



2011 Summer Institute in Nursing Informatics The Tenet Story

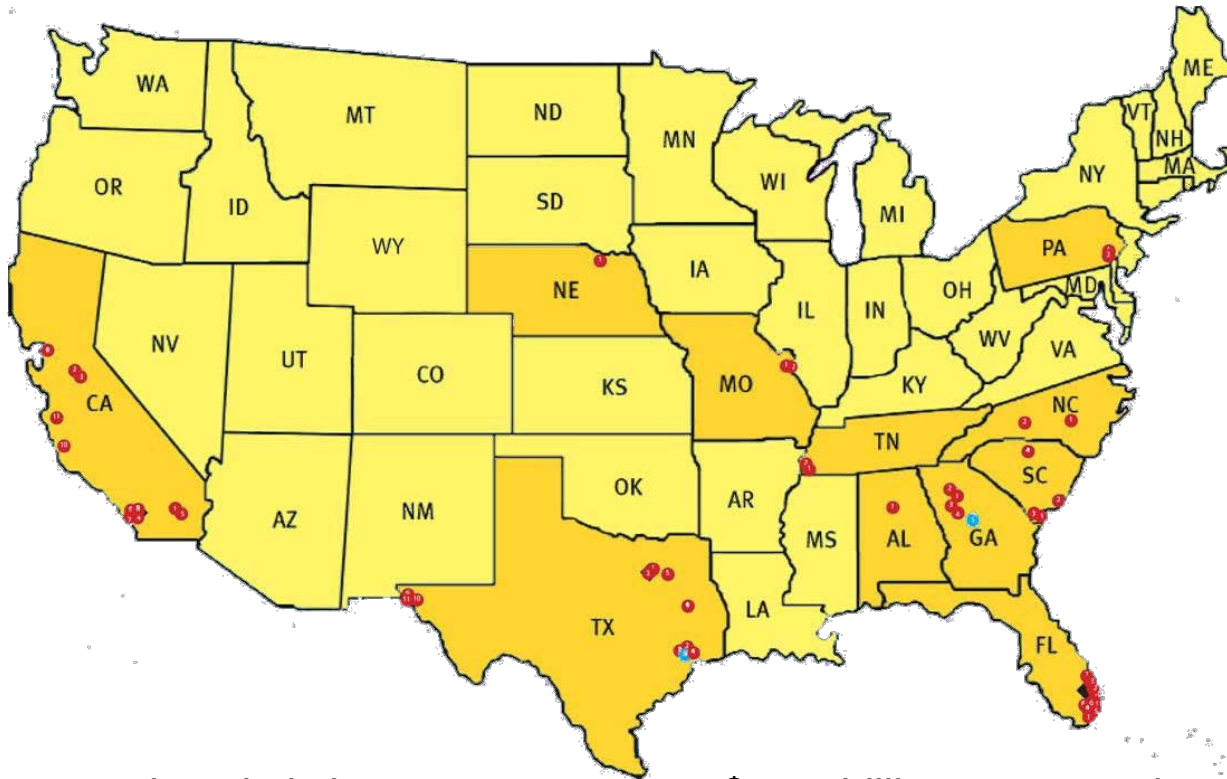
Liz Johnson, MS, FHIMSS, CPHIMS, RN-BC

- VP of Applied Clinical Informatics
- HHS Health Information Technology Standards Committee Member
- Modern Healthcare 2010 Top 25 Clinical Informaticist
- HIMSS 2010 Nursing Informatics Leadership Award
- HIMSS50 in 50: *Memorable Contributors in HIMSS' 50 Year History*



Tenet Healthcare Corporation

One of the Largest Investor-Owned Health Care Delivery Systems in the Nation



- 49 acute care hospitals in 11 states
- 64 outpatient centers
- 57,000 employees

- \$9.01 billion net operating revenues (CY'09)
- 519,390 admissions (CY'09)
- 3.88 million outpatient visits (CY'09)



