



The Role of Health IT in Quality Improvement

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Quality

...and I'm Here to Help

DILBERT

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NOTICE

Persons attempting to find a motive in this narrative will be prosecuted; persons attempting to find a moral in it will be banished; persons attempting to find a plot in it will be shot.

By Order of the Author,
Per C.C., Chief of Ordnance.



The Quality Challenge

What Is Quality?

**The Right
Care**

**For The
Right Person**

**At The
Right Time**

A Quality Disconnect

**Health care
costs up 8%
per year**

**Health care
quality up
3.1% in 2006**



Current Landscape

- Numerous reports confirm substantial gap between best possible and actual care.
- Broad buy-in to the “IOM 6”
- Increasing demands from purchasers that providers demonstrate quality delivered
- **Public reporting of performance leads to improvements**
- Recognition of urgent need to align disparate monitoring initiatives
- Initiatives that link payment with performance have proliferated in the private sector



Baseline Assumptions: Health Care Quality

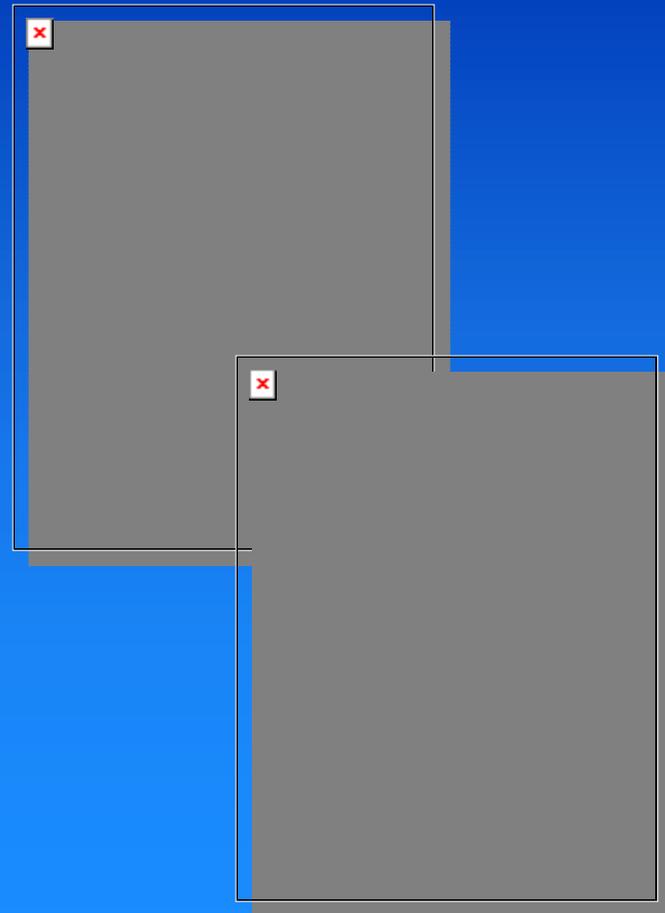
- Varies – A LOT; **NOT** clearly related to \$\$ spent
- Matters – can be measured and improved
- Measurement science is evolving:
 - Structure, process and outcomes
 - Broad recognition that patient experience is essential component*
- Strong focus on public reporting is good
 - Motivates providers to improve
 - Not yet 'consumer friendly'

Paired Reports

Quality is improving – Progress is too slow

- NHQR
 - Snapshot of quality of health care in America
 - Quality
 - Variation across states

- NHDR
 - Snapshot of disparities in health care in America
 - Quality + Access
 - Variation across populations



