

Informatics and Quality ~~On the Radar Screen~~ In the Crosshairs of Healthcare Reform

ASQ

Minnesota Section 1203

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Evaluator

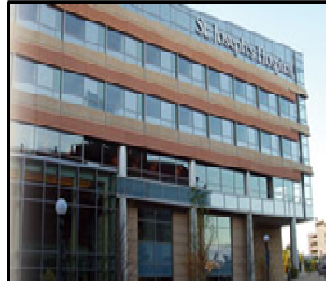
Minnesota Healthcare
Quality Professionals
Education Chair



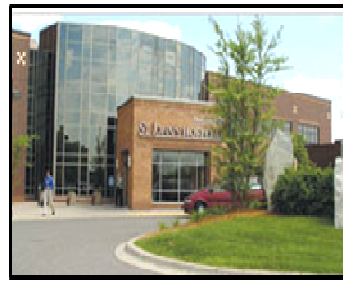
HealthEast Care System St. Paul, Minnesota



Woodwinds



St. Joseph's



St. John's



Bethesda

HealthEast Care System

- 4 Hospitals
- 12 Primary Care Clinics
- More than 35 specialty services
- Home Care & Hospice
- Medical Transportation

Hospital Capacity

Licensed Beds:	925
St. Joseph's Hospital	401
St. John's Hospital	184
Woodwinds Health Campus	86
Bethesda Hospital (LTACH)	254

EHR: McKesson; Allscripts

Agenda

- A few thoughts from ASQ's "Future of Quality" Study
- Healthcare: A Decision Intense Industry
- Healthcare Reform : A Catalyst for Quality
- Healthcare Quality & Informatics
- Change Management

