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

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<tr>
<td>Lab Area</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Elevators</td>
</tr>
<tr>
<td>Bench</td>
<td></td>
</tr>
<tr>
<td>Procedure Room</td>
<td></td>
</tr>
<tr>
<td>Lab Area</td>
<td></td>
</tr>
<tr>
<td>Draw area</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td></td>
</tr>
<tr>
<td>Fax/Printer</td>
<td></td>
</tr>
<tr>
<td>Practice Mgr Office</td>
<td>(PC)</td>
</tr>
<tr>
<td>Billing office</td>
<td>10 PCs for PMS</td>
</tr>
<tr>
<td></td>
<td>Printer</td>
</tr>
<tr>
<td></td>
<td>Cubicles</td>
</tr>
<tr>
<td>Break room/Meeting</td>
<td></td>
</tr>
<tr>
<td>Lab Area</td>
<td></td>
</tr>
<tr>
<td>Stairs</td>
<td>Elevators</td>
</tr>
<tr>
<td>Bench</td>
<td></td>
</tr>
<tr>
<td>Procedure Room</td>
<td></td>
</tr>
<tr>
<td>Lab Area</td>
<td></td>
</tr>
<tr>
<td>Draw area</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td></td>
</tr>
</tbody>
</table>
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, 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 to 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 Happy Valley office blueprint and the sample exam room layout, what recommendations would you make for:

The overall lay out of the practice’s space?
_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________

The overall layout of the exam rooms?
_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________

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

Before we set goals for POC documentation, we need to first build the case for its implementation. Is it in Happy Valley’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 from 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

______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
Using the case study, describe what you think the vision and goals could be for Happy Valley for point of care documentation.
Assessment

Point of care documentation with a computer is a fundamental change to the way that providers care for patients. The computer introduces new challenges to the patient-provider relationship for the practice. Practices must devise new strategies to cope with these challenges.

Best Practices

**Point of Care Documentation**

- “Paperless offices can increase patient satisfaction by reducing patient waiting times because doctors spend less time on paperwork and retrieving medical data. Patient registration information and patient history data can be filled out online even before a patient visits the office, freeing up the patient encounter with the physician so the physician can focus on the presenting problems and treatments. Physicians can quickly supplement their advice to patients with the wealth of patient education material software vendors include with their packages, as well as Internet health-related Web links. Physicians can click on the desired information and have it printed out for patients to take home with them. These disease- and treatment specific printouts help patients understand their illnesses, the plan of treatment, and the proper use of medications—all aimed at making the patient an active participant in his or her care and boosting patient care compliance. Patients can even self-educate themselves in the office waiting areas with available computer terminals, which can query Web sites about their specific conditions. After an office visit, to help ensure a higher level of patient compliance, the system can send out automatic reminders to patients (by e-mail or letter) of forthcoming appointments; needed lab tests; and preventive therapy, such as flu shots.” - American College of Physicians. The Paperless Medical Office: Digital Technology's Potential for the Internist

- “While exam room computing may provide benefit to clinician, patient, and health system, there are potential adverse impacts as well. In a review of research on exam room computing, Sullivan and Mitchell noted that doctors tend to talk slightly more while patients talk slightly less in the presence of a computer, a situation that could lead to decreased patient involvement in their health care. Further, using the EMR during the visit can interrupt the flow of conversation between clinician and patient. In addition, patients have concerns about the confidentiality of the EMR. With regard to exam room computing, patients have 2 critical questions: What are you doing (and what does it have to do with me)? And will my medical information be kept safe from prying eyes? Although these questions usually go unasked, the physician must anticipate and answer them.” – Laurence H Baker, PhD, and Vaughn Keller, EdD. Connected: Communicating and Computing in the Examination Room

- Tablets can be great tools for the clinic, but they do present a few unique challenges. Most tablets rely on some handwriting recognition to input data. While the handwriting recognition software is quite good, it can be tricky for some users. They also can 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 so that they have a chance to adapt to this unique way of entering data.
The following tool will help you analyze Happy Valley's state of readiness to adopt electronic point of care documentation.

