

Envisioning The Future Of Value Based Payment

#valuepayment

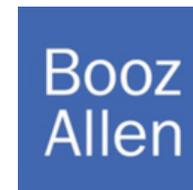
May 12, 2016

W Hotel

Washington, DC

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Panel 1:

Current And Future Challenges Of Hospital Value Based Payment

From Health Affairs

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Modifying Value-Based Purchasing To Drive Improvement

David W. Baker, MD, MPH, FACP
Executive Vice President, Healthcare Quality Evaluation
The Joint Commission

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Shift From HACs To Harm Measures

- **Currently, major causes of harm are not measured,* many measures invalid, severity not considered, only lowest quartile penalized**
- **Develop valid measures of all-cause harm**
 - **Incentivize culture of safety across hospital**
- **Incorporate weights for harm severity**
 - **Focus on harms most important to patients**
- **Increasing penalties if above a benchmark**
 - **Encourages improvement across spectrum**

Retire RRP, Focus On Admissions

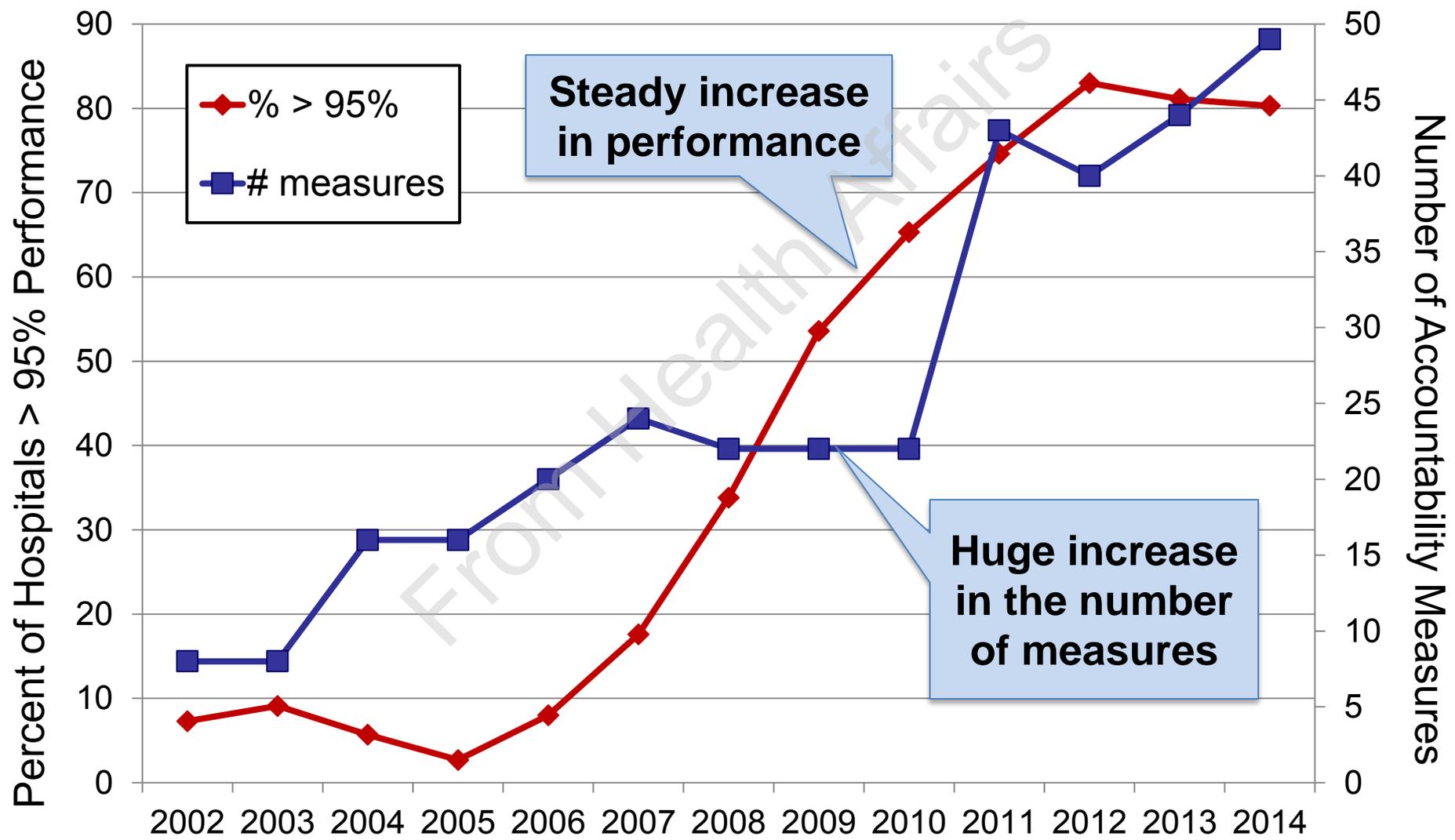
- 30-day readmission rate declined from 21.5% to 17.8% from 2007-15, mostly 2010-12*
 - Virtually no decline during the next 3 years
- Now, small % of readmissions are preventable
 - Much of remaining differences are spurious and do not reflect true differences in quality
- Need to incentivize preventing all admissions
 - Alternative payment models, bundles

Use Measures For Improvement

- **Process measures led to unprecedented improvements in quality from 2002-2015***
 - So successful that many measures were retired because they were “topped out”
- **Can we reproduce this “quality escalator”?**
 - Introduce national goals and measures, facilitate and reward rapid improvement
 - Shift topped-out measures to maintenance, and then introduce new national goals

**America's Hospitals: Improving Quality and Safety
The Joint Commission Annual Report 2015*

Hospital Performance On National Accountability Measures



Use Measures For Improvement

- **Process measures led to unprecedented improvements in quality from 2002-2015***
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**America's Hospitals: Improving Quality and Safety
The Joint Commission Annual Report 2015*

Scrutinize Outcome Measures

- **Some outcome measures can differentiate high quality providers and drive improvement**
 - **For example, complication rates and mortality after procedures (CABG)**
- **Many outcome measures have serious threats to validity (e.g., inadequate risk adjustment) and are unlikely to help improve care**
 - **For example, AMI, COPD, and stroke**
- **Need stricter criteria to use outcomes in VBP**

16 Principles for Improved Performance Measurement

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Overview:

- **Endorse Performance Measurement**
 - Measures Drive Behavior Change
- **Good Measurement, Based on Good Science**
 - Evidence for Recommendation
 - Evidence for Measure
- **Measures Should be “Fit for Purpose”**
 - Learning
 - Organizational Improvement
 - Accountability

Disclaimer:

- **Examples cited address universally important issues (e.g., sepsis, pain, HAI, cost), related to safety, quality, timeliness, access, experience and value.**
- **Examples are not intended to diminish importance of measurement, but serve as cautionary notes to better direct subsequent work.**
- **Measures should be . . .**

About Patient Care & Quality

- At best, imperfect proxies for quality
- Measurement should seek to improve patient outcomes, and be guided by science (not conjecture or convenience)
- ***N.B.:*** Role for Process Measures
 - Don't have to reprove link to clinical outcome (e.g., immunization)
 - Are outcomes, if frame-of-reference is provider

Example: “Efficiency” Measures

- Not clear that spending per beneficiary (Part A & B, -3 to +30d, HIQRP & VBP) correlates with care quality

Provider Behavior Affects Outcome

- **Accountable entity has to have control (or substantial influence) over variable(s) of interest**

Example: THR, TKR Risk-Standardized Complications

- **-3 to + 90d driven by many exogenous factors (e.g., PAC)**

Timely Reporting Supports PI

- Reporting is as concurrent as possible, to support timely feedback and improvement
- Lagging data are difficult to respond to rationally

Examples: Readmissions (-48 to -12 mo reporting)
Mortality (48 to -12 mo reporting)

Rational Financial Incentives

- **Incentivize improvement**
 - Don't penalize "doing the right thing" (e.g., necessary readmission)
 - Don't remove resources from improvement
 - Can be budget neutral, based on savings to payers from improvement
- **Accountability measures should not cause "double-jeopardy" regardless of FFS, FFV**

**Examples: HAC SIR <1.0, but bottom quartile
CDC-NHSN measures in both VBP and HAC
CJR Pricing, BPCI (Sepsis)**

Strong Evidence for Recommendation

- **Use framework akin to USPSTF and measure only where strong evidence exists for or against particular action.**

Example: MU, 5% Patients Must Enroll for Portal

Strong Evidence for Recommendation

Table 1. What the USPSTF Grades Mean and Suggestions for Practice

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer/provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer/provide this service.
C	The USPSTF recommends against routinely providing the service. There may be considerations that support providing the service in an individual patient. There is moderate or high certainty that the net benefit is small.	Offer/provide this service only if other considerations support offering or providing the service in an individual patient.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Example: Routine PSA for Prostate CA Screening

Strong Evidence for Measures

- Measures need to be adequately tested and demonstrated as reliable and valid
- Measures need to be demonstrated as valid & reliable *in mode of administration*
 - Manually abstracted measures may not behave identically, when administered electronically
 - e.g., abstracting measures applies logic that may not be available electronically

Example: ER Throughput

Time Admit to Unit **minus** Time Discharge from ER **never**
contemplated a negative number. (BH, Trauma)

Benefit Exceeds Cost of Measurement

- **Marginal benefit has to be worthwhile relative to other improvement opportunities**
 - Parallel approaches to measuring the same activity are wasteful . . . and divert attention and resources *from* improvement opportunity *to* measurement and reporting activity. Goal is improvement!
- **Seek administrative simplicity**
 - Ideally, electronic, but only if validated in electronic format

Example: Sepsis – 9 page, manual-abstraction algorithm

Avoid Unintended Consequences

- **Measures drive behaviors. While intent may be desirable, adequate testing may reveal unintended consequences.**

Example: PNE – Antibiotics within 4 hours

Avoid Unintended Consequences

13. During this hospital stay, how often was your pain well controlled?

- 1 Never
- 2 Sometimes
- 3 Usually
- 4 Always

14. During this hospital stay, how often did the hospital staff do everything they could to help you with your pain?

- 1 Never
- 2 Sometimes
- 3 Usually
- 4 Always

Example: HCAHPS – Pain

Support Alignment and “Systemness”

- **Align purpose (improvement) over time (episode), across sites, and among providers. For example**
 - Align physician and hospital
 - Align hospital and post-acute providers

Example: HIQRP, VBP, HACCS don't have direct analogs in PQRS. (Medicare Part A & B disconnected)

•Notionally Promising: Bundles, MACRA

Focuses Improvement Effort, not Reporting

- **Measure consistency among public & private payers and accreditation organizations**
 - **Harmonization ≠ Identicality**
 - Improvement efforts diluted by reporting burden

Example: TJC All Behavioral Health in HBIPS, but CMS only PPS units in HBIPS)

Reporting Reveals Meaningful Differences (in performance)

- Providers should not be rewarded or punished for meaningless difference in performance**

**Examples: HACCS not predictive from quarter-to-quarter
HCAHPS Star-Ratings Nurse
Communication Domain (76% TB is 2-star, 77% is 3-star)**

Methodologies Published and Transparent

- **Risk adjustment not proprietary**
 - Source data available
 - Accountable entity should be able to replicate results to guide improvement efforts
- ***N.B.:* Risk adjustment shouldn't jeopardize patient access to services, by avoiding adverse selection**

Examples: Commercial payer methodologies
CMS mortality, readmission cannot be replicated as no available pre- and post-hospital data

Publicly Reported Measures Should Be Publicly Understandable

- **Role for composite measures**
 - Should be guided by intellectual honesty and good science
 - e.g., If no rational reason to weight components differently, weight similarly
- **Disclose limitations of measures**

Example: PSI-90

**Cancer Care cannot be inferred from
AMI, HF, PNE, CVA, COPD, CABG R-A-M**



National Framework for Measurement & Reporting

- **HHS should adopt health and care framework in support of national policy goals**
 - **Guide payers, providers, publications**
 - Avoid current cacophony . . .
 - More “nutrition-label-like”
 - **Measures guided by more than convenience data (e.g., avoid “lamppost phenomenon”) and spurious mathematical recapitulations.**

Example: Commercial, Consumer Reports, HealthChex, HealthGrades, Leapfrog, ProPublica, Truven, U.S. News

Population \neq Σ Personal Health Measures

- Population health is not be the aggregate of individual care process measures
- Need *bona fide* population health metrics

Example: Cardiovascular Health \neq Σ AMI Metrics

Only Validated Measures Used for Accountability

- **Measurement serves different purposes**
 - **Place for learning and testing new measures**
 - Need to learn
 - **Place for internal improvement metrics**
 - Need to improve
 - **Place for public accountability**
 - Need to be accountable
 - Require evidence for recommendation and measure

Example: Excess Acute Days for AMI & HF (HIQRP)

Summary:

- **Endorse Performance Measurement**
 - Measures Drive Behavior Change
- **Good Measurement, Based on Good Science**
 - Evidence for Recommendation
 - Evidence for Measure
 - Good Math
- **Measures Should be “Fit for Purpose”**
 - Learning
 - Organizational Improvement
 - Accountability
- **Principles Apply Whether FFS or FFV**

Final Thoughts:

- *Not everything that counts is measured, not everything that's measured counts . . .*
Einstein
- *Numerators and Denominators are real people !*

16 Principles for Improved Performance Measurement

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Charting A Path Forward: Opportunities To Strengthen Hospital Value-Based Purchasing

Cheryl Damberg, PhD

**RAND Distinguished Chair in Healthcare Payment
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Discussion Topics

- **Measures**
 - How can we avoid mis-measurement of quality?
 - Where is the “V” in hospital value-based purchasing?
 - Is the MSPB measure of efficiency measuring the right output?
 - How can measurement take a more patient-centered view?
- **Payment/reward structure**

Getting Measurement Right

- **Absence of adjustment for socioeconomic (SES) factors creates problems:**
 - **Mis-measurement (lack of measure validity)**
 - **Undesired effects: de-resourcing low resource providers and avoidance of low SES patients**
 - **Hospital Readmissions Reduction Program--disproportionately penalized safety-net facilities***
- **In the context of value-based payments:**
 - **Need to adjust for characteristics of patients that are not under control of the clinician but that affect the outcome**
 - **Clinical factors do not measure all things that affect patient outcomes**
 - **Within hospital differences in quality performance is fair game for adjustment to make comparisons more equitable**
 - **Adjusting for within hospital disparities preserves true differences in quality--doesn't mask quality differences between hospitals**

* Joynt KE, Jha AK. Characteristics of hospitals receiving penalties under the Hospital Readmissions Reduction Program. *JAMA*. 2013;309 (4):342-343.

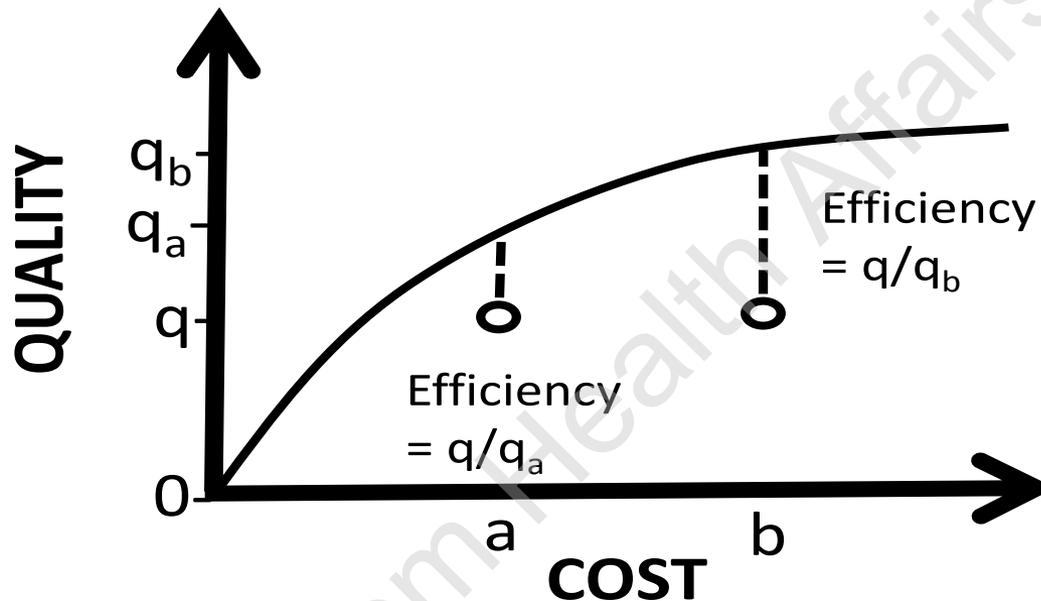
Not Yet Measuring “Value”

- **Value:** defined as outcomes relative to cost (encompasses efficiency)
 - Not yet measuring or paying for value, but rather a weighted combination of quality and resource use measures
 - Push for greater value in health care is based on a belief that there is inefficiency, or potential to improve health at current levels of spending
- **Efficiency:** relationship between a specific product of the health system (output) and the resources used to create product (inputs)
 - Expectation is that providers should produce the highest value for a given level of spending
 - For any given level of spending, increasing efficiency will increase value

Does The HVBP “Efficiency” Measure Capture What We’re Really Interested In?

