

# HRSA Health Information Technology and Quality Webinar

**“Tips On Workflow Analysis During a EHR  
Implementation”**

**Date: 1/21/2011**

US Department of Health and Human Services  
Health Resources and Services Administration

# *Office of Health Information Technology and Quality*

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

<http://www.hrsa.gov/healthit>

<http://www.hrsa.gov/quality>

Additional questions can sent to the following e-mail address:

[HealthIT@hrsa.gov](mailto:HealthIT@hrsa.gov)

- US Department of Health and Human Services
- Health Resources and Services Administration

# Upcoming HRSA Health IT and Quality Announcements

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- **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**
- **AHRQ Tools on Workflow Analysis for EHR Systems at <http://healthit.ahrq.gov/>**
- **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 24<sup>th</sup>, 2011 (tentative)**
- **CMS Opens Registration for Eligible Professionals and Hospitals interested in participating in the CMS Medicare and Medicaid EHR Incentive Program**

# Introduction

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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



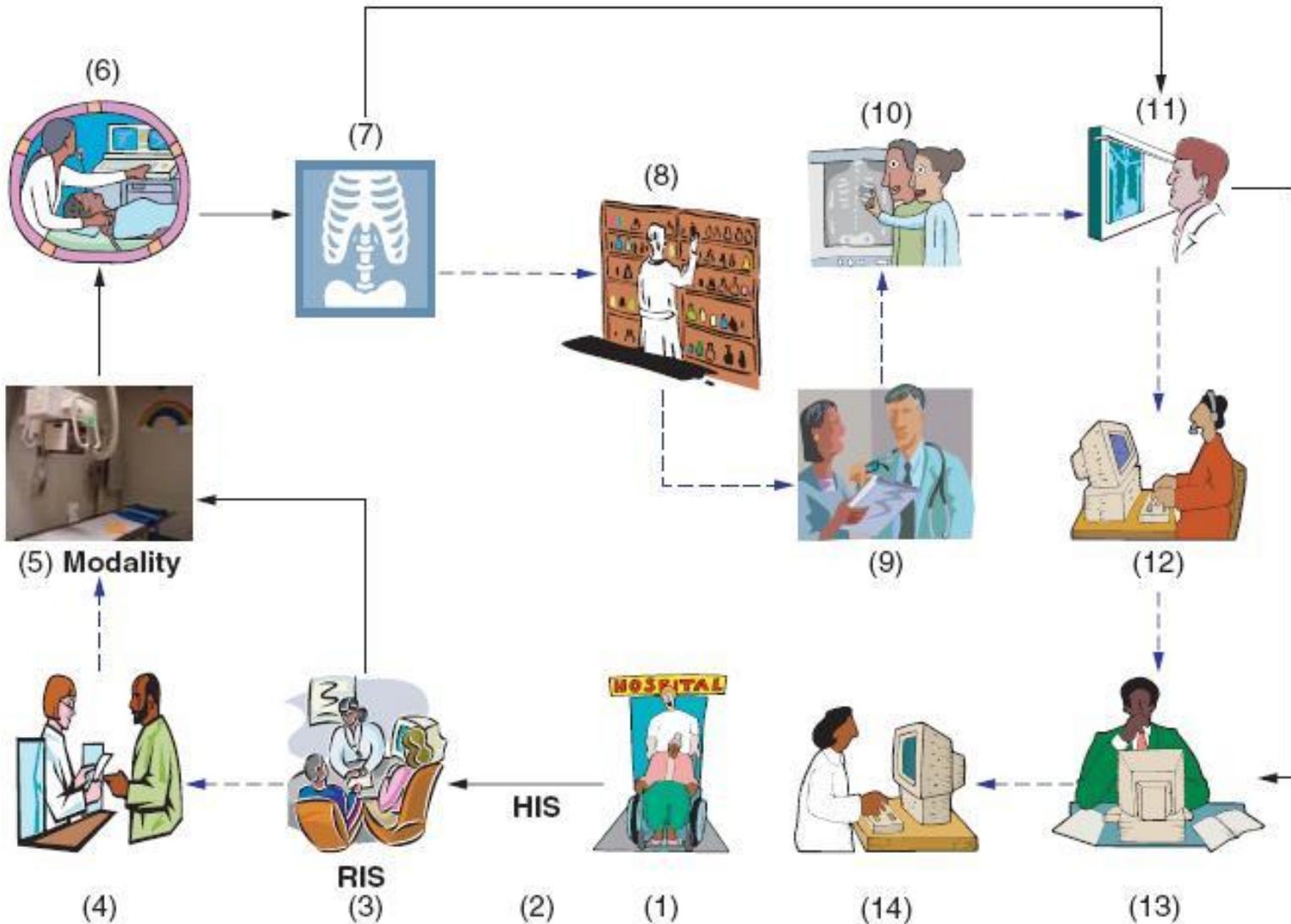
# Why Use Workflow Analysis?



- To illustrate the movement of MATERIAL/ INFORMATION/ PEOPLE within a system to determine optimal 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