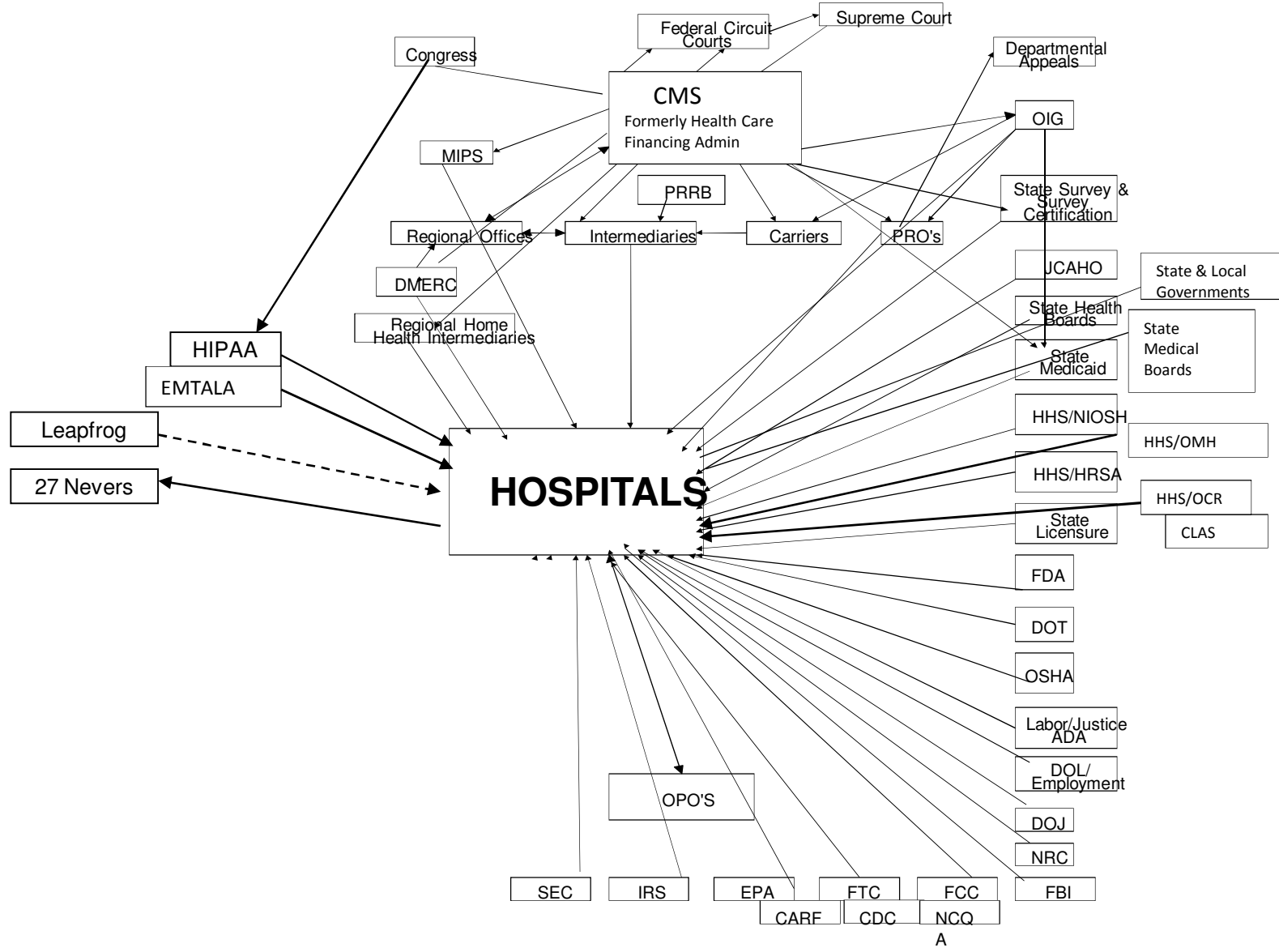
ASQ's 7 key forces

1. Globalization
2. Social Responsibility
3. New Dimensions of Quality
 - Innovation
 - Managing change
4. Aging Population
5. Healthcare
6. Environmental Concerns
7. 21st Century Technology: Driver of Change

ASQ's Implications That Resonated

- Culture of CQI:
 - The knowledge and ability to apply the tools of quality continue to be drawn out of the profession and **into the hands of everyone** in the organization.
 - As quality moves into areas less tangible than manufactured goods, it will increasingly become an issue of culture; a **“quality mind-set”** is needed.
- Measuring waste and managing its reduction will continue to focus quality on the **cost side** of the equation.
- **Change and innovation are as much attributes of quality** and how we manage as they are of products, processes, and services that are produced and delivered.
- This plethora of **data** will serve only to pollute clear thinking and rational decision making if it is **poorly designed, managed, and analyzed.**

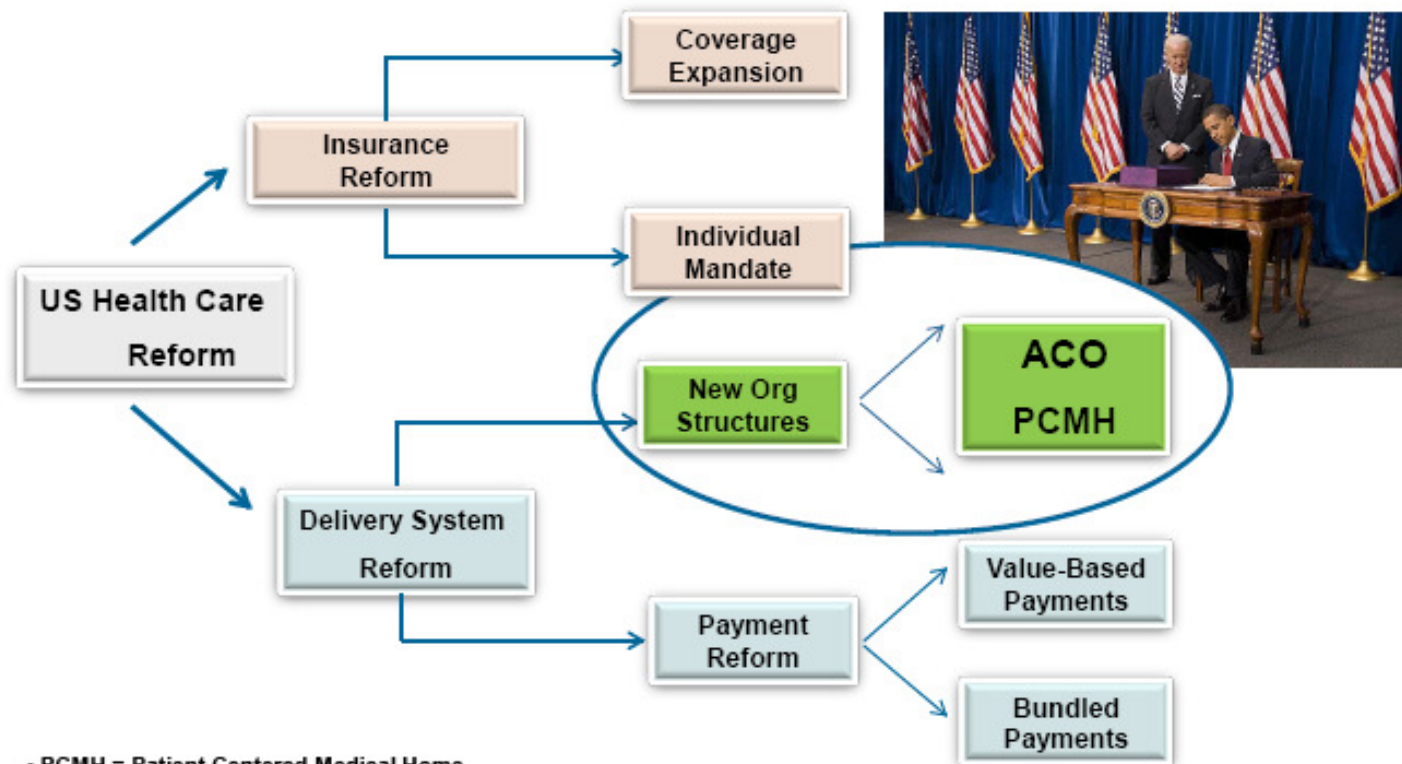
Who Accredits / Regulates a Hospital ?



