

The logo for the University of Maryland Medical System is a vertical blue bar on the left side of the slide. It features a white stylized graphic of a hand holding a pen, with the pen tip pointing downwards towards a series of white vertical bars that resemble a classical architectural column. The top of the bar is a solid blue rectangle, and the bottom is also a solid blue rectangle.

University of Maryland Medical System

# Driving Change in the 21<sup>st</sup> Century Practice of Medicine

Maryland Chapter  
Healthcare Information and Management Systems Society  
March 10, 2011

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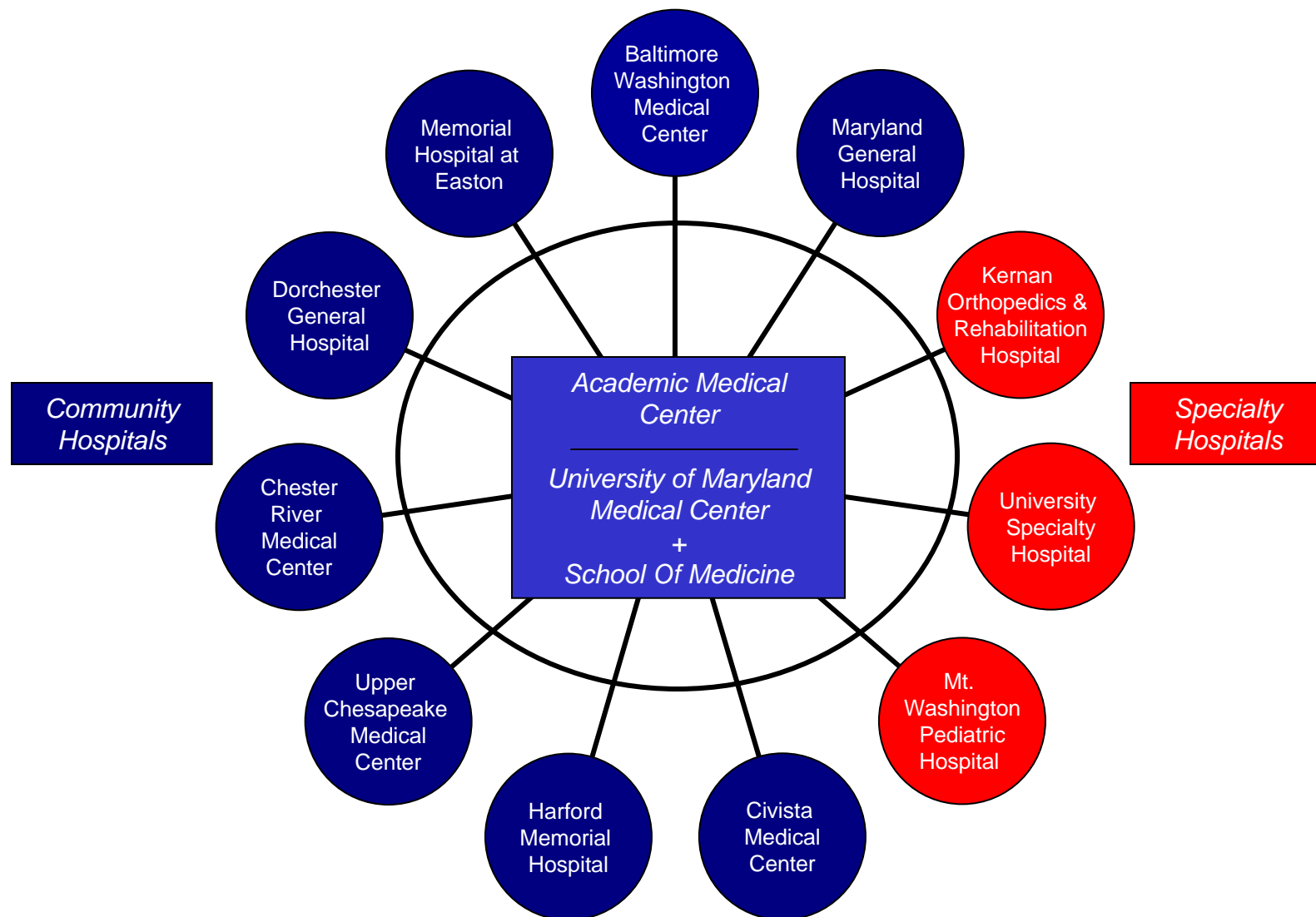


# Discussion

- Healthcare and related trends
- Technology
- Quality – IT Partnership
- Summary



# University of Maryland Medical System





# Industry Challenges

- Cost
- Variability of reimbursement models
- Capital Needs / Operating Margins
- Current Economic Conditions
- Access
- Patient Safety/Quality
- Increased Demand for Services
- Health Reform
- Labor Shortages
- Shifting Costs – Premiums, Cost Sharing, Deductibles, Co-Pays

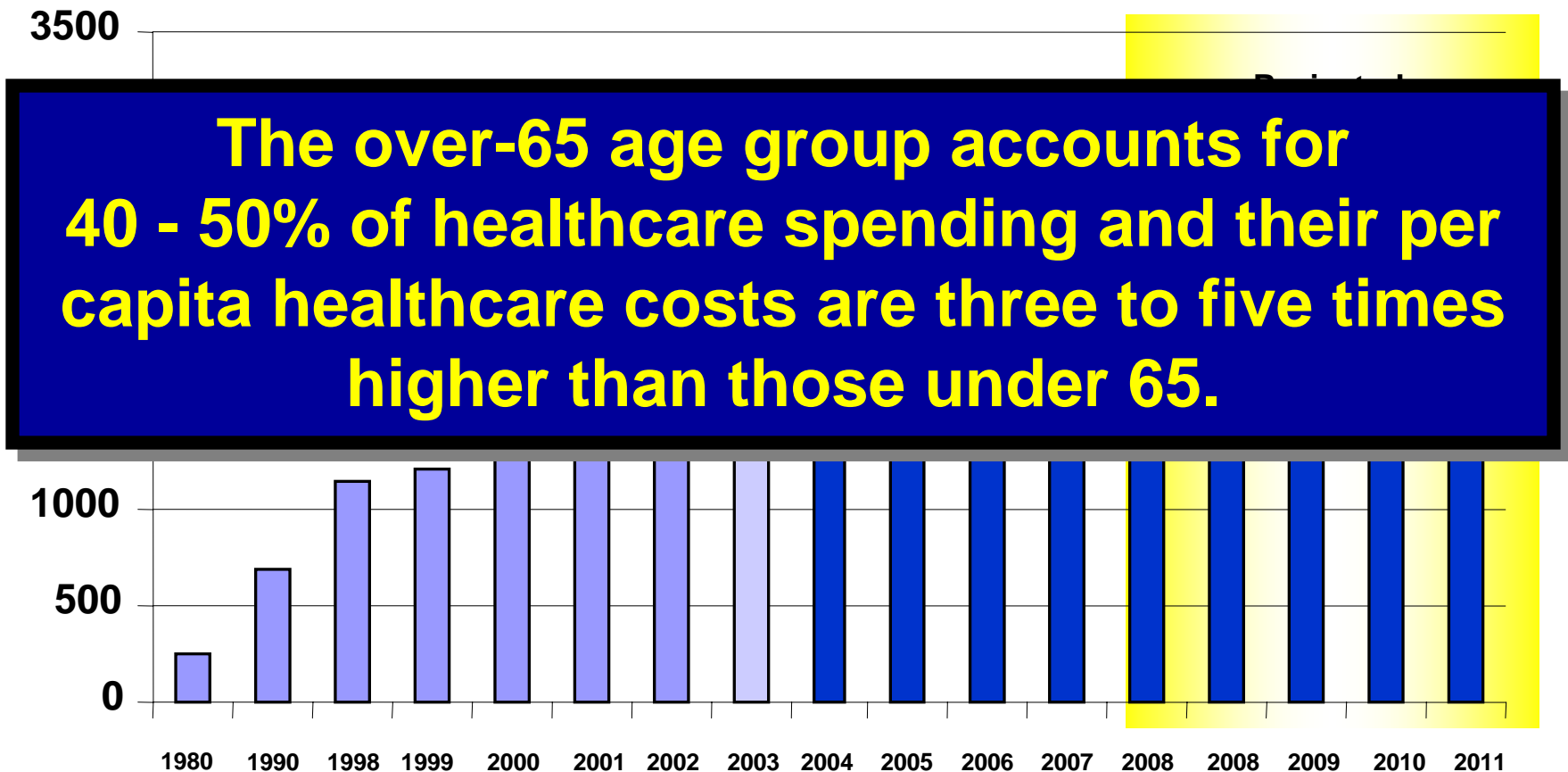


# Aging Population

- > age 65
  - 2000 approx 34.M 12% total population
  - 2010 approx 40.M 13%
  - 2020 approx 54.M 16%
  - 2030 approx 71.M 20%
  - 2040 approx 80.M 21%



# National (U.S.) Health Expenditures (\$Billions)



Source: Centers for Medicare and Medicaid Services, Office of the Actuary.