—————> 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

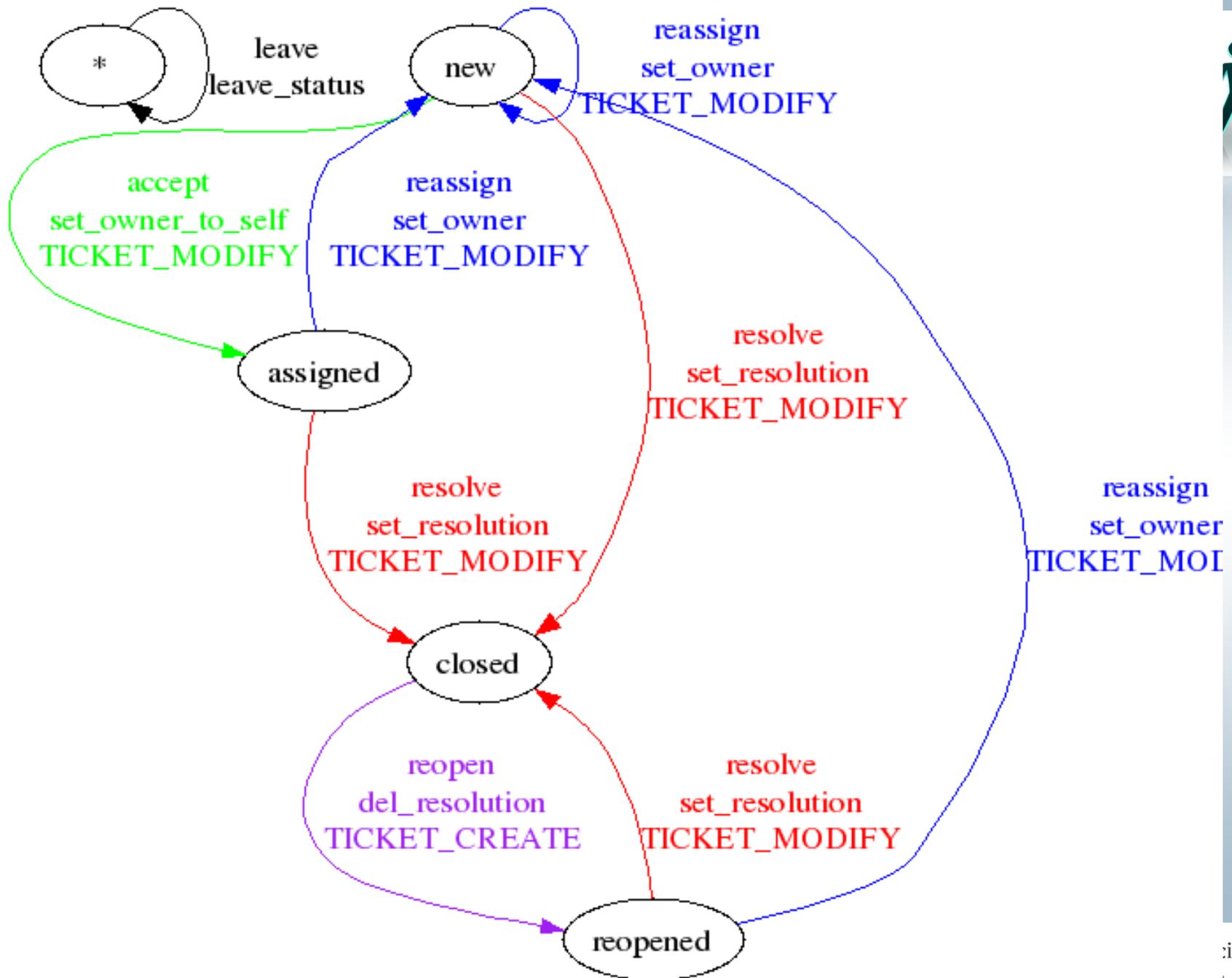


# What Does Workflow Analysis Do?



- 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



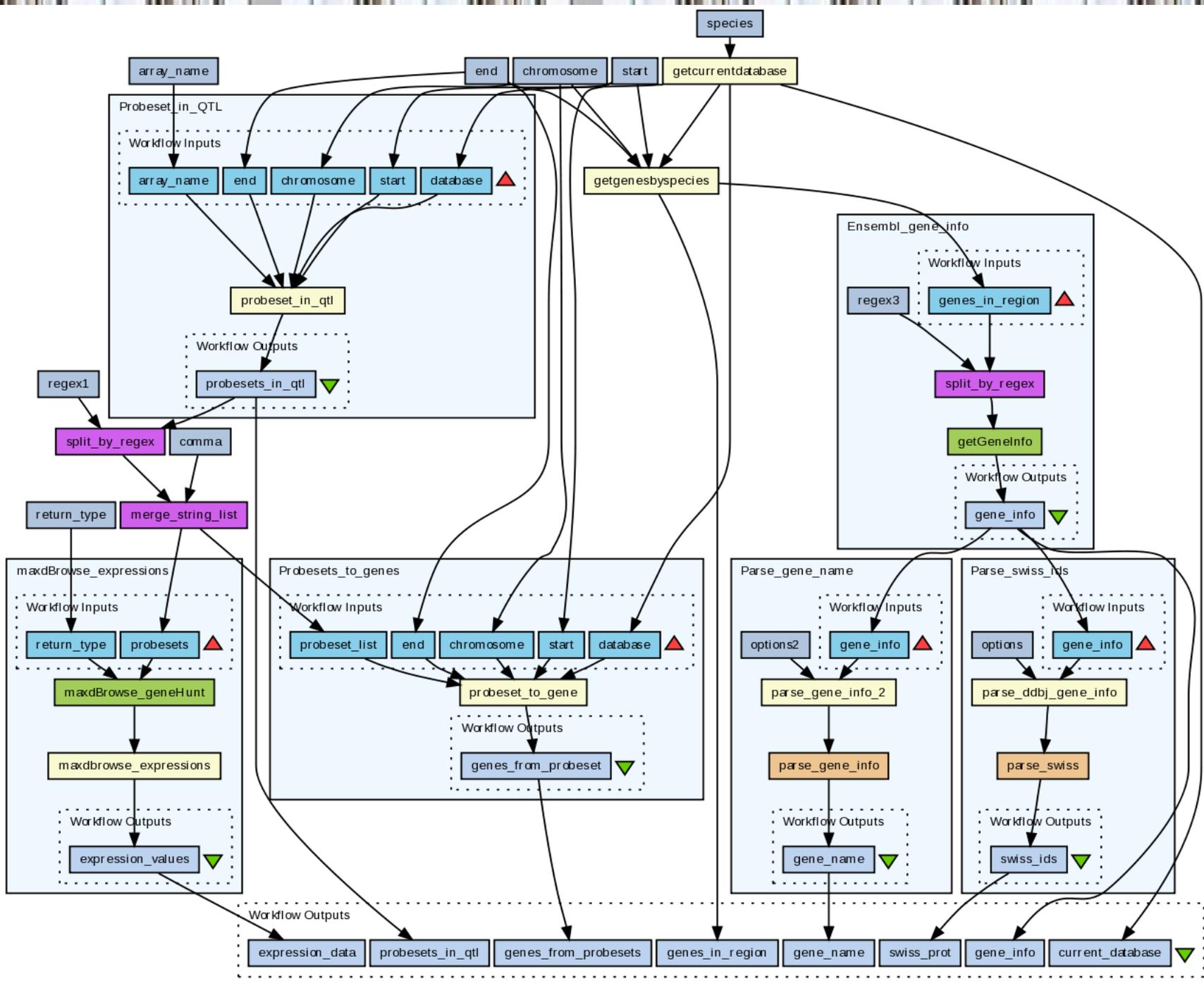


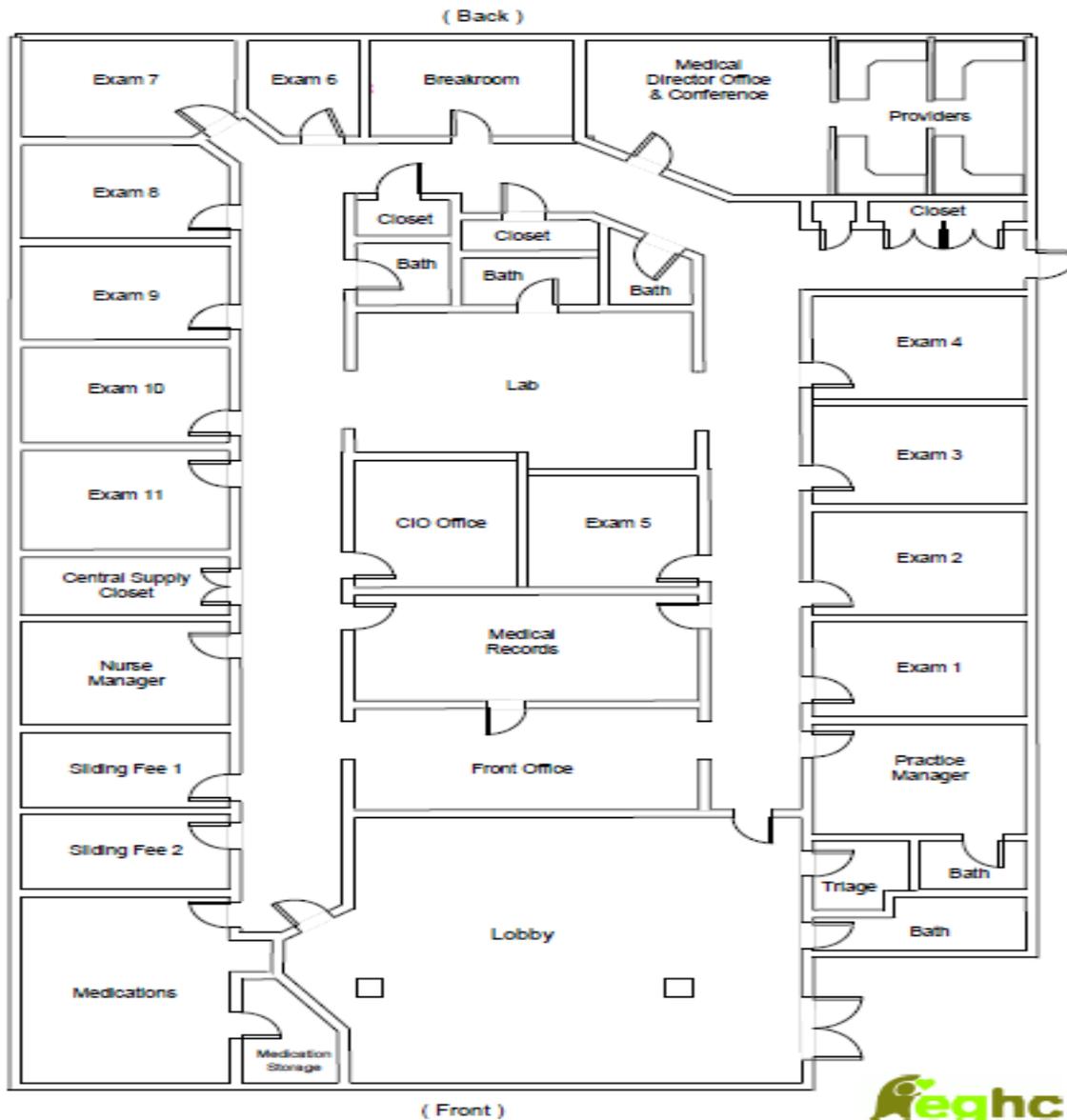
# How Do I Do Workflow Analysis?



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