Allegiance Health, Jackson Michigan Slide from 2010 McKesson Users Group

US Health Reform 2010

Two-Pronged Approach to Redesign of the US Health Care System. Who Will Lead "Delivery System Reform"???



- PCMH = Patient Centered Medical Home
- ACO = Accountable Care Organization

Some of the Reform drivers

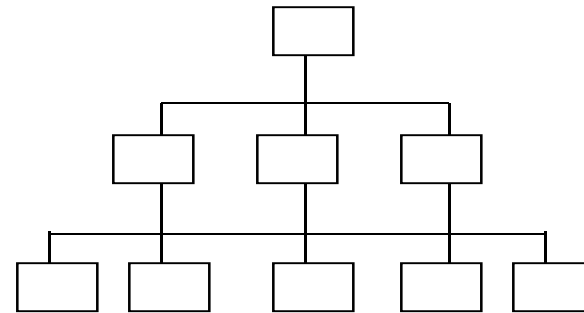
- Care Across the Continuum
 - replaces fragmentation of care
 - Homecare / Hospice
 - Clinics
 - Acute Care (hospital)
 - Long term care; Skilled Nursing Facilities
- Emphasis on Prevention , then treatment
- Pay for outcomes rather than pay for procedure
- Telemedicine

Predominant Metaphors Used in Organizations:

- *Machine*

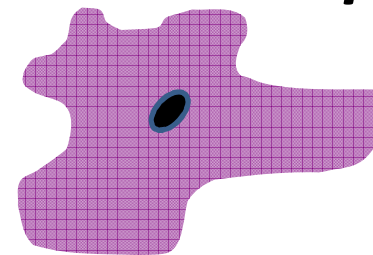


- *Military Operation*



The new, emerging metaphor of the decision paradigm:

Biological or Living Systems

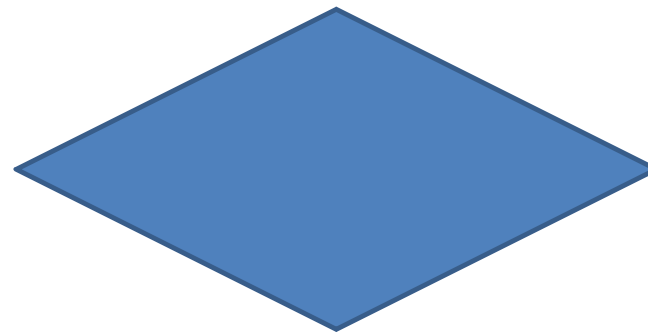


Healthcare: A Decision Intense Industry

Input

Process

Output



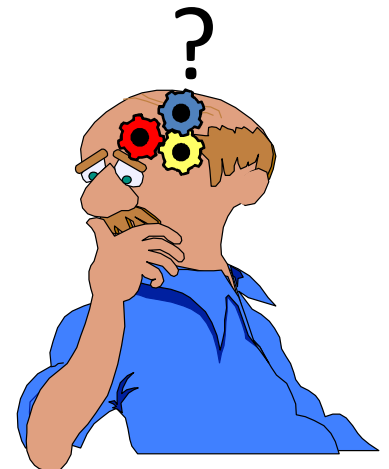
Clinical Outcomes
Patient Satisfaction

- Physicians
 - Nurses
 - Pharmacists
 - Respiratory therapists
 - Dieticians
 - Social workers
 - Rehab therapists
 - Etc
- } • Judgments
• Choices

Decision Making : What is a Decision ?

