“Tips On Workflow Analysis During a EHR Implementation”

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Office of Health Information Technology and Quality

Additional HRSA Health IT and Quality Toolboxes and Resources including past webinars can be found at:

http://www.hrsa.gov/healthit
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Additional questions can sent to the following e-mail address:

HealthIT@hrsa.gov

- US Department of Health and Human Services
- Health Resources and Services Administration
Upcoming HRSA Health IT and Quality Announcements

- Next 2011 HRSA HIT and Meaningful Use Workshops
  - January 24-25, 2011 Texas Association of Community Health Centers in Austin Texas
  - February 1-2, 2011 University of Arizona, Arizona Telemedicine Program


- Two HRSA Health IT and Quality Webinars in February on open source health IT software
  - “Tips on Open Source Software Models and Solutions in the Safety Net Community” February 10, 2011
  - “Overview of Alternate System Solutions for Health IT” February 24th, 2011 (tentative)

- CMS Opens Registration for Eligible Professionals and Hospitals interested in participating in the CMS Medicare and Medicaid EHR Incentive Program
Introduction

Presenters:

Jan Wilkerson-George Association for Primary Health Care (GAPHC)
Timothy Roark-GAPHC
Richard Turner-GAPHC
Dr. Rodolfo Urby-CommuniCare Health Centers
Katie Kerr-Kanabec Hospital
Workflow Analysis During EHR Implementation

GAPHC

Timothy Roark  --  Chief Information Officer
Richard Turner  --  HCCN Program Director
Jan Wilkerson -- RN, CPHQ
Our Model (myHCCN)

- Service model
- Then add-ons
- Additional services as needed
- Wanted to leave Autonomy to participants
  - Next Gen, GE Centricity, eCW, Success EHS, Alteer Office, Allscripts
- QI integrally involved in development of service

- WE DID NOT START TRYING TO DO EVERYTHING
  - No Revenue Cycle Management
  - No Train - the- Trainer Services
  - No 1-EMR/PM Vendor - Remained Vendor Neutral
Georgia Story (Demographics of HCCN)

- 335+ Providers
- 140+ Clinical Access points
- 27 FQHC Organizations
- 2 Tier IV Power SAS 70 Type II Certified Data Centers
Workflow Analysis

Workflow analysis is a study of the way documents, information and people related to a process move through an organization, in order to improve efficiency.
Steps to Workflow Analysis

- Review and assessment of current state
- Definition of future state requirements and workforce strategy
- Summary of benefits and operational savings
- Implementation roadmap
Scope of Workflow Analysis

- Current document management systems
- Current document workflow processes
- Security and permission requirements
- Identification of challenges and opportunities
Benefits and Savings

- Overall efficiency
- Employee time efficiency
- Physical space utilization
- Improvements in customer service
- Compliance
- Employee job satisfaction
Why Use Workflow Analysis?

- To illustrate the movement of MATERIAL/ INFORMATION/ PEOPLE within a system to determine optional positioning or activity sequencing
  - Best place for the PC station or location of EHR Notebooks/ pads
  - Improve movements of staff and patients through the clinical system
Radiology Workflow before PACS

1. Imaging personnel take the x-ray.
2. The x-ray is transported to the reading area.
3. The radiologist reviews the x-ray images.
4. The patient reviews the x-ray images.
5. Imaging personnel determine which modality to use.
6. Imaging personnel perform the imaging procedure.
7. The x-ray images are stored.
8. The radiologist reviews the x-ray images.
9. The patient reviews the x-ray images.
10. The radiologist reviews the x-ray images.
11. The patient reviews the x-ray images.
12. The radiologist reviews the x-ray images.
13. The radiologist reviews the x-ray images.
14. The radiologist reviews the x-ray images.

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Generic radiology workflow with PACS

Additional steps required before PACS
Why Use In EHR Implementation?

- To determine the most efficient locations for PC or Notebook Stations
- Improve patient and staff movement by eliminating/ reducing bottlenecks
- Improve staff and provider productivity with better access to information and documentation tools
- Discourage negative habits from the “paper-days” like waiting until the end of the day to document patient encounters
What Does Workflow Analysis Do?

- Create a visual document of movements within a workspace
- Shows:
  - Where unnecessary movements occur during process
  - The total distance traveled with a process
  - Identify unnecessary frequent visits to same location
  - Identify high traffic areas and potential congestion/bottlenecks
How Do I Do Workflow Analysis?

1. Select a process to document
2. Create the process floor plan/map of work space
3. Visually observe the movements of the target - ex PC
4. Trace all movements to/from [target] PC one cycle - multi-cycles helps identify patterns
5. Analyze work space activity charted in step 4 for improvement opportunities:
   - Reorganize work space into logical work area where interdependent activities are done in close proximity
For More Information

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Workflow, Clinicians and the EMR

Rodolfo M. Urby, MD, MPH, MBA
CEO/Medical Director
Southwest Texas Network
THREE BIG CONSIDERATIONS!