Every Strategic Initiative Has a Clear Vision and Mission

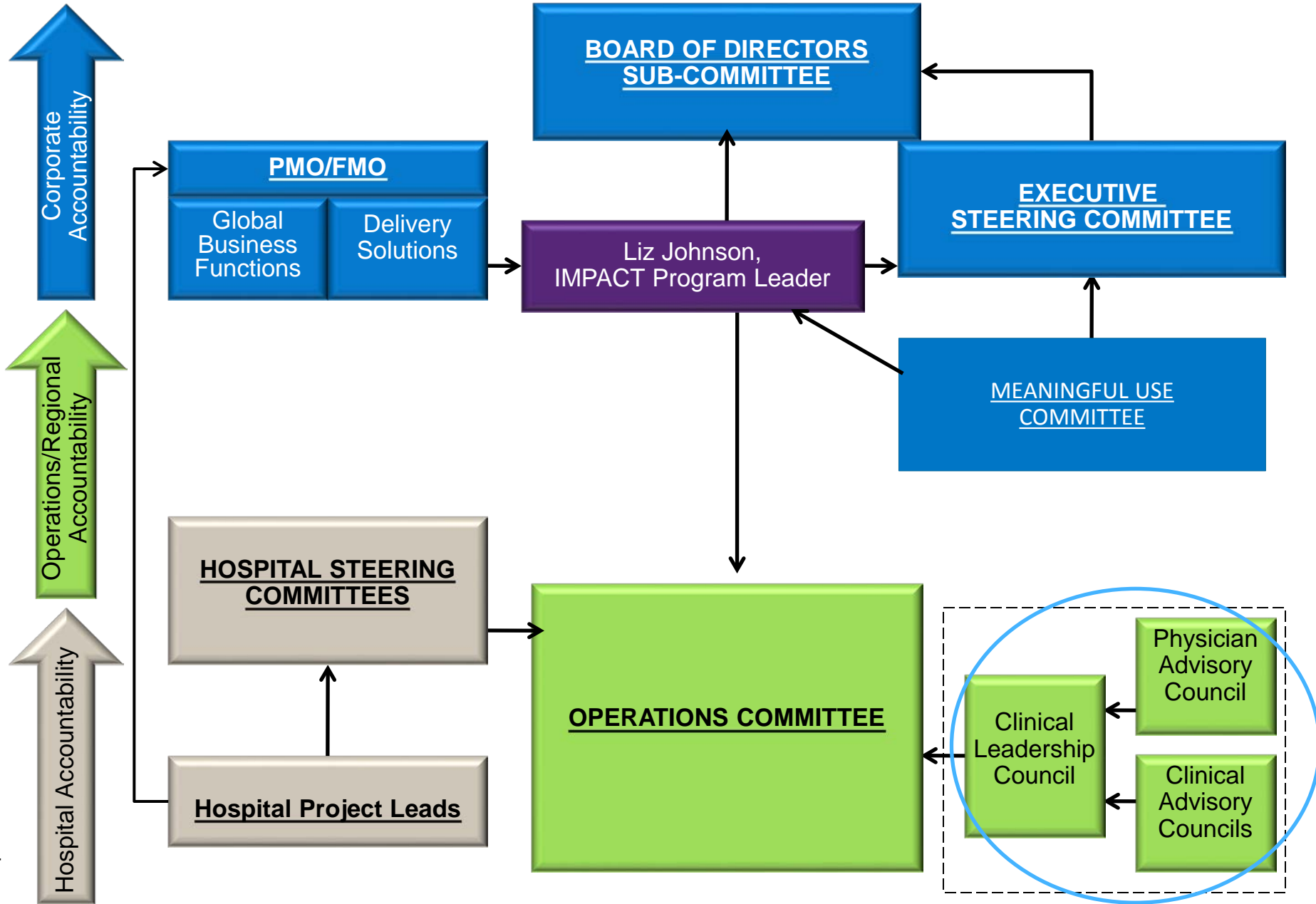
IMPACT Vision

To provide the right information when and where it's needed to improve the care and life of every person in the communities that we serve

IMPACT Mission

- Have an Electronic Health Record(EHR) and Patient Health Record(PHR) by 2015
- Get people to use technology
- Share health information in our hospitals and across our communities