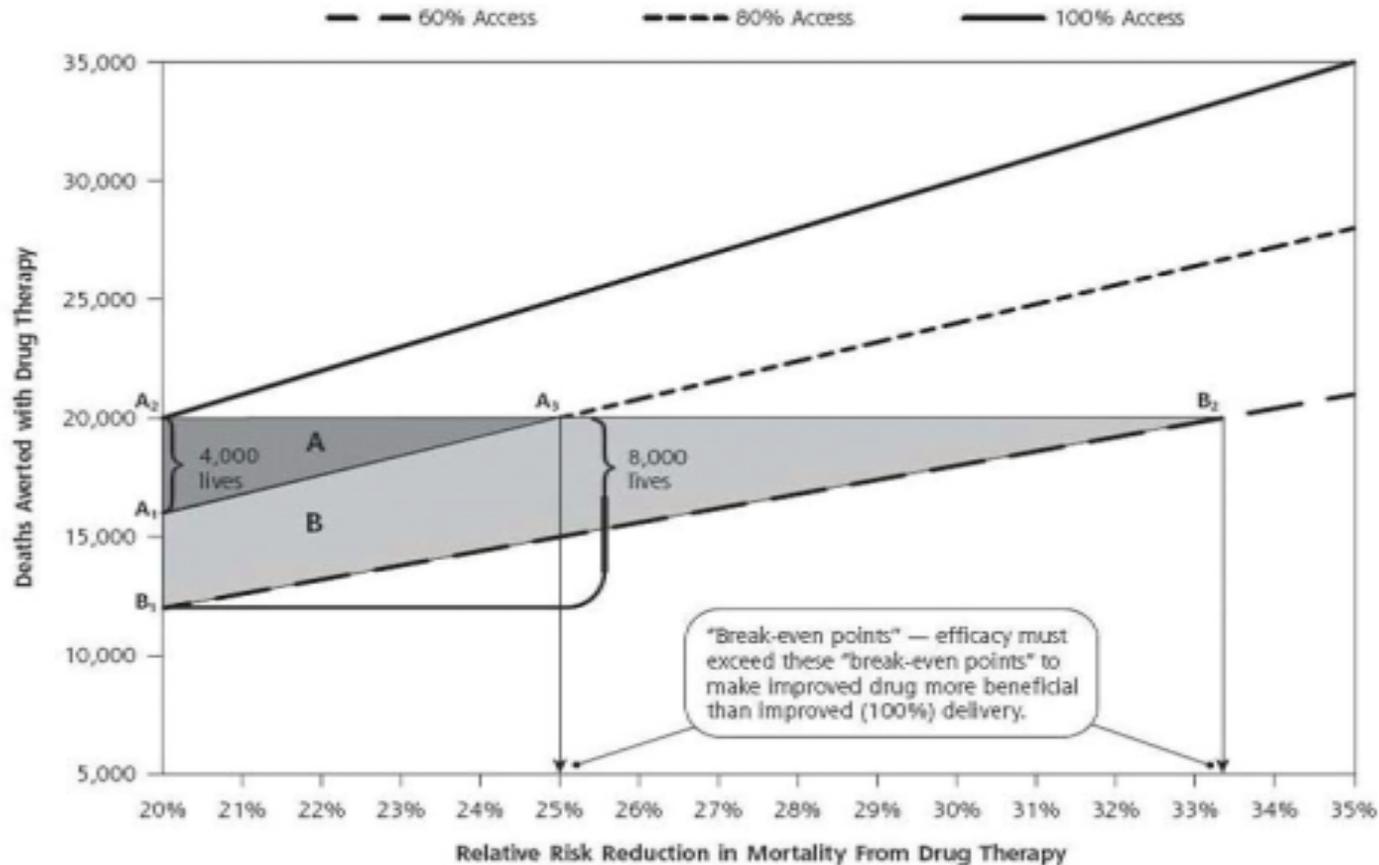


What Do We Know About Disparities?

- Most areas of health care quality are improving, but only very slowly
 - 38 of 40 core measures improved compared with 2005 reports
 - Overall improvement rate: **3.1%**
- Use of proven prevention strategies lags significantly behind other gains in health care
 - Only **52%** of adults reported receiving recommended colorectal cancer screenings
 - Only **58%** of obese adults were given advice about exercise from their doctor
 - Only **48%** of adults with diabetes receive all their recommended screenings

The Social Case: Potential lives saved through quality improvement

"The Break-even Point" (for a drug that reduces mortality by 20%)



Triangle A. If 100,000 patients are destined to die from a disease, a drug that reduces death rates by 20% (relative risk reduction [RRR] = 0.20) will save 16,000 lives (A1). If delivered to 80% of eligible patients, increasing delivery to 100% would save 4,000 more lives (A2). To save as many lives with without improving upon the delivery rate of 80% (A3), the RRR of the drug must be increased to at least 25% ("break-even point").

Getting to Best Possible Care

■ Moving the ball right now:

- Public Reporting – AND transparency
- Payment Reforms*
- Common Measures for public and private sectors
- Enhanced support for local collaboratives



■ Specific Policy Opportunities:

- P4P: absolute performance – &/or improvement?
- Rewarding the ‘leading edge’ *and* bringing others along
- Support for unbiased consumer information – and for effective use of HIT
- Insist on clear synthesis of results from public and private demonstrations



“So, when can I push the F7 key and aggregate all the health care data I need?”



AHRQ's Mission

Improve the quality, safety, efficiency and effectiveness of health care for all Americans





Health IT: Where We've Been; Where We're Going

- Long-term agency priority
 - AHRQ has awarded over \$216 million in health IT related grants and contracts since 2004.
- **New focus** on ambulatory safety and quality





Evidence: The Good News

- Three major benefits on quality were demonstrated:
- increased adherence to guideline-based care,
- enhanced surveillance and monitoring, and
- decreased medication errors.
- The primary domain of improvement was preventive health.
- The major efficiency benefit shown was decreased utilization of care.
- Data on another efficiency measure, time utilization, were mixed.
- Empirical cost data were limited.