- STAFF ACCOUNTABILITY REQUIRES STAFF OWNERSHIP OF PROCESSES.

- EMR IMPLEMENTATION SUCCESS = \[\text{PLANNING}^2 + \text{TRAINING}^2 + \text{PRACTICE}^2\]

- HEALTH CENTER’S SUCCESS DEPENDS ON SUPPORTING OUR STAFF TO SERVE PATIENTS.
Top Reasons for Dissatisfaction with EMR

1. EMR applications not suitable for practice type.

2. Insufficient clinician input in selection process.

3. Inadequate and insufficient time spent on training and practice.

4. Initial decrease in practice revenues.

5. Inadequate analysis of workflow processes and how the EMR will impact operational efficiency.

6. Lack of staff buy-in and staff support for the EMR.
Always do everything you ask of those you command.

George S. Patton
Reality Check: EMR Projects are HARD TO DO!

- Importance of EMR Champions
- Core Group Leader as Project Manager
- Buy As You Go vs. Big Buy Up Front
- Involve Staff in EMR Selection Process
- Be Sensitive to Concerns About Job Security
- Core Group as “EMR Set-Up Team”
- The EMR Belongs to ALL Staff – Staff Owns the Processes as Well.
- Centers Usually Underestimate the Initial Impact of the EMR on Activity and Fiscal Performance, AND the Amount of Training and Preparation Required.
WORK FLOW ANALYSIS STEPS*

- FLOW CHART OF CURRENT PROCESSES
- QUESTION WHY THINGS ARE DONE IN THESE WAYS
- QUESTION HOW PROCESSES COULD BE BETTER (VISION AND GOALS)
- ASSESS PRACTICE TOOLS AVAILABLE
- ANALYZE BEST PRACTICE APPROACHES
- IDENTIFY NEEDED PROCESS CHANGES USING THE EMR AS AN IMPROVEMENT TOOL

*Taken from Masspro – contracted by CMS
http://www.masspro.org/toolkits.php  Click on DOQ-IT: A Systems Approach to Operational Redesign
MACRO LEVEL: MAPPING THE CURRENT STATE OF WORKFLOW

- Staff roles and functions during all points of visit
- Who, where, how and when regarding point of care documentation process
- Flow of information in office
- Movement of paper within the office

Patient Flow

Documentation

Paper Document Management

Communications

Workflow Analysis
Micro Process Work Flow:  The Rx Refill Request on Paper

How do we do these things now? (Current State)
What EMR functionality do we need? (Desired State)
How will we use the EMR to perform these steps? (Best Practices)
Make process changes – analyze – improve.
Micro Process Work Flow: The Rx Refill Request with EMR

Number of steps reduced.
Process entirely automated and seamless.
Ensure Pharmacy contacts patient when Rx ready to close loop – if critical Rx, task MA to call patient using EMR.
Micro Process Work Flow: Patient’s Initial Steps During Encounter/Visit on Paper

PT. ARRIVAL
- Update info.
- Confirm Coverage
- **Return to Waiting**

Called for V.S.
- Triage
- Begin Note
- Chart CC, Update PMH, Meds and SH
- **Return to Waiting**

Pt. to Exam Room
- Clinician reviews chart outside room
- Conducts Encounter
- Orders POCT/other
- **Return to Waiting**

**Multiple Return of Pt. to Waiting Room – Bottleneck Becomes an Opportunity**
Now with EMR: From Returning to Waiting Room 3 Times to 0 Times.....

**INTAKE**
- All info. Updated in Pract. Mgmt System.
- Encounter note generated by EPM for the EMR.

**Pt. to Exam Room**
- Patient placed in empty Ex. Room.
- Computer in Ex. Room
- V.S., C.C., PMH, Med Hx by MA in Exam Room

**CLINICIAN ENCOUNTER**
- Visit done
- POCT ordered
- Pt. stays in room
- Flag notifies MA of order
- Finalize Visit
- Dismissal queue
Bottlenecks Become Opportunities for Improvement with EMR

Intake Process too Long
- EMR Fixes:
  - Kiosk
  - Patient Portal

Med Refill Requests Burdensome
- EMR Fixes:
  - Abstraction of Rx Data
  - E-Rx tool

Inconsistent Availability of Lab Results
- EMR Fixes:
  - Lab interface
  - In-box messaging of results to ordering Clinician

Every Bottleneck an Opportunity …..
Inconsistent clinician support
- Failure to meet individual clinician expectations
- MAs trying to guess clinician’s needs
- Patients inconvenienced in disorganized practice.
Process With Clinician Involvement

Dr. A wants CC/ROS/PMH Meds on EMR

Dr. B ONLY wants CC on EMR and Paper Chart

EMR Document Initiation

MA/Nurse Initial Processes

“Customized” MA approach is problem

Best Practices Research Address Dr. B’s concerns

Faster and Acceptable MA role in process

Drs. Agree on protocols for MA approved entries
PROCESS IMPROVEMENT TOOLS

Rapid Cycle Testing

- Small sample sizes
- Quick fixes analyzed for effectiveness in short period of time