Program Governance



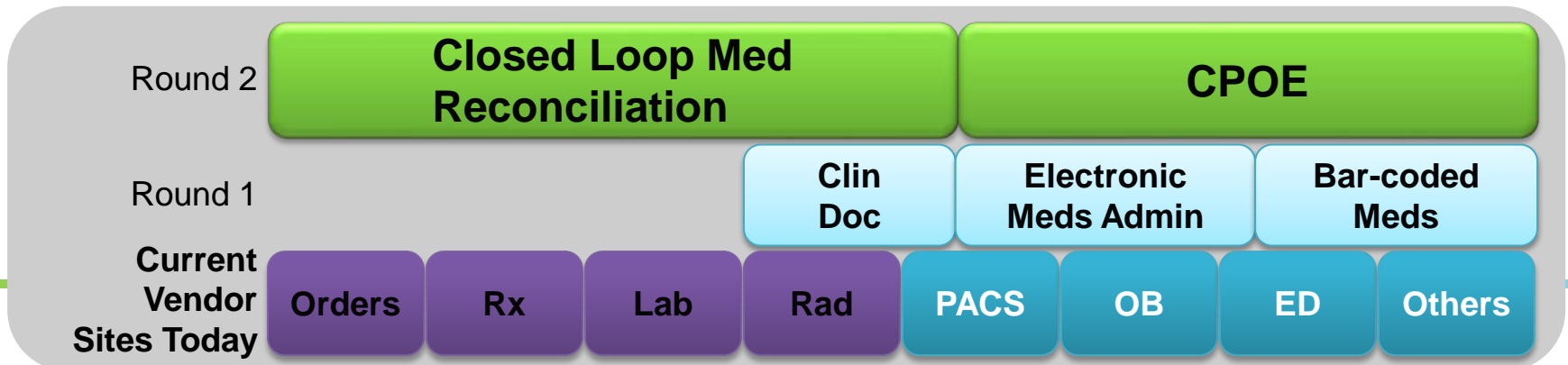
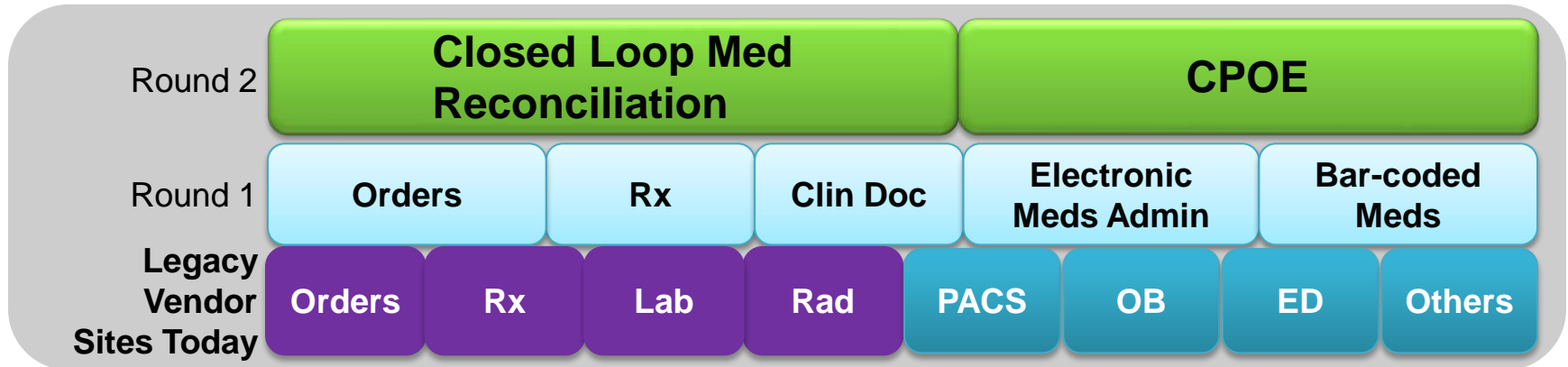
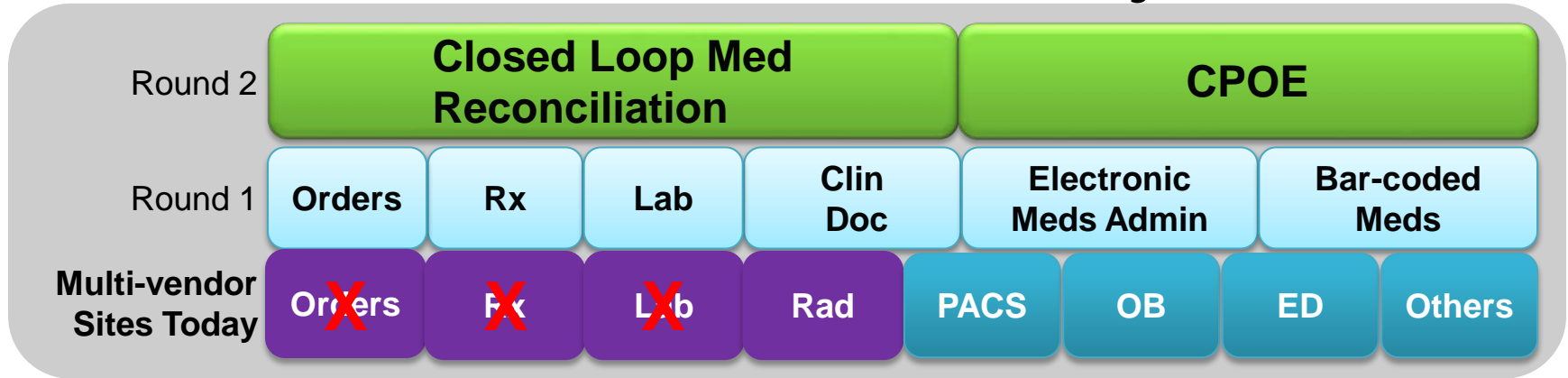
IMPACT Schedule