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

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Are finances something that will limit your ability to purchase POC solutions (wireless network, tablets, pocket PCs, etc.)?

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Are providers (MD, NP, PA) expecting changes to the way they interact with patients? How do they feel about these changes?

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Are staff members (RN, MA, secretaries) expecting changes to the way they interact with patients? How do they feel about these changes?

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

What roles at Happy Valley could be expanded to facilitate documentation in patients’ charts?

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

How do you think patients will react to having a computer in the exam room?

_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Appendix - Point of Care Documentation

How might you encourage patient acceptance of the EHR?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

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?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

What patient scenarios do you see as being inappropriate for POC documentation? What might be an acceptable approach to using the EHR in these situations (even in a limited manner)?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

Some practices operate well without documenting the entire visit 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?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________

This would also be a good time to review the ‘End User Hardware’ guide in the Appendix of this workbook.
Site Visits

Before going ahead with planning the process changes, you 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 as applied to Happy Valley. At the end of this exercise, you may find things about each scenario that can be used at Happy Valley.

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?
______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

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

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?

______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________

Would you expect that it would facilitate complete visit documentation?

______________________________________________________________________________________
______________________________________________________________________________________
______________________________________________________________________________________
Appendix - Point of Care Documentation

Plan

Based on the Happy Valley case study, describe how you would plan for Happy Valley’s POC documentation. Include information on who will use what type of device where in the 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 resulting.

Document the Current State

In order to analyze the In-Office Communication for Happy Valley, 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?”

Using the Happy Valley Case Study, provide a detailed overview of the strengths and limitations of the current processes. Feel free to ask your facilitator questions about Happy Valley if you feel you need more information. At the end of this section, you should have gathered key information about the flow of communication in the office.
Happy Valley Medical Practice – A Case Study
In-Office Communications

“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 – Med Rec 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
Current State Process Flowsheet: Incoming Calls

Patient calls

Front Desk answers the call

Provider reviews the In holder in between patients/end of day

Provider calls the patient

Does it require a medication refill?

Front Desk staff take down the message and notes the provider

Is it for a test result?

Front Desk staff call for the medical records needed in batches of 10-15

Is the medication "on protocol" for refills?

Front Desk staff take down all of the needed information.

Is the request approved?

Call the pharmacy or fax refill

No

No

Yes

Call the patient

Document in the patient's chart

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.

Front Desk completes a message and puts it in the box of the appropriate person.

Front Desk requests the chart and puts the note with the chart in the In holder for the provider.

Front Desk takes down the message and notes the provider.

Front Desk takes down the message and gives the message to the referral person.

Incoming calls

Front Desk answers the call

Is it for a medication refill?

Yes

No

Yes

No

Yes

No

Yes

No
Document the Current State

### Prescriptions

<table>
<thead>
<tr>
<th>How do refills come into the office and what is the volume?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone calls from patient</td>
</tr>
<tr>
<td>Phone calls from pharmacy</td>
</tr>
<tr>
<td>Faxed forms from pharmacy</td>
</tr>
</tbody>
</table>

Who is involved in the prescription process?

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

- **Intake Call**: Secretary pulls chart, takes message
- **Chart Pull**: Secretary places chart on provider chair
- **Authorization**: 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; Chart-dependent; Long delays in handoffs</td>
</tr>
<tr>
<td></td>
<td>Hard to track refills</td>
</tr>
</tbody>
</table>
### Phone Messages

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have a telephone triage system?</td>
<td>☑</td>
<td>☐</td>
</tr>
</tbody>
</table>

If yes, describe triage tree:

- Appts, med refills go to secretary
- Med question, dedicated lab results → RN
- Billing to billing staff
- Question she can answer → handle
- Can’t answer/needs review → select appropriate MD

How many of each type of phone message do you receive on a daily basis?