# Anxiety Creator

- Payment Reform and increased accountability has several forms
  - Penalties for “never events”
  - Reduction in unnecessary services
  - Shifts to generic medications
  - **Fixed payment (with quality goals) for management of chronically ill patients and surgical care**
- Overall increased accountability will lead to:
  - **Material financial risk being placed on the provider**
  - **Transparent price and quality information**
  - Determination and enforcement of diagnostic and treatment comparative effectiveness
- Accountable care will emerge in varying and models. A small percentage of market is ready today (maybe)



# Trends

- 237 million Americans use the Internet
- 197 million use the Internet for health care information
- Consumer demand is on the rise for
  - EMR utilization by their physician
  - Two way communication
  - Self Service capabilities
  - Self Education opportunities
  - Convenience

Source: Pew Trust



# Patient Engagement

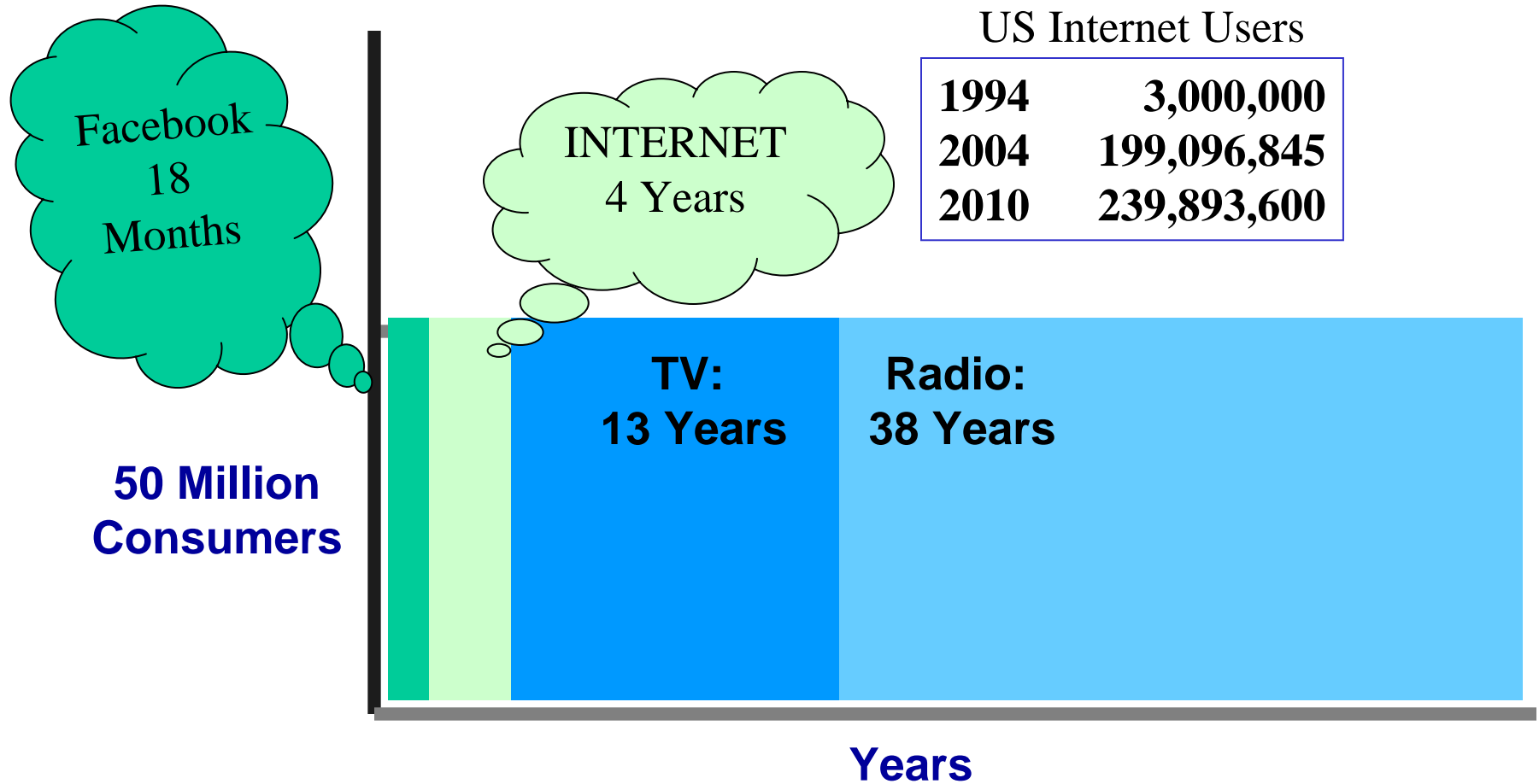
- Consumerism in healthcare places a much greater demand of patients to be informed and providers to inform
- Patients want to be in a position to make more effective decisions in terms of:
  - Appropriate provider for a given condition
  - Efficient use of healthcare dollars spent
  - Healthy lifestyle and preventative medicine choices

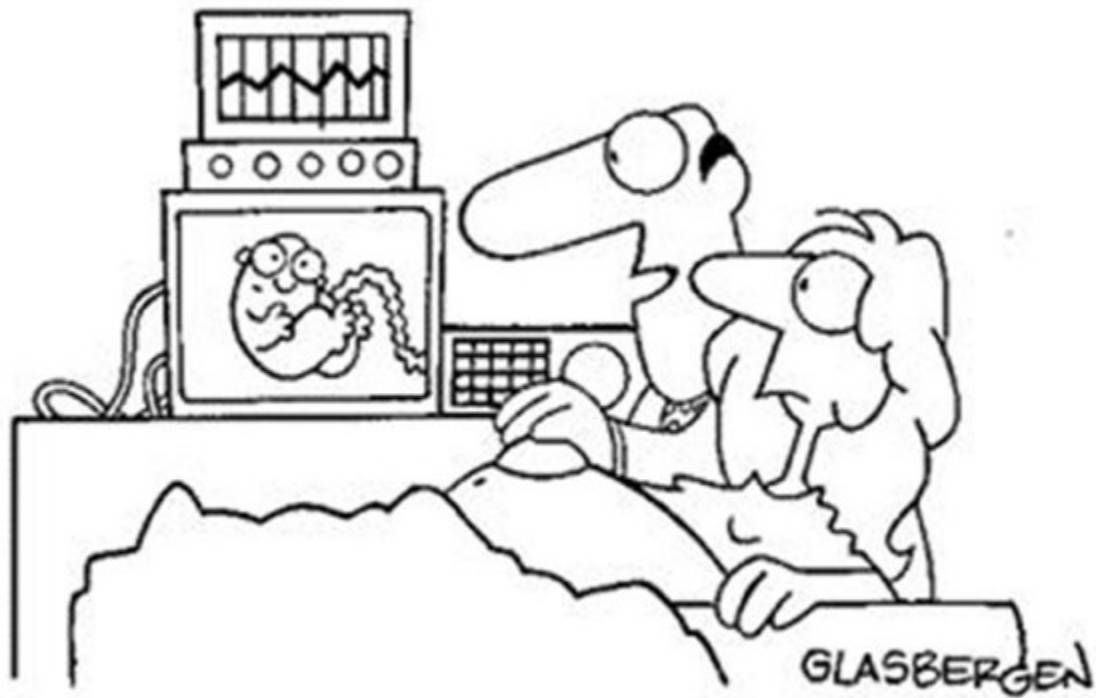


Transformation is upon us  
.....and it is us



# Technology Adoption





**“Your baby is developing very nicely.  
Would you like to send him an e-mail?”**



# Industry Transformation

- Banking and Financial Services
- News and Media
- Retail
- Travel and Entertainment
- Logistics