- **Hussey et al., state “*efficiency is used by different stakeholders to connote various constructs*”**
 - Current MSPB efficiency doesn’t capture the construct of interest
- **MSPB is a utilization metric (given price standardization)**
 - Examines the relative use of health services for three days prior, hospitalization +30 days post
 - No specification of quality in the measure of “output”
- **What should be the output of interest?**
 - Output: Level of “quality produced”
 - Measure: Hospital’s relative efficiency in producing a level of quality (“output”) for a given total cost (“input”)
 - Estimate relative efficiency using a production function

Hypothetical Production Frontier



- Circles represent two providers with different costs but with same quality, q
- Full efficiency--achieved along the production frontier (solid curve), represents the maximum possible quality levels q_a and q_b at costs a and b , respectively
- Efficiency for a provider is “actual” quality q divided by the maximum possible level of quality

Patient Focused Care Requires Moving To Measuring Patient-reported Outcomes

Sort by distance	Health improvements reported by patients after hip replacement	Health improvements reported by patients after knee replacement	Health improvements reported by patients after varicose vein surgery	Health improvements reported by patients after groin hernia surgery
<p><u>St Thomas'</u></p> <p>Westminster Bridge Road, London, SE1 7EH Tel: 020 7188 7188</p> <p>0.9 miles away</p> <p><input checked="" type="checkbox"/> Add to shortlist</p>	<p>n/a</p> <p>Data not available</p>	<p>n/a</p> <p>Data not available</p>	<p></p> <p>Among the worst</p>	<p>n/a</p> <p>Data not available</p>
<p><u>University College Hospital</u></p> <p>University College Hospital, 235 Euston Road, London, NW1 2BU Tel: 020 3456 7890</p> <p>1.1 miles away</p> <p><input checked="" type="checkbox"/> Add to shortlist</p>	<p></p> <p>Better than average</p>	<p></p> <p>In the middle range</p>	<p></p> <p>In the middle range</p>	<p>n/a</p> <p>Data not available</p>
<p><u>St Bartholomew's Hospital</u></p> <p>West Smithfield, London, EC1A 7BE Tel: 020 3416 5000</p> <p>1.2 miles away</p>	<p>n/a</p> <p>Data not available</p>	<p>n/a</p> <p>Data not available</p>	<p></p> <p>Among the worst</p>	<p></p> <p>Worse than average</p>

What Do We Know About The Relationship Between Quality And Cost?

	Clinical Process	HCAHPS	Outcomes	Efficiency	Non-Efficiency	Payment Adjustment
Clinical Process	1.000	0.502	0.070	0.191		
HCAHPS	0.502	1.000	0.091	0.315		
Outcomes	0.070	0.091	1.000	0.059		
Efficiency	0.191	0.315	0.059	1.000	0.105	
Non-Efficiency				0.105	1.000	
Payment Adjustment	0.441	0.624	0.251	0.496	0.452	1.000

Efficiency=Medicare Spending Per Beneficiary. Non-efficiency=composite of outcomes, HCAHPS and clinical process domain scores

Payment/Reward Structure

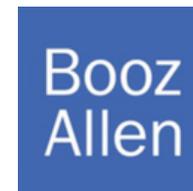
- **Recent Health Affairs article* highlighted problem with current HVBP reward structure**
 - If pay for lower cost (MSPB), could reward low quality
- **Paying for “low cost” is more likely to create disparities**
 - Often the low cost providers are those who serve low SES populations, and resources are more scarce (lower payments)
 - Disadvantaged patients cost more to treat
 - Below some level of spending, may not be able to produce quality. May need to spend more to get to quality

*Das, A. et al. Adding A Spending Metric To Medicare's Value-Based Purchasing Program Rewarded Low-Quality Hospitals. *Health Affairs* 35, no.5 (2016):898-906doi: 10.1377/hlthaff.2015.1190

Payment/Reward Structure

- **How to provide right incentives for a heterogeneous set of providers?**
 - Emphasize different things at different points
- **Alternative payment approach:**
 - If below some benchmark “Q” then just focus on rewarding quality
 - As “Q” improves, shift to rewarding both “Q” and cost/efficiency
 - Among those who are high quality, use efficiency as a tie breaker to reward providers differentially (i.e., efficiency measure performance becomes bonus points once you do it right—meaning get to “Q”)

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Panel 2:

Current And Future Challenges Of Physician Value Based Payment

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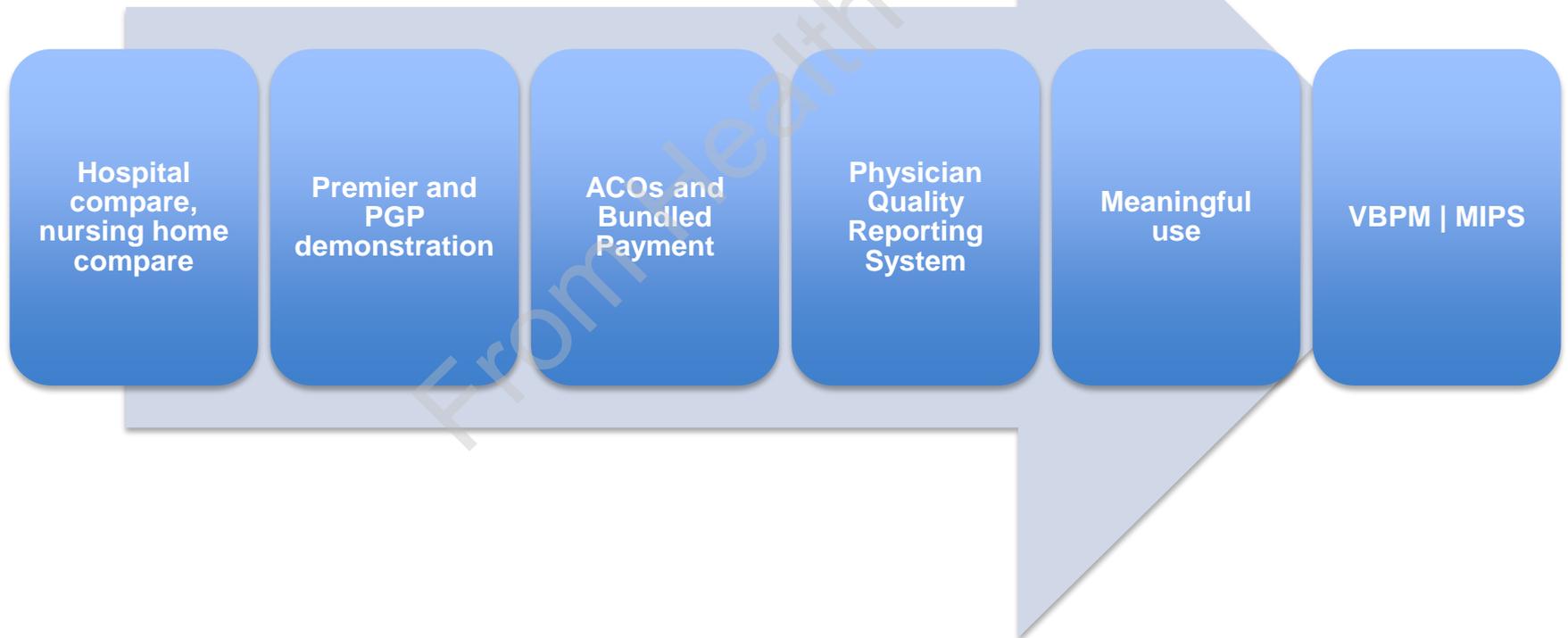
What Is The Role For Physician Value-based Purchasing In Medicare?

Meredith Rosenthal, PhD

**Professor of Health Economics and Policy
Harvard T.H. Chan School of Public Health**

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Health Care Purchasing Reform Environment



Elements Of A Strategy

- **Narrow in the beginning, broader over time**
- **Demonstrations**
- **Quality first, then cost**
- **Low-powered to high-powered**
- **Incremental to transformative**

Physician Value Based Purchasing

- PQRS and VBPM were ignored by most – few physicians got to “practice” before MACRA arrived
- No demonstrations of pay for performance
- Quality and cost together from the beginning, along with some participation measures
- Choice of quality measures makes it hard to know what we will get

What Is CMS' Goal For Physician Value-based Purchasing?

- **A way to limit spending increases (by way of a pay cut)?**
- **An incentive to join a larger entity?**
- **An incentive for physicians to join alternative payment models?**

What Might Be Accomplished Through Physician Payment Reform?

- Little traction for VBP with individual physicians
- Maybe taking the joy out of the status quo is the most important feature of MACRA
- Perhaps measure development will be accelerated
- Some modest possibilities to consider:
 - align physicians with other providers through measure selection (e.g., reward surgeons for implementing checklists)?
 - build regional efforts to align physicians within specialties around the same measures with investment in collaboration, benchmarking

Dana Gelb Safran, ScD

**Senior Vice President for Performance
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Current & Future Challenges of Physician Value-Based Payment:

What Can We Learn from Alternative Quality Contract (AQC) Results, 2009-2016

Dana Gelb Safran, ScD

Chief Performance Measurement & Improvement Officer
Senior VP, Enterprise Analytics
Blue Cross Blue Shield of Massachusetts

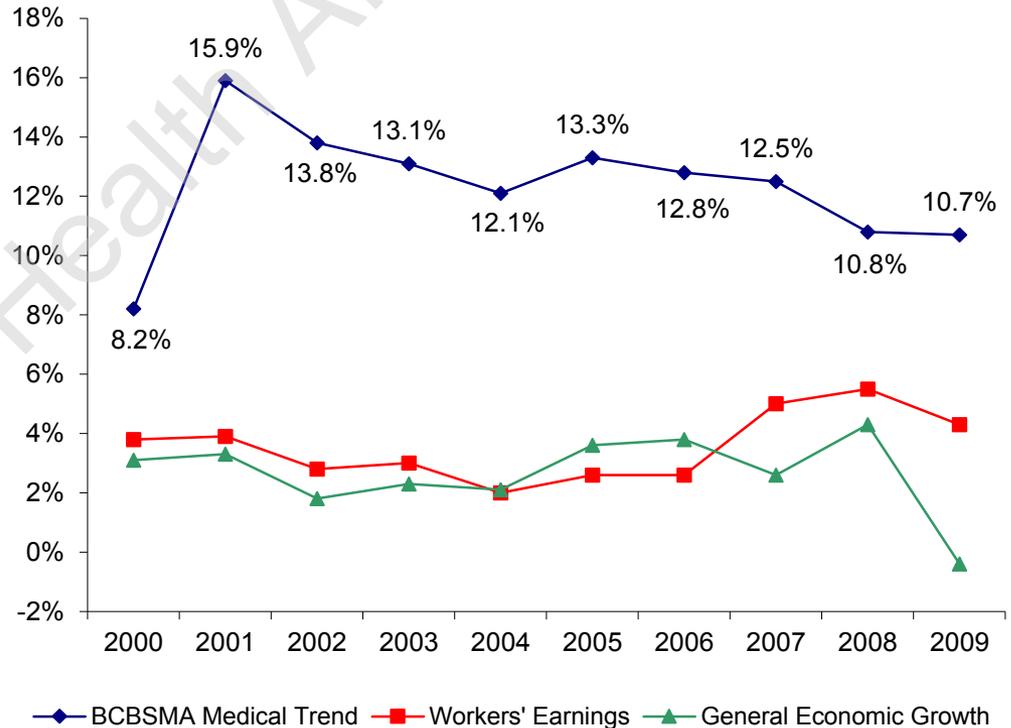
Presented at:

Health Affairs Briefing: Envisioning the Future of Value Based Payment
12 May 2016

The Alternative Quality Contract: Twin goals of improving quality and slowing spending growth

In 2007, leaders at BCBSMA challenged the company to develop a new contract model that would improve quality and outcomes while significantly slowing the rate of growth in health care spending.

The Massachusetts health reform law (2006) caused a bright light to shine on the issue of unrelenting double-digit increases in health care spending growth (Health Care Reform II).



Sources: BCBSMA, Bureau of Labor Statistics.

AQC Physician Participation

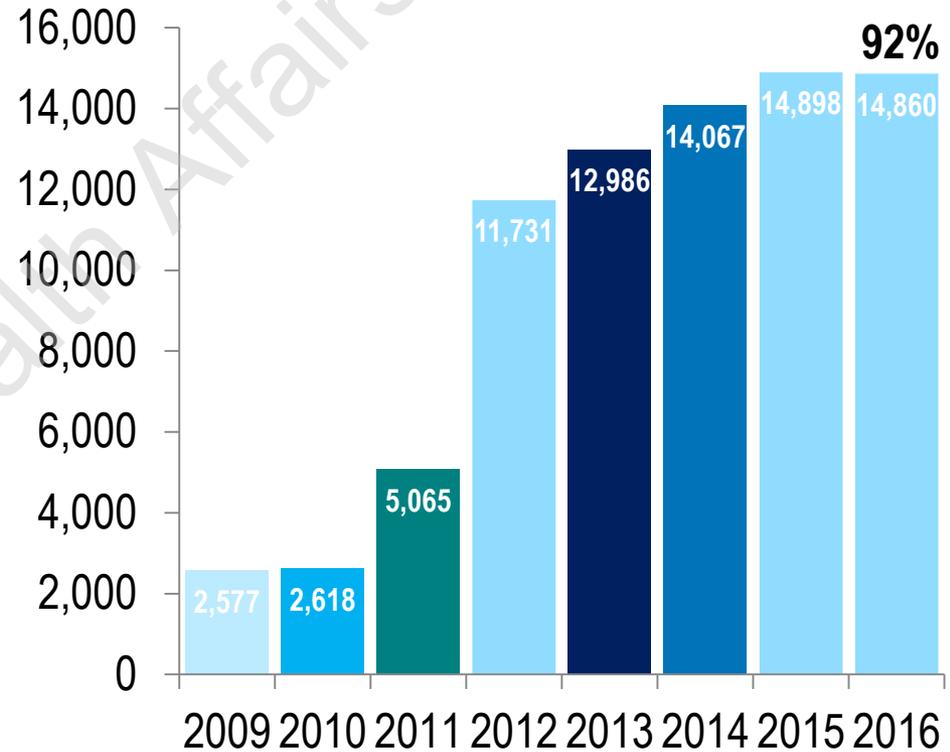
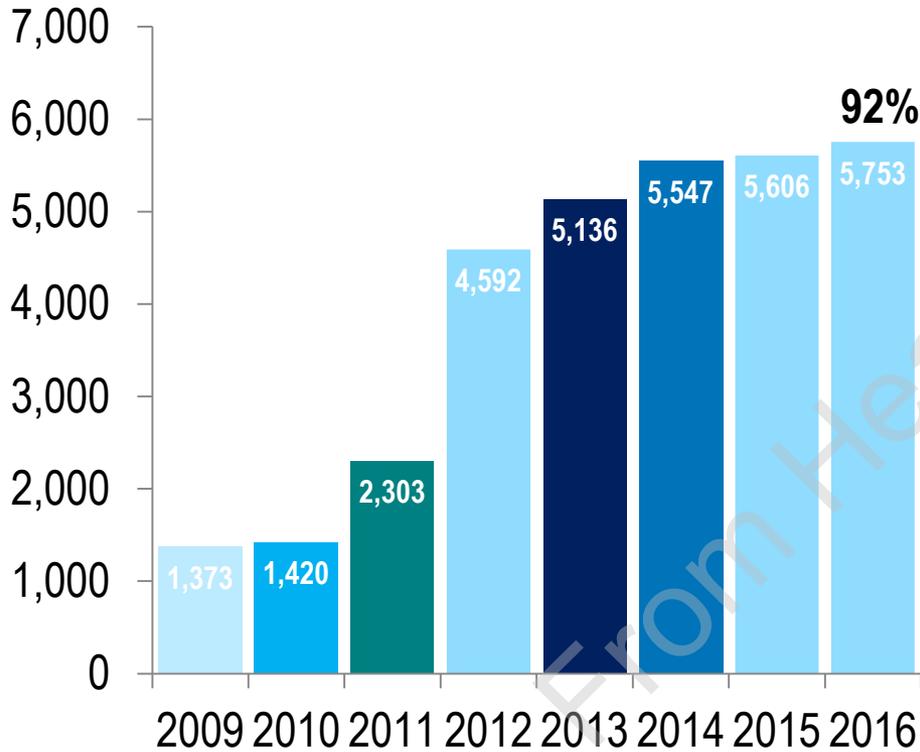
(Current as of May 2016)