Evidence: The Less Good News

- Available quantitative research was limited and was done by a small number of institutions.
- Systems were heterogeneous and sometimes incompletely described.
- Available financial and contextual data were limited.
- Four benchmark institutions have demonstrated the efficacy of health IT in improving quality and efficiency.
- Whether and how other institutions can achieve similar benefits, and at what costs, are unclear.



More Recent Evidence

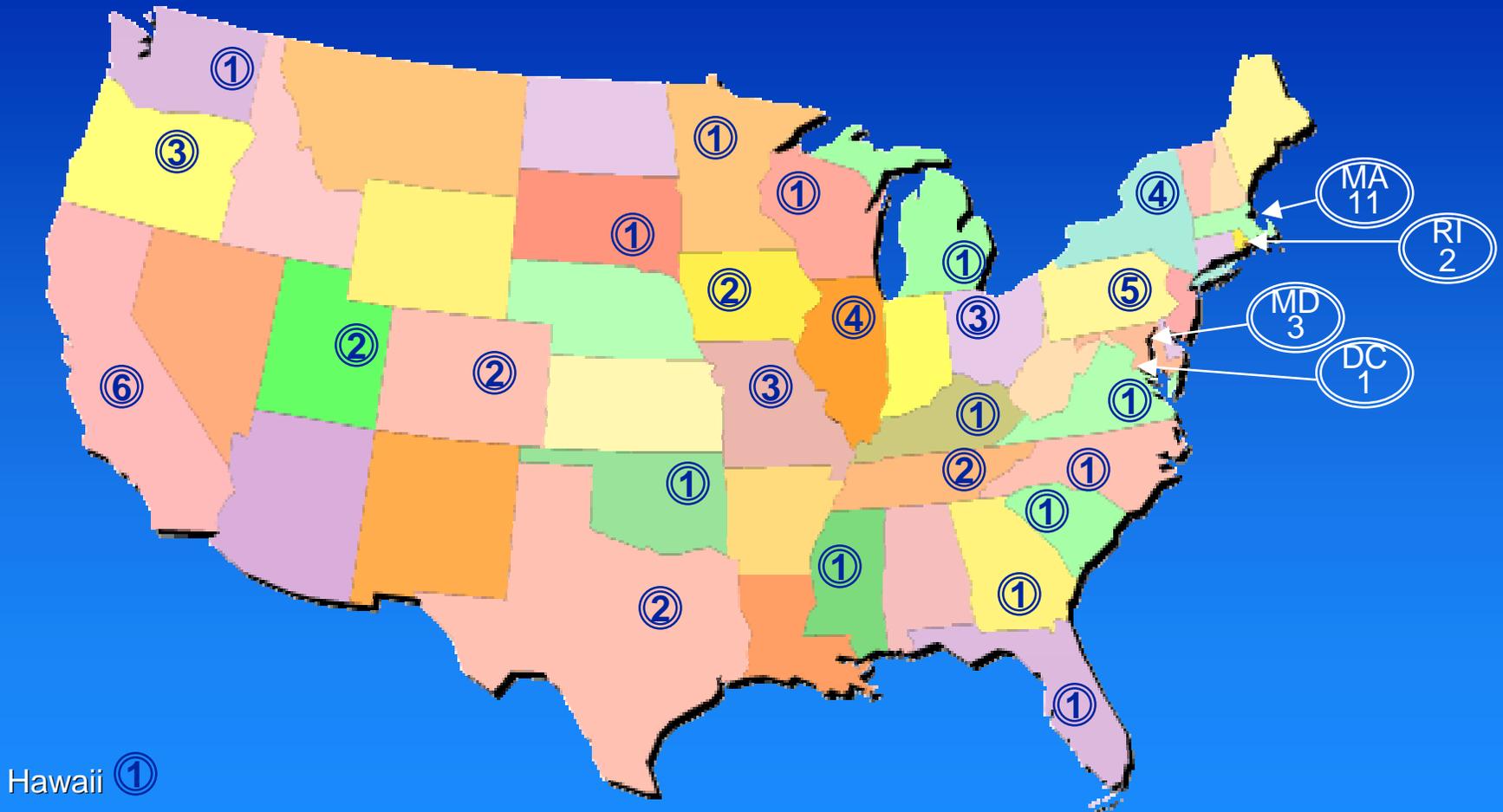
- The presence of an EMR does not equal quality improvement
- Cost and implementation effort are significant barriers to adoption
- When implemented, not all features are used



Ambulatory Safety and Quality Program

- **Over 60 Grants and Task Orders in 3 areas:**
 - Enabling Quality Measurement through Health IT
 - Improving Quality through Clinician Use of Health IT
 - Enabling Patient-Centered Care through Health IT
- **Health IT CERT awarded to Brigham & Women's (David Bates PI)**
- **EPC Report on the Elderly, Chronically Ill and Underserved's use of health IT**
- **Consumer Engagement Focus Groups**
- **Contract for Technical Assistance for Medicaid and SCHIP programs**