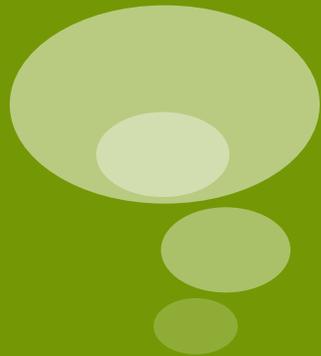


# For More Information



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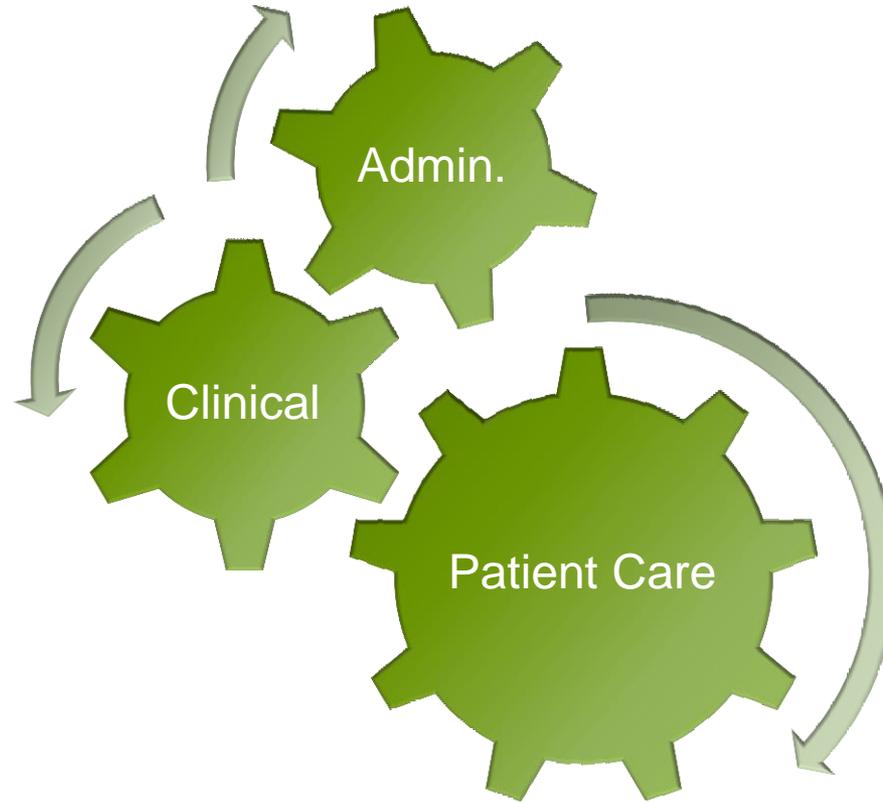


# Workflow, Clinicians and the EMR

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 = [PLANNING]<sup>2</sup> + [TRAINING]<sup>2</sup> + [PRACTICE]<sup>2</sup>
- 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.