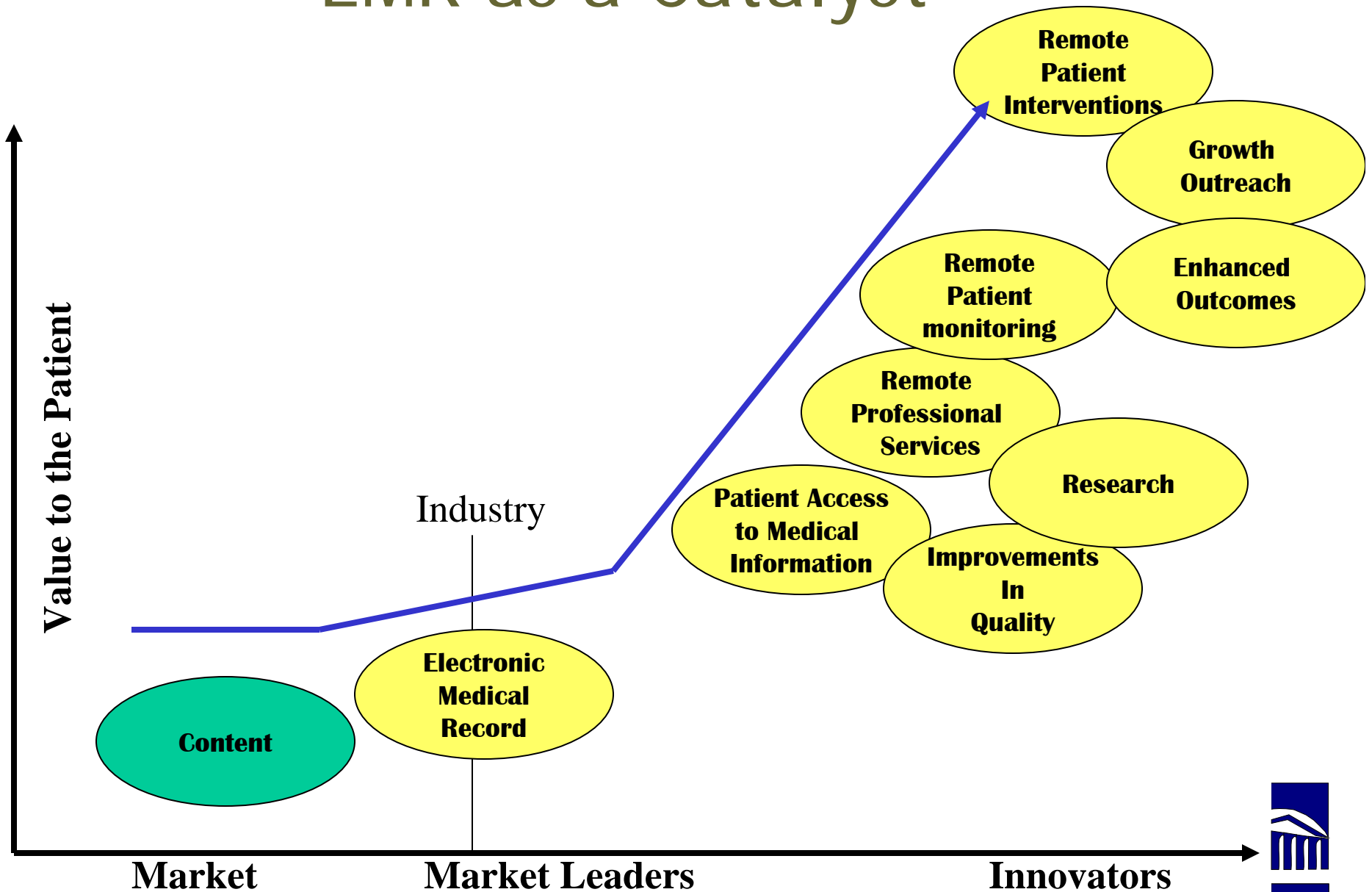
HEALTH CARE



# Industry Transformation

- Aggregate and Industry studies point to a strong connection between IT and US productivity revival in the late 1990's to early 2000's.
- Investment began in the late 1970's with a high degree of intensity being made in the 1980's and 1990's
- Between 1987-95 Intensive IT using industries posted productivity gains similar to non IT intensive use industries.
- Between 1996 - 2000 productivity growth for Intensive IT using industries grew nearly 4 times higher than other industries
- Use of information technology became focused in the early 1990's for the Intensive IT use industries
- Use of IT blended with innovations in processes, skill changes, structuring, and other operational changes reap the greatest benefits

# EMR as a Catalyst





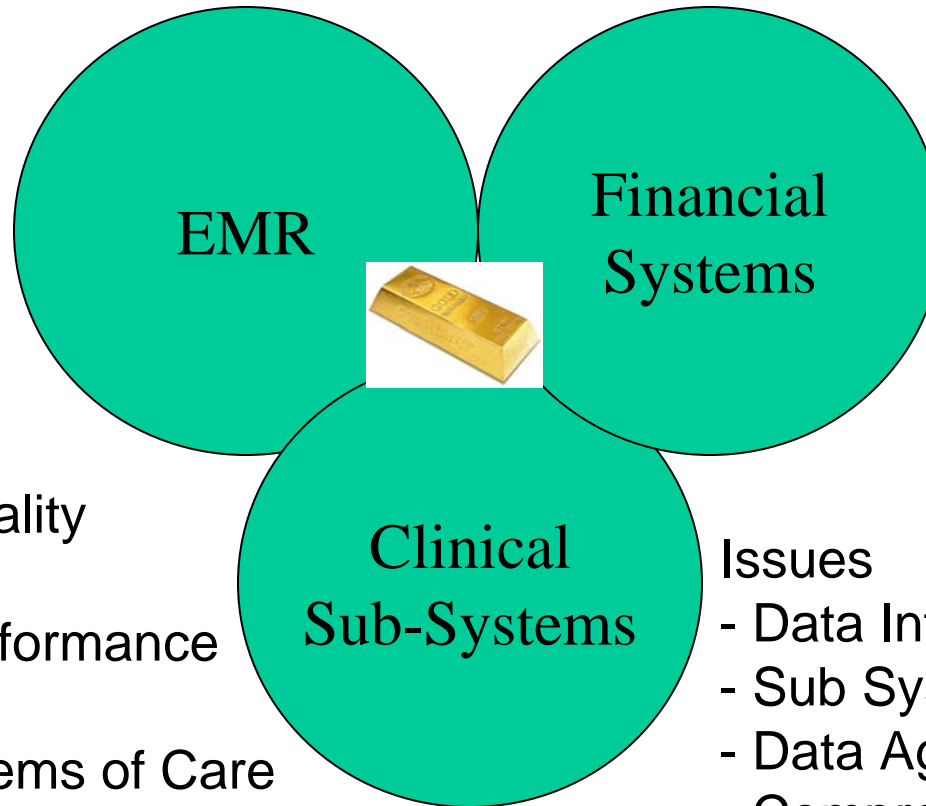
# Secondary Use

## Considerations

- Privacy
- Standards
- Source of Truth
- Architecture

## Primary Use

- Transactions
- Workflow
- Data Transfer
- Operations



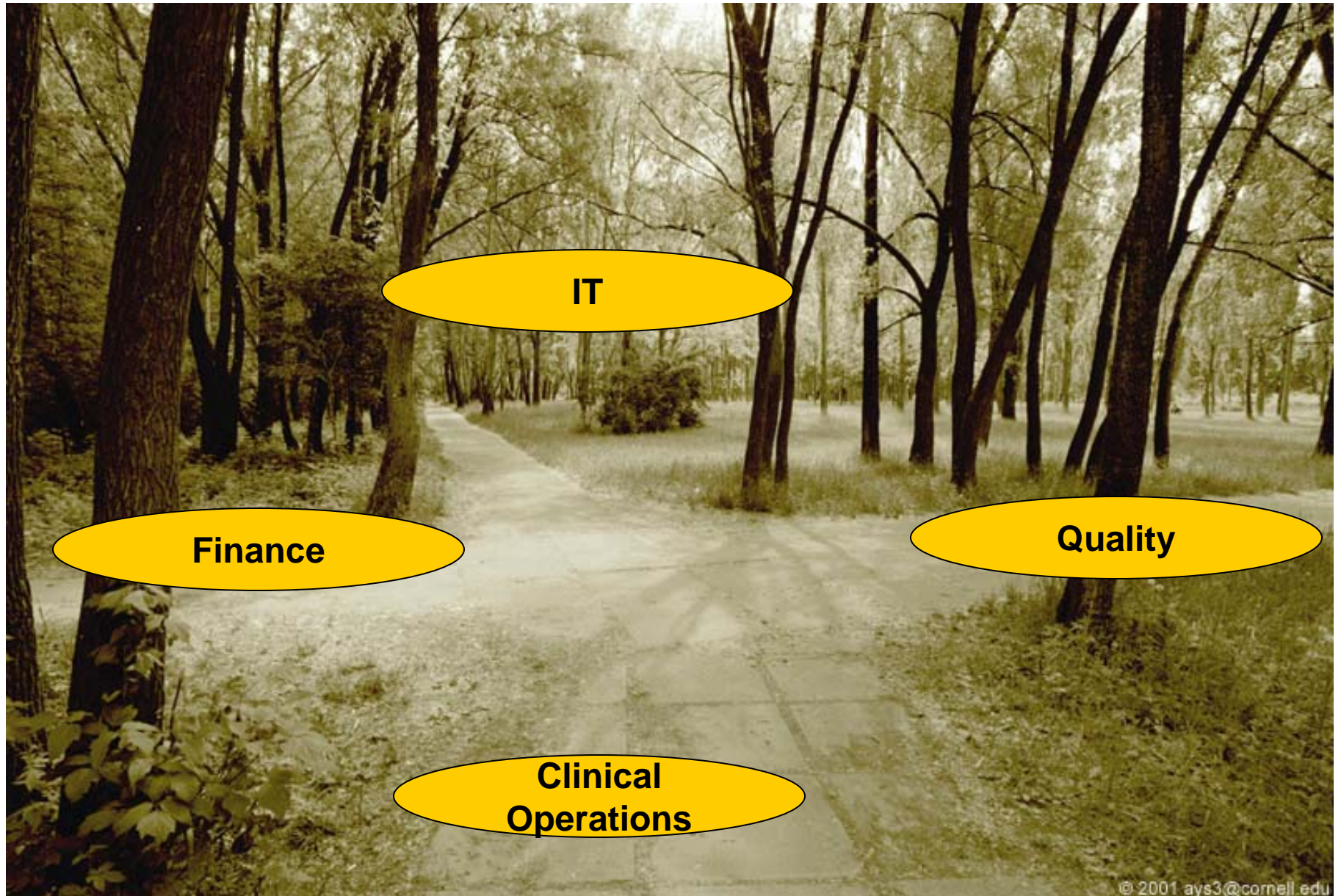
## Secondary Use

- Enhanced Quality
- Outcomes
- Operating Performance
- Research
- Creating Systems of Care
- Personalized Medicine
- TeleMedicine
- Patient Engagement
- New Opportunities

## Issues

- Data Integration
- Sub Systems
- Data Aggregation
- Comprehensiveness
- Interoperability
- Accuracy and Trust
- Legal and regulatory barriers

# Intersection



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# UMMS Intersection





# Patient Safety Technology Crossroads

- True meaningful use of an EMR
  - Computerized Provider Order Entry
    - Clinical Decision Support
  - Imbedded evidence-based protocols
  - Medication Verification and Administration
- Clinical Reporting and Analytics
- Core Measures
- Improvements in Clinical Performance
  - Creation of Systems of Care
  - Disease based forecasting
- Accountable Care



# Imperatives for Enhanced Quality

- Integrated system performance
  - Common information technology system across the continuum
  - Creation of Systems of care
  - Real-time clinical decision support
- Analytics in the redesign of care processes
  - Measure, Monitor, Report
  - Reduce unnecessary services, admissions, and procedures
  - Ability to track patient care across the continuum
- Accountability
  - Enhance patient services, education, and self management
  - Organize and deliver integrated care blending high tech with high touch
  - Performance/Outcome based incentives
  - Blended clinical and financial analytics