ASQ Geographic Range*



*Projects in 29 states & the District of Columbia
Some projects have multiple sites in different states



Impact of Health IT on Outcomes in Ambulatory Settings and Across High-Risk Transitions of Care

- Using Precision Performance Measurement to Conduct Focused Quality Improvement – Northwestern University
 - Type of health IT: Quality of Care Decision Support, Vocabulary/Coding Standards
 - Designed to create systems that improve quality data and seamlessly link it to practice-level quality improvement programs and point of care interventions



Estimated Total Funding – \$1.2 million
Project Start – Sept. 30, 2007
Project End – Sept. 29, 2010



The Relationship Between Health IT and Workflow Design

- Medication Safety in Primary Care Practice: Translating Research into Practice – Medical University of South Carolina
 - The project will develop a set of medication safety measures relevant for primary care, incorporate them in quarterly practice performance reports and assess the impact of the intervention on the incidence of medication errors
 - Type of Health IT: Quality of Care Decision Support

Estimated Total Funding: \$1.2 million
Project Start – Sept. 30, 2007
Project End – Sept. 29, 2010





Care for Patients with Multiple Chronic Conditions



Oregon Health & Science University

- RxSafe: Shared Medication Management and Decision Support for Rural Clinicians – Oregon Health & Science University
 - Oregon Health & Science University is using previously developed technology to support shared medication management for persons with chronic conditions.
 - Type of Health IT: Clinical/Operational Decision Support (provider-focused)

Estimated Total Funding: \$1.2 million
Project Start – Sept. 30, 2007
Project End – Sept. 29, 2010

Priority Populations

- AHRQ supports research on numerous aspects of health care for specific populations
 - Disparities in health care have been well-documented in recent decades across a wide range of populations
 - Many priority populations are represented across the ASQ projects



Women

- **Harnessing Health IT to Prevent Medication-Induced Birth Defects – University of Pittsburgh**
 - This project will develop and evaluate ways computers may be able to help doctors counsel women about preventing birth defects caused by use of certain medications.
 - Type of Health IT: Clinical Decision Support (provider-focused), Human/Machine Interface



Estimated Total Funding: \$1.19 million
Project Start – Sept. 30, 2007
Project End – Sept. 29, 2010

Chronic Illness



■ The BLUES Project: Improving Diabetes Outcomes in Mississippi with Health IT – Delta Health Alliance, Jackson, MS

- Demonstrating the effects of diabetes management practices at several ambulatory clinics throughout Mississippi when utilizing well-designed, comprehensive health IT
- Type of Health IT: Electronic Medical Record



Diabetes prevalent in the Delta

By LARRY E. BOKZ, News Editor June 30, 2008

Mississippi, especially the Delta, has the highest per capita rate of diabetes, a debilitating disease that is preventable, Dr. Marshall Bouldin said Tuesday.

"In 1990, no state had more than 4 percent of its population with diabetes," Bouldin said. "Today, one in 10 Mississippians has diabetes."

Dr. Marshall Bouldin, left, associate professor of medicine at the University of Mississippi Medical Center, Jackson, briefs Dan Wassel, center, Coalhoma County special projects coordinator, and Ray Stinson, on the features of the new metabolic center.

Bouldin, associate professor of medicine at the University of Mississippi Medical Center in Jackson, began a program about the Delta Diabetes Project, which is co-sponsored by the Delta Health Alliance and UMMC.

The program, which was held in the private dining room at Northwest Regional Medical Center, included a tour of the Metabolic Clinic in the physicians building.

That unit deals with the causes and corrective measures for those with diabetes.

The project is a large scale collaborative disease management intervention to address diabetes in the Delta, Bouldin said.

"The Mississippi Delta, the poorest region of the poorest state, has extremely high measures of health disparities, obesity, diabetes and the complications from diabetes," Bouldin said.

Bouldin, a Chickasaw native and one of four sons of acclaimed artist Marshall Bouldin Sr., said the obesity and diabetes have a direct correlation.