# First: Assemble Core Group



**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.



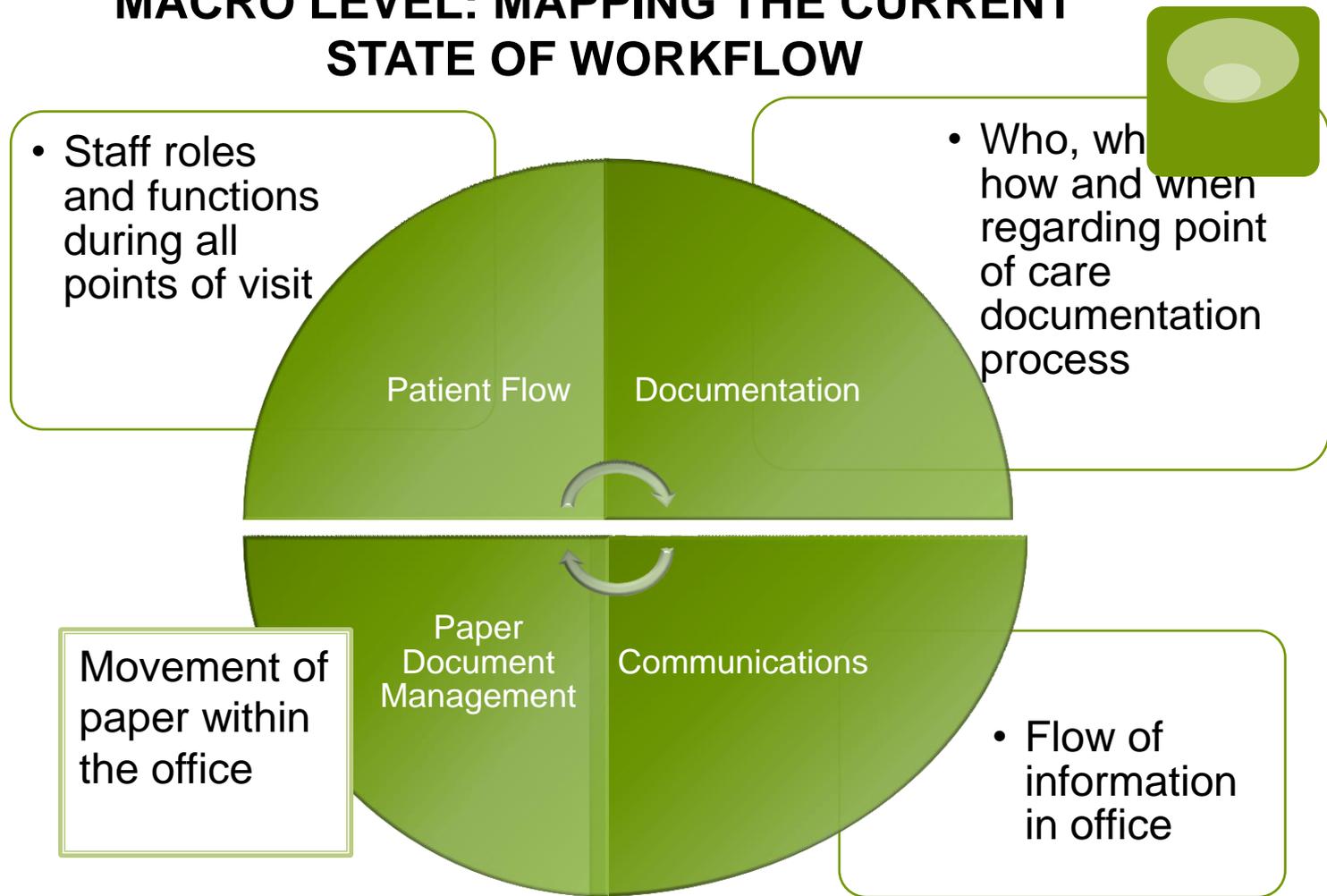
# WORK FLOW ANALYSIS STEPS\*

- 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



Workflow Analysis

<http://www.norc.org/6275/module7/connecting%20workflow%20with%20EMR%20deployment.pdf>

# Concurrent and Parallel Processes: Pt. Flow



**PAPER:**  
Printing  
Referrals



**COMMUNICATIONS**  
Messages

**DOCUMENTATION**  
What does the MA put  
in the EMR?





# Micro Process Work Flow: The Rx Refill Request on Paper



How do we do these things now? (Current State)

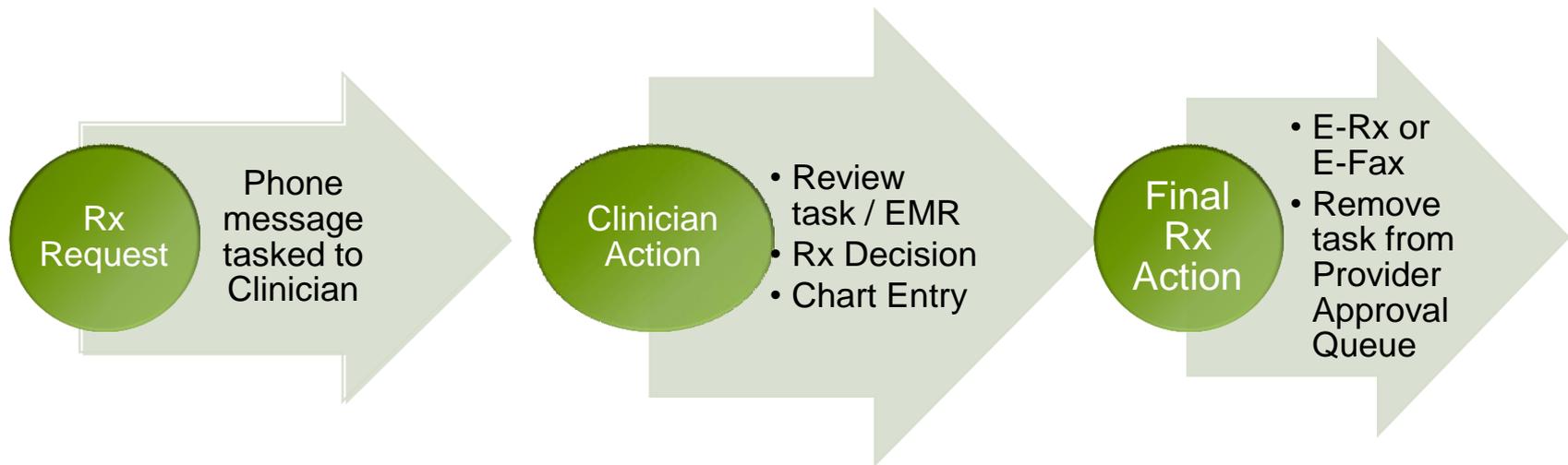
What EMR functionality do we need? (Desired State)

