Workflow Redesign for EHRs

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REACH

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Objectives

- Learn the value of understanding current clinical workflows
- Understand how workflow documentation can improve the success of an EHR implementation
- Increase awareness of practical workflow analysis tools
- Receive suggestions on ways to involve clinical staff
What’s so Great About Flow Charts?

Is there potential for process improvement?
Why Map Processes?

- Excellent early step to engage the organization in the idea of change
  - EHR will force standardization
  - EHR implementation requires a review of workflow
  - Process mapping engages structured thinking
- Potential for process improvement
  - Almost always “aha moments”
- Captures key controls, processes, important ways you are unique
- EHR success is about the People and the Process, NOT the technology.
Process Maps & the EHR

- Process maps illustrate nature of the activities and the sequence & flow of the work
- Process maps are a visual representation of complex activities
- Process mapping begins the change management process by engaging users
- Process maps help identify problems and workarounds in the current system
- Process maps can form the basis for identifying functional requirements in the EHR
Key Concepts & Definitions

- **Workflow**
  - The study of “Who Does What When”

- **Process**
  - A complete set of activities that crosses functional boundaries to accomplish a task.

EVENT ➔ TASKS ➔ RESULTS
Workflow Analysis

- Frame the Process
- Understand the current (as-is) process
- Design the new (to-be) process
## Process Frame Example

- **Boundaries**
  - Major steps in the process from the trigger event to the end result

- **Stakeholders / Customers**

- **Mechanisms**

- **Case For Action / Assessment**

- **Vision**

- **Metrics / Measures**

### PROCESS FRAME

<table>
<thead>
<tr>
<th>Process Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger Event</td>
</tr>
<tr>
<td>Case for Action</td>
</tr>
<tr>
<td>Customers / Stakeholders</td>
</tr>
</tbody>
</table>
### Establishing Expectations for Use of EHR in Key Clinical Processes

<table>
<thead>
<tr>
<th>Visit Specific Processes</th>
<th>EHR Impact Function</th>
<th>Benefits</th>
<th>Metrics</th>
<th>Expectations/Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-Visit</strong></td>
<td></td>
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<tr>
<td>Appointment scheduling</td>
<td>- Patient portal for scheduling visit</td>
<td>- Context-specific scheduling of diagnostics studies prior to visit</td>
<td># FTE scheduling # FTE pulling/filing charts and loose sheets</td>
<td>- Reduce clerical staff 75% through attrition - Check eligibility on 95% of patients, reducing A/R days by 5 and cutting bad debt by 50% - Increase patient satisfaction scores by 3%</td>
</tr>
<tr>
<td>Diagnostic studies scheduling</td>
<td>- Automated self history &amp; symptom assessment</td>
<td>- Check eligibility</td>
<td># in collections # days in A/R # FTE prepping charts Patient satisfaction</td>
<td></td>
</tr>
<tr>
<td>Insurance verification</td>
<td>- ASC X12N 270/271 Paperless</td>
<td>- Reduce/eliminate filing</td>
<td></td>
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<tr>
<td>Chart preparation</td>
<td>- Patient portal for scheduling visit</td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Check in</strong></td>
<td>- Workflow - Wait times calculated</td>
<td>- Reduce wait time</td>
<td># minutes wait time # patient visits/hour/ physician</td>
<td></td>
</tr>
<tr>
<td><strong>Patient intake</strong></td>
<td>- Context-specific template-based charting - Health maintenance reminders</td>
<td>- Compliance with health maintenance</td>
<td># records identifying flu shot status # DM foot exams</td>
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<tr>
<td>Documentation of vitals, HPI, etc.</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td>Check on health maintenance</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td>Patient preparation</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td><strong>Review chart</strong></td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Review results (incl. images)</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td>Review past encounter data</td>
<td>- Patient portal for scheduling visit</td>
<td></td>
<td></td>
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<tr>
<td>Review other provider &amp; patient-supplied data</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td><strong>Clinical documentation</strong></td>
<td>- Patient portal for scheduling visit</td>
<td></td>
<td></td>
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<tr>
<td>Validate history data</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td>Record physical exam</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td>Document encounter notes</td>
<td>- Patient portal for scheduling visit</td>
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<tr>
<td><strong>Care planning</strong></td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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</tr>
<tr>
<td>Develop care plan consistent with guidelines</td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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<tr>
<td><strong>Medication management</strong></td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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<td></td>
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<tr>
<td>Order medications</td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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<tr>
<td>Manage refills: local pharmacy, mail order</td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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<tr>
<td>Manage samples</td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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<tr>
<td>Reconcile medications</td>
<td>- Integrated provider EHR and patient PHR - Inter-disciplinary, multi-media, and remote access - Continuum of care</td>
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</tbody>
</table>
The Current (As-Is) Process

- Map the current process using progressive levels of detail until the process is understood
- Use an 80/20 Rule at a sufficient detail to inform the software configuration process
- Capture low hanging fruit or ah hahs
- Remember to include the staff involved in the process
The New (To-Be) Process