Process Improvement Tools


MULTIPLE METHODS

- UMAIS: Understand, Measure, Analyze, Implement, Standardize.
- PDSA: Plan, Do, Study, Act
- SWOT, Flowchart and Project Mgmt Software
Institute for Healthcare Improvement Recommends Rapid Cycle Testing Method

- IHI advocates rapid-cycle testing for spreading positive change throughout an organization. *Hospitalist Management Advisor, December 1, 2006*

- An important tool in creating a successful pilot and spreading change throughout an organization is rapid-cycle testing. Rapid-cycle testing allows organizations to test and refine ideas quickly and on a small scale. Unlike more traditional quality improvement methods that involve collecting a large amount of data over a long period of time, rapid-cycle testing can produce quick feedback about the effectiveness of an intervention and allow for ongoing refinement.

Analysis Steps - Review

- **ASSESS CURRENT STATE**
- **QUESTION WHY (ANALYZE BOTTLENECKS)**
- **QUESTION HOW PROCESSES CAN IMPROVE (VISION AND GOALS)**
- **ASSESS PRACTICE TOOLS AVAILABLE (EMR TOOLS NEEDED OR AVAILABLE)**
- **ANALYZE BEST PRACTICE APPROACHES**
- **IDENTIFY NEEDED PROCESS CHANGES WITH THE EMR IN PLACE**
THREE BIG THINGS!

- STAFF ACCOUNTABILITY REQUIRES STAFF PROCESS OWNERSHIP.
- EMR IMPLEMENTATION SUCCESS = [PLANNING]² + [TRAINING]² + [PRACTICE]²
- HEALTH CENTER OPERATIONS ARE SUSTAINED BY STAFF/PATIENT INTERACTIONS. ALL PROCESSES MUST SUPPORT THE CLINICIAN/PATIENT INTERACTION!
Kanabec Hospital

Tips for Conducting Workflow Analysis During a Health IT Implementation

Friday, January 21st, 2011
Kanabec Hospital

- Located in Mora, Minnesota – Primary Service Area includes Mora, Ogilvie, Hinckley and Pine City
- In process of purchasing 4 Allina Clinics
- 25-Bed Critical Access Hospital
- 320 Employees
- Member of SISU Medical Solutions
- 1st Critical Access Hospital in the nation to reach Stage 6 on HIMSS EMRAM
Workflow Analysis

- Allowed us to prepare for the changes that come with an EHR implementation.
- Kanabec Hospital has an integrated EHR from a single vendor.
- Implemented the EHR module by module (ex. Pharmacy, Lab, Imaging, CPOE, Nursing Documentation, etc.)
Conducting and Implementing Workflow Analysis

- Identify “Module Owner” or application owner
- Module Owner provides a demonstration of the application – All Departments asked to attend
  - Presentation given at monthly IT Project Meeting
  - Departments identify processes impacted
- Form Module “Core Team”
Conducting and Implementing Workflow Analysis

- Module Owner forms a sub-committee with representatives from departments impacted by the implementation
  - Review and diagram the current manual or electronic process
  - Ensure end-user representation on the committee – someone familiar with day-to-day workflow surrounding process
  - Is the current process working? If not, improve the current process.
  - Module Owner contacts other SISU facilities to better understand how they are utilizing the module, lessons learned, etc.
Conducting and Implementing Workflow Analysis

- Share the news of the new HIT with end-users
- Implementation Core Team takes the workflow diagrams to the module build & training sessions
- Design the module build around the workflow diagram
- Once built in “Test” environment, perform parallel runs with end-users to test the new electronic workflow

KANABEC HOSPITAL
Exceeding Your Expectations.
Conducting and Implementing Workflow Analysis

- Gather sub-group to review parallel run findings
- Make recommended corrections
- Train end-users on HIT & new process
- Go Live
- Continue to review process & meet with sub-group as needed
Differences in Workflow Analysis ~
Large vs. Small Organizations

- Smaller facilities have fewer individuals to train; however, training can be an issue in a smaller site as it may be difficult to find the adequate coverage during training periods.

- Many times, smaller facilities can train on functionality as well as work flow during training periods. In large facilities, functionality of the system will be taught by a training team, and the department will have to do the department specific training.
Differences in Workflow Analysis ~ Large vs. Small Organizations

- Workflow Change in a large facility can be more complicated due to the size, complexity, and levels of approval that are needed.

- In a large facility, to make a change in the EHR is complex and many times will go on a tracking system to prioritize the changes with the staff resources available. This can cause important HIT projects to be put on hold for months.
In a large facility, training and department integration can be difficult due to the size of the organization and complexity of systems and processes. In a smaller facility, it may be easier to plan workflow since the departments are small and there are not as many levels of management.
Differences in Workflow Analysis ~
Large vs. Small Organizations

- Smaller facilities may not have a resource on site with the expertise or desire necessary to lead an HIT implementation.
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