

Background (Objective & Business Case)

Foundational EMR Implementation (Professional Billing, Hospital AP/AR and HR modules) were implemented at a large Mid-Western Hospital with less than satisfactory results by the hospital system's IT department. Hospital executives were concerned about patient safety with future phased implementations of Clinical Order Entry and Clinical Physician Order Entry modules, as well as ancillary service lines (Pharmacy, Labs, PT/RT, OT and Social Services). Summit OG was hired to map current workflows as well as phase-by-phase changes. We were also charged with the identification of risks and gaps and the development of an action plan for resolution/mitigation.

Initiative Definition

Initiative: EMR Workflow Risk/Gap Analysis **Effective Date:** April, 2010

Objectives / Rationale	Scope
<ul style="list-style-type: none"> Facilitate the identification of implementation risks & gaps across the 3-EMR phases and between Units Develop regular and consistent status reporting to effectively communicate each Unit's risk resolution progress Ensure awareness, understanding and collaboration across Hospital to execute the EMR implementation Communicate to key stakeholder groups the changes the EMR implementation will bring Identification of optimization opportunities Generate buy-in of the implementation plan by Hospital Clinical Physician and Executive groups 	<ul style="list-style-type: none"> Creation of Unit Physician and Nursing Workflows Engagement of EMR Development Team, Unit staff, Unit ADs & Directors, and physicians Identification of implementation risks/gaps & development of an Action Plan & reporting structure for Action Teams Escalation path for critical issues
Potential Issues / Risks	Key Deliverables
<ul style="list-style-type: none"> Lack of participation Inability to coordinate schedules and "make" time Hand-offs/dependencies Status reporting Executive Support and Advocacy 	<ul style="list-style-type: none"> Current workflows Future workflows Risks/Gaps Action Plan for Units Reporting structure to leadership Feedback mechanisms Facilitative capability

Analysis & Implementation Plan

Summit OG was initially charged to map physician and nurse workflows in the Emergency Department. The hospital directive for Summit OG quickly expanded to include a risk and gap analysis with actionable items categorized and prioritized.

Summit OG was also asked to provide a framework that would ensure the resolution of the identified risks. We established an actionable plan with owners, due dates, standardized reporting format, timeline for completion and escalation path. Risks were tracked through completion.

Key Activities

Activity	Key Activities
1. Launch Unit Initiative	<ul style="list-style-type: none"> Identify appropriate Unit Core Team (Unit resources, physician(s), unit AD/Director) Conduct kick-off meeting to set expectations and review templates Develop baseline workflow process map Develop future EMR workflow process map by Phase, identifying paper-to-EMR changes, and new/DC processes
2. Assess Risks & Gaps	<ul style="list-style-type: none"> Validate future EMR workflow process map by Phase Discuss/Validate EMR-enhanced "to-be" process workflow, highlighting job/responsibility changes Identify existing and future implementation Risks/Gaps Facilitate FMEA-type risk analysis - categorizing and prioritizing risks/gaps
3. Identify Optimization Opportunities	<ul style="list-style-type: none"> Capture optimization opportunities Develop strategic messaging for identifying what is In/Out of scope for 3 phases vs. Optimization Develop "tolling window" messaging strategy to stakeholder segments to explain changes as each new Phase approaches
4. Develop Risk/Gap Mitigation Action Plan	<ul style="list-style-type: none"> Communicate EMR-enhanced "to-be" workflow process highlighting job/responsibility changes Develop Action Plan (Risks, Owner, Due Dates) to eliminate/mitigate identified Risks/Gaps Recommend optimal methods for communicating & engaging each unit stakeholder segment Recommend methods for gathering feedback and evaluating implementation effectiveness Define format & schedule for ongoing Action Team Status Reports to Leadership and protocol for adjustments to action plan

An Implementation Action Plan that clearly articulates the key actions and owners is critical to this effort

Standardized Status Reporting

Standardized reporting structure gave executive and clinical leadership a comparative view of progress Unit by Unit. The reporting format also allowed leadership to categorize and prioritize institutional risks such as downtime procedures, centralized vs. decentralized scanning policies, and confidentiality of patient access in an electronic system.

Status Update for Week Ending April 30, 2010

Key Accomplishments	Status			
	Unit - Resource	April	May	June
1. CIVICU kick-off meeting, current state validation, initial risk identification	EC - Jane	85%		
2. NCU process mapping completed w/ Unit Team				
3. PICU process mapping continues with Unit walk-through	PICU - John	30%		
4. Initial contact made with 7 South - Unit coordinator	CVICU - Jane	25%		
5. Identification of EMR Risk/Gap Action Plan Owner	NCU - John	20%		
6. Hand-off EC Risk/Gap Action Plan to Fred R.	7 South - Ann	5%		
7. NCU initial contact and kick-off meeting w/ Unit Coordinators	West Tower - Ai	0%		
8. PICU process map finalization	Pharmacy - Ann		?	
9. 7 South kick-off meeting date	Lab - Ted			?
10. Identification of IT point of contact				

High Level Risks / New Risks & Bots

Risks	Challenges/Opportunities
<ul style="list-style-type: none"> Flow sheet functionality Cool/Emergent procedures Medication reconciliation Resident training Centralized vs. decentralized scanning Physician inpatient consults 	<ul style="list-style-type: none"> Immediate Barriers: <ul style="list-style-type: none"> Single legislated EMR resource NCU changes Long Term Challenges/Opportunities: <ul style="list-style-type: none"> Ability to fully address Pharmacy & Lab process Assessments of scope and expectations for this effort Resource availability - unit and his teams Hardware assessment and communication of decisions made Communication of internal lessons learned and best practices

Scope of Work and Key Deliverables

While the initial scope of work expanded, the key steps to developing the deliverables was standardized and allowed for fast and efficient documentation of workflows and identification of risks/gaps.