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PCPs

SCPs



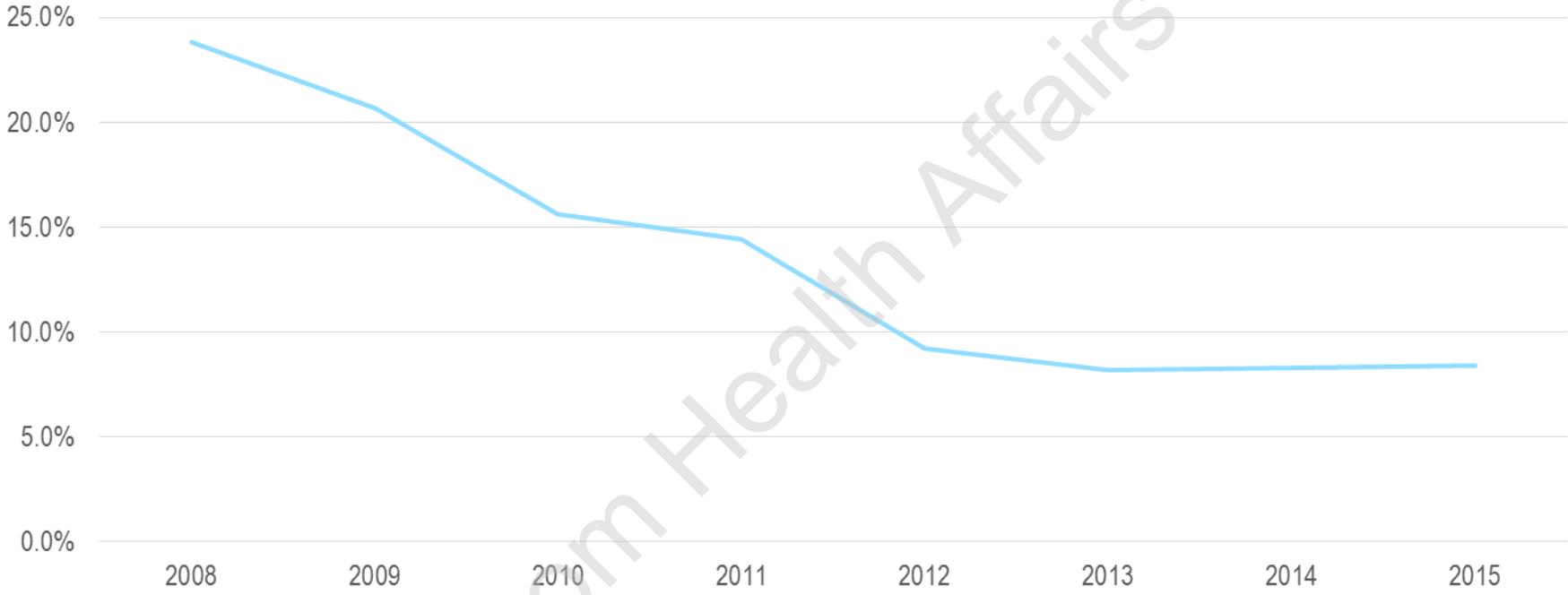
Small Unaffiliated Practices, 2008-2015

Small practices began affiliating with larger groups for support



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% of PCPs that are Independently Contracted



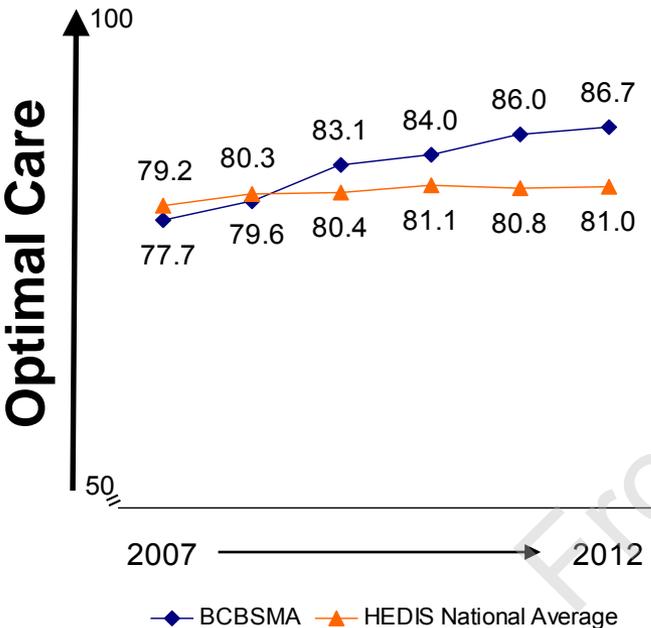
While the majority of Massachusetts physicians continue to practice in settings with ≤ 5 physicians, the AQC has contributed to a large share of these small practices opting to affiliate with a larger entity (e.g., IPA, PHO) for infrastructure support.

Quality & Health Outcome Results Under the AQC: Improvements by the 2009 Cohort of AQC Groups from 2007-2012

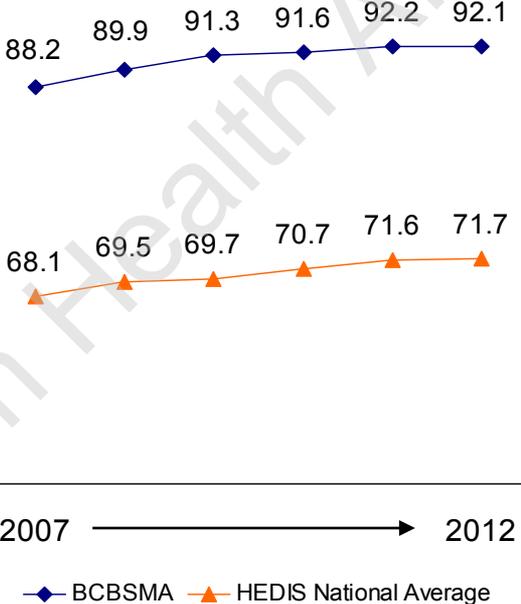


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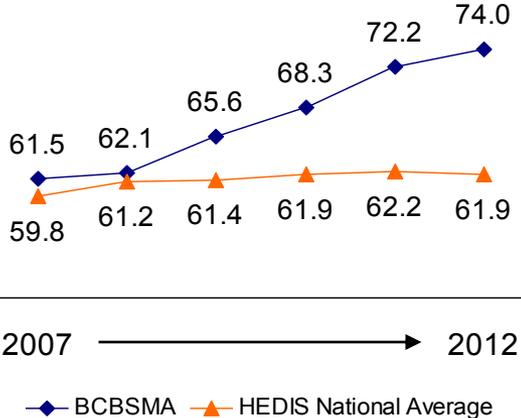
Adult Chronic Care



Pediatric Care



Adult Health Outcomes



These graphs show that the AQC has accelerated progress toward optimal care since it began in 2009. The first two scores are based on the delivery of evidence-based care to adults with chronic illness and to children, including appropriate tests, services, and preventive care. The third score reflects the extent to which providers helped adults with serious chronic illness achieve optimal clinical outcomes. Linking provider payment to outcome measures has been one of the AQC's pioneering achievements.

AQC Results: Significantly Reduced Spending

Formal Academic Evaluation: Year 3 & 4 Results



The NEW ENGLAND
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SPECIAL ARTICLE

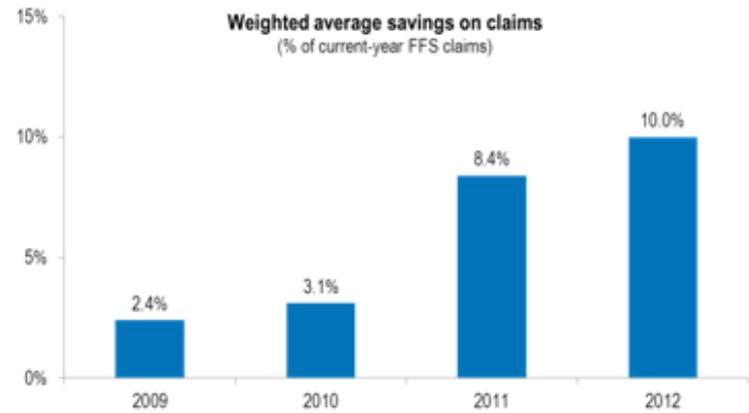
Changes in Health Care Spending and Quality 4 Years into Global Payment

Zirui Song, M.D., Ph.D., Sherri Rose, Ph.D., Bruce F....

As compared with similar populations in other states, Massachusetts AQC enrollees had lower spending growth and generally greater quality improvements in the period 2009 through 2012... The AQC experience may be useful to policy-makers, insurers and providers embarking on payment reform. Although it is still early, these results suggest that a two-sided global budget model may serve as a foundation for slowing spending and improving quality."

Blue Cross Blue Shield of Massachusetts

Savings Associated with the AQC Relative to Control Group, 2009-2012



AQC Physician Participation ¹	2009	2010	2011	2012
	20%	20%	35%	77%

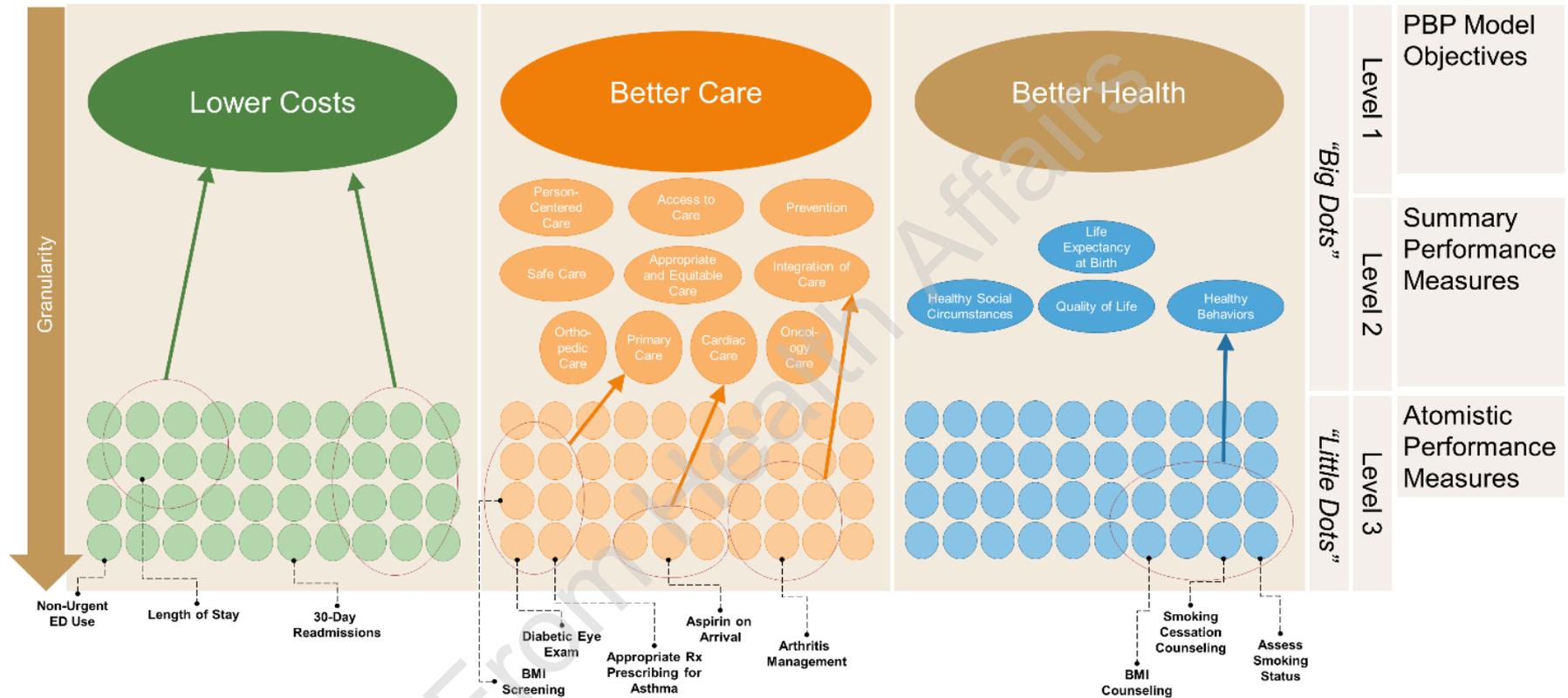
Notes: (1) Calculated based on combined PCP and EOP participation as of December of each year.

Blue Cross Blue Shield of Massachusetts

2

Source: Song Z, et al. Changes in Health Care Spending and Quality 4 Years into Global Payment. *The New England Journal of Medicine*. 2014.

Performance Measurement Needs for Population-Based Payment (PBP) Models



Recommendation: To support the long-term success and sustainability of population-based payment models, future state measures must be based, as much as possible, on results that matter to patients (e.g., functional status) or the best available intermediate outcomes known to produce these results

For More Information



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Doctor and the Doll by Norman Rockwell

NR0007

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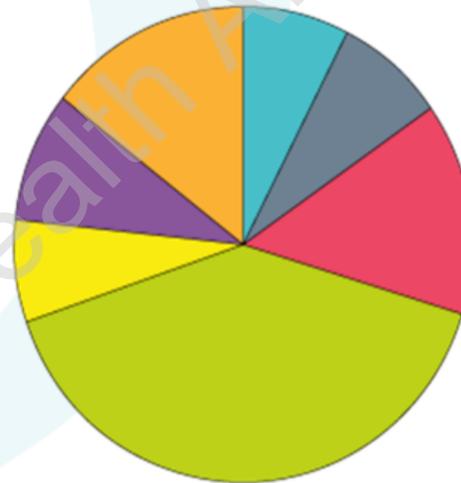
Alan Lazaroff, MD
Board of Directors
American Geriatrics Society

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Physician Health Partners

- Since 1996
- IPA/Network Management
- PHPprime
 - 185,000 lives
- Medicaid Regional Care Collaborative Organization (RCCO)
 - 125,000 lives

Total # of Covered Lives = 315,799



All Health Plan Contracts

- Aetna Whole Health
- Anthem Enhanced Personal Health Care Program
- Cigna Accountable Care
- CCHA (Medicaid)
- Medicare Shared Savings Program (Medicare fee-for-service)
- UnitedHealthcare AARP Medicare Complete (Medicare Advantage)
- UnitedHealthcare Commercial ACO

Tom Valuck, MD, JD
Partner, Discern Health

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Keynote Address

David Blumenthal, MD

President

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Envisioning the Future of Value Based Payment

David Blumenthal, MD, MPP
President, The Commonwealth Fund

Health Affairs Briefing
Washington, D.C.
May 12, 2016



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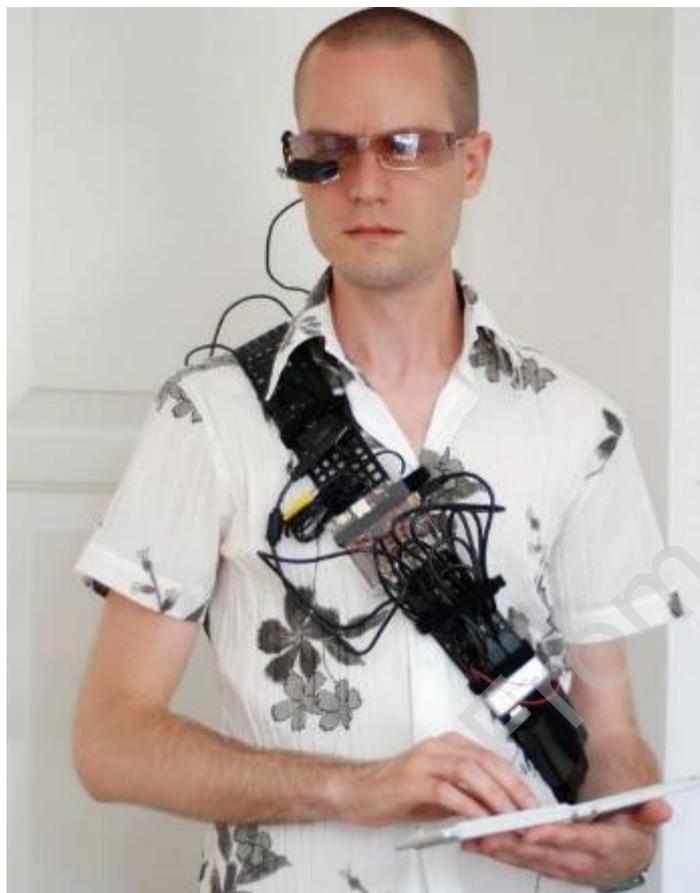
Today's Agenda

**VITAL
SIGNS**
CORE METRICS
FOR HEALTH AND HEALTH CARE PROGRESS



INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES

Today's Agenda





Measure Proliferation

Measure Categories (hundreds)

...