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</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**: Secretary takes call/ RN takes call
- **Chart Pull**: Secretary pulls chart, gives to appropriate provider/ RN requests chart
- **Clinical Action**: RN, MD - returns message to secretary w/chart
- **Follow-up**: 
- **Other**: Secretary refiles chart

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>
### Test Results

Do you offer testing (lab/rad) in your office?  Yes  No  
UA, glucose, all else sent out to hosp

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

local hosp., Quest

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></td>
<td>No good way to track missing results</td>
</tr>
<tr>
<td></td>
<td>Duplicates</td>
</tr>
</tbody>
</table>
Vision and Goals

To be successful, you have to have a vision of what you want the practice to look like after the EHR is implemented. Using the case study, describe what you think the goals could be for the Happy Valley Practice.

Discussion questions
- Is Happy Valley adopting an EHR to improve communication throughout the office?
  - What “vision” do 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 Happy Valley staff is most concerned about during this transition?
  - Are there any issues that would-be deal-breakers?

Description of Happy Valley Goals:

Prescriptions:

- Intake ____________________________
- Chart Pull ____________________________
- Authorization ____________________________
- Follow-Up ____________________________

Phone Message:

- Intake ____________________________
- Chart Pull ____________________________
- Clinical Action ____________________________
- Follow-Up ____________________________

Test Results:

- Incoming ____________________________
- Review ____________________________
Assessment

The most important change in the office workflow will be the advent of electronic communication. All messaging related to patient care will be handled in the EHR. This represents a fundamental change to the way the office operates.

Our primary concern is for patient safety and satisfaction, so you will see that many suggestions err on the side of caution. 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 workflow that you change, remember that the same systems you had for urgent issues before can still be used. They just need to incorporate an electronic way of documenting that care.
**Best Practices**

**Prescription Refills**

- The best practice would be to 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 also greatly decreases the amount of time spent pulling charts and contacting pharmacies. This allows you to fax prescriptions from the EHR directly to the pharmacy.

- Entering medications in a “field” format is imperative for the electronic prescribing or electronic faxing workflow.

---

**Best Practices**

**Phone Messages**

- The best practice would be to capture all incoming phone messages in the electronic chart. The notes should be sent electronically with no chart pull (*See Transition period note). Policies and Procedures should be 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 secretaries 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 secretary 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 secretaries will need to complete the message in the EHR but also pull the paper chart for physician review. It’s important to consider this as part of the EHR workflow. Will all messages require a chart pull along with the electronic message?*
The best practice would be to have a lab results interface from the hospital lab in which they were processed to the EHR. The most important thing when working with interfaced lab results is to structure the workflow such that results are always reviewed. Interfaced lab results come into the system via electronic reminders.

- Communication of lab results back to the patient is a great tool for increasing contacts with patients and improving satisfaction. Some clinics have implemented a 'lab letter', generated in the EHR, to achieve this goal. How might you implement the 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. Can your vendor develop this report?

- Are there situations where the person who submits the lab order is not the patient's primary physician? How will you deal with this in the EHR?

**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 were not electronically directed to your lab.

- These labs are often treated like other outside documents that need to be scanned into the system. Will your new scanning workflow be efficient enough to deliver lab results in the timely manner?

- Are there paper lab values that need to be electronically stored? HgbA1C for diabetics, EF for CHF patients, amylase/lipase for liver patients, BUN and creatinines for renal patients.

- There may also be labs done in your office. The results of these labs also need to get into the EHR and to the ordering provider.

- 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. Will the staff in the lab have time to complete this information? If not, what will the process be?
Using the case study, the current state workflows, the goals of the practice, and the best practice recommendations, analyze and discuss the workflow processes and identify the problem areas and possible solutions for Happy Valley Medical Associates.