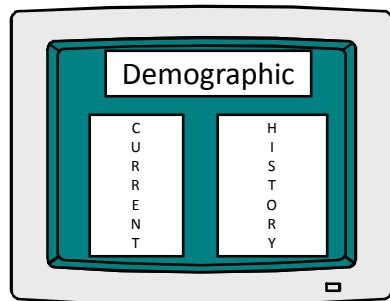
- Decisions commit resources through judgment and choice processes
- There is process in decision-making:
 - Opportunity/Problem Detection & Explanation
 - Alternative Generation
 - Analysis (Cost/Benefit judgments)
 - Selection among alternatives
 - Implementation(Monitoring/measurement repeats the cycle)

- Can we model this process?

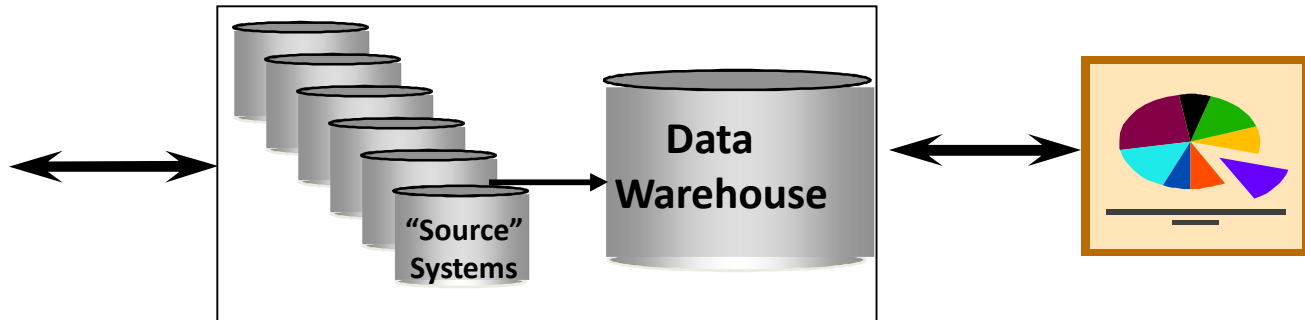


Decision Categories

CONCURRENT CLINICAL & OPERATIONAL DECISIONS



RETROSPECTIVE / ANALYTICAL TACTICAL & STRATEGIC DECISIONS



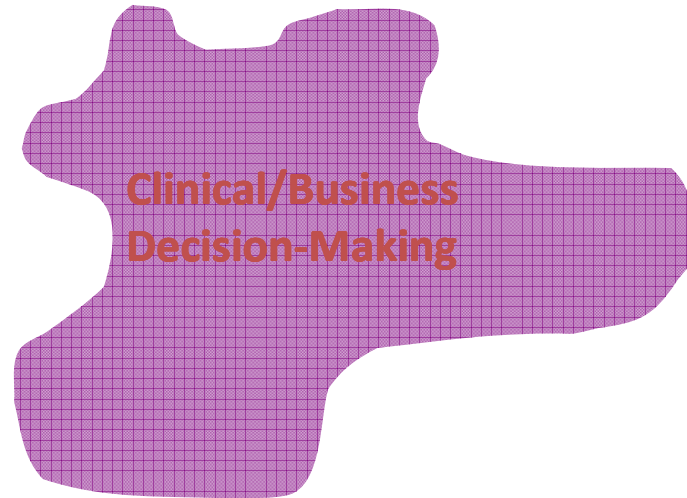
- 'Quick Look' JUDGMENTS
- 'within'
 - a PATIENT: Solve problem;
Exploit Opportunity
 - a PROVIDER: activity levels
 - a DEPARTMENT: staff scheduling
 - a REGION: assess event impacts
- Empower employees (within limits)
- Semi-structured process
- Apply protocols/pathways

- RESEARCH & PI ANALYSIS
- 'across'
 - patients
 - continuum of care
 - channels,
 - markets,
 - periods
- Unstructured (little or no process)
- Find key variables
- Collaboration & sharing.
- Refine protocols/pathways