Prev: tobacco cessation
Pexp: clinician communication
Pexp: patient rating of doctor
Pexp: collaborative decision-making

Safe: wrong site surgery
Safe: hospital-acquired conditions
Safe: central line infections
Safe: hand hygiene
Safe: MRSA bacterium
Safe: pressure ulcers
Safe: medication reconciliation
Safe: adverse event reporting

... others ...

Cost
PC: insurance coverage
PC: out of pocket med payments
RR: Total cost of care index
RR: prescription of generic drugs
UN: condition-specific imaging use
Ind: health literacy
Ind: children reading at grade level

...

Measure in Use (thousands)

Quality of ca
CVD: aspirin
CVD: beta b
CVD: heart f
CVD: blood
Can: cytoge
Can: ER/PR+
Resp: asthm
Resp: COPD
DM: HbA1c
DM: LDL
DM: diabete
MH: depress

MH: antipyp
MH: care pla
ID: Hepatitis
ID: HIV viral I
ID: antibiotic
Surg: volume
Surg: antibio
Surg: checkl
Surg: post-op
OGQ: EHR fu
OGC: ED thr
OGQ: advan
OGQ: pain m
MCH: prena
MCH: Cesar
MCH: post-p
Prev: USSTF
Prev: physica
Prev: tobacc
Pexp: clinica
Pexp: patien
Pexp: collab
Safe: wrong
Safe: hospita
Safe: centra
Safe: hand h
Safe: MRSA b
Safe: pressur
Safe: medic
Safe: advers
... others ...
PC: insuranc
PC: out of po
RR: Total cos
RR: prescript
UN: conditio
... others ...

Engagemen
Ind: health li
Ind: children
Ind: collabo
Ind: patient
Com: comm
... others ...

Population h
HS: life expe
HS: perceiv
HS: illness da
Beh: fruit/veg
Beh: activity
Soc: income
Soc: neighbor
Env: air parti

Quality of ca
CVD: aspirin
CVD: beta b
CVD: heart f
CVD: blood
Can: cytoge

ANALYSIS & COMMENTARY
A Population Health Framework For
System Reform — Neal Haflin et al.

FORUMS & DEBATES
Community Health Workers' Status —
Heidi L. Behrman & Samuel Starke

GLOBAL HEALTH
Interventions With Vietnamese Health
Minister Nguyen — Tsung-Mei Cheng

AT THE INTERSECTION OF HEALTH, HEALTH CARE, AND POLICY

HealthAffairs

Collaborating
For Community
Health

Integrating
Public Health &
Community
Development

Manuel Pastor &
Rachel Marella-Frosch

Increasing
Investment In
Social Determinants
Of Health

Ian Galloway

Wellness Metrics
For Real Estate

Cross-Sector
Collaboration To

Local Approaches

Health In All Policies —
James Conroy et al.

By Lawrence P. Casalino, David Gans, Rachel Weber, Meagan Cea, Amber Tuchovsky, Tara F. Bishop, Yesenia Miranda, Brittany A. Frankel, Kristina B. Ziehler, Meghan M. Wong, and Todd B. Evenson

DATAWATCH

US Physician Practices Spend More Than \$15.4 Billion Annually To Report Quality Measures

Each year US physician practices in four common specialties spend, on average, 785 hours per physician and more than \$15.4 billion dealing with the reporting of quality measures. While much is to be gained from quality measurement, the current system is

$$V = \frac{Q_1 + Q_2 + Q_3 + Q_4 \dots + Q_n}{C_1 + C_2 + C_3 + C_4 \dots + C_n}$$

From Health Affairs



Value is about what we value.

From Health Affairs



From Health Affairs



Choice Requires Two Things

- Criteria (values)
- Legitimate process

From Health Affairs





Care Cost

Affordability
Sustainability

Healthy People

Length of life
Quality of life
Healthy behaviors
Health social circumstances

Key Measure Domains

Engaged People

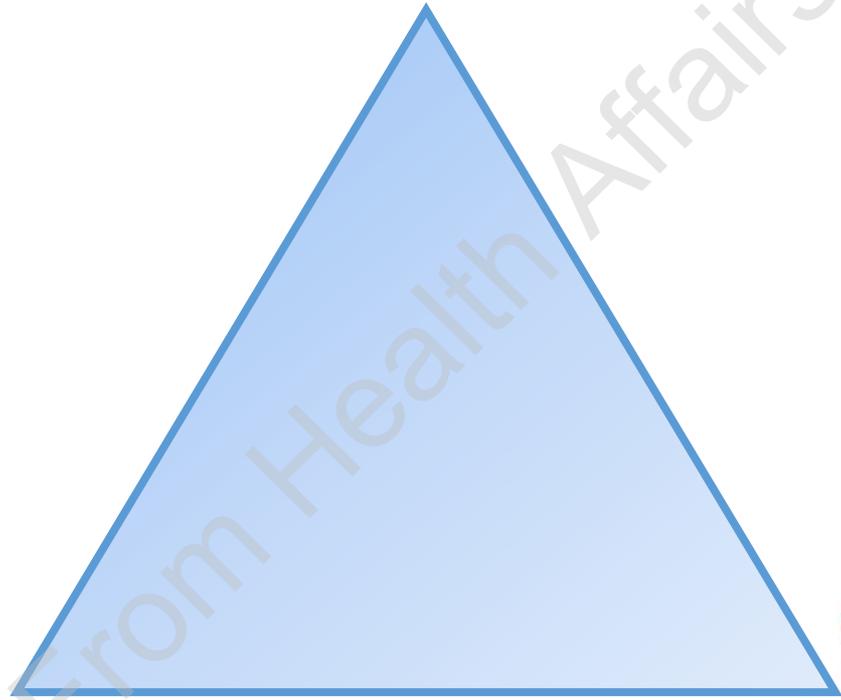
Individual engagement
Community engagement

Care Quality

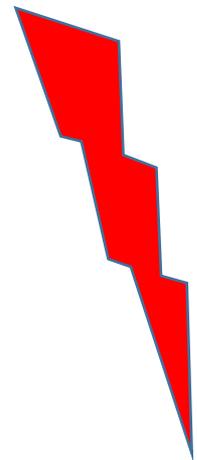
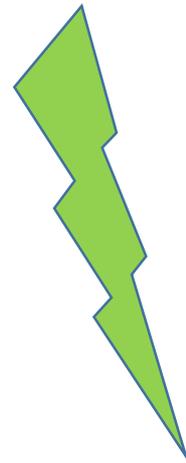
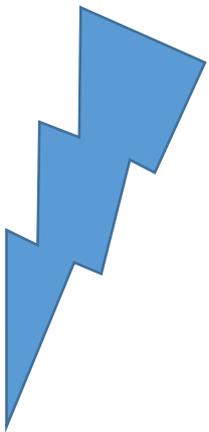
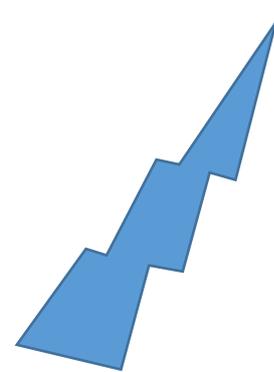
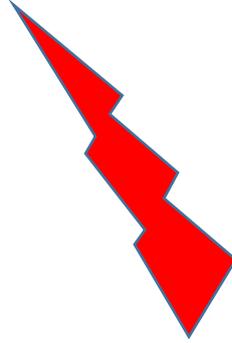
Prevention
Access to care
Safe care
Appropriate treatment
Person-centered care



From Health Affairs



DATA

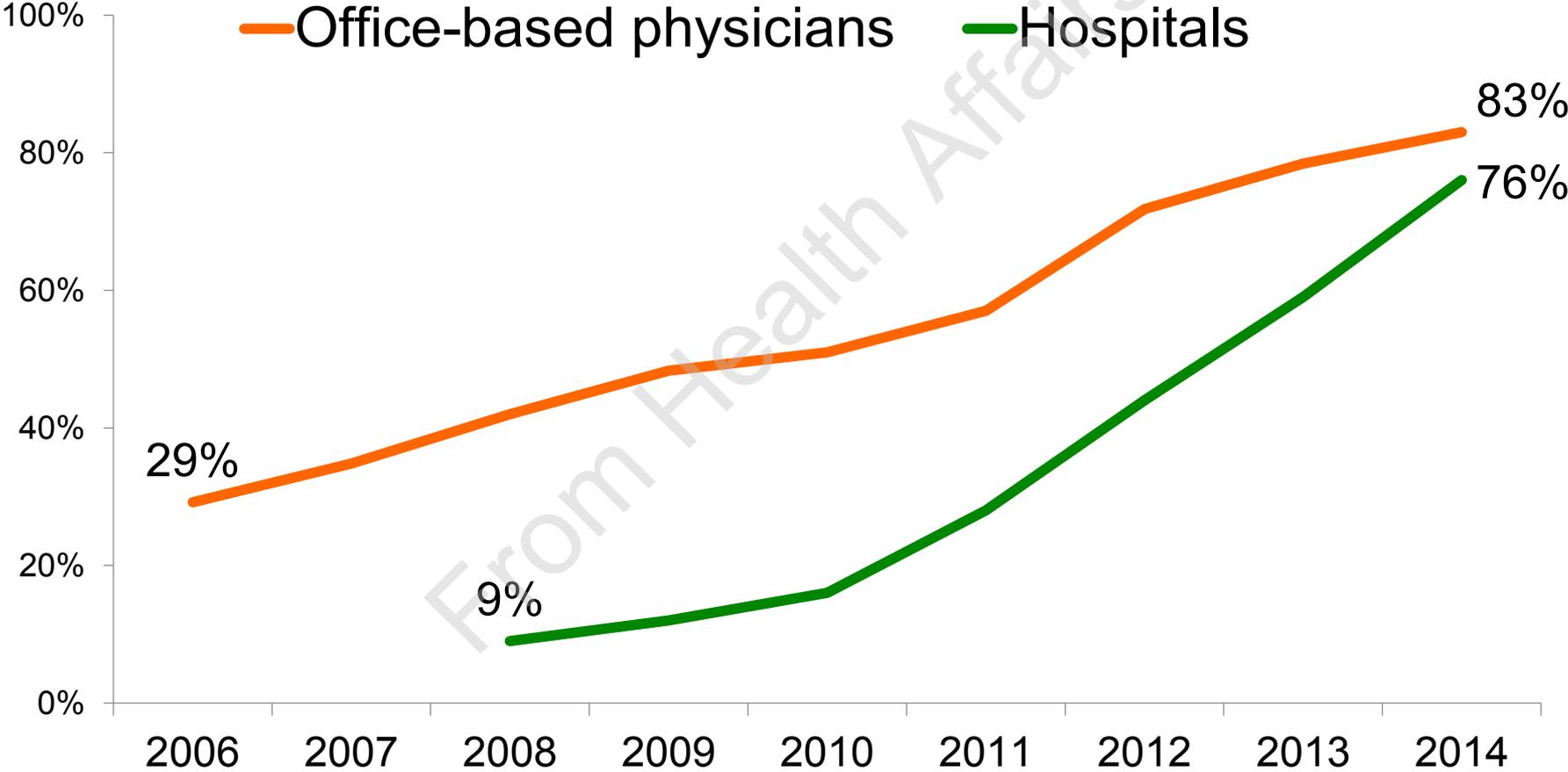


From Health Affairs



From Health Affairs

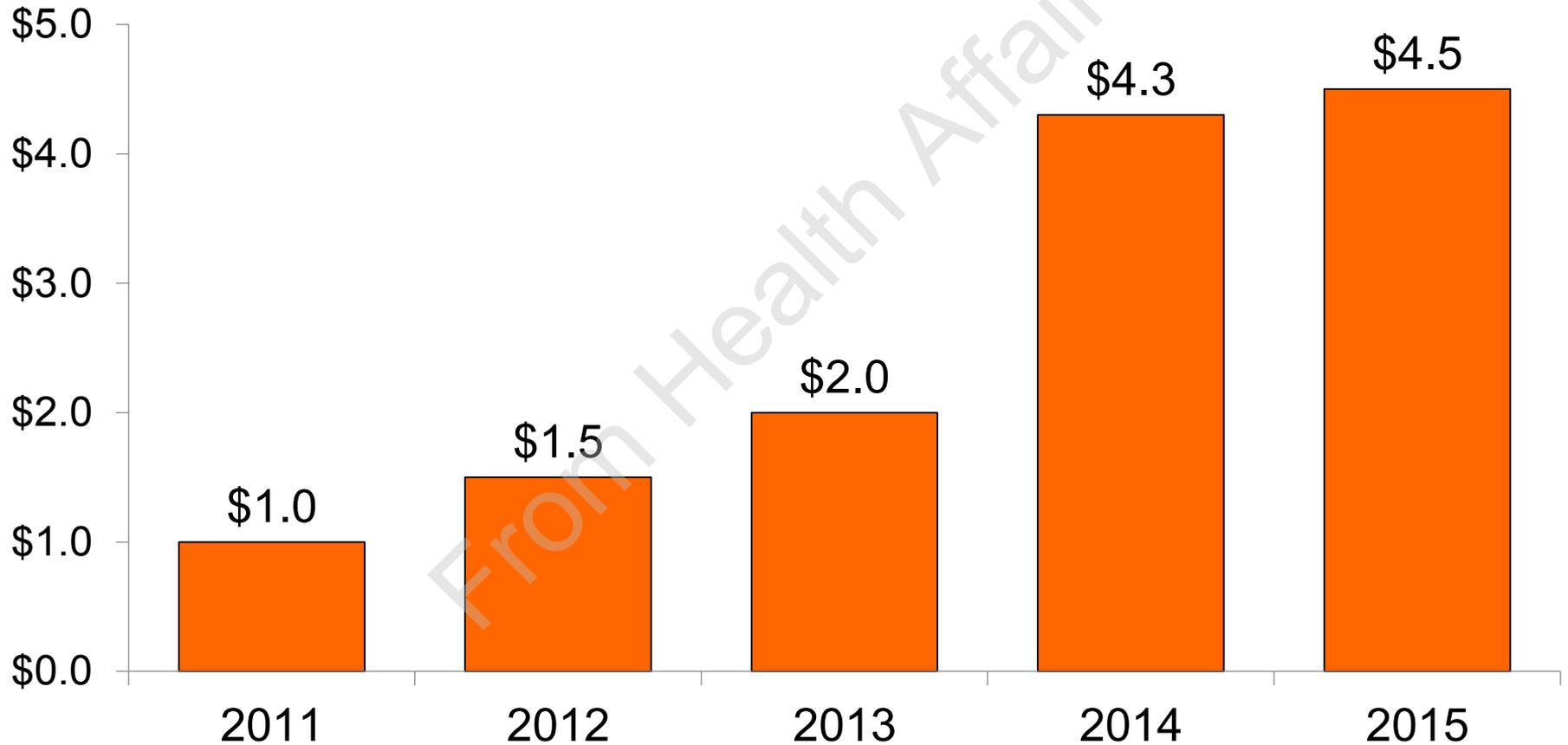
Rates of EHR Adoption Among Hospitals and Physicians



Notes: Hospital data of those with at least a basic EHR system (ONCHIT, 2015); physician data of practices with any EHR system (National Center for Health Statistics, 2014).