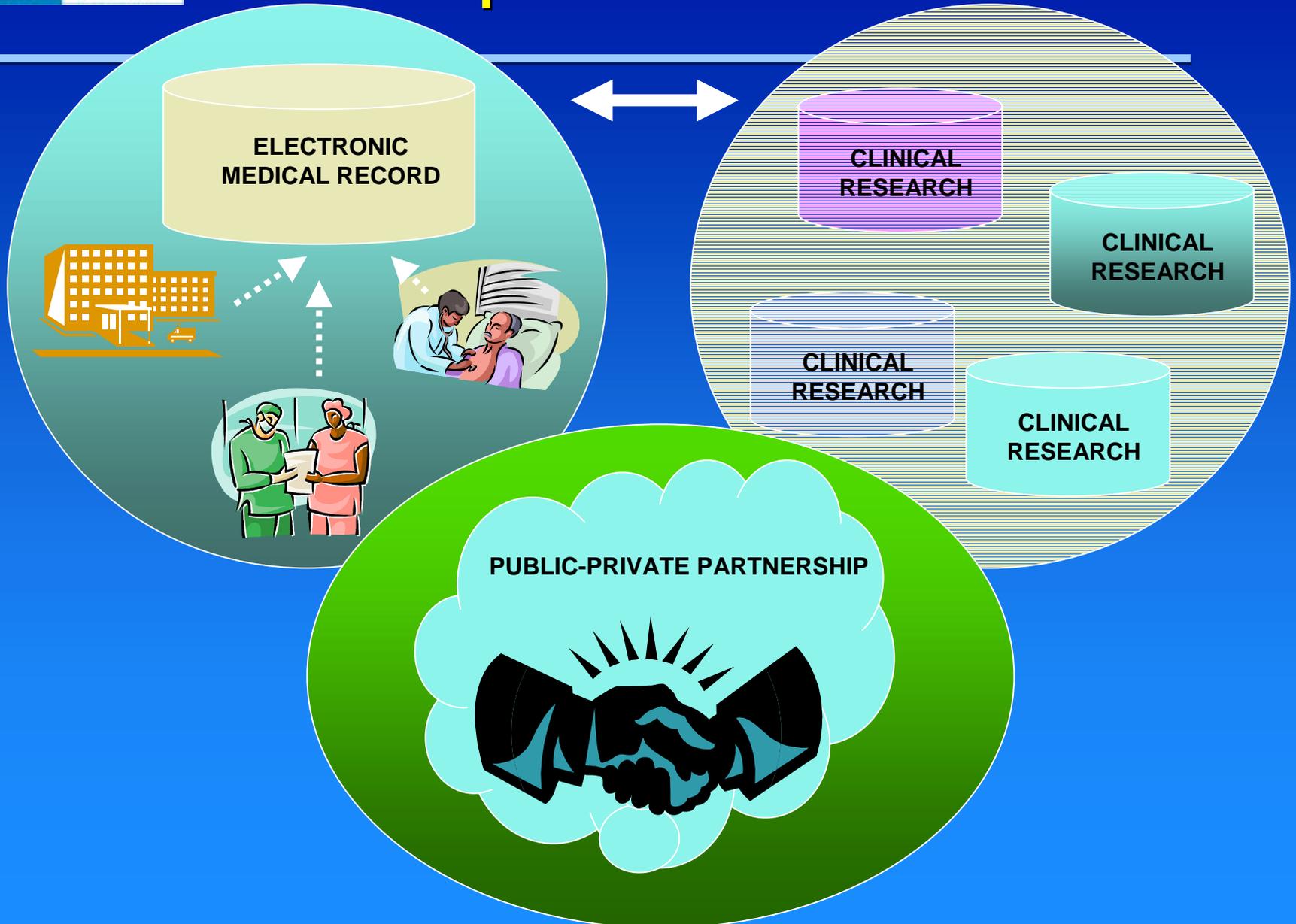
"A third of our school children in Mississippi are obese," Bouldin said. "We're talking about being 30-40 percent overweight."

Bouldin, who is also director of the University of Mississippi Diabetes and Metabolism Center, said the average patient has had diabetes for 10 years.

"Seventy one percent of African Americans have diabetes," he said. "Thirty six percent of diabetics are without any kind of insurance and about half of them are under 65."

Estimated Total Funding: \$1.16 million
Project Start – Sept. 30, 2007
Project End – Sept. 29, 2010