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

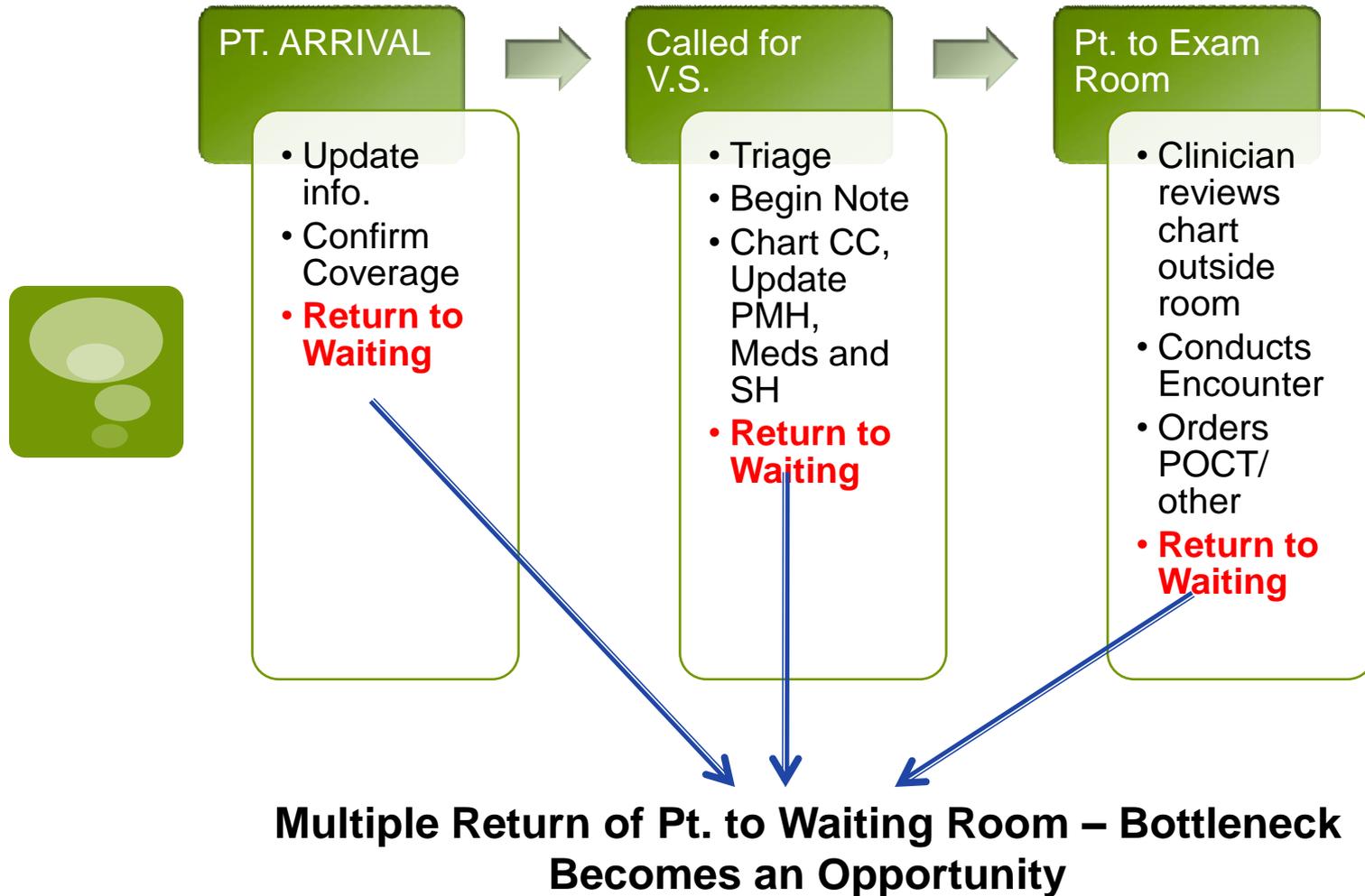


Number of steps reduced.