	2010				2011				2012				2013				2014			
	1Q10	2Q10	3Q10	4Q10	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12	3Q12	4Q12	1Q13	2Q13	3Q13	4Q13	1Q14	2Q14	3Q14	4Q14
1. Des Peres Hospital R1 R2																				
2. Desert Regional Medical Center R1 R2																				
3. John F. Kennedy Memorial Hospital R1 R2																				
4. Placentia - Linda Hospital R1 R2																				
5. San Ramon Regional Medical Center R1 R2																				
6. Sierra Vista Regional Medical Center R1 R2																				
7. Twin Cities Community Hospital R1 R2																				
8. Doctors Hospital at White Rock Lake R1 R2																				
9. Sierra Medical Center R1 R2																				
10. Nacogdoches Medical Center R1 R2																				
11. Providence Memorial Hospital R1 R2																				
12. Sierra Providence East Medical R1 R2																				
13. Frye Regional Medical Center R1 R2																				
14. Spalding Regional Medical Center R1 R2																				
15. Sylvan Grove Hospital R1 R2																				
16. Delray Medical Center R1 R2																				
17. Hialeah Hospital R1 R2																				
18. Palmetto General Hospital R1 R2																				
19. West Boca Medical Center R1 R2																				
20. St. Louis University Hospital R1 R2																				
21. Good Samaritan Medical Center R1 R2																				
22. North Shore Medical Center R1 R2																				
23. Florida Medical Center R1 R2																				
24. Coral Gables Hospital R1 R2																				
25. Palm Beach Gardens Medical Center R1 R2																				
26. St. Mary's Medical Center R1 R2																				
27. Houston Northwest Medical Center R1 R2																				
28. St. Francis Hospital - Bartlett R1 R2																				
29. St. Francis Hospital R1 R2																				
30. Creighton University Medical Center R1 R2																				
31. Brookwood Medical Center R1 R2																				
32. Piedmont Medical Center R1 R2																				
33. Doctors Hospital of Manteca R1 R2																				
34. Doctors Medical Center of Modesto R1 R2																				
35. Fountain Valley Regional Hospital R1 R2																				
36. Lakewood Regional Medical Center R1 R2																				
37. Los Alamitos Medical Center R1 R2																				
38. North Fulton Regional Hospital R1 R2																				
39. South Fulton Medical Center R1 R2																				
40. Central Carolina Hospital R1 R2																				
41. Hahnemann University Hospital R1 R2																				
42. St. Christopher's Hospital for Children R1 R2																				
43. Centennial Medical Center R1 R2																				
44. Lake Pointe Medical Center R1 R2																				
45. Park Plaza Hospital R1 R2																				
46. Cypress Fairbanks Medical Center R1 R2																				
47. Atlanta Medical Center R1 R2																				
48. East Cooper Regional Medical Center R1 R2																				
49. Hilton Head Regional Medical Center R1 R2																				
50. Coastal Carolina Medical Center R1 R2																				

Legend

 = EHR
 Go Live
 = CPOE
 Go Live

Evolution of Tenet Clinical Systems





Tenet's Position

Quality Measures

- Develop reporting capabilities to deliver all 15 electronic specified measures
- Incorporate specific data elements in the EHR build design for 20 measures proposed for Stage 2 and 3

24 Utilization Measures

- Develop reporting capabilities to deliver all **24** Utilization Measures
 - Develop reporting and compliance for 14 Core Set measures
 - Develop reporting and compliance for all 10 Menu Set measures providing flexibility in choosing 5 for submission



Tenet - Measure by Measure

Conducted functional and application level analysis

Objective: Ischemic stroke, discharge on anti-thrombotics

Business: Ischemic stroke patients prescribed anti-thrombotic therapy at hospital discharge.

