

Workflow Assessment for Health IT in Ambulatory Care

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Background

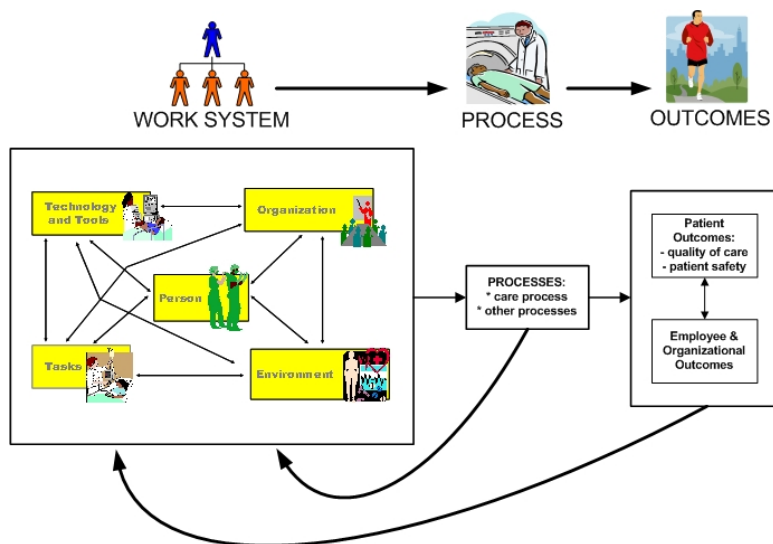
- ❑ This presentation is based on work done for the AHRQ contract on “Incorporating Health Information Technology Into Workflow Redesign” [HHSA290-2008-10036C].
- ❑ http://cqpi.engr.wisc.edu/withit_home
- ❑ <http://healthit.ahrq.gov/workflowfinalreport>
- ❑ <http://healthit.ahrq.gov/workflow>

What is Workflow?

Defining Workflow

□ Workflow:

- who, what, where, when and how things get done in your healthcare organization
- both clinical and administrative work



SEIPS [Systems Engineering Initiative for Patient Safety] Model of Work System and Patient Safety (Carayon et al., 2006)

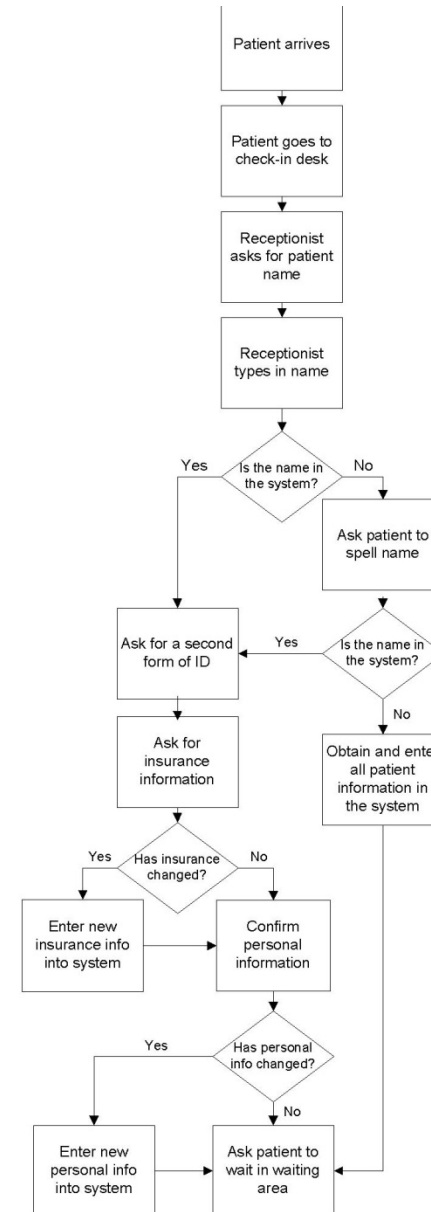
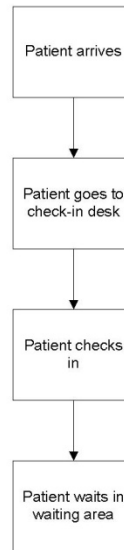
Examples of clinic workflows

http://healthit.ahrq.gov/portal/server.pt?open=512&objID=1135&mode=2&pid=DA_1014962&cid=DA_1014629&p_path=/DA_986294/DA_1014962/DA_1014629&pos=#Answer

- ☐ Answering phones
 - Flows for different types of phone calls
- ☐ Appointment system
 - Flows for new vs. existing vs. continued vs. non-continued care patients
- ☐ Messaging
 - To different types of staff and for different reasons
- ☐ Order diagnostic testing
 - Flows for different kinds of tests
- ☐ Reporting diagnostic test results
 - Flows for different kinds of tests or normal vs. abnormal
- ☐ Ordering medications, including
 - Prescription renewal
- ☐ Making referrals
- ☐ Billing and coding
- ☐ New patient work-ups
- ☐ Chronic disease management
- ☐ Receiving and processing patient information from outside providers
- ☐ Confirming insurance or pay status

Detailed flowcharts

- Two flow charts of the workflow of “patient check-in”.
- Both figures are accurate descriptions of the same process at a particular clinic.
- But only the figure on the right (2) shows the details of *what the workflow really is*.