**Happy Valley Medical Associates In-Office Communication**

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________________________________________________________________________________
In addition to the technology and functionality described so far in this section, there are other technologies that you may want to consider to help improve the flow of communications in the office.

| **Patient Portals** | A patient portal is a web-based way for your patients to interact with the practice. This is a module for some EHR's or it can be purchased from a separate vendor and interfaced to your EHR. Patient portals usual allow patients to request appointments and refills electronically, get test results, and review patient education materials. More advanced patient portals allow patients to actually schedule their own appointments, view or print selected parts of their charts, and email their provider. A patient portal, properly configured, can decrease the patient telephone calls for information and help fielded by the office staff. |
| **Expanded telephone systems** | Many offices now use a telephone strategy to help route incoming calls so that the appoints go to a particular line, refills to another, and so on. These telephony “trees” do help triage the incoming calls. One other concept is the use of “Voice over IP” technology. In its simplest terms, this technology uses your computer network to handle your telephony needs. This may be helpful with larger practices. |
| **Voice paging systems** | Voice paging systems allow the entire office staff to be reached in real time by a voice page. Each staff person has a device about 1" by 3" that they wear that acts as a receiver/microphone. There is no overhead paging or “hunt and find” to locate an individual. The system also can handle “voice activated calling” for outside calls so a nurse or physician can make a call from anywhere in the office – no physical phone needed. If you have a large staff or are located on multiple floors of a building, this might be a technology to consider. |
Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for a prescription refill. Be prepared to discuss the key areas of change and why your group decided on them.
Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for a phone message. Be prepared to discuss the key areas of change and why your group decided on them.
Plan

Based on your assessment of the needs of the Happy Valley Medical Practice, design a new process map for test result communication. Be prepared to discuss the key areas of change and why your group decided on them.
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.

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.

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. Feel free to ask your facilitator questions about Happy Valley if you feel you need more information. 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.

In this Section

- Determine the Current State of the Practice
  - Case Study: Document Management
  - Documentation Tools
- Vision and Goals
- Assessment
  - Documentation Management Data Gathering Tool
- Plan
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 – Med Rec 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, PA

“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:

Valley Hospital: 40%
- Labs: 80%
- Tests / Procedures: 15%
- Consults: 5%

Johnson Memorial: 25%
- Labs: 20%
- Tests / Procedures: 70% (Primarily preventative screening (mammos, bone mineral density, colonoscopies, etc.)
- Consults: 10%

Patients: 5%
Consults from specialists: 20%
Skilled nursing facilities: 10%

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.
Appendix - Document Management

A Systems Approach to Operational Redesign

Document Workflow

- Document arrives
- Faxes come to the back table and are looked at every few hours

Start

Results - Front desk requests the patient record

Front desk looks up the patient, determines who the appropriate provider is, places the document in the provider’s In Box

Is the document a fax?
- If hand carried by patient or in the mail, front desk date/time stamps.
- Front desk reviews and determines who should look at the document.

Is the document a test result?
- Attach document to the patient record
- Place record with document in the provider’s In Box
- Provider reviews and initials the document

Provider calls patient, documents in chart

Does the patient require a call?
- Chart gets returned to the record room
- Does the patient require a call?

Patient is called, document in the chart

Provider requests the chart

Is the chart needed?
- Provider reviews and initials the document and places it in Out box
- Document is returned to the record room

Does the patient require a call?
- Does the patient require a call?

Provider reviews

Provider pulls a standard results letter, checks the results, puts patient name and address on the letter, puts letter in Out box

Document gets filed in the chart

End
Ongoing Document Processing

In order to understand more about the Happy Valley Medical Associates’ 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 the practice every week?  
   - _____ <100  
   - _____ 101-200  
   - [X] 201-300  
   - [X] 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?  
   - Every
7. Define the documents that come into the 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>hosps (mainly local) \ guest, 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>lookup 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) ________/day ________

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

- How many scanning workstations will be available? ________ 1 ________
Vision and Goals

What are Happy Valley’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.