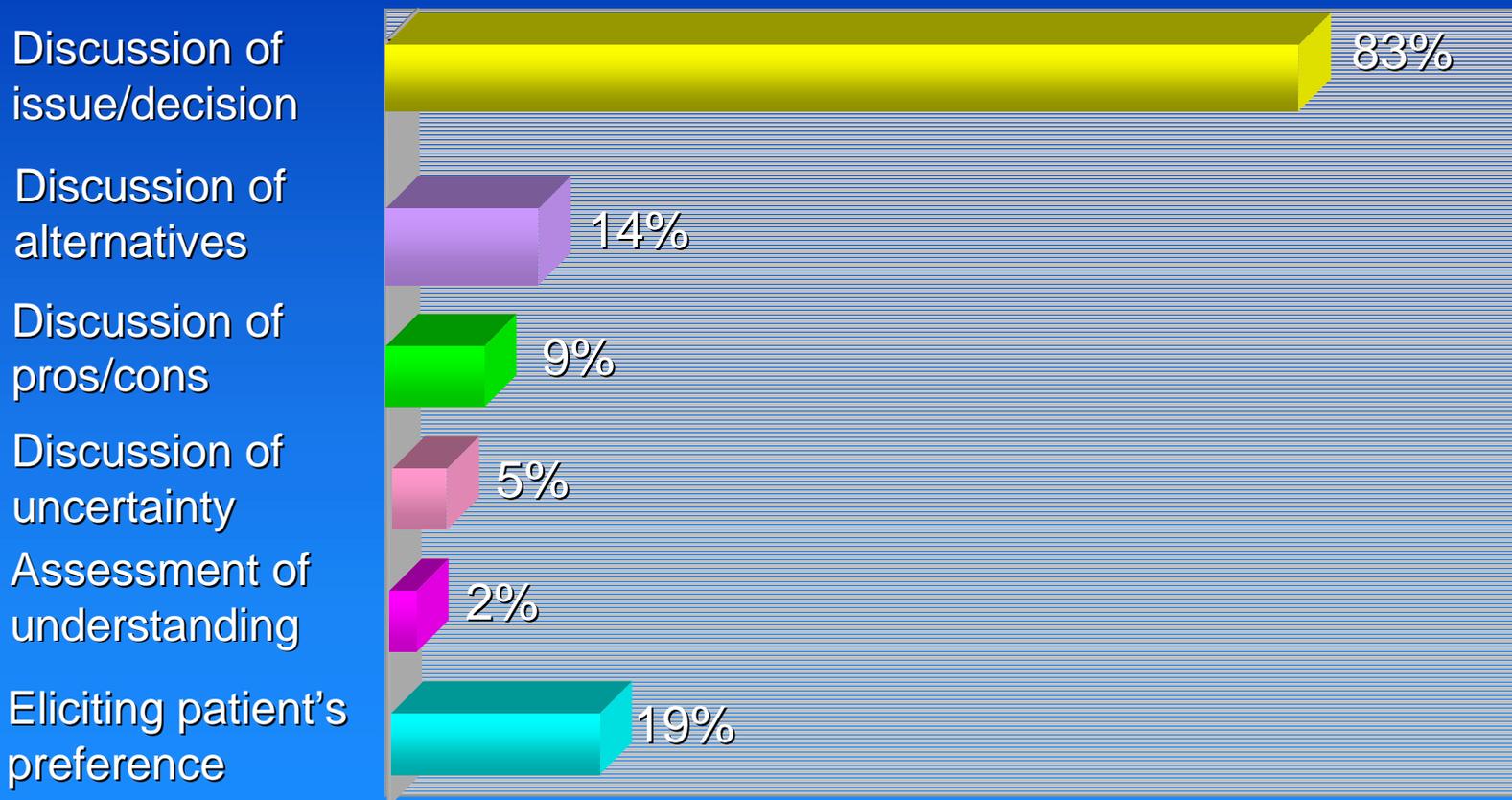
Partnership for Effective Health Care





How Physicians and Patients Discuss Routine Clinical Decisions

How frequently each element of informed decision-making was part of physician-patient discussion*



*Source: CH Braddock et al, *Journal of General Internal Medicine*; 1997;12:339-345



Knowledge engineering in health care

- Not a new discipline, recent concept applied to health care*
 - Methods and techniques in knowledge acquisition and representation
 - Application and evaluation
 - Construction of systems, including expert systems

* *Expert Systems, The Journal of Knowledge Engineering*



AHRQ Clinical Decision Support Demonstrations

- Advance understanding how to best incorporate CDS into health care delivery
- Steering committee with broad stakeholder participation
- CDS in certified EHR systems, with emphasis on translating practice guidelines into machine readable form
 - Preventive services
 - Pts with multiple common chronic illnesses
- Replication of CDS elements across multiple sites
 - Emphasis on ambulatory settings
- Two contracts, \$1.25M per year per contract