Venture Funding of Digital Health

\$ Billion



Remaining Challenges

- Health information exchange.
- Cybersecurity.
- Analytics.

From Health Affairs

What Can Data Do For Us?

- Create value through new knowledge.
- Create new measures.
- Reduce measurement burden.

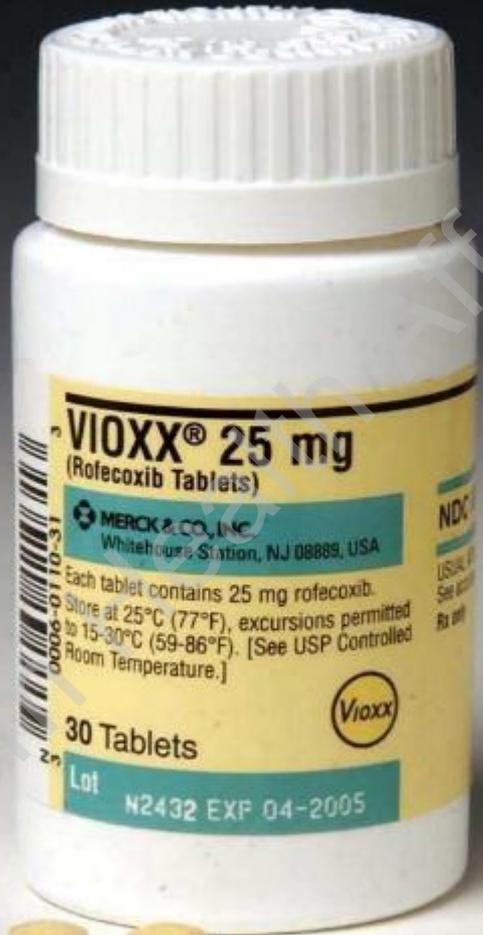
From Health Affairs



RESEARCH ARTICLE | PRECISION MEDICINE

Identification of type 2 diabetes subgroups through topological analysis of patient similarity

Li Li¹, Wei-Yi Cheng¹, Benjamin S. Glicksberg¹, Omri Gottesman², Ronald Tamler³, Rong Chen¹, Erwin P. Bottinger² and Joel T. Dudley^{1,4,*}



VIOXX® 25 mg
(Rofecoxib Tablets)

MERCK & CO., INC.
Whitehouse Station, NJ 08889, USA

Each tablet contains 25 mg rofecoxib.
Store at 25°C (77°F), excursions permitted
to 15-30°C (59-86°F). [See USP Controlled
Room Temperature.]



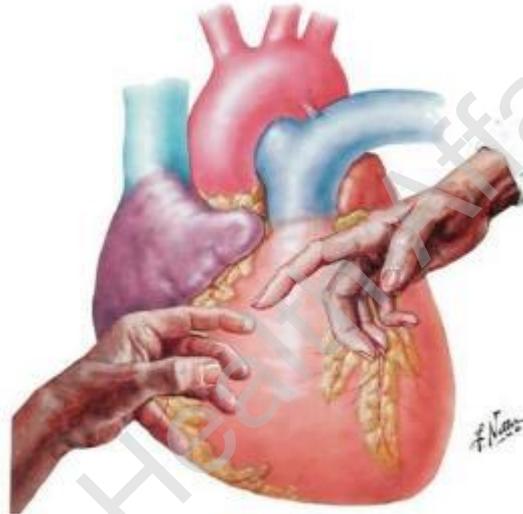
30 Tablets

Lot **N2432 EXP 04-2005**



JAMA

The Journal of the American Medical Association



Risks and Benefits of Estrogen Plus Progestin in Healthy Postmenopausal Women

Principal Results From the Women's Health Initiative
Randomized Controlled Trial

Banishing Burden

EHR adoption

Decision-support

**AUTOMATED
QUALITY
REPORTING**

Interoperability

Patient portals

Privacy and security

Wearables and biosensors

Key Points

1) Value in the eye of the beholder.

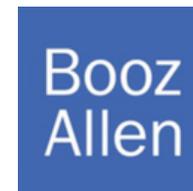
2) New technologies don't solve problems, but...

They create opportunities for humans to solve problems.

3) Big Data is a huge resource...

If we can figure out what we want.

Health Affairs thanks our sponsors:



Panel 3:

The Future of Value Based Payment

From Health Affairs

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Using Big Data To Improve Patient Care: The Era Of Precision Delivery

David W. Bates, MD, MSc

Chief Innovation Officer

Brigham and Women's Hospital, Boston, MA

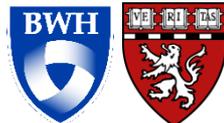
Immediate Past President, ISQua



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Big Data And Value-Based Care: What Has Changed

- **Lots of electronic clinical data now available**
 - Inside hospital
 - Outside hospital
- **Natural language processing techniques have come of age**
- **Many other data sources to link to**
 - Genetic, genomic
 - Social
 - Mobile



Viewpoint | February 16, 2016

INNOVATIONS IN HEALTH CARE DELIVERY

Integrating Predictive Analytics Into High-Value Care

The Dawn of Precision Delivery

Ravi B. Parikh, MD, MPP^{1,2}; Meetal Kakad, MD, MPH^{1,2}; David W. Bates, MD, MSc^{1,2}

[\[+\] Author Affiliations](#)

JAMA. 2016;315(7):651-652. doi:10.1001/jama.2015.19417.

Text Size: [A](#) [A](#) [A](#)

Article

References

This Viewpoint discusses the use of electronic health record “big data” to integrate predictive analytics into clinical practice and future directions for using predictive analytics to achieve high-value health care.

By David W. Bates, Suchi Saria, Lucila Ohno-Machado, Anand Shah, and Gabriel Escobar

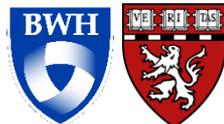
Big Data In Health Care: Using Analytics To Identify And Manage High-Risk And High-Cost Patients

ABSTRACT The US health care system is rapidly adopting electronic health records, which will dramatically increase the quantity of clinical data that are available electronically. Simultaneously, rapid progress has been made in clinical analytics—techniques for analyzing large quantities of data and gleaming new insights from that analysis—which is part of what is known as *big data*. As a result, there are unprecedented opportunities to use big data to reduce the costs of health care in the United States. We present six use cases—that is, key examples—where some of the clearest opportunities exist to reduce costs through the use of big data: high-cost patients, readmissions, triage, decompensation (when a patient's condition worsens), adverse events, and treatment optimization for diseases affecting multiple organ systems. We discuss the types of insights that are likely to emerge from clinical analytics, the types of data needed to obtain such insights, and the infrastructure—analytics, algorithms, registries, assessment scores, monitoring devices, and so forth—that organizations will need to perform the necessary analyses and to implement changes that will improve care while reducing costs. Our findings have policy implications for regulatory oversight, ways to address privacy concerns, and the support of research on analytics.

Big Data in Clinical Care

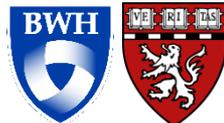
Six Use Cases:

- High-cost patients
- Readmissions
- Triage
- Decompensation
- Adverse events
- Treatment optimization



High-Cost Patients

- About 5% of patients account for 50% of spending
 - First step in managing population is identifying this group
- Need to include data about mental health, socioeconomic status, marital and living status
- Identification of specific actionable needs and gaps
 - Can make managing these patients much more cost-effective



BWH Claims-Based Approach

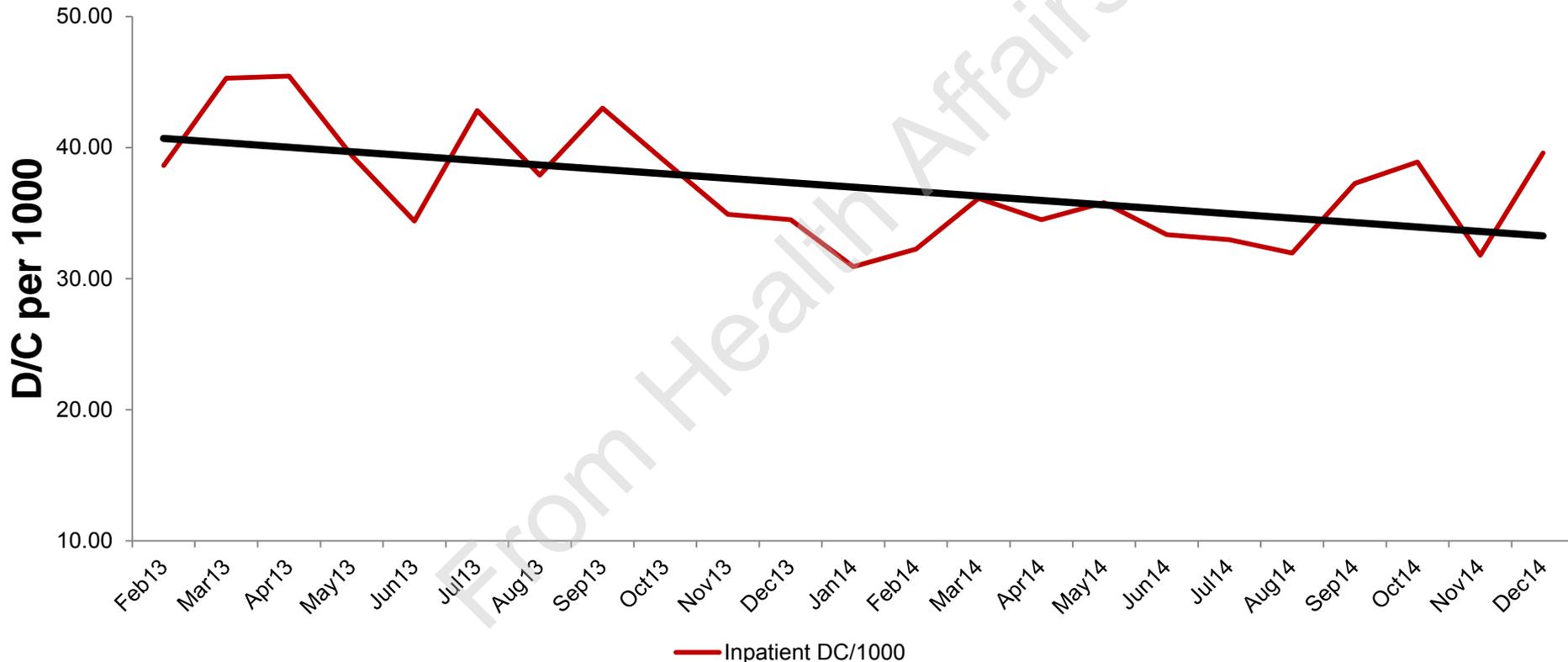
- Uses LACE to risk stratify
- Claims data from past 12 months
- Clinical conditions from a list of ~30 are categorized as high, moderate or low acuity
- Combinations of conditions from each category determine level of clinical complexity
- Hospitalizations, ER visits and other types of utilization trigger inclusion

Population

- About 3000 patients currently
- Majority female (61%)
- Elderly (mean age 71, range 21-102 years)
- 32% with a mental health diagnosis
- An average of 17 medications per patient
- PMPM ~\$2000
- 2-4 times higher than average
- Hospital admissions account for > 50% of costs

Population-Level Reduction in Inpatient Admissions

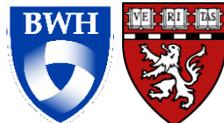
BWH Inpatient Discharges Per 1000



- 2,064 inpatient discharges from BWH 2/1/13 – 12/31/14
- Average admit per 1000 rate Feb 2013 – Dec 2013 was 49 and in 2014 was 40
- 18% reduction

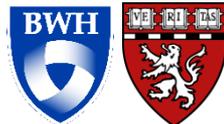
Readmissions

- CMS has strongly incentivized reducing their frequency
- Should use an algorithm to predict frequency
- Key differentiators:
 - Tailoring intervention to individual patient
 - Ensuring that patients get intended intervention
 - Monitoring specific patients after discharge
 - Ensuring low rate flagged for intervention to patients experiencing a readmission



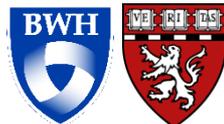
Triage

- Estimating risk of complications—at admission, evaluation, transfer
 - Need detailed guideline that clarifies how the algorithm will inform care
- Examples
 - Evaluating newborns for early onset sepsis
 - Emergency department composite scores to predict decompensation



Decompensation

- Monitoring patients especially outside ICUs
- Can track many parameters with “wearables” or even devices that sit between mattress and bed
- In one trial a device that measured pulse, respiratory rate and movement reduced number of subsequent ICU days by 47% (Brown, Am J Med 2014)
- Use of multiple parameters simultaneously, especially in ICUs



Conclusions

- Clinical data are now nearly ubiquitous in the U.S.
 - Levels of adoption of about 80% in hospitals and clinical setting in U.S.
- Yet most organizations haven't yet figured out how best to leverage these data
 - Every organization will need to invest
- “Big data” approaches will result in many insights both in clinical care and research
- Some of the examples likely to bear fruit early on
- Novel sources are most likely to provide marginal improvement—social, mobile

ACS Perspective Measurement Under MACRA/QPP

Frank G. Opelka, MD FACS
Medical Director
American College of Surgeons

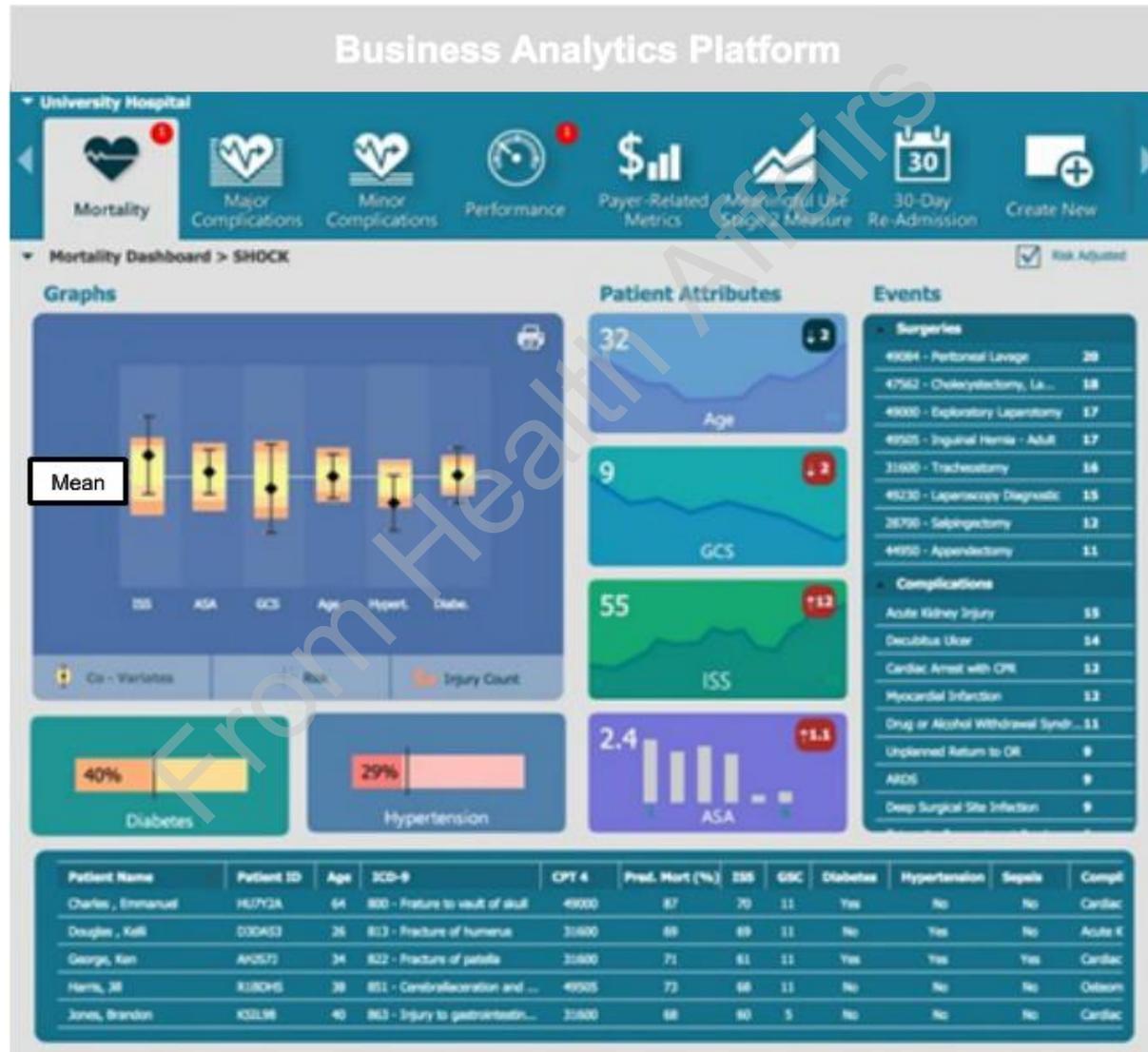
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- Regardless of the path a clinician takes – MIPS or APMs - performance measurement should reflect the patient care provided, not the payment system.
- Clinicians need consistent measurement infrastructure using advanced analytics, multiple data sources, & registries – all of these represent a much larger clinical data ecosystem than EHRs can ever offer alone. The dashboards of care !