- Combination of the as is and the design of the technology
  - Functional benefits
  - Functional constraints
- Forms the basis for change management and training
- Distributed widely and discussed
Current As-Is Process

 Radiologist
 Dictate films

 Transcription clerk
 Pick up packets

 Transcriptionist
 Place on shelf in Transcription

 Radiologist
 Dictate films

 Transcriptionist
 Picks up packets from shelf

 Transcriptionist
 Transcribe radiology records

 Transcriptionist
 Return to done section

 Radiologist
 Signs off on Report

 Finish

 Return complete reports to Radiology

 Finish

 Future To-Be Process

 Radiologist
 Dictate films using voice recognition

 Transcriptionist
 Retrieves dictated report from system

 Transcriptionist
 Validates content

 Finish
Process Mapping Tools

- Tools may be used at varying levels of detail
- Tool selection may depend on the nature of the process being mapped
- Tools may be paper-based, automated, or web-based
- There are a variety of process mapping tools; the key is to choose the one that works best for your organization
- The tool is not as important as understanding the process
Process Mapping Tools

- Flowcharts
  - Graphical, pictorial mapping tool
  - Easy to understand
  - Can be high level or detailed
- Common shapes to use

Terminator: Start and Finish
How to Map Processes

- With a team of experts – the people who do the work
- Written down
- Dynamically – in a way that can be updated
- With or without flow charting tools
- With a sense of engagement or excitement
Getting Started
Discuss Drawing Blood

- What event needs to be in place to start?
- What info needs to be delivered to the next step?
- What is a process step for this process?
- What is a work instruction?

1. Start
2. Order for blood draw is placed
3. Lab Receives Order
4. Lab technician identifies patient
5. Correct Patient?
   - Yes: Tech draws Blood
   - No: Locate correct patient
7. Tech delivers sample to Lab
8. Lab analyzes and reports the results
9. End
Process Mapping Tools

- **Top Down Process Map**
  - Can refer to another pre-defined process
  - Use the least number of steps necessary, usually 7 or 8 steps
  - Stay at a high level; more detail can be added later if necessary
Top Down Process Map
(High Level)

Minneapolis School Based Clinics
Top Level Process

1.0 Inform Students About Services
2.0 Register Students and Prepare Charts
3.0 Schedule Visits and Follow Up
4.0 Provide Care and Document Encounters
5.0 Bill Payers, Report to Funders, and Manage Collectables
Top Down Process Map (More Detailed)

Step 1
Inform Students about Services

1.1 Develop Communication Plan
1.2 Execute Communication Plan
1.3 Evaluate Effectiveness
1.4 Follow up

Step 2
Register Students & Prepare Charts

2.1 Collect Demographic Information
2.2 Collect Completed Forms
2.3 Organize Charts

Step 3
Schedule Visits & Follow up

3.1 Schedule Visit
3.2 Communicate Date/Time of Appointment
3.3 Set up Reminder for Appointment

Step 4
Provide Care and Document Encounters

4.1 Check Student In
4.2 Place in Room
4.3 Provide Care & Document Visit
4.4 Check Student Out
Swimlane Diagram

Sample Swimlane Diagram

- Registration Clerk: Registers Patient and Collects Co-Payment Due
- Medical Assistant
- Rooms Patient: Records Reason for Visit and Vital Signs in Chart
- Provider
- Instructs Patient
- Examines and Treats Patient and Documents in Patient Chart
- Greets Patient, Verifies Reason for Visit and Vital Signs

(AHIMA Resource Book: Optimizing Investment in the EHR, 2006. 7)
What We’re Looking For

- The right way
  - Not:
    - My way
    - Your way
    - The way we’ve always done it

- Focus on the right way is often a cultural change
What to Map

- Use 80-20 Rule: 80% is good enough

- Common process list:
  1. Pre-Visit
     - Appointment scheduling
     - Diagnostic studies scheduling
     - Insurance verification
     - Chart preparation
  3. Patient intake
     - Documentation of vitals, HPI, etc.
     - Check on health maintenance
     - Patient preparation
  4. Review chart
     - Review results (incl. images)
     - Review past encounter data
     - Review other provider & patient-supplied data
  5. Clinical documentation
     - Validate history data
     - Record physical exam
     - Document encounter notes
  6. Care planning
     - Develop care plan consistent with guidelines
  7. Medication management
     - Order medications
     - Manage refills: local pharmacy, mail order
     - Manage samples
     - Reconcile medications across continuum of care
  8. Ordering
     - Diagnostic studies
     - Surgery
     - Referrals
     - Admissions
     - Nursing services
  9. E&M coding
  10. Charge capture
  11. Patient instruction
     - Education
     - Summary of visit
  12. Check out
Process Improvements

- Look for
  - Duplication
  - Variation
  - Inefficiencies
  - Inconsistencies
- Ah Ha’s, low hanging fruit
- Correct some things you find
- Communicate and celebrate
Conclusion

- The power of process mapping lies in the visual representation of complicated concepts
- Process mapping is a vital step in preparing for EHR implementation
- Process mapping has inherent benefits beyond the EHR
- There is no one right tool
- Engaging people who do the work is essential to success