Business Goal: How will we measure success? Eligible patients prescribed a medication within 72 hours of discharge.

Business Case: All eligible patients.

Business Value: Better patient outcomes, reduce costs.

Owner: ISB, CPOE

Decision: Yes No

Impact: No impact on patient safety, no impact on patient care.

Researched documentation for each measure

April 30, 2010
Version 1.1

HITSP Quality Measures Technical Note ED, VTE, and Stroke Examples for Implementation of the HITSP Quality Interoperability Specification

HITSP/TN906

HITSP
Healthcare Information Technology Standards Panel

Submitted to:
Healthcare Information Technology Standards Panel

Submitted by:

Populated validation tool of identified data elements

Data Element Validation Process: Workflows and Order Sets

Measure ID	Measure Name	Measure Type	Measure Status	Measure Description	Measure Data	Measure Data	Measure Data	Measure Data	Measure Data
...

Coordinated with a multi-disciplinary team



Met with representatives from key functional areas



Ongoing managing and working issues and risks

Physician Adoption Status

Measure ID	Measure Name	Measure Type	Measure Status	Measure Description	Measure Data	Measure Data	Measure Data	Measure Data	Measure Data
...

Key Meaningful Use Workflows

Foundation System Workflows

- ▶ Smoking Status
- ▶ Advanced Directives
- ▶ Recording Allergies
- ▶ Medication Reconciliation-Nurses
- ▶ Use of the Medication List
- ▶ Use of the Problem List-Nurses

CPOE Workflows

- ▶ Documenting clinical trials
- ▶ Problem List-Physician
- ▶ Medication Reconciliation-Physician
- ▶ Capturing " preliminary cause of death" -Physician
- ▶ Comfort Measures-Physician
- ▶ Medication Contraindications-Physician
- ▶ Depart Process-discharge medications-Physician
- ▶ Patient request for electronic discharge instructions-Nurse
- ▶ Quality Measures: stroke and VTE
- ▶ Transition of care

Life Cycle of a Meaningful Use Measure

... with supporting Tools and Resources

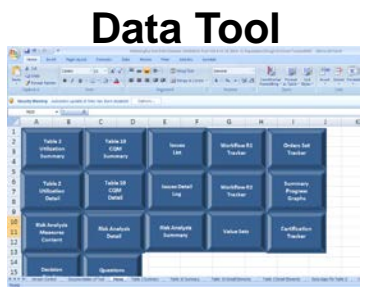
Life Cycle of a Meaningful Use Measure

Stage 2 & 3

Meaningful Use (Stage 1) Requirements

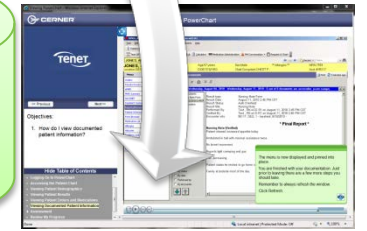
Attest to CMS

Drives – design decisions & build (workflow, data elements, order sets, content)



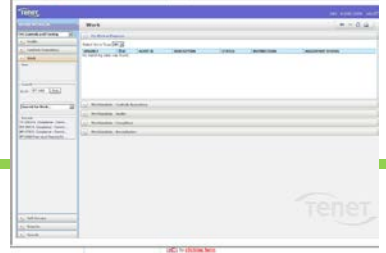
Provider Uses a Certified EHR

PBAR*
Cerner*
EDW*



Document Compliance & Evidence

MU Attestation Documentation Module



Monitor & Track Compliance

MU Dashboard



Data populates Enterprise Data Warehouse

EDW

* Certified





Clinical Business Intelligence Demonstration

Cognos Viewer - Dashboard

Boberg, Carol [Log Off](#) [About](#)

[Keep this version](#) [Add this report](#)



Meaningful Use Compliance Dashboard



Measures Summary | Measures Analysis | CQM Analysis

Choose a Facility

Corporate

[Deselect all](#)