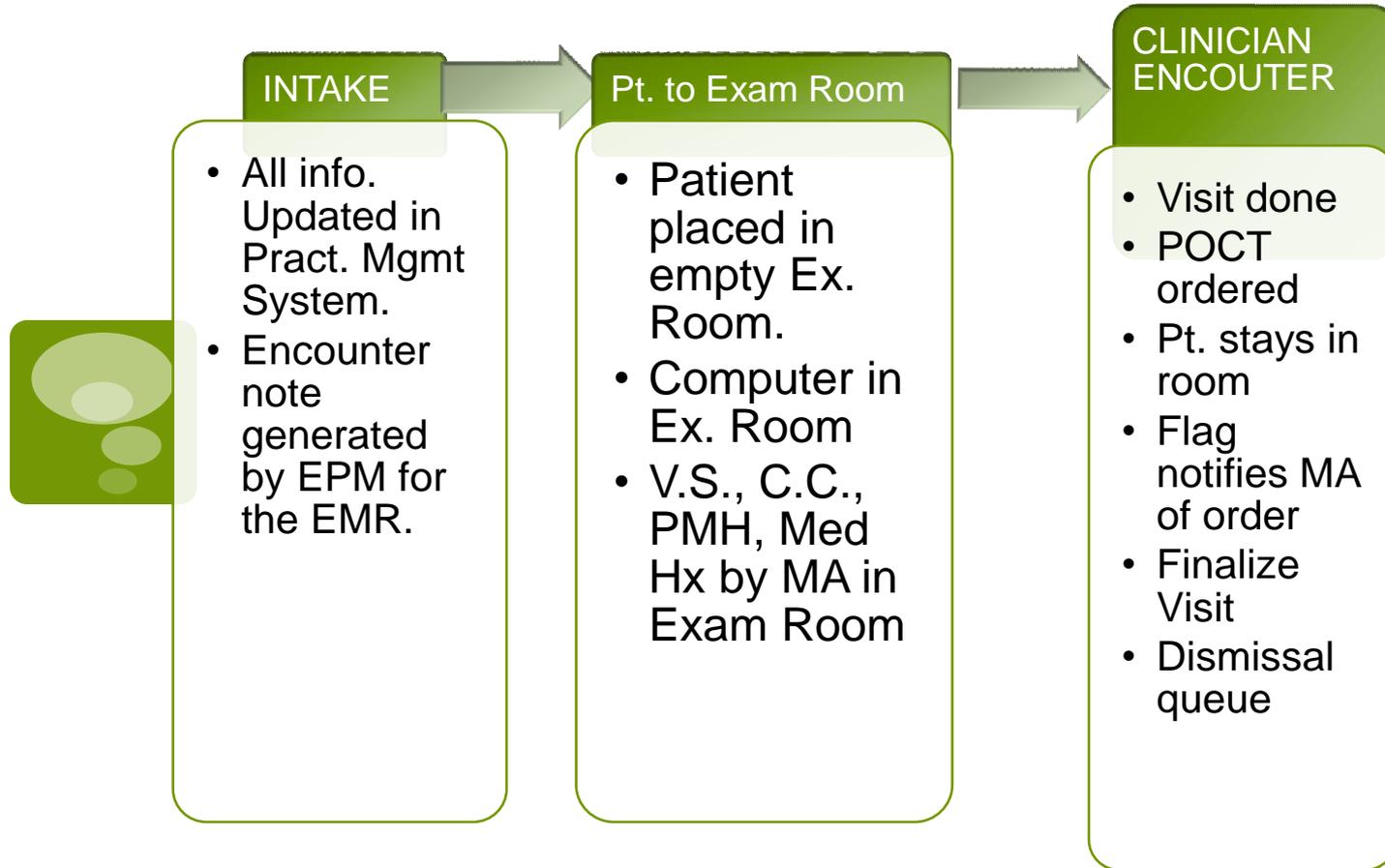
Process entirely automated and seamless.

Ensure Pharmacy contacts patient when Rx ready to close loop – if critical Rx, task MA to call patient using EMR.

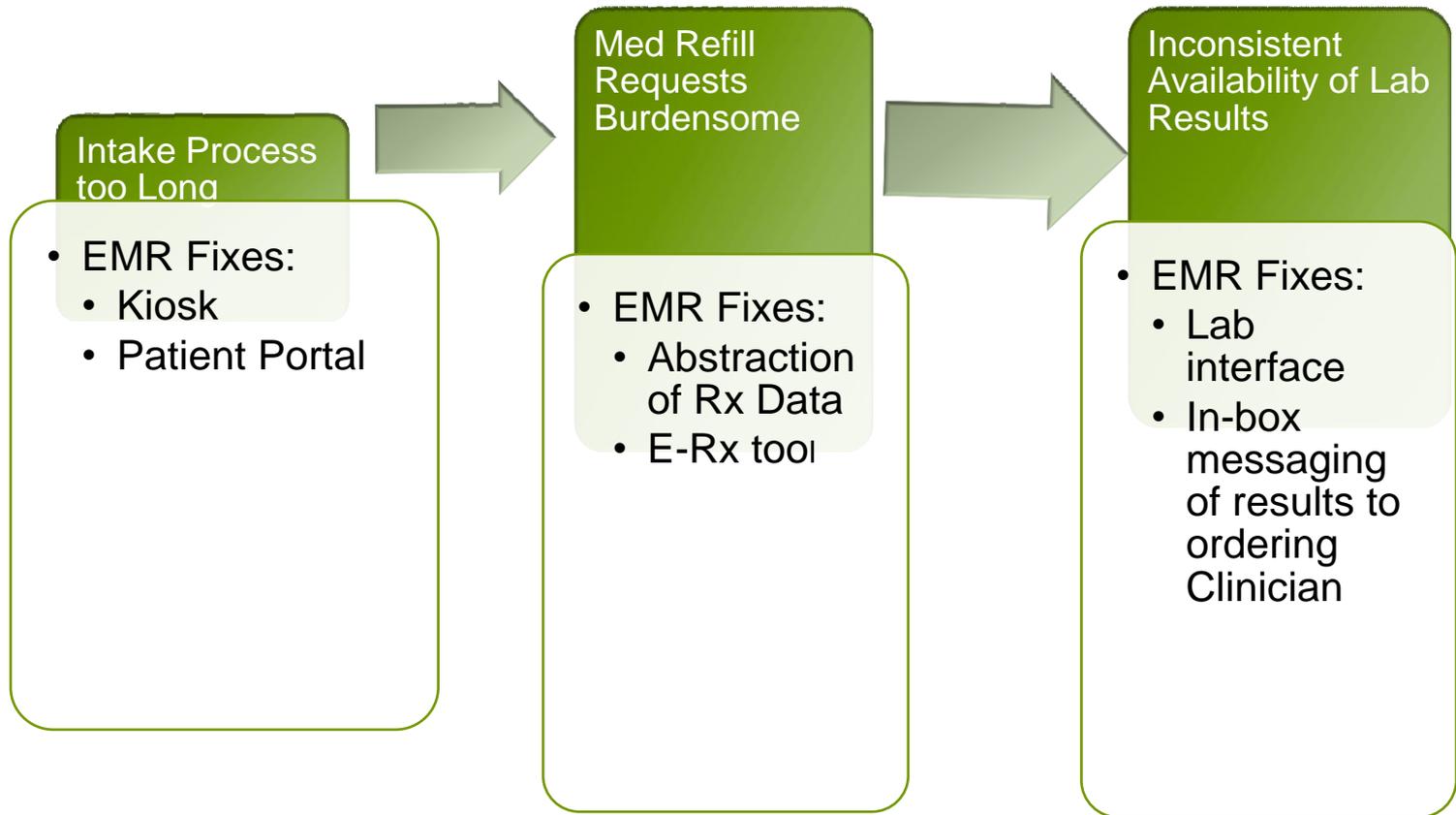
# Micro Process Work Flow: Patient's Initial Steps During Encounter/Visit on Paper