Objective of Decision Support

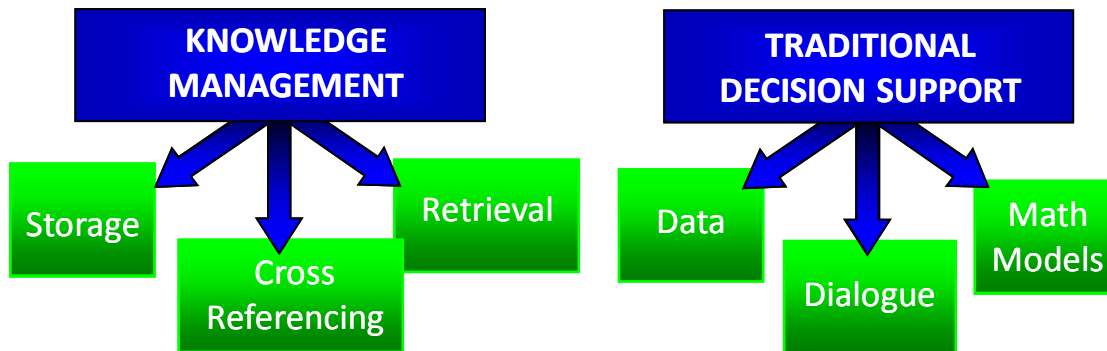
Unobstructed exploration
to achieve closure
in a single sitting.