Stage

Stage One

Fiscal Year Submission

2012

Utilization Measures - Current Reporting Period - as of Oct 6, 2010

Hospital Name	Core Set		Menu Set		Days Reporting
DES PERES HOSPITAL	9	5	9	1	35
DESERT REGIONAL MEDICAL CENTER	8	6	7	3	35
JFK MEMORIAL HOSPITAL	11	3	8	2	35
PLACENTIA LINDA HOSPITAL	10	4	8	2	5
SAN RAMON REGIONAL MEDICAL CTR	10	4	3	7	5
SIERRA VISTA REGIONAL MED CTR	9	5	4	6	5
TWIN CITIES COMMUNITY HOSPITAL	11	3	3	7	5

- *Compliance tool*
 - Built on *Pega* (same platform as Compliance Central)
 - Provides detailed instructions and procedures for hospital to complete required steps for attestation submission by Corporate
 - Supports dashboard for yes/no measures - interfaced with DW
- *Reminder/scheduling tool*
 - Start and end times associated with Meaningful Use attestation
 - Electronic communication between Hospital and Corporate submitter
- *Central repository*
 - Attestation responses for each hospital
 - Evidence to support CMS audit
- *Audit tool*
 - Time stamps work-flows, responses, authors, and evidence

MUADM: The Tool

ATTESTATION Status New Urgency 10 ID MUA-765

HISTORY

Advanced View

Time	Description	Operator	Flow
5/18/2011 2:22 PM	Item created.	Wf04 Train	StartCreateAttestation -
5/18/2011 2:22 PM	Assigned to Wf04 Train to ' (complete task) '.	Wf04 Train	StartMUADMQuestionnaire - WorkList
5/18/2011 2:29 PM	Attached Core Objective # 1: MU_Objective 1.docx	Wf04 Train	
5/18/2011 2:29 PM	Attached Core Objective # 1: MU_Objective 2.docx	Wf04 Train	
5/18/2011 2:39 PM	Attached Core Objective # 6: MU_Objective 6.docx	Wf04 Train	

ATTACHMENTS (3)

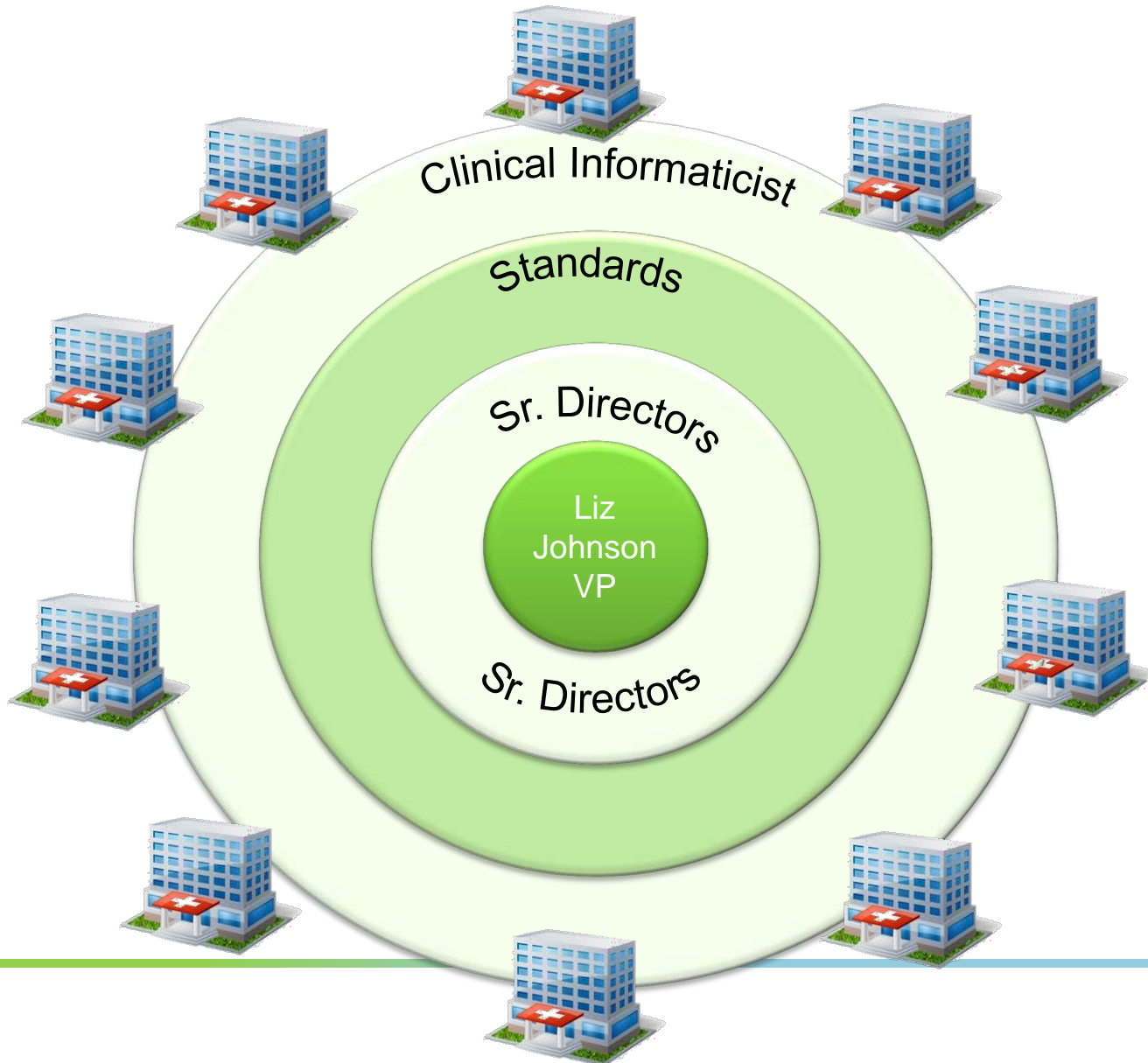
Time	Description	Operator	Attachment Type
- Core Objective # 1 (2 items) Core Objective # 1			
5/18/2011 2:29 PM	MU_Objective 2.docx	Wf04 Train	Document
5/18/2011 2:29 PM	MU_Objective 1.docx	Wf04 Train	Document
- Core Objective # 6 Core Objective # 6			
5/18/2011 2:39 PM	MU_Objective 6.docx	Wf04 Train	Document