# Now with EMR: From Returning to Waiting Room 3 Times to 0 Times.....

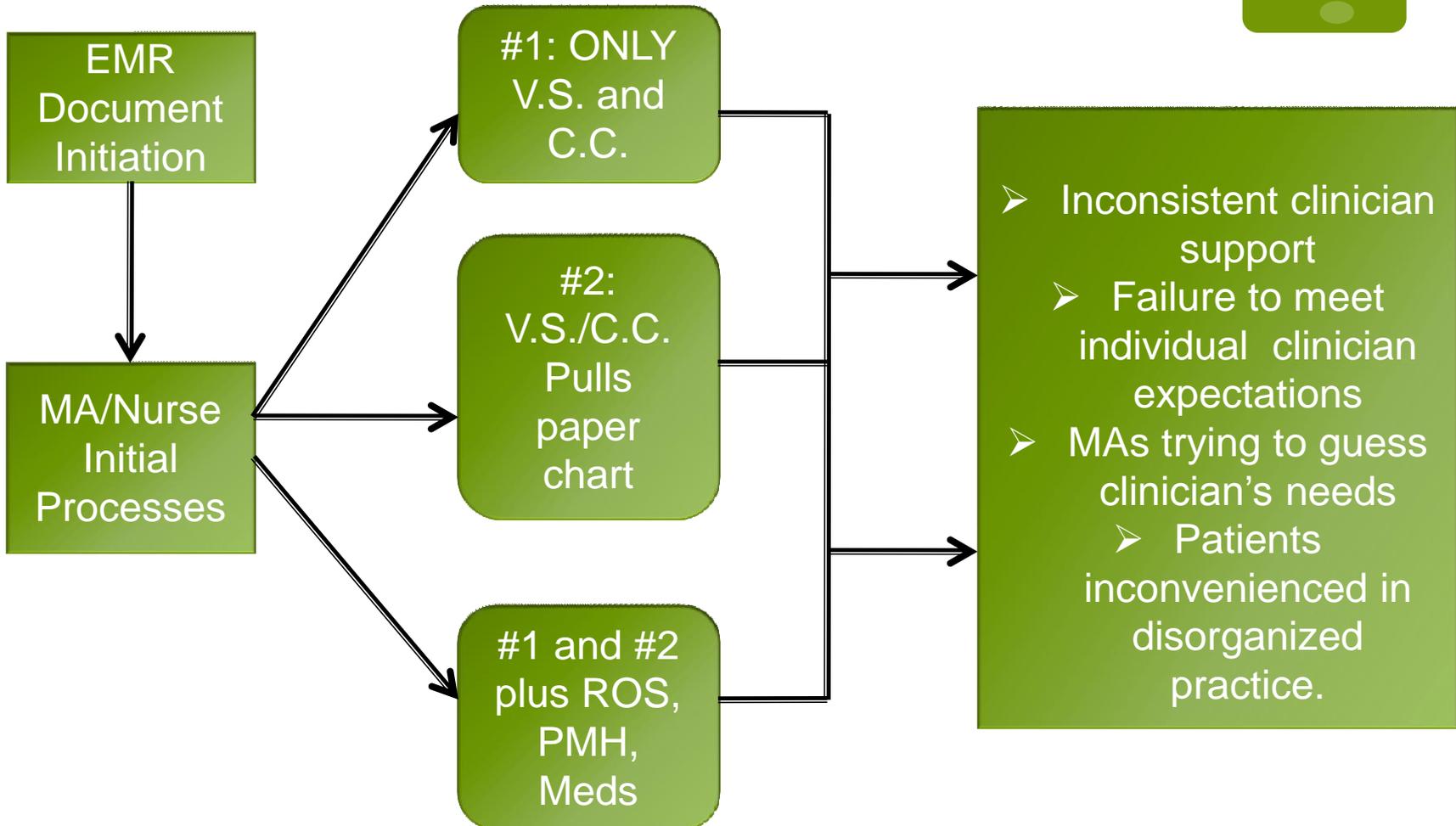


# Bottlenecks Become Opportunities for Improvement with EMR

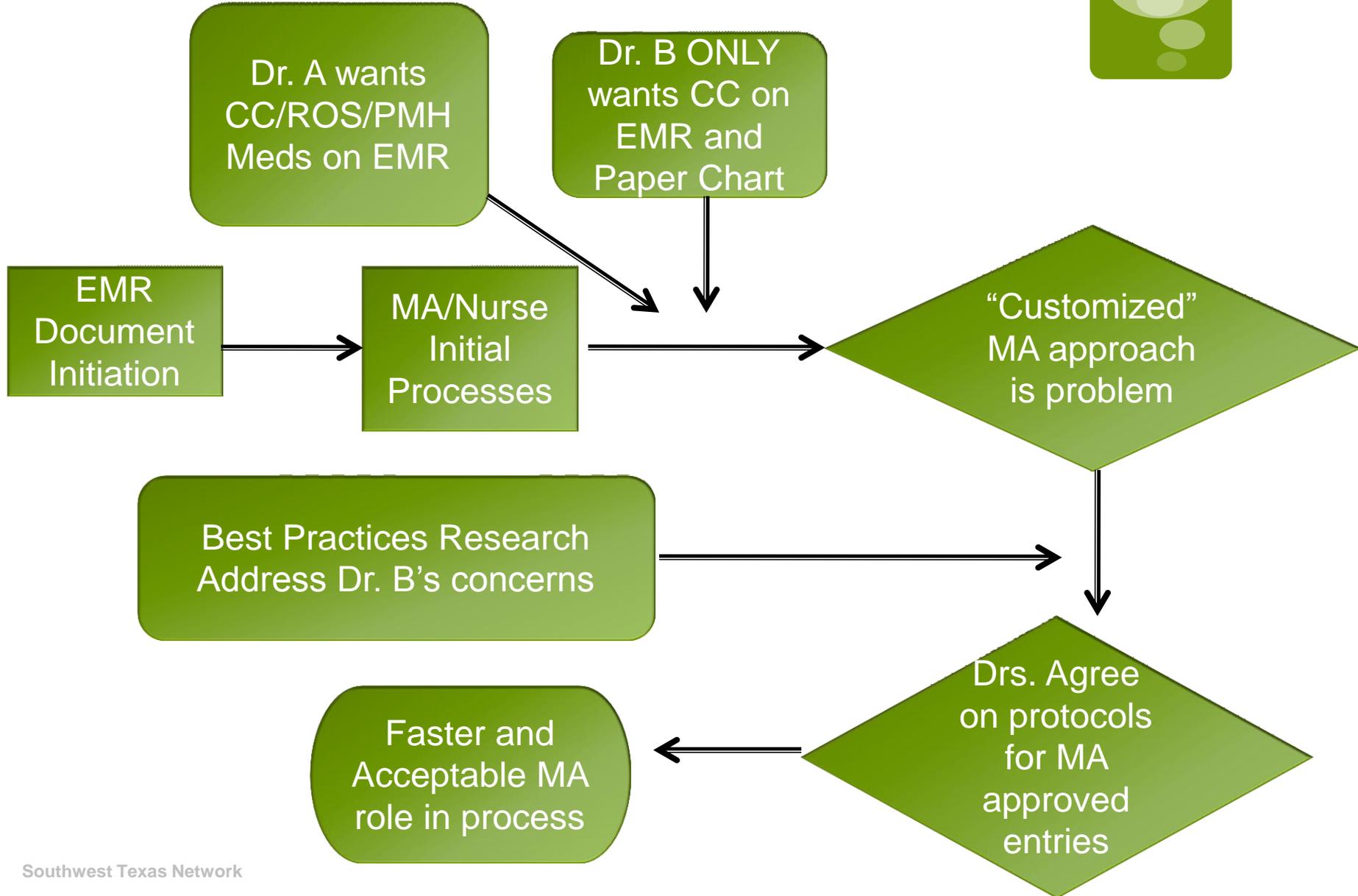


**Every Bottleneck an Opportunity .....**

# PROCESS W/OUT CLINICIAN INVOLVEMENT



# Process With Clinician Involvement



# PROCESS IMPROVEMENT TOOLS



## Rapid Cycle Testing

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

## Process Improvement Tools

- <http://www.quality-assurance-solutions.com/basic-tools-for-process-improvement.html>

## 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.



<http://www.hcpro.com/HOM-64949-3615/IHI-advocates-rapidcycle-testing-for-spreading-positive-change-throughout-an-organization.html>

# 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]<sup>2</sup> + [TRAINING]<sup>2</sup> +  
[PRACTICE]<sup>2</sup>
- HEALTH CENTER OPERATIONS ARE SUSTAINED BY STAFF/PATIENT INTERACTIONS. ALL PROCESSES MUST SUPPORT THE CLINICIAN/PATIENT INTERACTION!

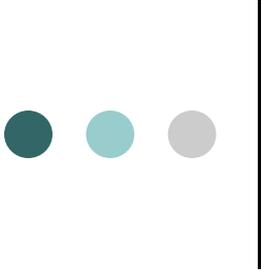




# Kanabec Hospital

Tips for Conducting Workflow  
Analysis During a Health IT  
Implementation

Friday, January 21<sup>st</sup>, 2011

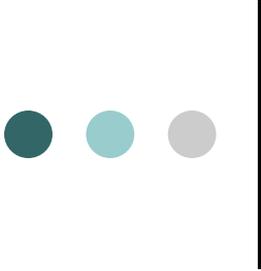


# Kanabec Hospital

- 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
- 1<sup>st</sup> Critical Access Hospital in the nation to reach Stage 6 on HIMSS EMRAM

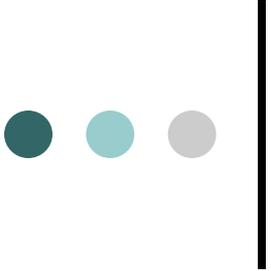