Decision Process Modeling: The Requirements GAP



FLEXIBILITY

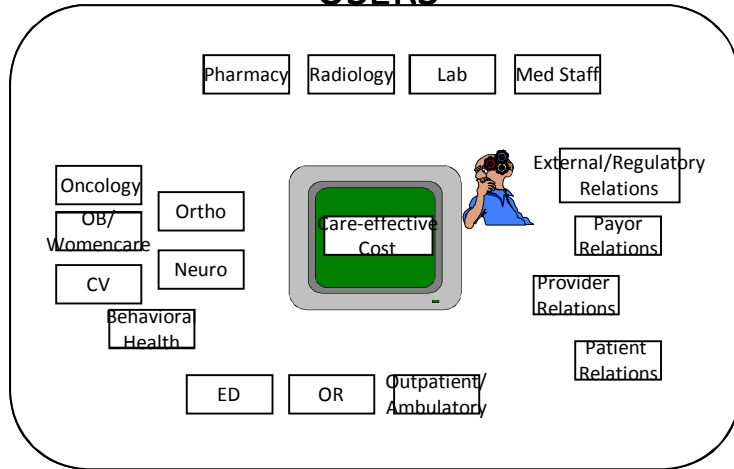
IT ARCHITECTURE



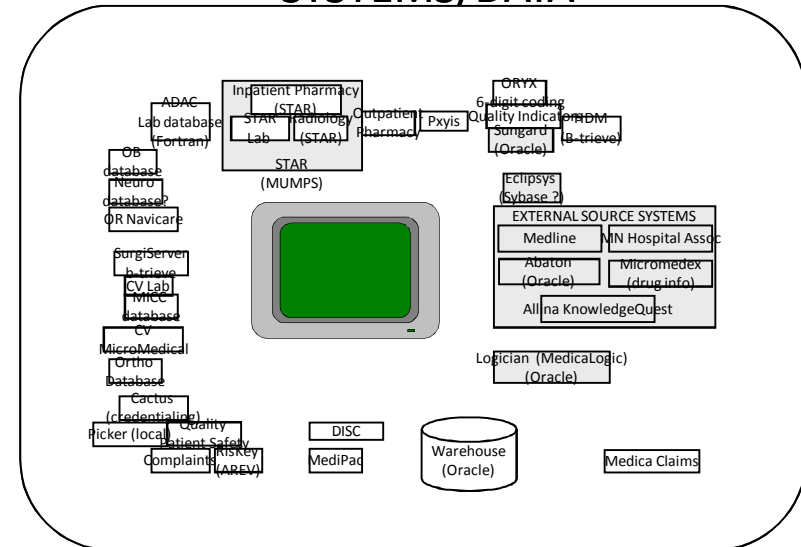
STRUCTURE

Decision Paradigm: Additional Bridges Required

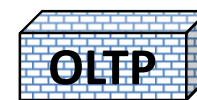
USERS



SYSTEMS/DATA



IT MODELS



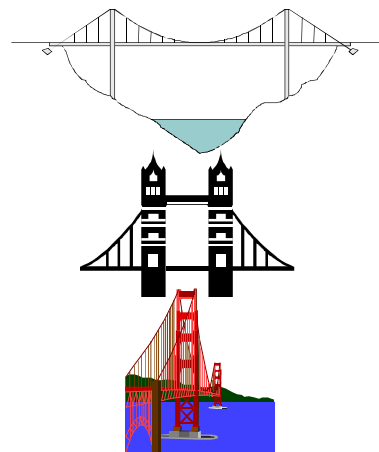
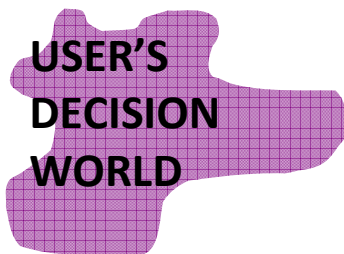
Transaction Process
(ERD; DFD)



Analytical Decision Processes



Operational/Clinical Decision Process Storyboards



Healthcare IT & Informatics

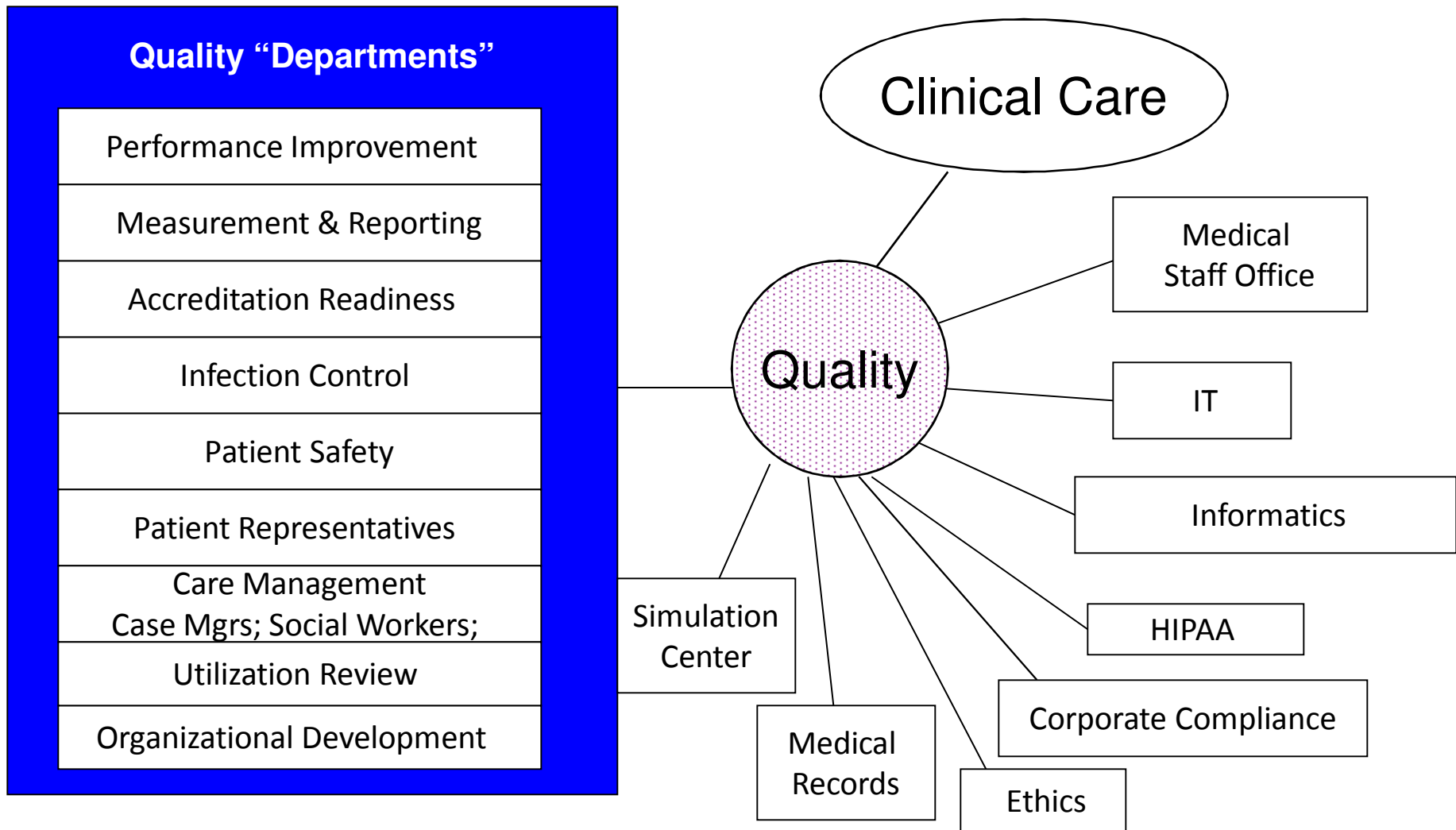
- IT
 - Hardware and infrastructure
 - Backup and recovery
 - Transaction applications
 - Registration/scheduling
 - Coding
 - Billing
- Informatics
 - Electronic Health Records: The Clinical applications
 - Clinical Decision Support & Documentation
 - “The most significant change a clinician will ever encounter”
Valusek