Dashboard Sample

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The Merit-based Incentive Payment System (MIPS)

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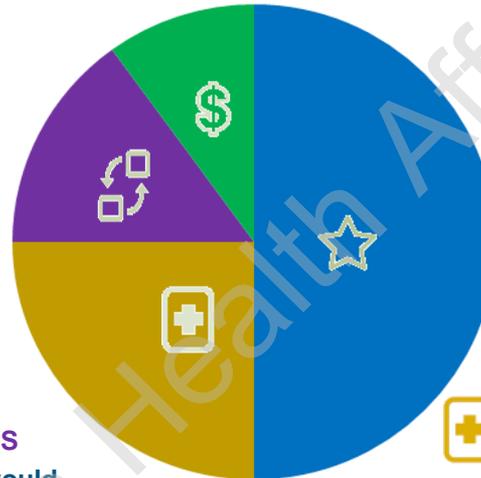
COST

(10 percent of total score in year 1; replaces the cost component of the Value Modifier Program, also known as Resource Use): the score would be based on Medicare claims, meaning no reporting requirements for clinicians. This category would use more than 40 episode-specific measures to account for differences among specialties.



QUALITY

(50 percent of total score in year 1; replaces the Physician Quality Reporting System and the quality component of the Value Modifier Program): clinicians would choose to report six measures versus the nine measures currently required under the Physician Quality Reporting System. This category gives clinicians reporting options to choose from to accommodate differences in specialty and practices.



CLINICAL PRACTICE IMPROVEMENT ACTIVITIES

(15 percent of total score in year 1): Clinicians would be rewarded for clinical practice improvement activities such as activities focused on care coordination, beneficiary engagement, and patient safety. Clinicians may select activities that match their practices' goals from a list of more than 90 options. In addition, clinicians would receive credit in this category for participating in Alternative Payment Models and in Patient-Centered Medical Homes.



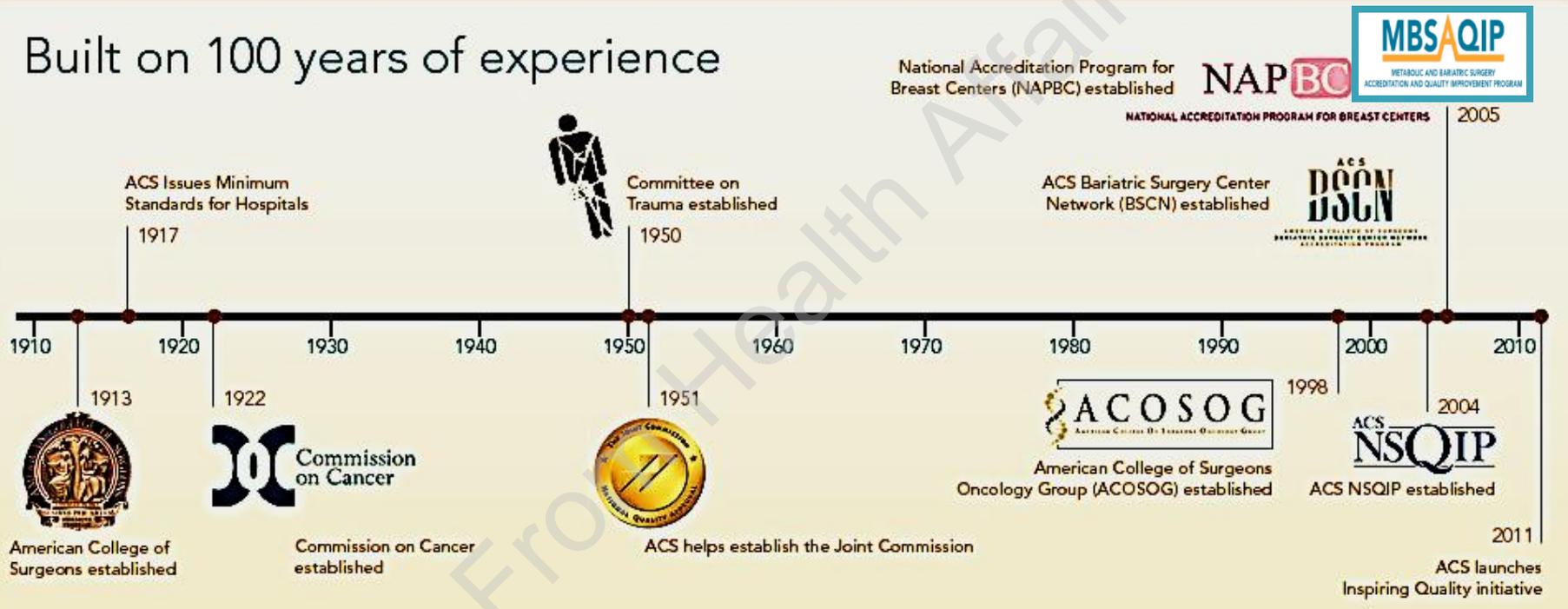
ADVANCING CARE INFORMATION

(25 percent of total score in year 1; replaces the Medicare EHR Incentive Program for physicians, also known as "Meaningful Use"): Clinicians would choose to report customizable measures that reflect how they use electronic health record (EHR) technology in their day-to-day practice, with a particular emphasis on interoperability and information exchange. Unlike the existing Meaningful Use program, this category would not require all-or-nothing EHR measurement or quarterly reporting.

ACS Registries – the first 100 years.

HealthAffairs

Built on 100 years of experience



Four Guiding Principles of Continuous Quality Improvement

1. Standards

- Individualized by patient
- Backed by research

3. Rigorous Data

- From medical charts
- Backed by research
- Post-discharge tracking
- Continuously updated

2. Right Infrastructure

- Staffing levels
- Specialists
- Equipment
- Checklists

4. Verification

- External peer-review
- Creates public assurance

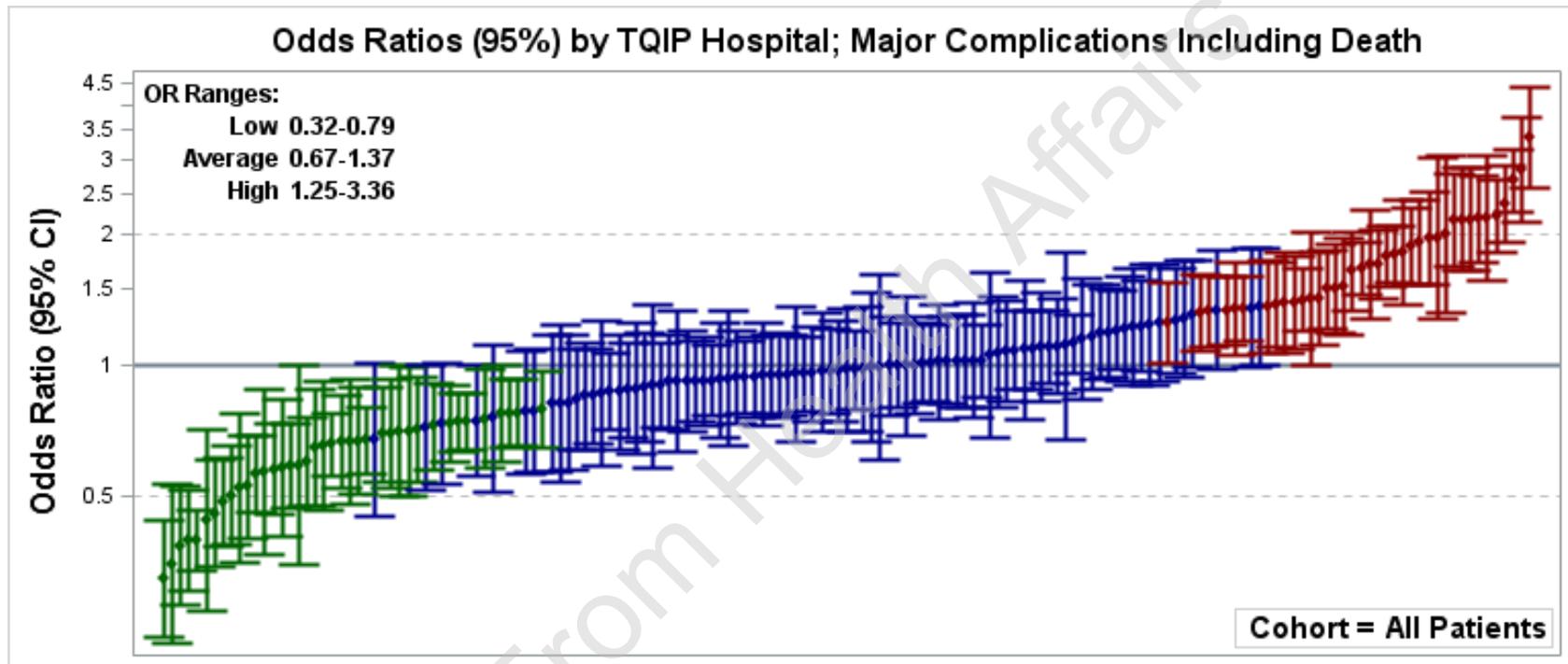


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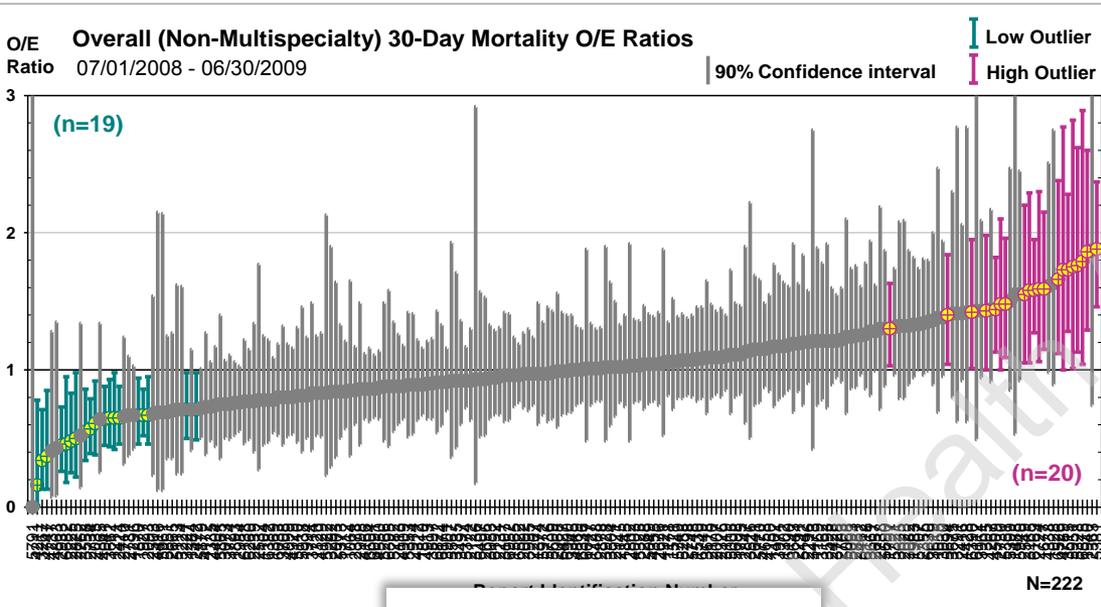
*Inspiring Quality:
Highest Standards, Better Outcomes*

Every surgical patient in every specialty walks through the phases of surgical care. To optimally design a value based surgical care system which promotes better care requires a framework that values the phases.

- **Phase 1 – Pre-operative care**
 - *Initial assessment & optimization of co-morbid conditions, medications, & informed consent*
- **Phase 2 – Peri-operative care**
 - *Pre-check 72 hrs prior to & upon admission: surgical checklist, position, & prep*
- **Phase 3 – Intra-operative care**
 - *Intra-operative conduct with entire team, technical procedure, & anesthesia*
- **Phase 4 – Post-operative care**
 - *Initial recovery, in-hospital clinical pathways*
- **Phase 5 – Post discharge care**
 - *Recovery plan & care coordination*

Risk adjusted major complications including death

Positive Outliers –Driving Change



82%

OF HOSPITALS DECREASED COMPLICATIONS

66%

OF HOSPITALS DECREASED MORTALITY

250-500

COMPLICATIONS PREVENTED ANNUALLY PER HOSPITAL

We've found common ground for health care reform.

Our National Surgical Quality Improvement Program prevented 250-500 complications per year, per hospital. Improving care - and reducing costs. You can do both.

The ACS National Surgical Quality Improvement Program - a national effort to improve surgical care and cut costs - led by the American College of Surgeons - is helping to prevent thousands of surgical complications each year according to a just-released study of 126 hospitals.

It's proof that, with the right approaches, we can improve both the quality of patient care and, at the same time, reduce and even eliminate many health care costs.

The hospitals experienced a reduction of 250-500 complications per hospital, per year if these methods were used in every hospital in the nation. We could reduce health care costs by \$13 to \$25 billion every year, or \$100 to \$200 billion over the next decade - and help keep more of patients' and providers' money in the system. Let's stop focusing on the latest fad diets, and work together to make sure Congress rewards providers who deliver better care at lower costs, by using measures like these.