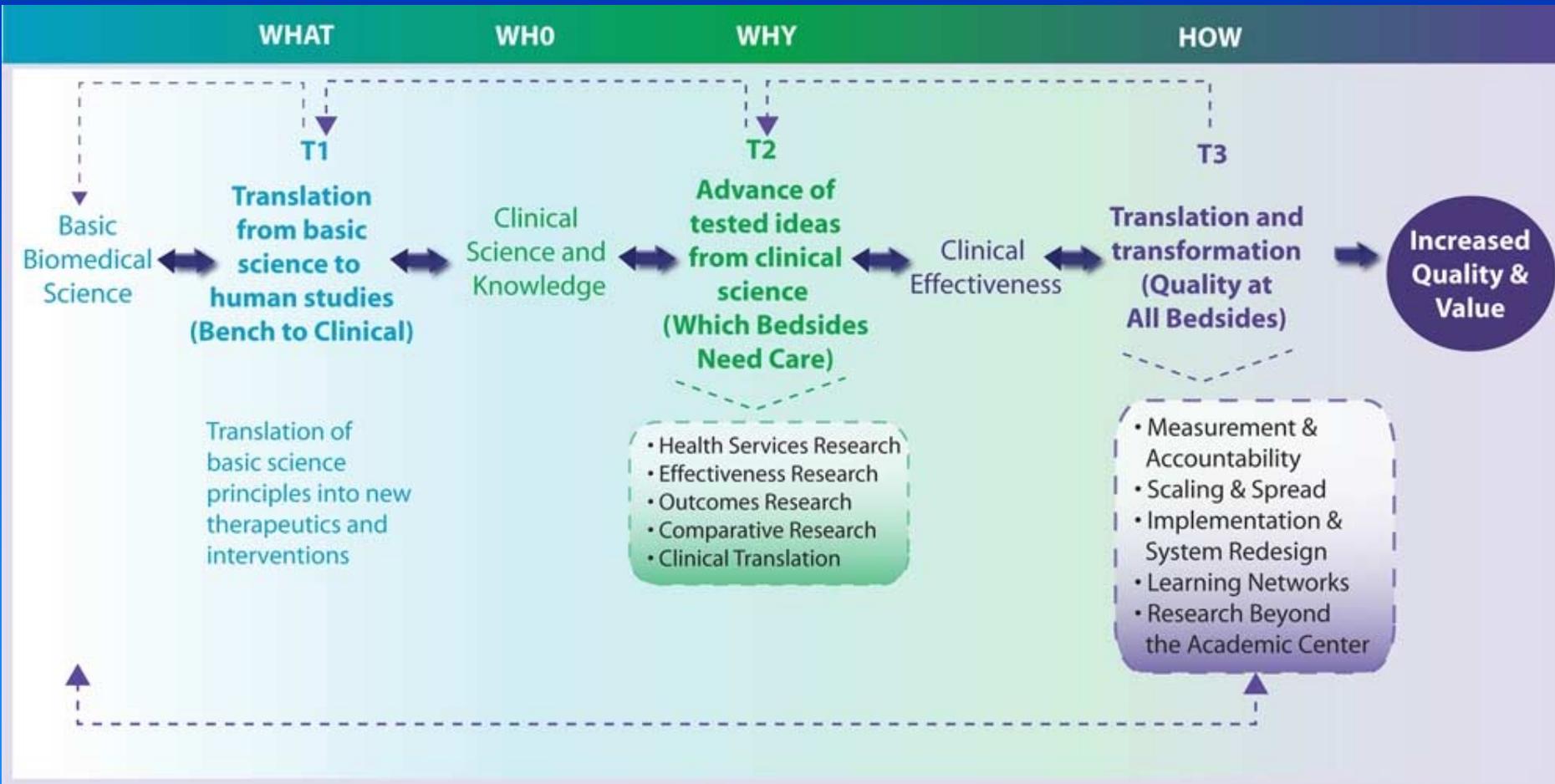


E-Health must deliver on need for evidence-based medicine

- E-health records, e-prescribing and e-reporting of adverse drug events are **significant applications** of Health IT
- **Integrating evidence-based medicine** with Health IT provides greatest opportunity to improve the value of health care in America
- We must continue to develop ways for Health IT to deliver the **best and most current evidence on treatment effectiveness and outcomes** to providers, payers and consumers