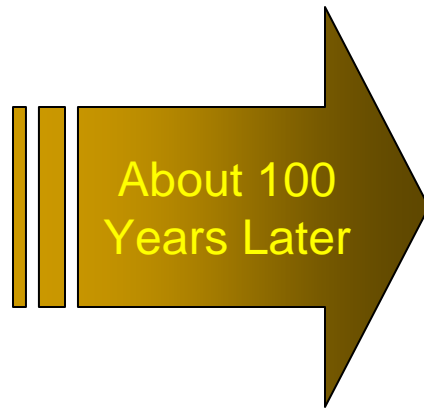


# Putting It In Perspective

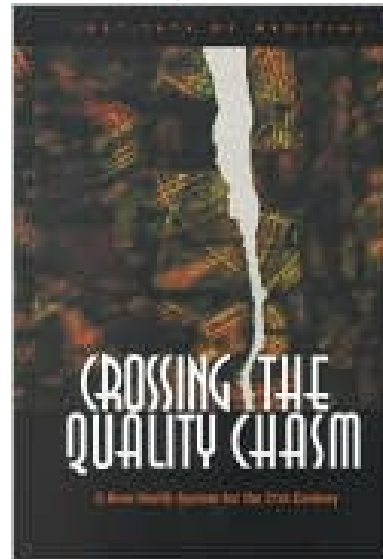


Abraham Flexner, MD

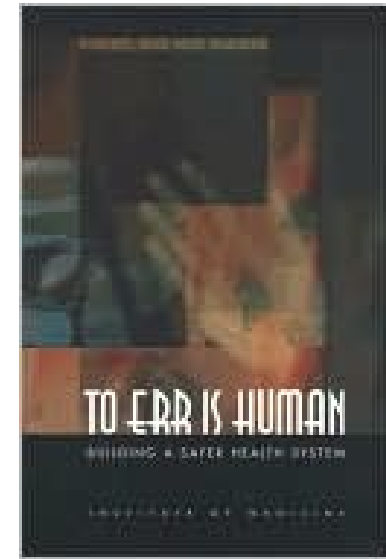
“Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Training,” 1910.



Crossing The  
Quality Chasm



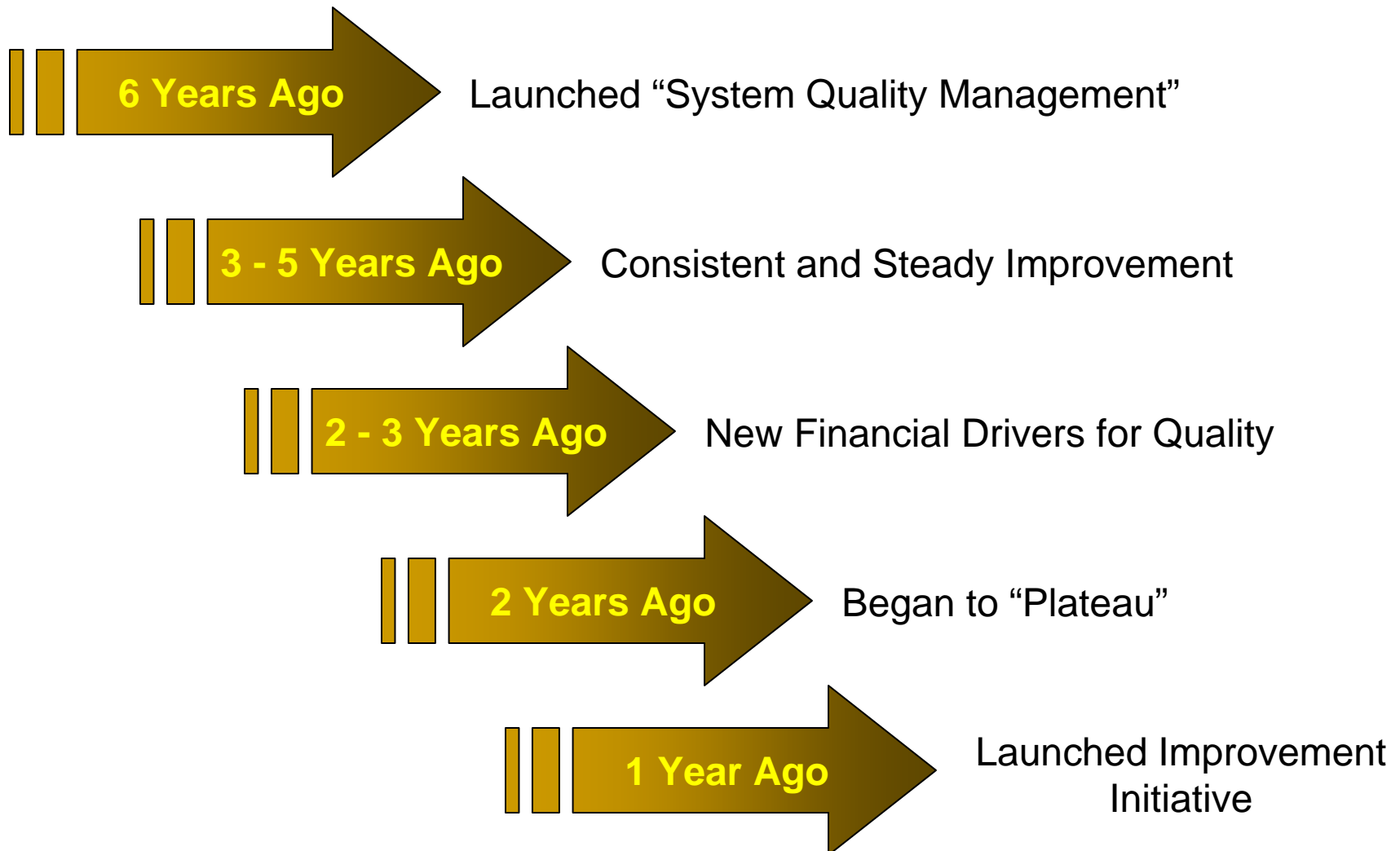
To Err  
Is Human



The Institute Of Medicine (IOM)