Learn more about the ACS NSQIP program at acsquality.org

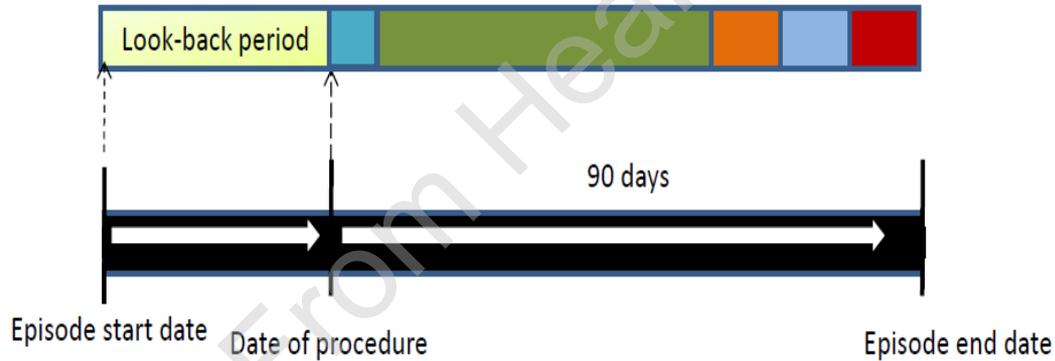
Treatment Episode

Trigger Code(s) define episode type

Relevant Services (Px codes)

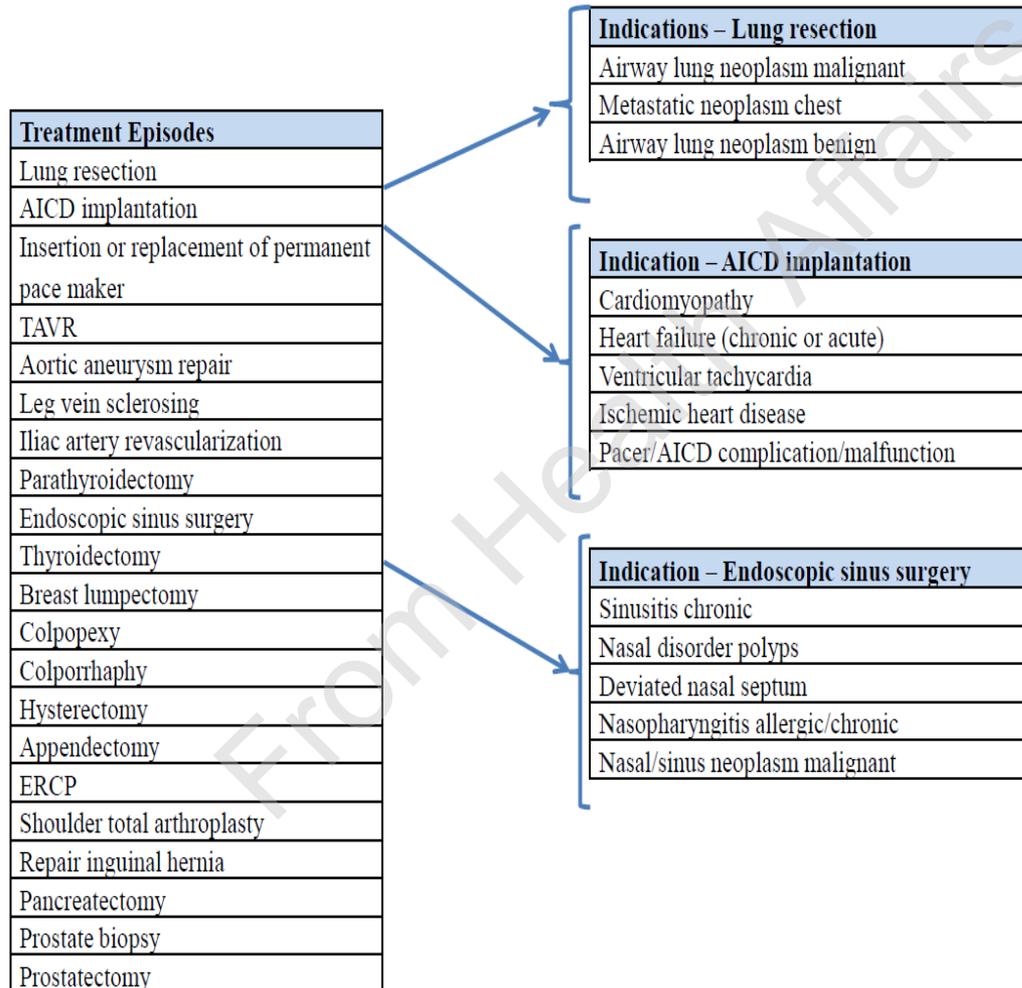
Relevant Diagnoses (Dx codes)

Sequelae (complications)



Ex: IP admissions/SNF
Physician visits
Therapies
Testing
ED

EGM Treatment Episodes and Their Indications



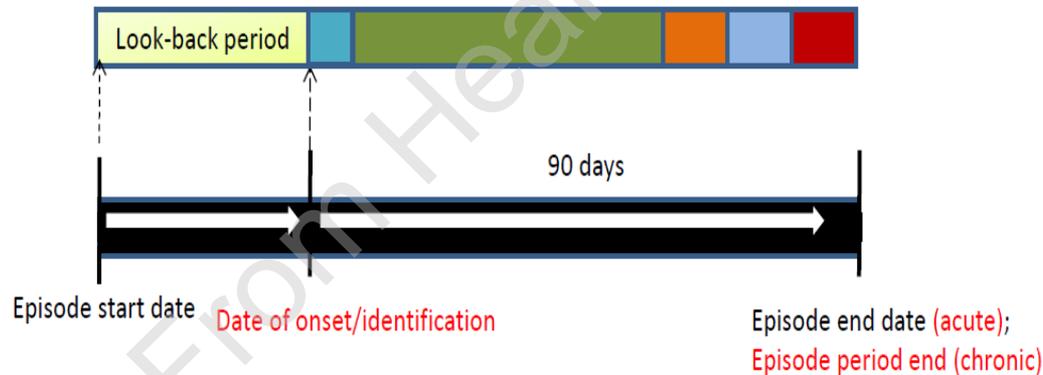
Condition Episode

Trigger Code(s) define episode type

Relevant Services (Px codes)

Relevant Diagnoses (Dx codes)

Sequelae (complications)



Ex: IP admissions/SNF
Physician visits
Therapies
Testing
ED

Comprehensive EDD covers majority of Medicare spending

16 Clinical Chapters
Behavioral
Cardiovascular
Chest (respiratory)
Dermatologic
Ear, Nose, Throat, Dental
Endocrine Metabolic
Eye
Female Genital (includes breast)
Gastrointestinal
General, systemic, unspecified
Hematologic, Lymphatic
Male Genital (includes prostate)
Musculoskeletal
Neurological
Pregnancy
Urinary (includes gender neutral genital items)

10 Diagnostic Type within Chapters
Congenital and hereditary
Infection
Neoplasm
Injury Poisoning Toxins
Signs, Symptoms, clinical states
Degenerative
Immune, Inflammatory
Nutrition, metabolic
Other, general
Status, Screening, service

12 Service type within chapters
Anesthesia
Supplies, equipment, devices
Drugs, contrast, etc.
Evaluate, manage (specific to chapter)
Facility (IP, OP, ER, etc.)
Infusion, dialysis, pheresis, radiation tx
Other, general
Definitive (major) procedure
Supporting (minor) procedure
Tests, labs, imaging
Professional treatment, therapy
Transport

Condition Episode < Chapter X Dx Type
 Treatment Episode < Chapter X SVC Type

1. Alignment of surgical treatment plan and **patient goals of care**: percent of patients who have been given the purpose for the recommended procedure AND goals of care have discussed and documented in the medical record

Purpose of the procedure:

1. Establish a diagnosis
2. Relieve symptoms
3. Treat underlying condition
4. Improve function and/or QoL



2. Identification of **major co-morbid medical conditions**: Percentage of patients undergoing a surgical procedure who received general or spinal anesthesia and who has documentation of significant co-morbid condition(s) in their medical record

(do not list the co-morbid conditions as part of the measure specifications)

3. **Modifiable risk factor, smoking cessation**: percentage of smoking patients who receive tobacco screening and are offered counseling of delaying procedure until smoking cessation is achieved

Two steps to the measure:
1) Identify that the patient is a smoker
2) Refer the patient to a cessation program



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4. Pre-op key medications review for anticoagulation medication: percentage of patients undergoing anesthesia who are on anticoagulation medication(s) and who are given a perioperative management plan for anticoagulation medications

6. Patient frailty or functional index : percentage of patients 65 years and older who underwent a non-emergency surgery and were evaluated using a frailty index score or a functional status score

(this can include multiple tools)

5. Patient Centered Risk Calculator:

<http://riskcalculator.facs.org/>

As part of shared decision making, provide patient with preop risk calculator for expected outcomes.



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7. **Perioperative composite:** percentage of patients who underwent surgery and the current status of updated Hx and Phys, re-evaluation of critical studies, documentation of site and side are documented in the medical record.

8. **Post-op care coordination and follow-up:** percentage of patients who underwent a major surgery with appropriate anesthesia who had their results **communicated to the patient's PCP or referring physician within 30 days** of the procedure via telephone, EHR, or written letter, with appropriate documentation in the medical record.

9. PQRS # 356 **Unplanned Hospital Readmission within 30 Days** of Principal Procedure

10. Participation in a **national risk adjusted outcomes surgical registry.**



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Data driven Clinical Decision Support



Surgical Risk Calculator

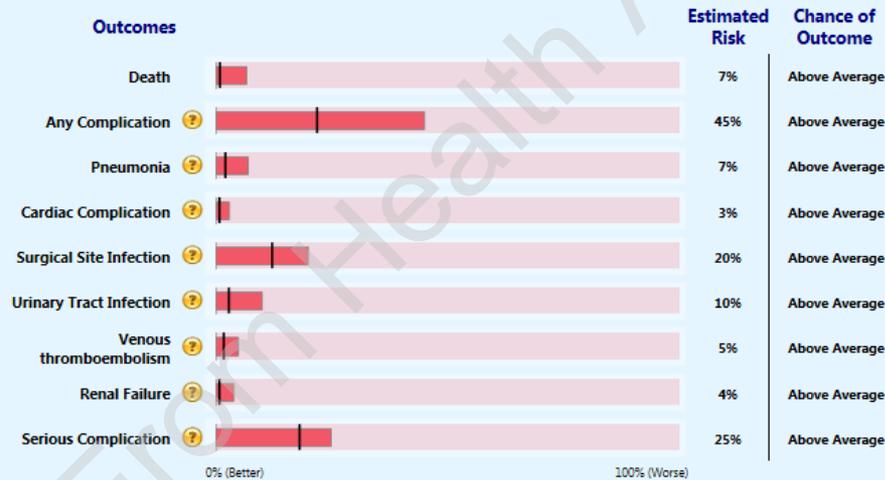


[Risk Calculator Homepage](#)
[About](#)
[FAQ](#)
[ACS Website](#)
[ACS NSQIP Website](#)

Procedure 44140 - Colectomy, partial; with anastomosis

[Change Patient Risk Factors](#)

Risk Factors Age: 75-84, Female, Partially dependent functional status, Emergent, ASA III, Clean/Contaminated wound, Diabetes (oral), Dyspnea with exertion, Obese (Class3)



Average Length of Hospital Stay: 8.0 days

How to Interpret the Graph Above:



Surgeon Adjustment of Risks

This will need to be used infrequently, but surgeons may adjust the estimated risks if they feel the calculated risks are underestimated. This should only be done if the reason for the increased risks was NOT already entered into the risk calculator.

1 - No adjustment necessary

[Back](#)

Step 3 of 3

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For Surgeons

- Registry – personalized
- MOC
- OPPE
- Public reporting
- PQRS or payment incentives

For Patients – patient centered care

- Risk assessment
- Guideline check
- Check list reminder
- Appropriateness check
- Patient satisfaction survey

Link to surgeon and patient education modules, ACS mobile web content

Collaboration Breeds Innovation

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TENNESSEE
Surgical Quality Collaborative

Existing User Login
User ID:
Password:
PIN:

:: Building Relationships.....Improving Outcomes.....Future Solutions Now

The Tennessee Surgical Quality Collaborative (TSQC) is a pilot project of 10 Tennessee hospitals seeking to measure and improve the care of surgical patients throughout the state.

The TSQC is collaboration between the Tennessee Chapter of the American College of Surgeons, the Tennessee Hospital Association's Center for Patient Safety and participating hospitals. The TSQC was funded through a generous three year grant from Blue Cross Blue Shield's Tennessee Health Foundation. This funding significantly reduces barriers for Tennessee surgeons and hospitals wishing to participate in - and benefit from- the program.

of Tennessee
plans for better health, plans for a better life.™

ACS NSQIP

Tennessee Center For Patient Safety
"Making Safe, Quality Care the Top Priority"



SURGICAL CARE INITIATIVE

TAKING THE LEAD TO IMPROVE SURGICAL PATIENT OUTCOMES

preventing complications
reducing costs
improving surgical care

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Welcome to FSCI

Hospitals and providers work hard to provide the best possible care for patients, yet complications still occur. When they do, the patient's health is jeopardized, additional treatment is required, and the cost of care increases. That is the last thing we want to have happen.

Through a new collaborative called the Florida Surgical Care Initiative (FSCI), the Florida Hospital Association and the American College of Surgeons are bringing hospitals and surgeons together in a statewide effort to prevent surgical complications, reduce costs and improve the quality of care for our patients. Our goal is to make Florida a national leader in health care quality.

By working together, Florida's hospitals and surgeons will have a tremendous impact on improving care for Floridians. We will restore health faster, safer and at a lower cost.

FSCI VIDEO

LATEST FSCI

6.30.10



MS QC Michigan Surgical Quality Collaborative

Existing User Login
User ID:
Password:
PIN:

About Us Membership Resources Contact

Surgical Care Data Collection & Analysis Sharing of Best Practices Better Outcomes

:: Building Relationships.....Improving Outcomes.....Future Solutions Now

The Michigan Surgical Quality Collaborative (MSQC) is a connected community of 34 Michigan hospitals seeking to measure and improve the care of surgical patients throughout the state.

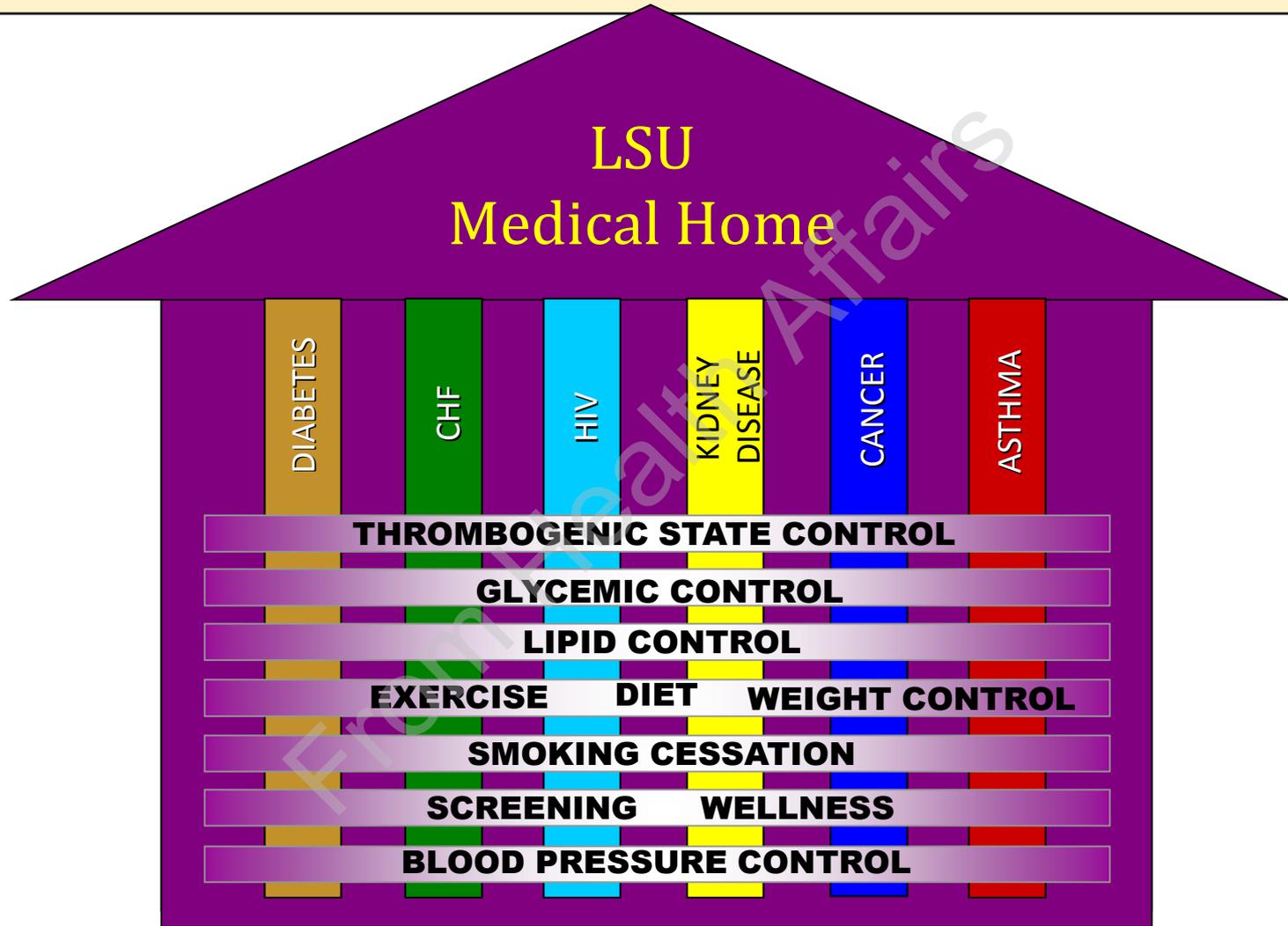
VTE Project Launched
Read More >>

Myocardial Injury



Michigan Surgical Quality Collaborative

TENNESSEE
Surgical Quality Collaborative



Welcome,
John Couk
Physician eCMM
Tue, March 05, 2013

◀ Back 🔍 Fwd ▶

+ Summary ▶

✕ Problem List

i Demographics

📄 Visit History

📄 Medications ▶

📄 Immunizations

📄 Laboratory ▶

📄 Radiology ▶

📄 Clinical Reports ▶

📄 Print

Patient Name: Adam ZzzTest

MRN: C88881003 (EKL)