TAKE ACTION

Review Screen: Tracking and Evidence



Applied Clinical Informatics at Tenet



Value Realization

Value Realization

Clinical Informaticists...

- ▶ Participate in identifying value realization measurements
- ▶ Support the achievement of value realization outcomes through standardization of workflow, reporting, application, and clinical practice
- ▶ Promote continued process improvement and sustainment of benefits

Measure	Description	CMS Threshold	TENET Goal	Patient Count	Status to CMS Threshold	Score
Core Set 01	Use of CPOE (Medication Orders)	30	100	370 of 1481		24.9
Core Set 02	Drug-drug and drug allergy interaction checks	Yes	Yes			0.0
Core Set 03	Record Demographics	50	100	1450 of 1559		93.0
Core Set 04	Maintain Problem List	80	100	78 of 1244		6.2
Core Set 05	Maintain meds list	80	100	1325 of 1559		84.9
Core Set 06	Maintain meds allergy list	80	100	1263 of 1559		81.0
Core Set 07	Record Vital signs	50	100	943 of 1371		68.7
Core Set 08	Record smoking status	50	100	748 of 1169		63.9
Core Set 09	One CDS Rule	Yes	Yes			100.0
Core Set 10	Report hospital CQM	Yes	Yes			0.0



Informatics Development at Tenet

- Mentorship of hospital informaticists by IMPACT program informaticists experienced in EHR implementations
- Annual Tenet Clinical Informatics Academy
 - Academy lapel pin and certificate for 18 nursing Continuing Ed credits
- CI Collaborative calls and website to share best practices
- CI competency assessments
- Visits and assistance to other Tenet hospitals