What additional questions do you need to ask to determine the vision for Happy Valley? 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 _____

Does their EHR software have an integrated document imaging management (DIM) system?
- If so, have they explored the functionality of this DIM?

**Discussion questions:**

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

What do they want to change about their current manual document process?
Given the information in the case study, your interviews and observations, describe Happy Valley Medical Associates’ vision and primary goals for an improved document management workflow.

**Happy Valley Medical Associates Document Management Vision and Goals**
Assessment

Electronic document management represents a significant change for the medical records staff in the practice, as the EHR becomes 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

The following best practices and analysis will guide you through the process of identifying the strengths and weaknesses of the practice.

### Best Practices Document Management

- 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 is in the EHR. It does not mean that every office note has to be completed in the EHR, but that anything completed in paper is scanned, not filed.

- Filing backlogs can significantly complicate the above process of conversion. It will be much easier to locate documents later if you’ve cleared these 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 file and prep in the paper chart. In the beginning, however, as staff members learn the scanning system, it will take longer than your prep time for the 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, then sorting the documents, a fax server allows you to go straight to the sort process. It requires, however, that physicians review documents electronically, which can be a big change for some physicians.
Before beginning the process of developing a documentation management plan for Happy Valley, you decided to conduct a few site visits to see how your peers are managing their processes with EHR. While you couldn't find anyone who matched your exact profile, there are folks in your area who are handling their challenges in unique ways. Discuss the challenges and benefits of each scenario as applied to Happy Valley. At the end of this exercise, you may find things about each scenario that can be used at Happy Valley.
Example 1 - Community Health Center - scanning process

Main Street site, school-based sites

- Documents arrive at Main St, school-based sites
- Mailroom tags each document with:
  - two patient identifiers
  - provider name
- Documents sent to CHC by courier

CHC mail room

- Documents arrive at CHC
- Mailroom tags each document with:
  - two patient identifiers
  - provider name

Medical Records CHC

- Pre-sort paper documents into main scanning categories
- Medical records staff
- Scanning coordinator
- Scan pre-sorted documents into reasonably-sized batches
- Is the document legible?
- Yes
- No
- Scanning coordinator
- Follow procedure for illegible documents
- Rename, refile, and resend
- Medical records staff
- Sort scanned documents:
  - Name document using naming conventions
  - Send to appropriate provider
- Providers review documents in PAQ
- Is the document legible?
- Yes
- No
- Determine appropriate follow-up
- Is the document appropriately named and filed?
- Yes
- No
- Approve and sign-off

Providers

Clinic #1:

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 Happy Valley? 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 Happy Valley? Would it be necessary? Why or why not?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Clinic #2:

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.

![Diagram of document management process]

**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-reviewed documents**

- Lab results, radiology
- Correspondence from outside providers
- Medical histories from outside offices

**No review needed**

- Office-generated documentation
- H&Ps
- Discharge notes, dictated consults from in-patient hospital visits
- PFTs
- Office-generated documentation

**Physician review of document**
Clinic #2:

What are the strengths of this model?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

What are the weaknesses of this model?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Would this process work for Happy Valley? 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 Happy Valley? Would it be necessary? Why or why not?
__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Clinic #3:

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?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

What are the weaknesses of this model?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________

Would this process work for Happy Valley? 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 Happy Valley? Would it be necessary? Why or why not?

__________________________________________________________________________________
__________________________________________________________________________________
__________________________________________________________________________________
Each workflow above highlights certain goals and opportunities for each practice. Using what you know of Happy Valley Medical Associates and the workflows described above, define the key components for a new document management workflow for Happy Valley Medical Associates.

Happy Valley Medical Associates Document Management Assessment

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

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________________________________________________________________________________
Plan

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

Outline the key milestones in your document management transition plans.
Appendix - Document Management

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