**KANABEC HOSPITAL**

*Exceeding Your Expectations.*



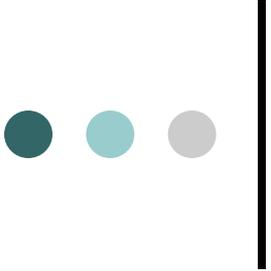
# Workflow Analysis

- 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.)



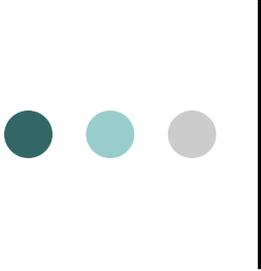
# Conducting and Implementing Workflow Analysis

- 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”



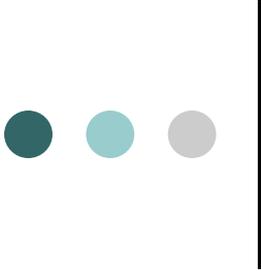
# Conducting and Implementing Workflow Analysis

- 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.



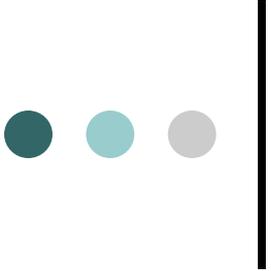
# Conducting and Implementing Workflow Analysis

- 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



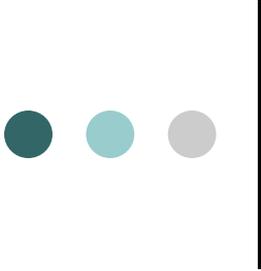
# Conducting and Implementing Workflow Analysis

- 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



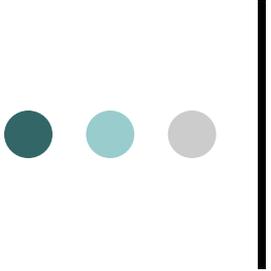
# Differences in Workflow Analysis ~ Large vs. Small Organizations

- 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.



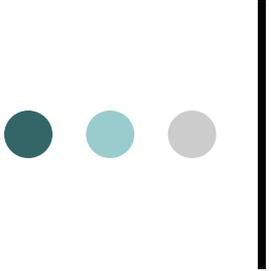
# Differences in Workflow Analysis ~ Large vs. Small Organizations

- 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.



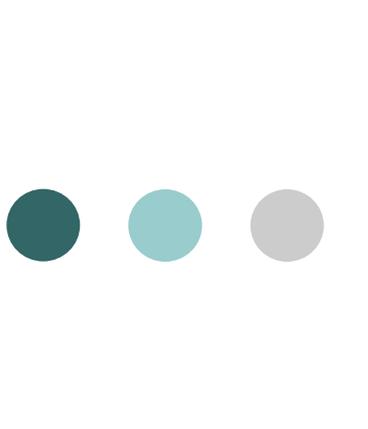
# Differences in Workflow Analysis ~ Large vs. Small Organizations

- 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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*Exceeding Your Expectations.*

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