Healthcare Informatics

- Clinical Applications Build
 - Orders
 - Nursing Documentation
 - Clinician Notes
 - Medication Reconciliation
 - Lab & Imaging integration
- Trainers
- Super Users
- Pharmacy Informaticists
- Reporting & Analytics

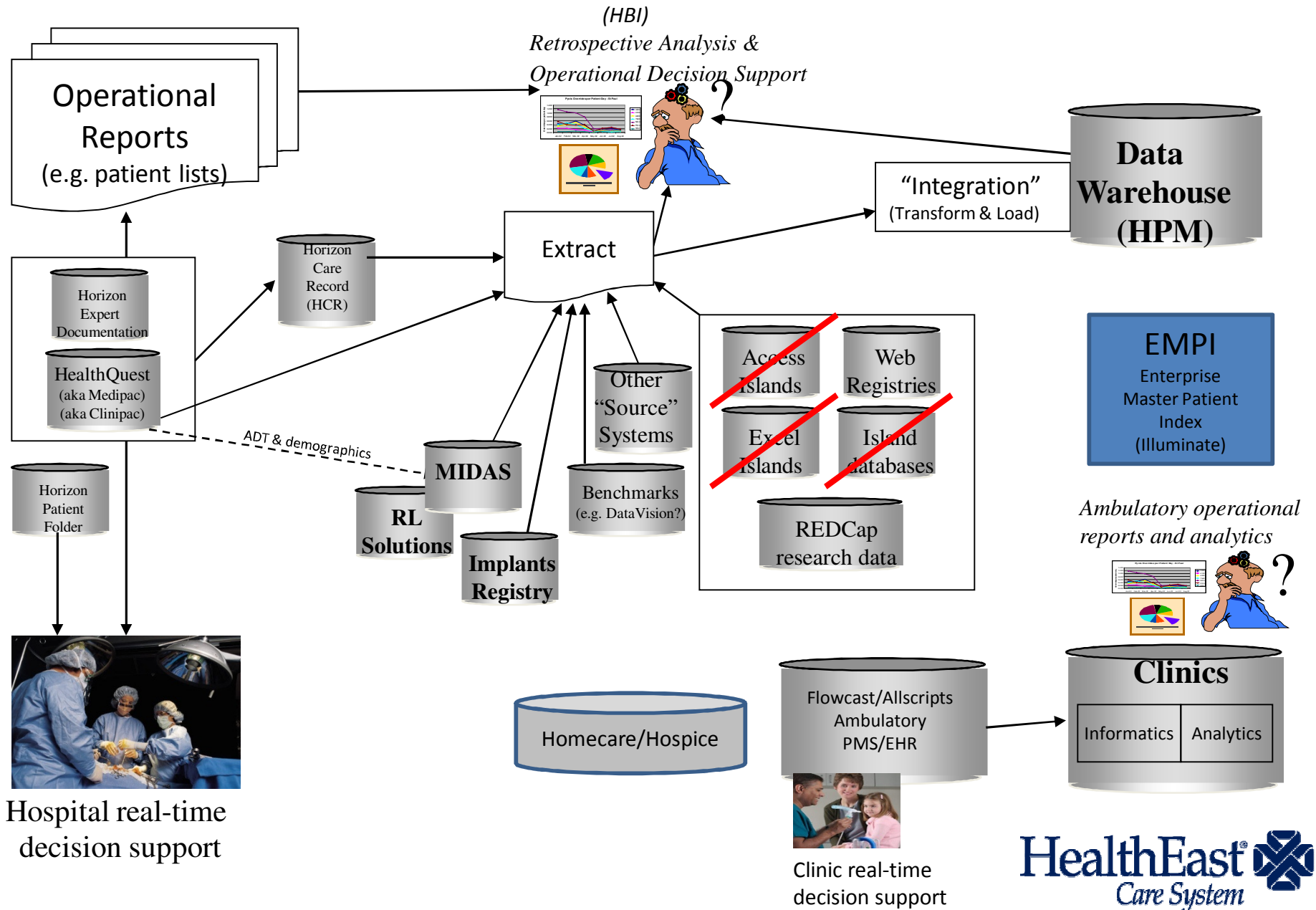
Healthcare Quality

- **Is everybody's job**
- Is supported by the following departments (and many others)