Key Deliverable	Brief Description
1. "As-Is" Process Map	<ul style="list-style-type: none"> Identify appropriate Unit Core Team (EMR resources, Unit resources, physician(s), unit AD/Director)
2. "To-Be" Process Map	<ul style="list-style-type: none"> Conduct kick-off meeting to set expectations and review templates
3. Risk/Gap Analysis	<ul style="list-style-type: none"> Develop baseline workflow process map Develop future EMR workflow process map by Phase, identifying paper-to-EMR changes, and new/DC processes
1. Workflow Validation	<ul style="list-style-type: none"> Validate future EMR workflow process map by Phase Discuss/Validate EMR-enhanced "to-be" process workflow, highlighting job/responsibility changes
2. Risk/Gap Analysis	<ul style="list-style-type: none"> Identify existing and future implementation Risks/Gaps Conduct FMEA-type risk analysis, categorizing and prioritizing risks/gaps
1. ID Optimization Opportunities	<ul style="list-style-type: none"> Identify optimization opportunities Develop strategic messaging for identifying what is In/Out of scope for 3 phases vs. Optimization Develop "tolling window" messaging strategy to stakeholder segments to explain changes
2. Explanation of Changes	<ul style="list-style-type: none"> Communicate EMR-enhanced "to-be" workflow process highlighting job/responsibility changes (Unit EMR resources, physician(s), unit AD/Director) Develop Action Plan (Risks, Owner, Due Dates) to eliminate/mitigate identified Risks/Gaps
1. Develop Action Plan	<ul style="list-style-type: none"> Recommend optimal methods for communicating & engaging each unit stakeholder segment (facilitative function, i.e. SWOT) Recommend methods for gathering feedback and evaluating implementation effectiveness Define format & schedule for ongoing progress reviews and protocol for adjustments to action plan

Unit Mapping of Current & Future States

A framework was developed to visually represent:

- Patient flow through the unit
- Role-based workflows (primarily physician and nurse)
- Corresponding paper and electronic documentation

Results from the workflow analysis elicited an overwhelmingly positive reaction from not only hospital executives, but from physicians, nurses and other clinical staff as well. Pre and post surveys showed a marked reduction in pre-implementation anxiety and uncertainty regarding the impending EMR implementation.

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Categorization & Prioritization of Risks/Gaps

After workflows were validated by Unit physicians, nurses and clinical staff, both risks and gaps were categorized and prioritized based on impact. Optimization opportunities were also documented and given to Unit Management to consider for future upgrades.

EC Risks & Gaps

Safety/Patient Care Risks	Compliance/Reporting Risks	Communication Risks	Institutional Risks	Security/Legal Risks
<ul style="list-style-type: none"> Identify appropriate Unit Core Team Conduct kick-off meeting to set expectations and review templates Develop baseline workflow process map Develop future EMR workflow process map by Phase, identifying paper-to-EMR changes, and new/DC processes 	<ul style="list-style-type: none"> Validate future EMR workflow process map by Phase Discuss/Validate EMR-enhanced "to-be" process workflow, highlighting job/responsibility changes Identify existing and future implementation Risks/Gaps Facilitate FMEA-type risk analysis - categorizing and prioritizing risks/gaps 	<ul style="list-style-type: none"> Capture optimization opportunities Develop strategic messaging for identifying what is In/Out of scope for 3 phases vs. Optimization Develop "tolling window" messaging strategy to stakeholder segments to explain changes as each new Phase approaches 	<ul style="list-style-type: none"> Communicate EMR-enhanced "to-be" workflow process highlighting job/responsibility changes Develop Action Plan (Risks, Owner, Due Dates) to eliminate/mitigate identified Risks/Gaps Recommend optimal methods for communicating & engaging each unit stakeholder segment Recommend methods for gathering feedback and evaluating implementation effectiveness Define format & schedule for ongoing Action Team Status Reports to Leadership and protocol for adjustments to action plan 	<ul style="list-style-type: none"> Flow sheet functionality Cool/Emergent procedures Medication reconciliation Resident training Centralized vs. decentralized scanning Physician inpatient consults

Actionable Resolution Framework

Work Teams were developed to own and resolve risks. Action teams usually consisted of clinical leadership, administrative leadership and IT resources.

The project team provided a framework to ensure the resolution of the identified risks. Actionable plans were established with identified owners, due dates, standardized reporting format, timeline for completion and escalation path.

Rollout Optimization

Additional value-added activities provided by Summit OG included the development of:

- Communications Strategy and Audience Analysis
- Change Management Strategy
- Change Agent Strategy and Framework for Deployment
- Readiness Assessment
- Post-Implementation Evaluation & facilitation of Lessons Learned

Analysis	Engagement	Communication	Training	Readiness
<ul style="list-style-type: none"> Stakeholder Impact Gap 	<ul style="list-style-type: none"> Executive Level Market Managers Ambassadors Proved Users Field Users 	<ul style="list-style-type: none"> Strategy & Planning Audience Analysis Field Cops Field Ops Field Users Implementation Proved Users Workshops/Webinars Lessons Learned 	<ul style="list-style-type: none"> Requirements Courses Job Aids Workshops/Webinars Online Help Metrics 	<ul style="list-style-type: none"> People Software Technology/Equip Site Command Center Traveling Unit Help Transition to Ops