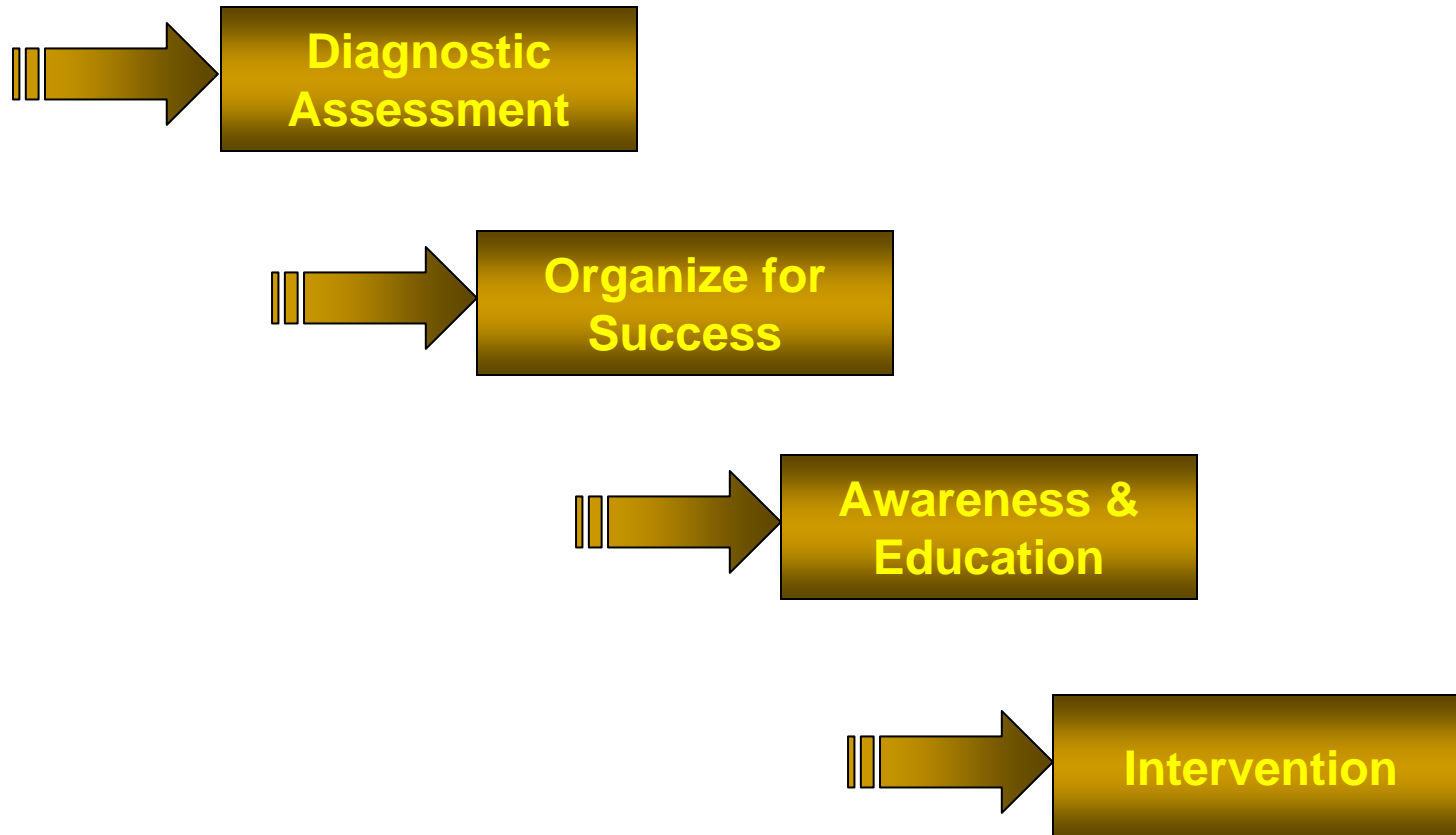


# Putting It In Perspective



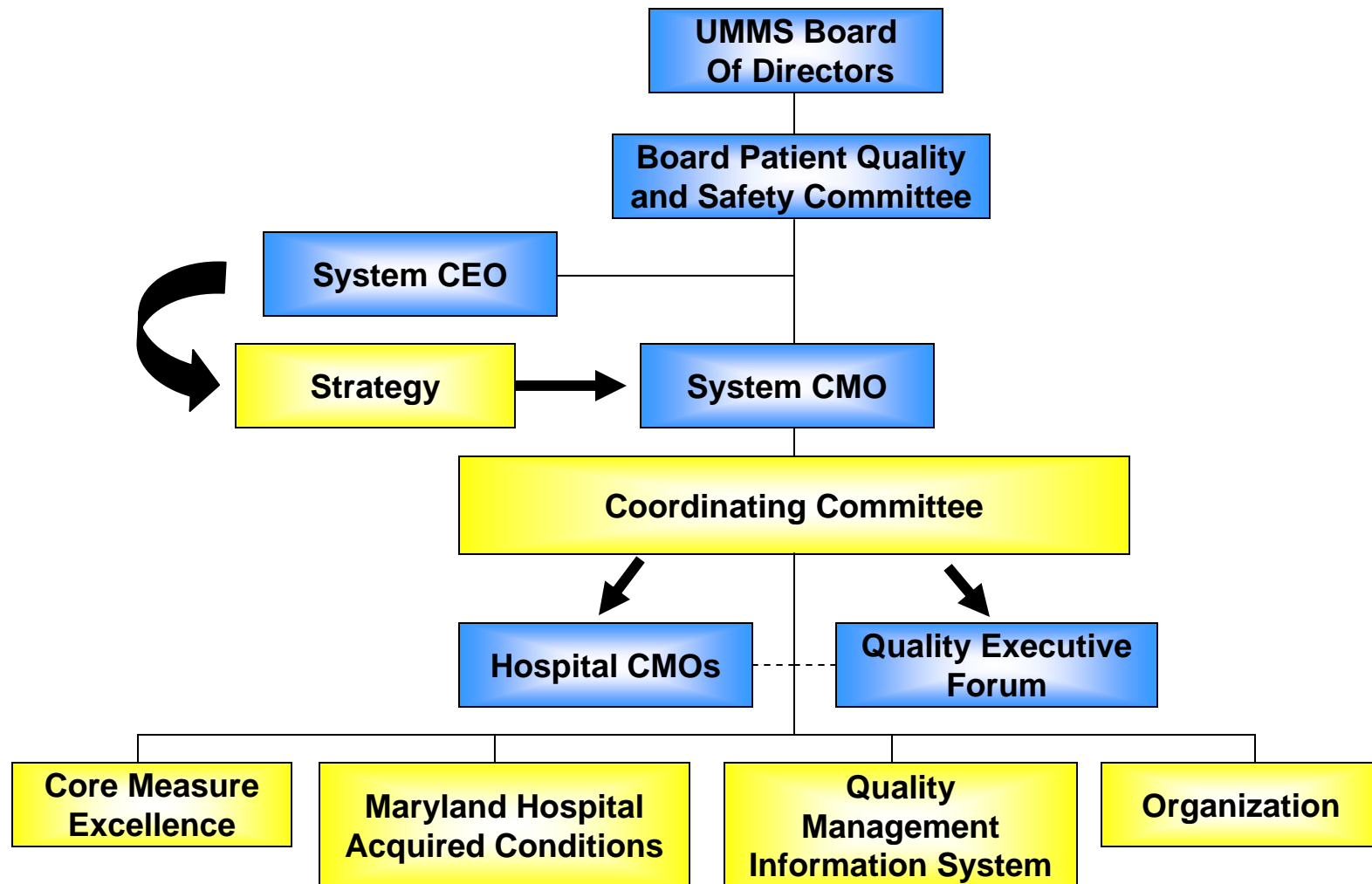


# A Year of Transformation



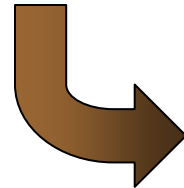


# Organize for Success





# Organize for Success



## Transforming How We Work



**Multi-Disciplinary Teams**

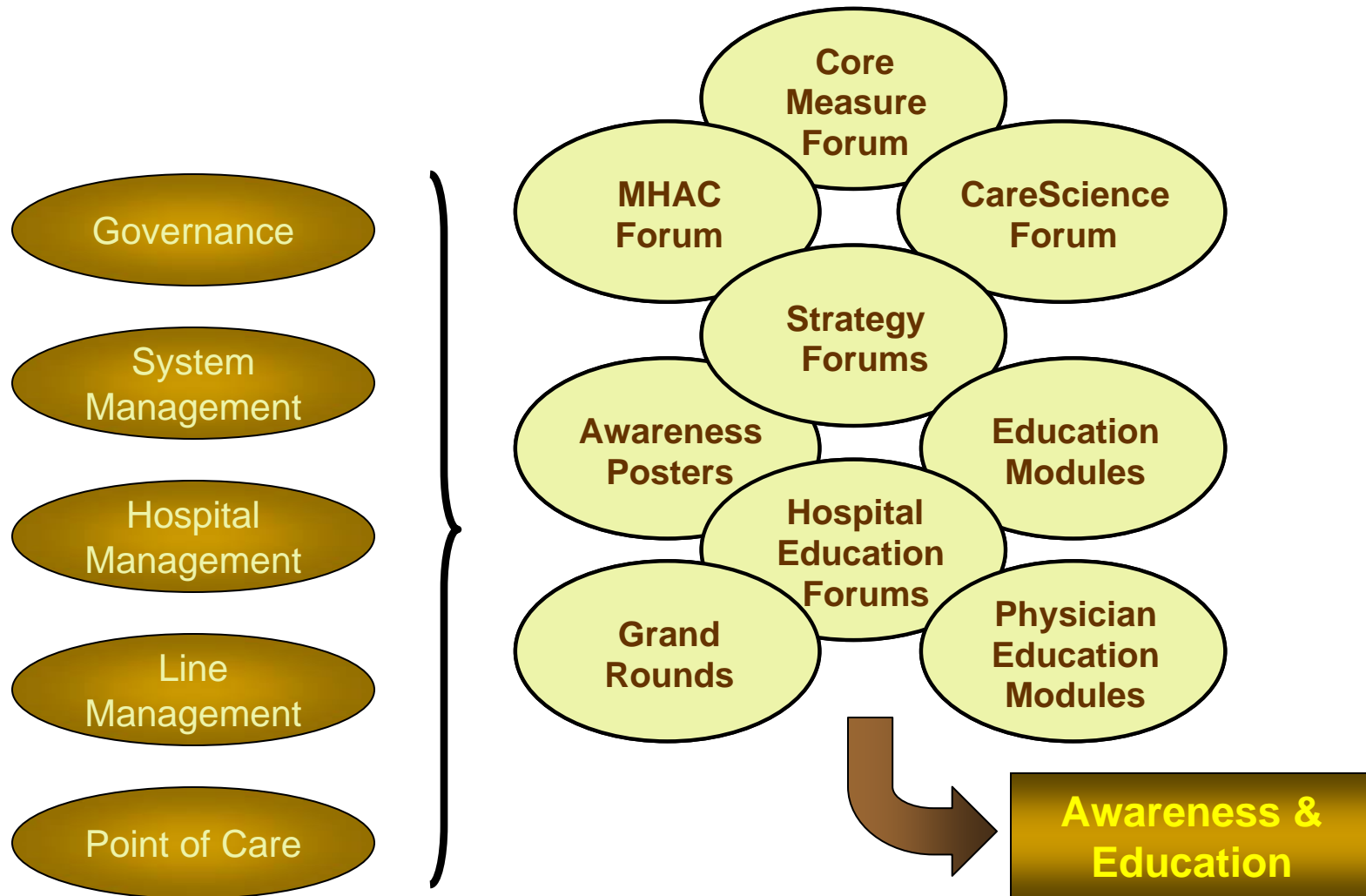
**Multi-Level, Multi-Hospital**

**Rapid Cycle Innovation**

**Collaboration, Iteration**

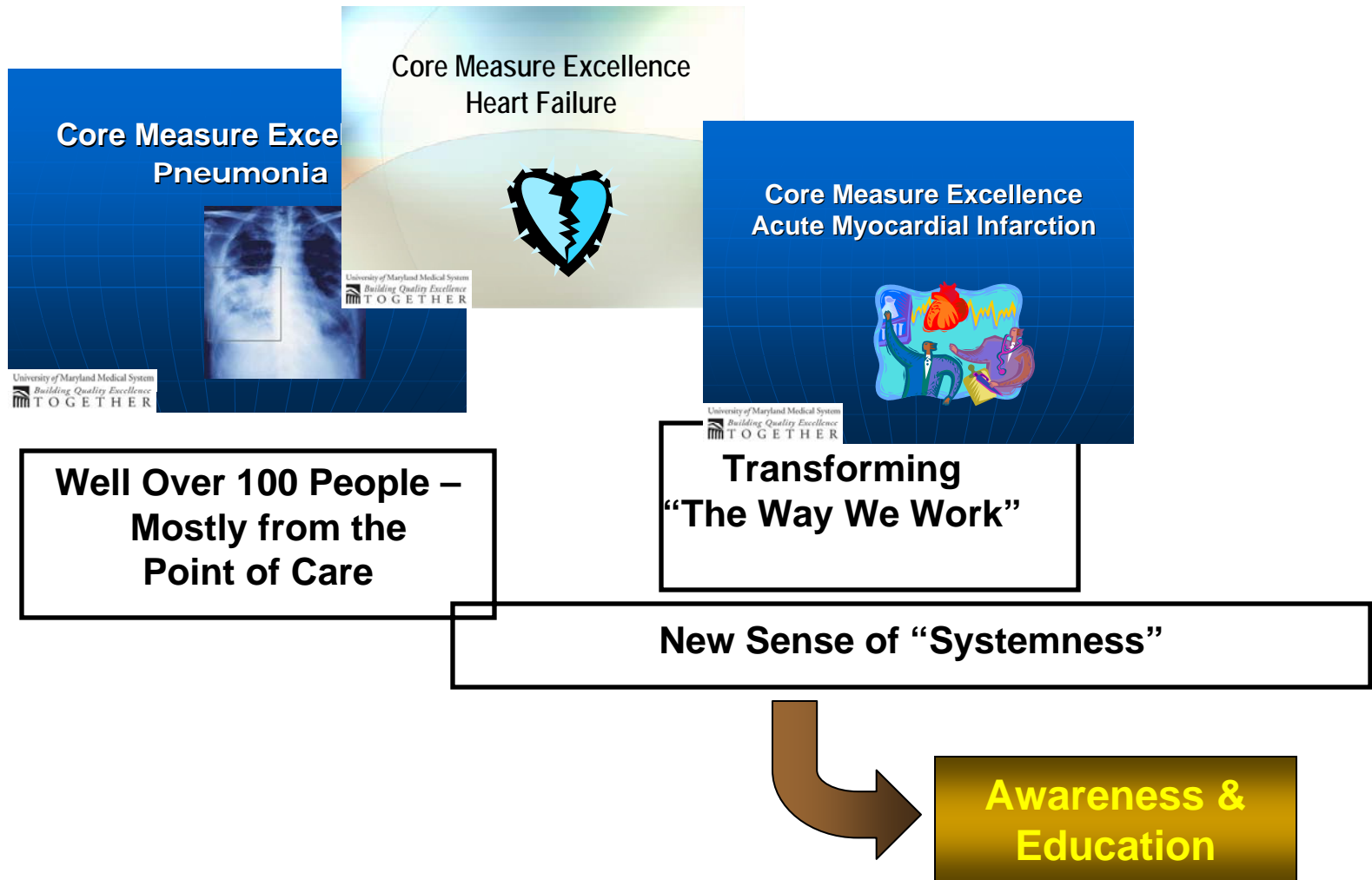