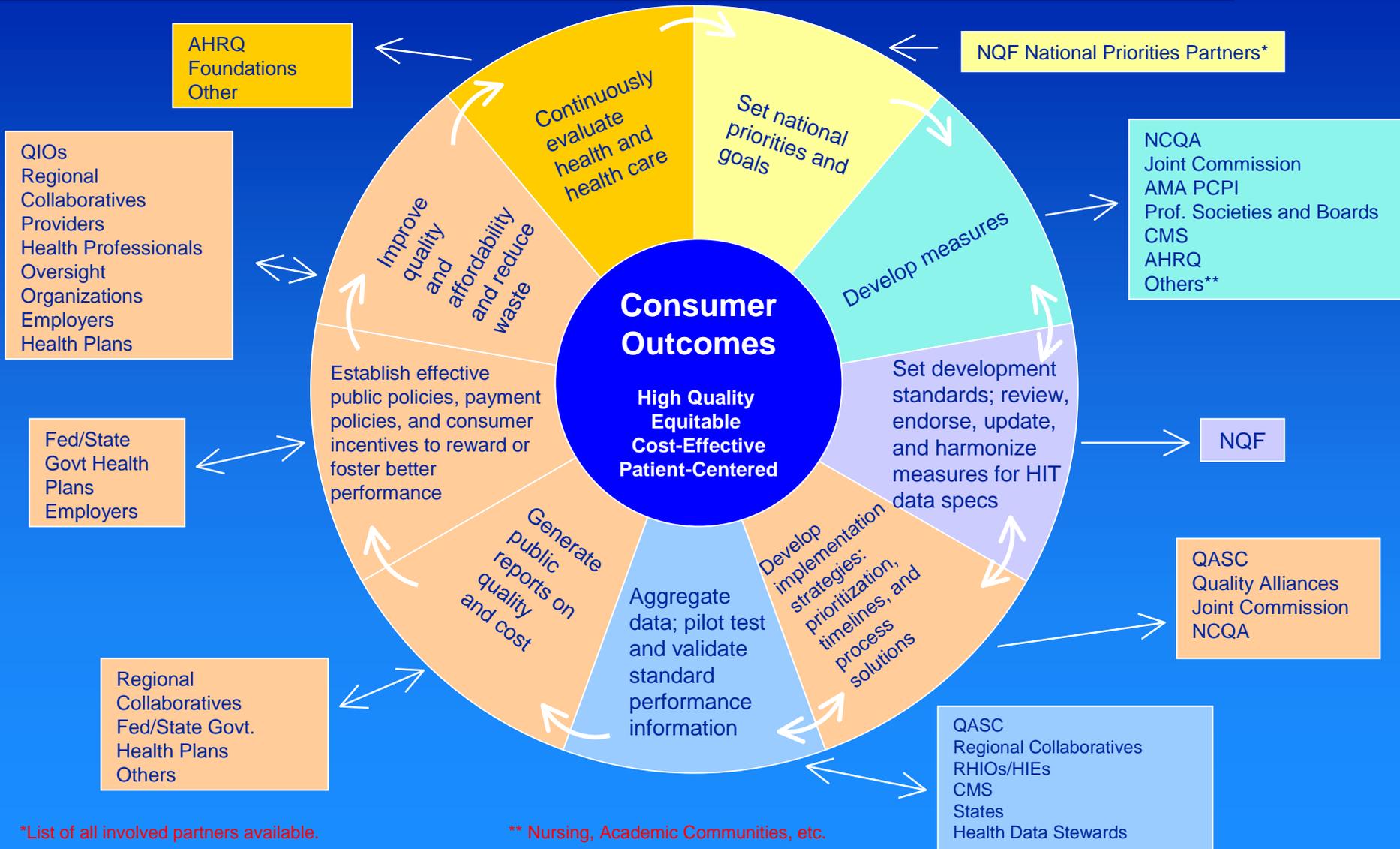
How Can We Enhance Our Efforts?

The Evolution of Translational Research





National Framework for Quality and Cost Transparency for High-Value Care



*List of all involved partners available.

** Nursing, Academic Communities, etc.

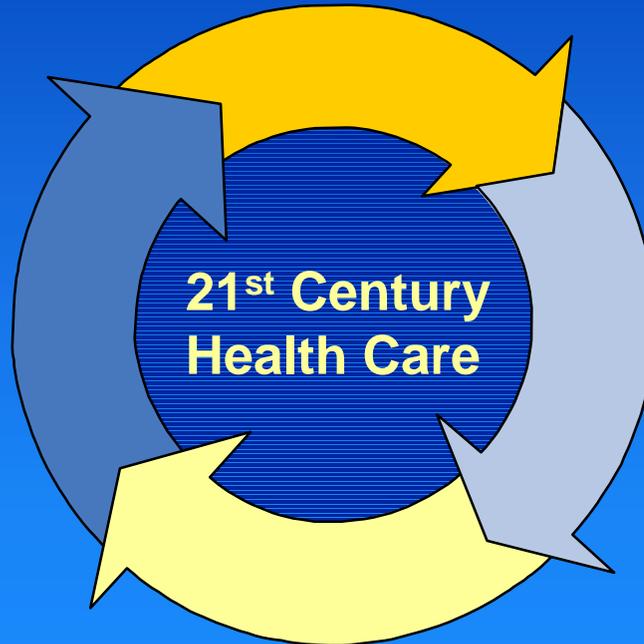


21st Century Health Care

Improving quality by promoting a culture of safety through Value-Driven Health Care

Information-rich, patient-focused enterprises

Evidence is continually refined as a by-product of care delivery



Information and evidence transform interactions from reactive to proactive (benefits and harms)

Actionable information available – to clinicians AND patients – “just in time”



Value-Driven Health Care will Improve Quality

Quality standards, Health IT, evidence-based outcomes and clinical decision systems are creating a system of shared knowledge that will ...



...make the right thing to do
the easy thing to do

Excellence & Mediocrity



“A society which scorns excellence in plumbing simply because it is plumbing, but rewards mediocre philosophy simply because it is philosophy will soon become a society in which neither its pipes nor its theories will hold water.”

John W. Gardner (1961)



Call to Action

- It's time to rededicate ourselves to achieving high quality in **all** its forms, for **all** Americans, **all** the time
- We need better tools to identify and analyze trends
- We must increase the use of health IT to eliminate disparities and drive other health care enhancements
- Collaboration at all levels is critical
- **We need leadership, at both the national *and* local levels**



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Questions?