Is workflow just the sequence of steps of a process?

☐ Not exactly.

☐ Workflow is the sequence of:

- physical and/or mental **tasks** performed by various **people**
- **over time and through space.**
 - ☐ It can occur sequentially and/or simultaneously
 - ☐ It can occur at different and/or multiple levels

Workflow at different levels

1. Inter-organizational workflow
2. Clinic-level workflow
3. Intra-visit workflow
4. Cognitive workflow

A more detailed example: Medication orders

- Consider the workflow of ordering a medication.
- Without e-prescribing, the workflow might involve a provider with prescribing privileges writing a prescription on a prescription pad, signing it, and handing it to the patient.



Calcium Gluconate 2 (amps) Slow IVP
(each over 10min) following dialysis
Mg Sulfate 5g in 150 cc DSW Over 30'
Alumina 250m (25%) IV now during dialysis

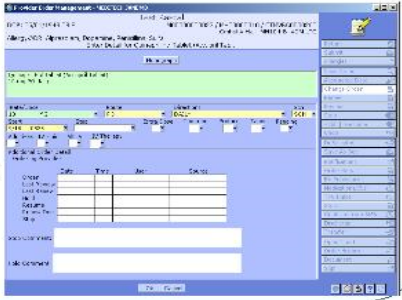


Medication orders: e-Prescribing

- Implementing e-prescribing changes the mental and physical steps of the process, as well as the order of steps and the organizations involved.
 - Providers have to log into the system, remembering a password.
 - They have to access the record of the particular patient, which involves a series of physical steps using the mouse and/or keyboard.
 - They have to execute mental steps of searching for the correct information and locating the correct medications and pharmacy.
 - Both the provider and patient need to know the pharmacy where the patient will pick up the medication.

Medications

- Able to choose from thousands of medications – 1st Data Bank
- Orders follow the Medication Rights
- Order is editable changes can be made to the start date, dose, frequency, etc.
- Dose instructions and comments can be entered



Why is it important to understand your workflow when planning, implementing, and using health IT?

Answer #1:

To avoid pain and suffering

- Many clinics have implemented health IT only to find that they did not anticipate how much **an EHR, clinical decision support or other technologies** can change clinical and administrative workflows.
- Suddenly *the way things have to get done* becomes very different:
 - The unanticipated changes cause considerable pain during and after implementation for the clinic staff.
 - Significant disruptions in patient care, billing, communication, etc...

Answer #2:

To assist in vendor selection

- Workflow analysis can:
 - Identify efficient and productive workflows that you would like to keep and inefficient ones that you would like to change.
 - Determine how your workflows are likely to change after implementing the technology.
- With that information, you can ask each potential vendor about how their technology will affect different workflows.
- This way, you can select the vendor that best fits your practice.

Answer #3:

To better prepare and train staff

- Every time you make a change to your practice, *especially when implementing health IT*, your clinical and practice management workflow will change.
- These changes may affect some staff members more than others.
- You need to train staff for the changes that will affect them.

Answer #4:

To plan ahead


- Although technology implementation may seem like a simple change, it is likely to be much more complex and challenging than you anticipate.
- By identifying how workflows will change, you can make better decisions.

How to Evaluate Workflow?


Toolkit on Workflow Assessment for Health IT

- The Toolkit is a comprehensive compendium of information that includes:
 - information on how to analyze workflow,
 - tools to analyze workflow,
 - examples of workflow analysis and redesign,
 - others' experiences with health IT and workflow, and
 - research on health IT and workflow.

Demonstration of Toolkit



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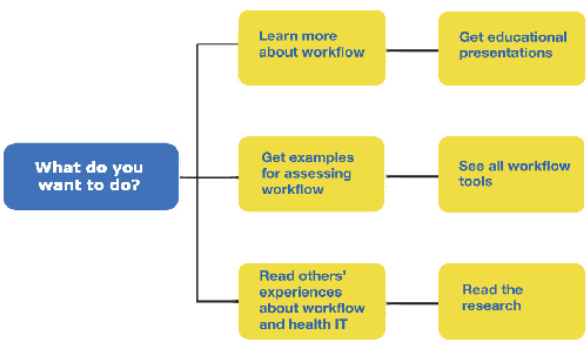
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Workflow Assessment for Health IT Toolkit

Workflow Home

A key to successful implementation of **health information technology (health IT)** is to recognize its impact on both clinical and administrative **workflow**. Once implemented, health IT can provide information to help you reorganize and improve your workflow. This toolkit is designed for people and organizations interested or involved in the planning, design, implementation, and use of health IT in ambulatory care.



<http://healthit.ahrq.gov/workflow>



Workflow Assessment for Health IT Toolkit

Too often clinics believe workflow should only be assessed after a vendor product has been selected and just before the health IT is implemented. By understanding workflows and preparing for changes to them throughout the planning and implementation process, a clinic is better prepared for the workflow changes postimplementation.

Below are the various stages associated with health IT implementation and use. For each stage, key workflow assessment activities are listed. When selecting a specific activity, you are then provided with an example of the tool and a more complete description of its use.