# Transforming Our Culture



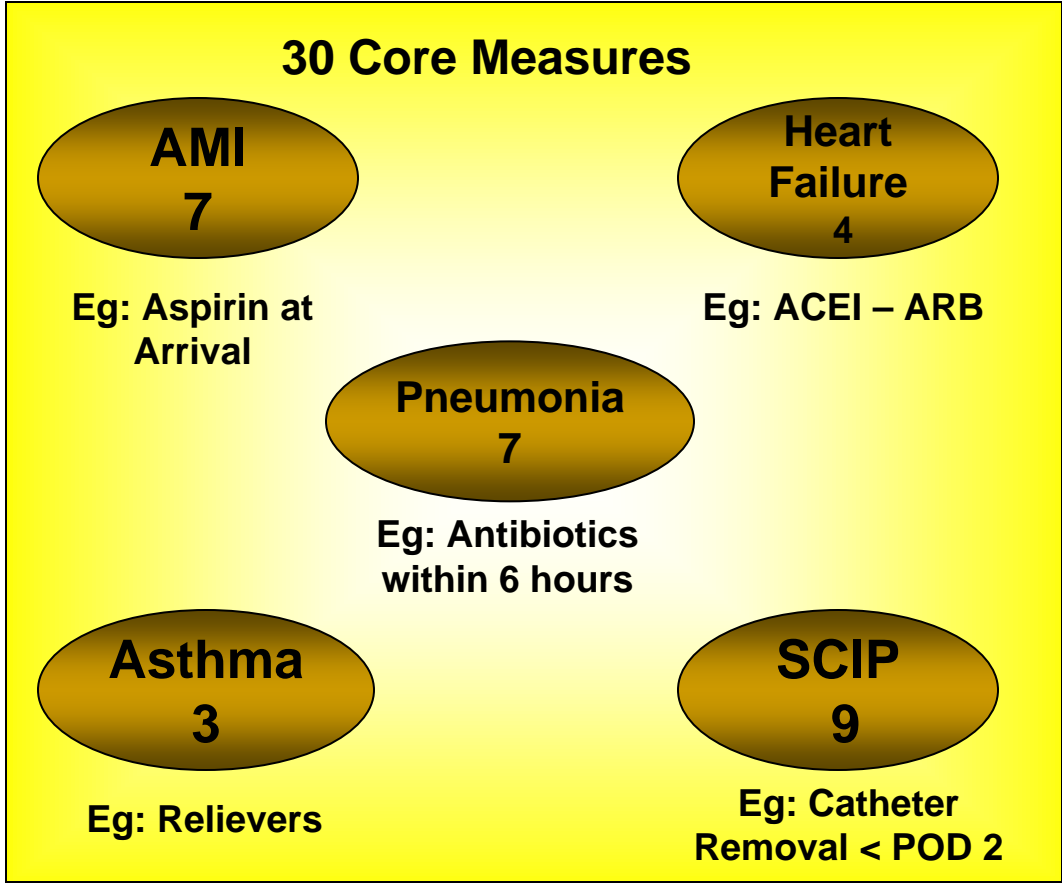


# Transforming Our Culture





# Intervention: Focus on Core Measures



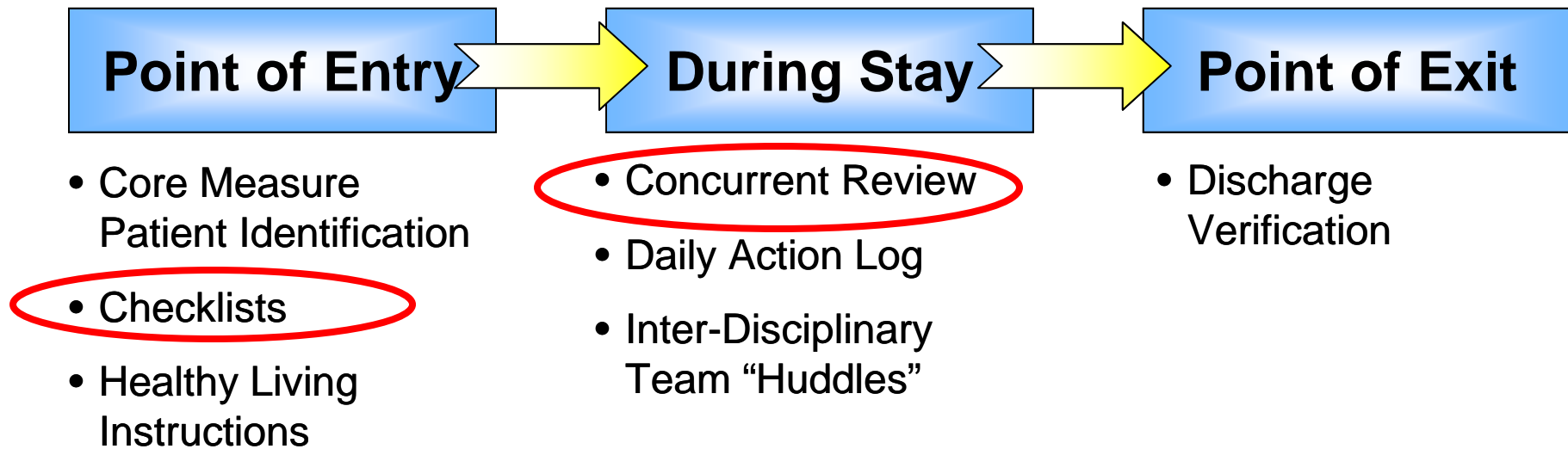
**UMMS Goal: Top Decile Performance**

video



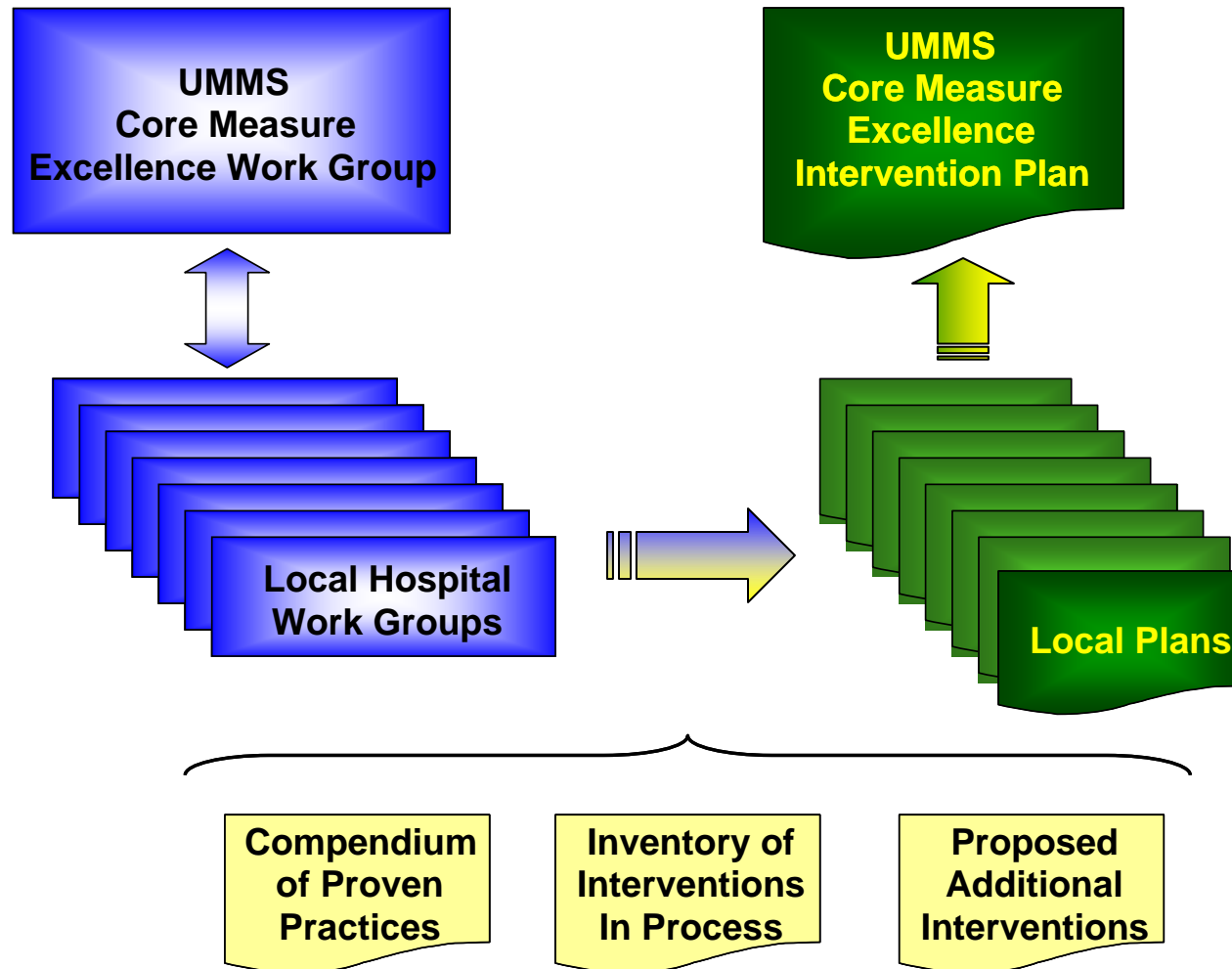
# Intervention

## Examples of Interventions in Process





# Intervention





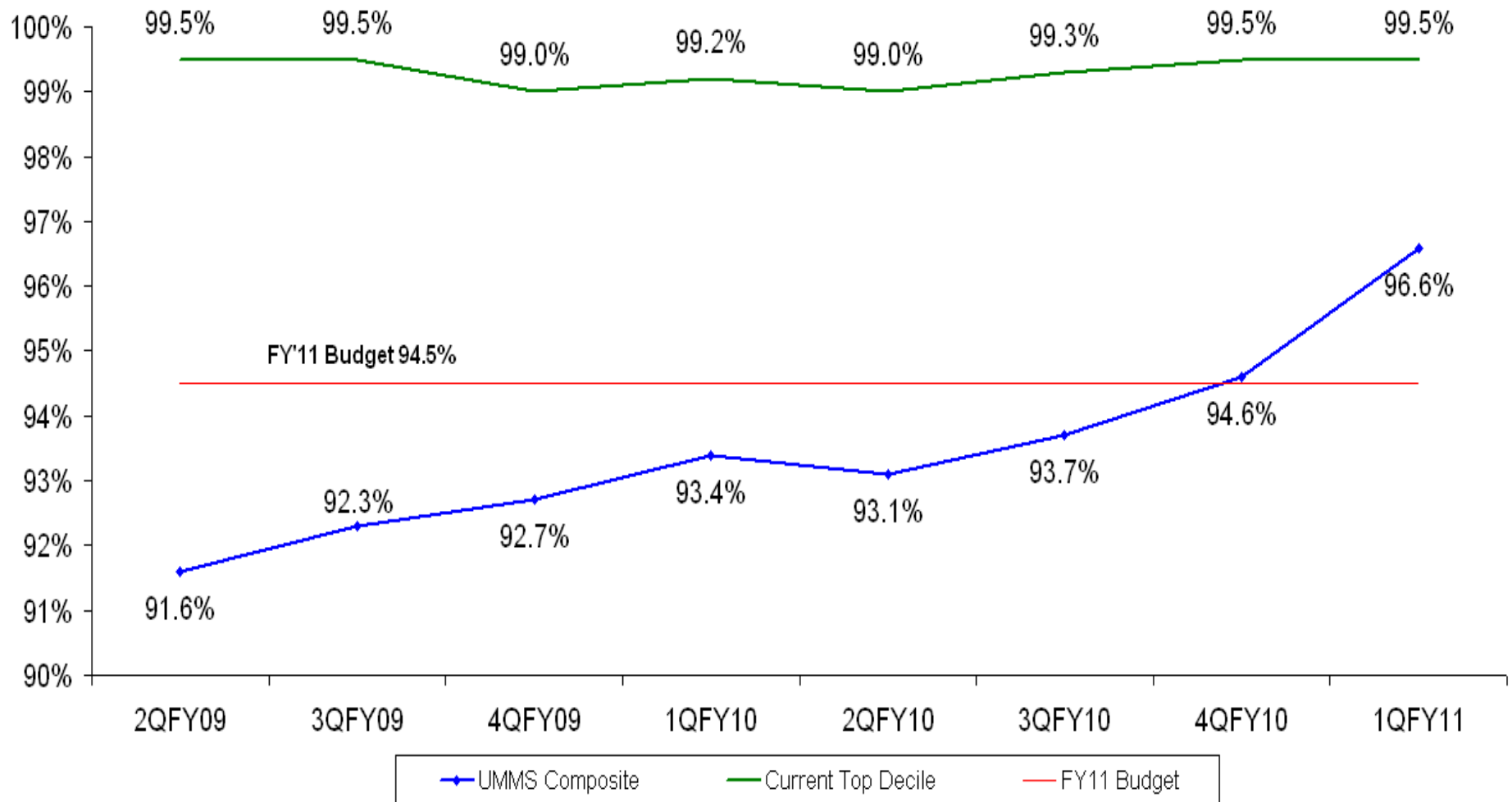
## **Our “Culture of Quality” Transformation is Already Yielding Measurable, Tangible Positive Results**

- ∅ **Medication Errors Causing Harm**
- ∅ **Maryland Hospital Acquired Conditions**
- ∅ **Unplanned Readmissions**
- ∅ **Central Line Associated Blood Stream Infections (CLABSI)**
- ∅ **Hospital Acquired Pressure Ulcers**
- ∅ **Patient Falls with Injury**
- ∅ **New Malpractice Claims**
- ∅ **Mortality and Morbidity**