Lesson Learned with Meaningful Use Stage 1

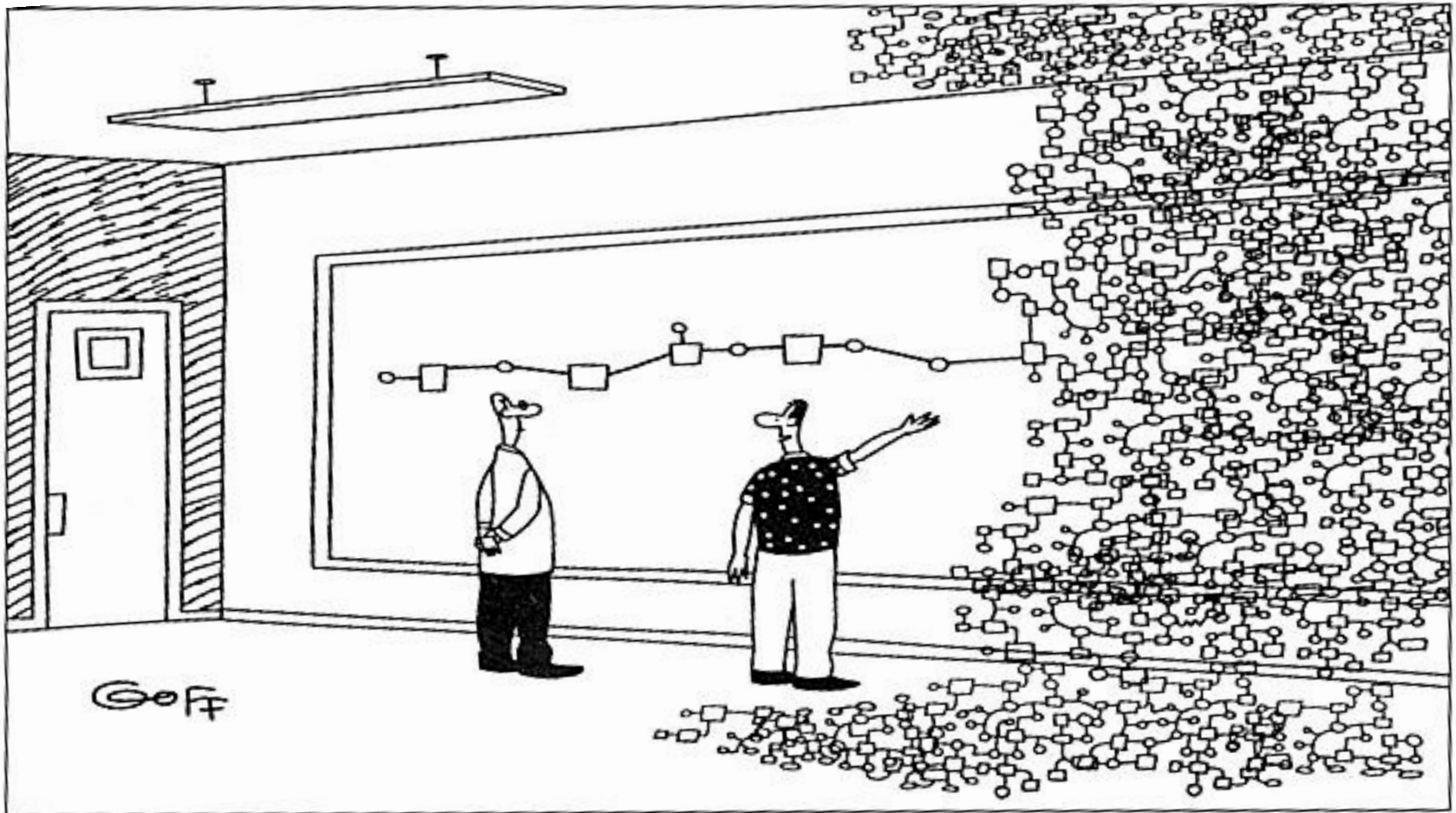
- Make decisions now with the future in mind
 - Prepare for Stage 2 and 3
 - Shared accountability programs
 - Pay for performance (quality based)
- The data matters, a lot
 - Summary analysis of the CMS regulations is not enough
 - need to get to the data level (measure by measure)
 - Data must be discrete, at the lowest level
 - Can't build for the future without the data in mind
 - Must be able to aggregate, calculate and report
- **Overlap** between CMS Core Measures and CMS EHR Clinical Quality Measure programs exists
 - These will not be 100% "harmonized"
 - Will require expansion of hospital quality programs



Lesson Learned with Meaningful Use Stage 1

- Have a **team dedicated** to tracking, interpreting and attesting
- It's a **balancing act** that requires effective governance to manage other priorities (e.g. 5010, ICD-10)
- Engage your **clinicians**, early, often and get their input
- **Communicate**, communicate, communicate
 - Help users understand what is coming
 - Set expectations, things will change





"This is where the idea for the new EHR starts getting a little complicated."