HealthEast Informatics Conceptual Model

view as of 12/31/10



Healthcare Reform : A Catalyst for Quality

- Meaningful Use
- Value-Based Purchasing
- Accountable Care Organizations

Meaningful Use ⁺ = Necessary Conditions

- Meaningful Use
 - EHR's (hospital and clinic) over next 5 years
 - Health Information Exchanges (HIE)
 - Continuity of Care Document (CCD)
 - Continuity of Care Record (CCR)
- ICD-10
- Master Patient Index

Value Based Purchasing

$$\text{VBP} = \text{Quality} / \$$$

$$\text{Quality} = .7 (\text{clinical outcomes}) + .3 (\text{satisfaction})$$

“First do no harm”

$$\text{Quality} = (\text{Patient Safety}) * (\text{clinical outcomes} + \text{satisfaction})$$

Accountable Care Organizations

Providing care across the continuum and being paid for it

Measures	Clinics	Hospitals	Recovery & Rehab
Hospital Acquired Infections		X	
Hospital Acquired Conditions		X	
Readmission 7 , 14, 30 days (by disease)			X
LOS Index (Geometric Mean)		X	
Cost / Case		X	
Potentially Avoidable Admits (by disease)	X		
Potentially Avoidable Admits (by provider)	X		
Potentially Avoidable ED Visits (by disease)	X		
Potentially Avoidable ED Visits(return in 72hrs)		X	
Mortality (overall)		X	
Mortality (disease specific)		X	

Change

- The only constant is change
(except from a vending machine)
- Life is change
Growth is optional
- It is not necessary to change.
Survival is not mandatory.
Deming

Change Management

Identify the change occurring on your unit this week:

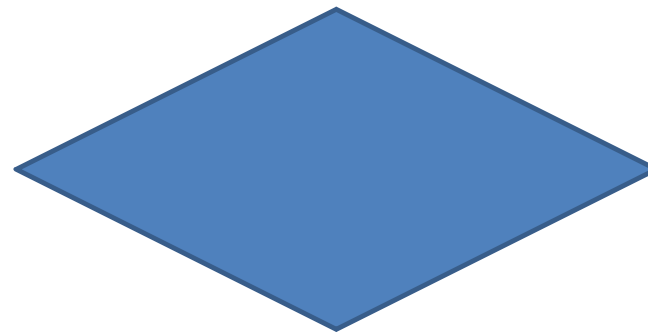
- Professional partnership model;
- medication reconciliation;
- new staff starting/orienting/precepting;
- new nursing students;
- new hospital planning;
- new equipment (SCD pumps, ceiling lifts);
- focus on decreasing overtime;
- focus on increasing team playing;
- focus on patient Picker scores "would you recommend?";
- telemetry training;
- new protocol for insulin pens w/discharged patients;
- added edunet modules (diabetes, moderate sedation, influenza);
- management changes;
- construction/detours outside and inside building;
- EHR monthly updates;
- relocation of our supply room;
- focus on email as primary source of information/no paper postings;
- daily medicare discharge notices;
- patient room changes/loss of private rooms."

What are the implications of this much simultaneous change ?

Input

Process

Output



Clinical Outcomes
Patient Satisfaction

- Physicians
 - Nurses
 - Pharmacists
 - Respiratory therapists
 - Dieticians
 - Social workers
 - Rehab therapists
 - Etc
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Re-Cap

- Healthcare: A Decision Intense Industry
- Healthcare Reform : A Catalyst for Quality
- Healthcare Quality & Informatics
- Change Management
- A few thoughts from ASQ's "Future of Quality" Study

Review/Summary: ASQ's 7 key forces

1. Globalization

HIE; CCD; CCR

1. Social Responsibility (STEEEP)

(Safe, Timely, Equitable, Effective, Efficient, Patient-centered)

3. New Dimensions of Quality

- Innovation
- Managing change

4. Aging Population

5. Healthcare

6. Environmental Concerns (e.g. medication disposal)

7. 21st Century Technology: Driver of Change

(EHR/EMR; diagnostics; telemedicine; predictive decision support)

Questions