# Core Measure Scores Are Improving Steadily

### UMMS Composite Core Measure Score





# Overarching Perspective

**I Believe We Have Been Successful  
for Two Principal Reasons**

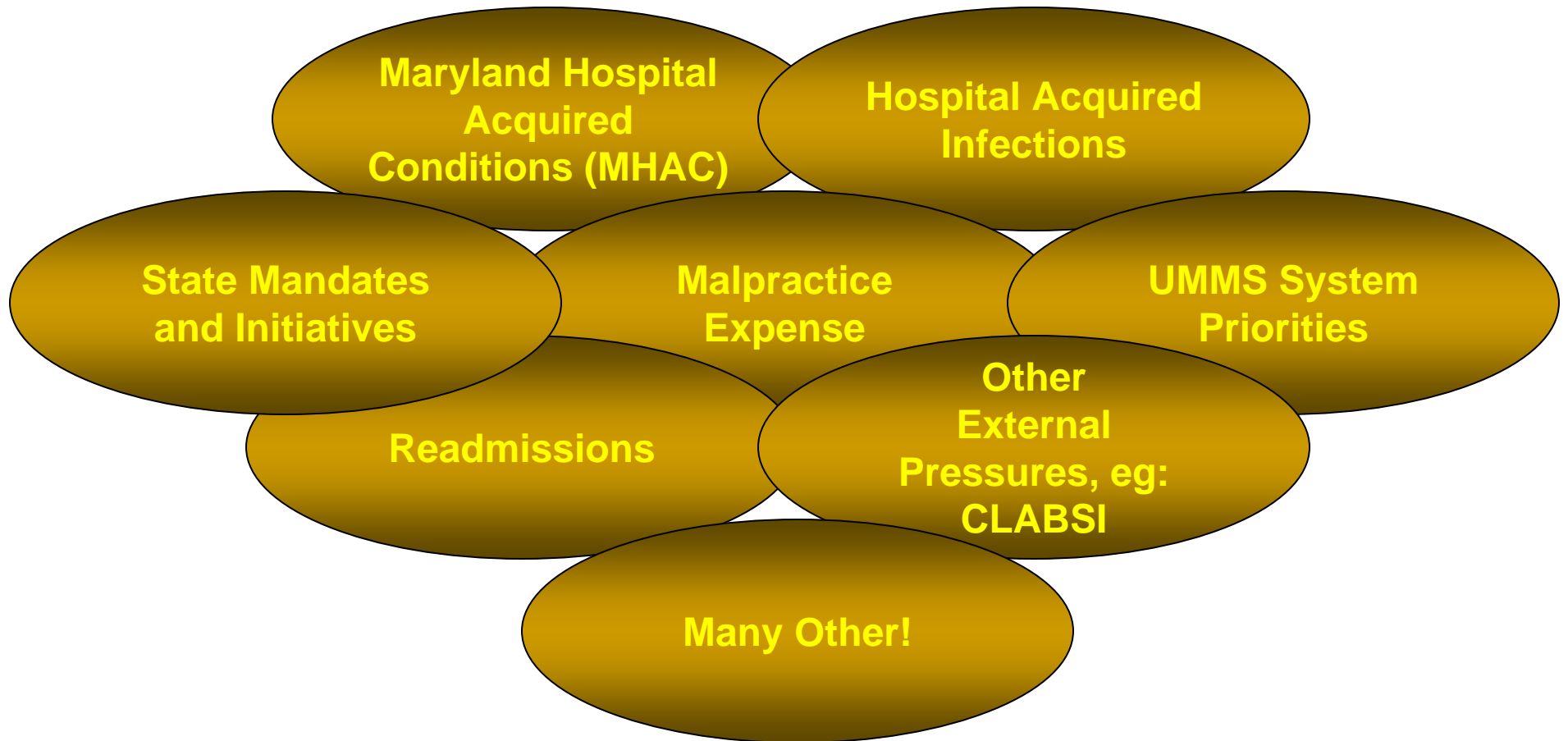
**Engagement**

**Focus on  
Priorities**



# The Conundrum We're Trying to Resolve

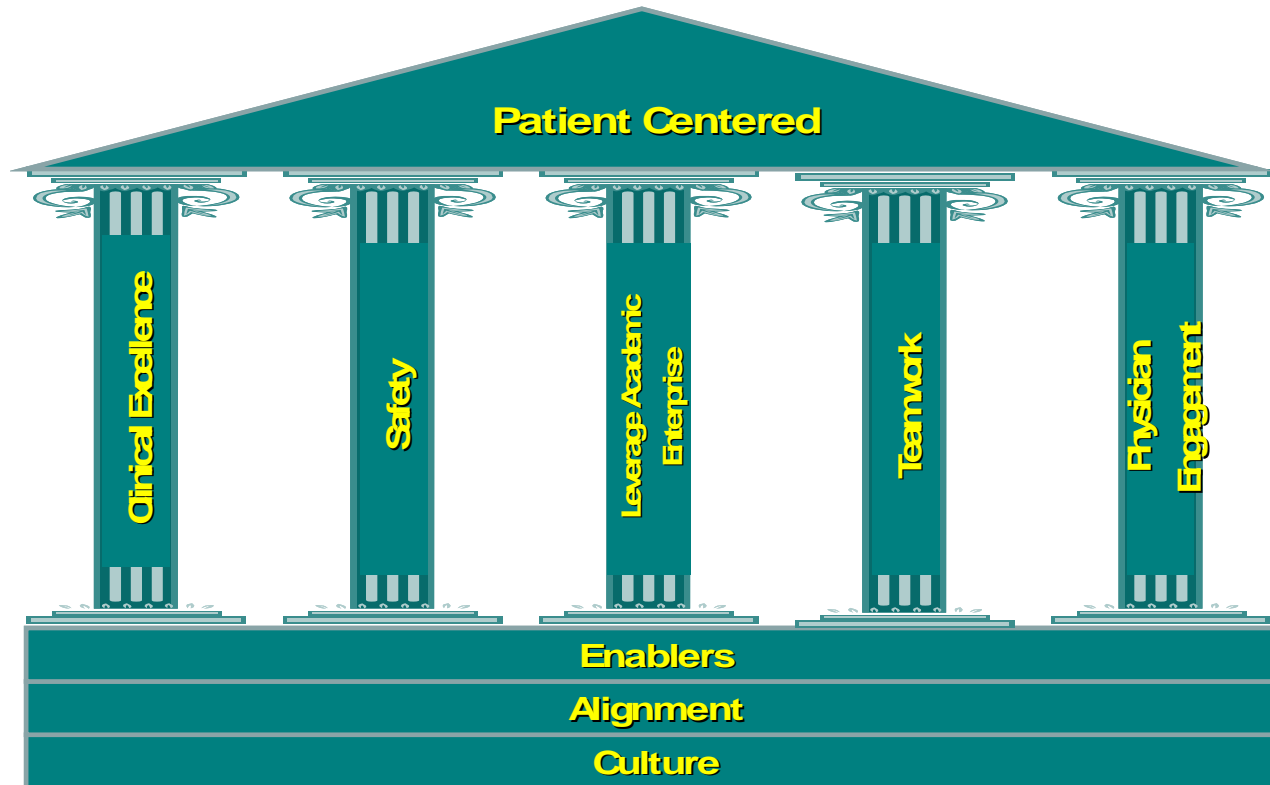
**Many Similar or Related Issues Compete for Scarce Resources**



**“If it’s not about allocating scarce resources, it’s not strategy!”**



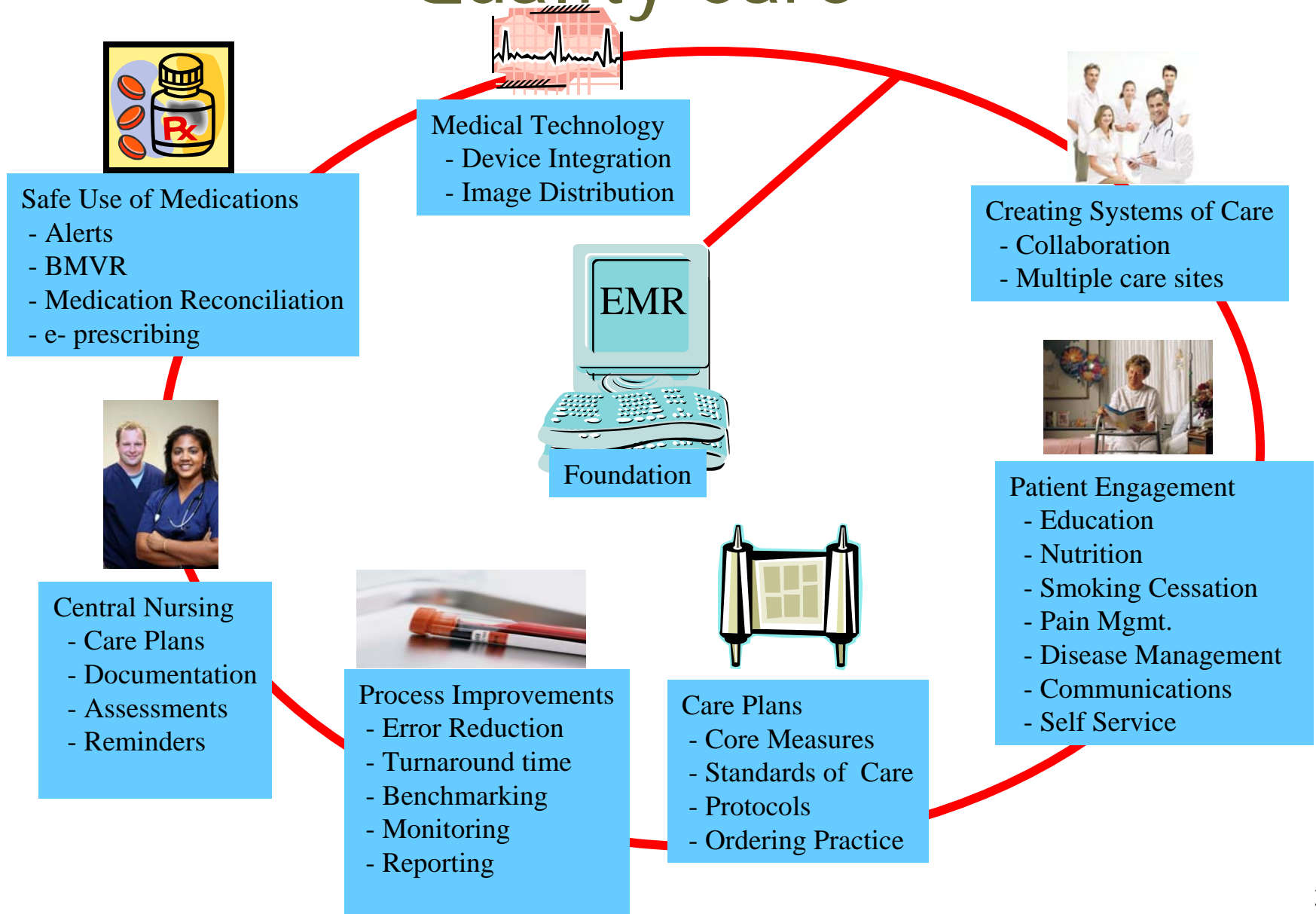
## Principle System Wide Objectives for the Next Year



- Increase use of Evidence Based Care
- Reduce Readmissions
- Improve Peer Review
- Meet Core Measure Targets
- Reduce Hospital Acquired Infections and Falls



# Multi-Dimensional Support for Quality Care





# Summary

- Technology convergence is now
- Consumers demand speed, convenience and quality
- Collaboration is Vital – Information is blended
  - Clinical Quality and Operations – Finance – Information Technology in partnership
- Transformational = Technology + Use
- Imbedded in the day to day clinical and business operations
  - Work and/or Care stops or is compromised when systems fail
- Financial Risk is evident
  - Reimbursement Variability
  - Consumer Expectations
  - Management of Risk – Cost of Failure
  - Create Systems of Care
- Strategic component to any health care delivery operation

- Strategy is a commodity - execution is an art

..... Peter Drucker