Age: 58 Years (2/25/1955)

Gender: Male



Patient Summary

Last Inpatient Admission: 12/1/2009

CBC	CHEM	ESR	LFT	LIPID	TSH	U/A	CXR	EKG
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QuickView - Mouse over buttons above for quick view of most recent results for these test types

Medical Home Unknown

Asthma Needs PFT, ACT Score, Serveryity Class, Action Plan

Allergies 18

CHF Needs NYHA

Allergen	Reaction
Adhesives (Tape)	Hiccoughs
Aspirin	Palpitations
Ativan	Chest pain
Bactrim	Anxiety
BEE POLIN	Agitation
Blue Gel	Itchy (skin)
dial soap	Anxiety
dogs	Confusion
flowers	Diarrhea
Iodinated Contrast Media	Hives (skin)
Latex	Hives (skin)
Lortab	Chest pain
Penicillin G Benzathine	Rash (skin)
Penicillins	Rash (skin)
Ragweed Extract	Redness (eyes)(itching skin)
Shellfish-derived Products	Redness (skin)
Sulfa Antibiotics	Rash (skin)(swelling)
white pill	Arthralgia

Diabetes Needs Cr, HbA1C, LDL, Foot Exam, Eye Exam

Weight Management Last BMI 35.4

Preventive Health Needs PSA, FOBT, Colon Imaging

Screening			
Last	Date	Value	
PSA	04/18/2008	0.3	Add Refusal
Fecal OBT	Unknown		
Colon Imaging	Unknown		Add O/S
HIV Screen	08/21/2007		

Tobacco Use Treatment			
Last	Date	Value	
Smoking Status	06/23/2010	Yes	Add

Home Medications 23

Vital Signs		
Last	Date	Value
Blood Pressure	06/19/2010	130/87 mmHg
Height	07/03/2008	68.0 in
Weight	08/19/2008	232.6 lb
Waist Circumference	06/19/2010	83.8 cm
BMI	08/19/2008	35.4
		Add

abx (1 application) pt taking one antibiotic unsure name
 Accupril 20 MG Oral (1 tablet 2 times per day)
 Aspirin 325 MG Oral (1 tablet 1 time per day) test prescription. ign...
 Bactrim DS 800-160 MG Oral (1 tablet 2 times per DAY for 7 day(...
 Blood pressure ()
 Charcoal 260 MG Oral (1 capsule 1 time per day) Not Valid. Test ...
 FentaNYL Citrate 400 MCG Buccal (1 lollipop 1 time per day)
 Ferrous Fumarate 325 (106 Fe) MG Oral (1 tablet 1 time per day f...
 HydrALAZINE HCl 10 MG Oral (1 tablet daily)
 Hydrochlorothiazide 12.5 MG Oral (1 capsule 1 time per day for 3...

Username: Today: 8/25/2013

Input Folder:

Output Folder:

Disease Area:

Indicator:
Fraction of the Total Patient Population with a most recent BP > 140/90

Denominator:
Patients who both visited an LSU medical home clinic in the past 6 months and who have a history of clinic visits extending back at least 12 months.

Request:

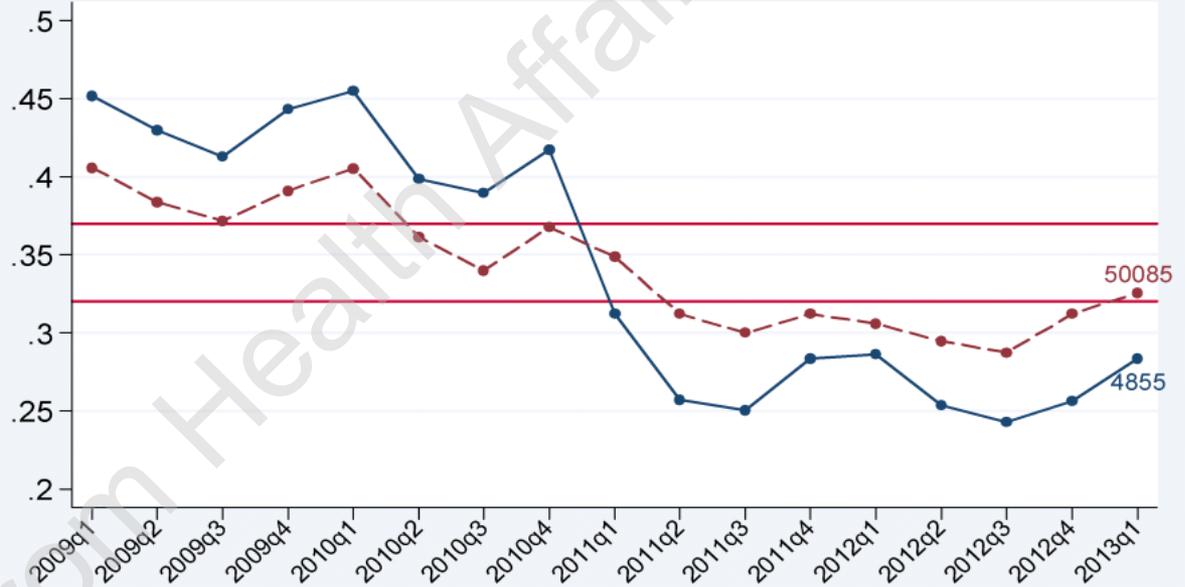
Time Unit: Retain:

Submit

Quit

Graph Table HTML Diagram

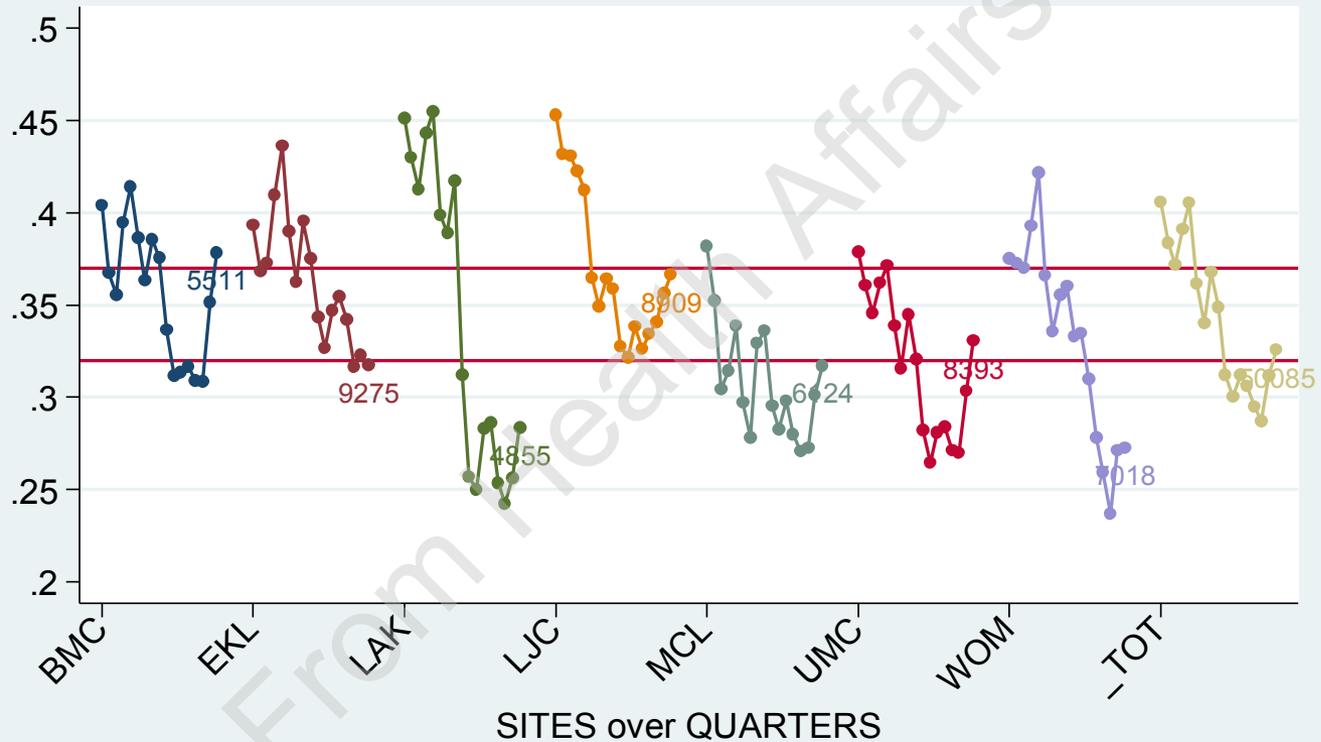
mhstandards: Last BP > 140/90, Total denom: MedHm sustained 6/12



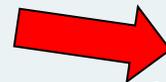
VALUES BY quarter: SITE(solid line), TOTAL(dashed line)

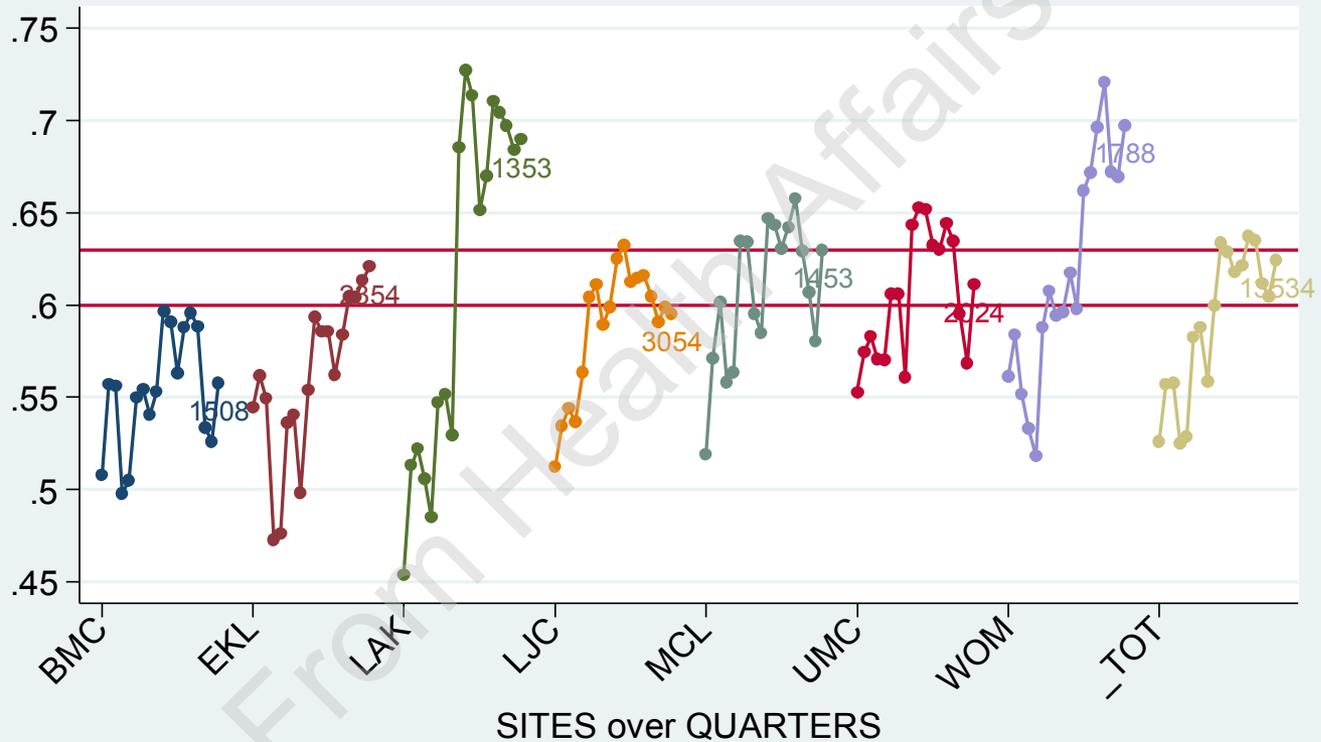
Graph uses data from quarters 200901 through 201301
 AWARD criterion = 0.27, 25th and 75th percentiles: see lines on graph

mhstandards: Last BP > 140/90, Total
denom: MedHm sustained 6/12



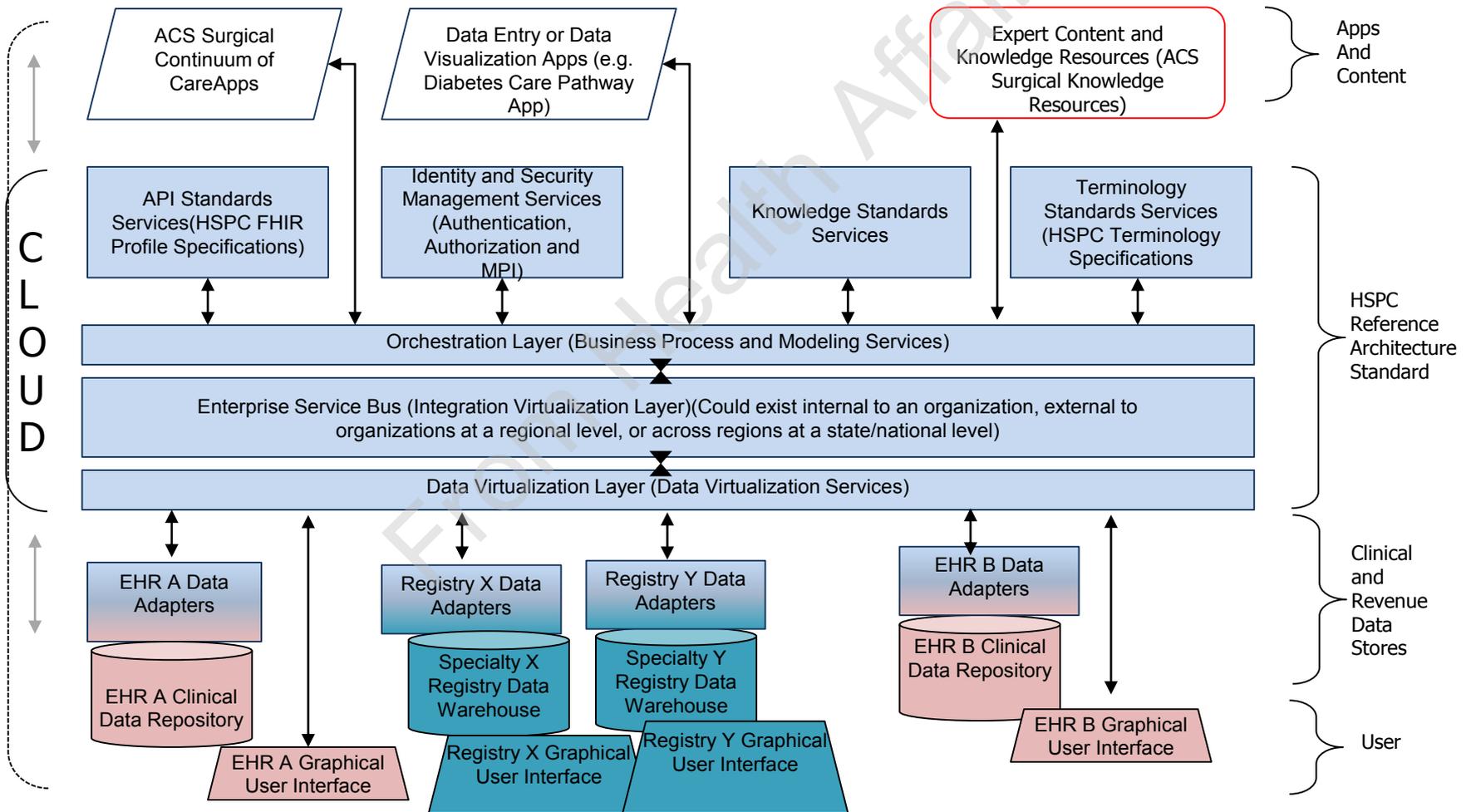
Graph uses data from quarters 200901 through 201301
AWARD criterion = 0.27, 25th and 75th percentiles: see lines on graph

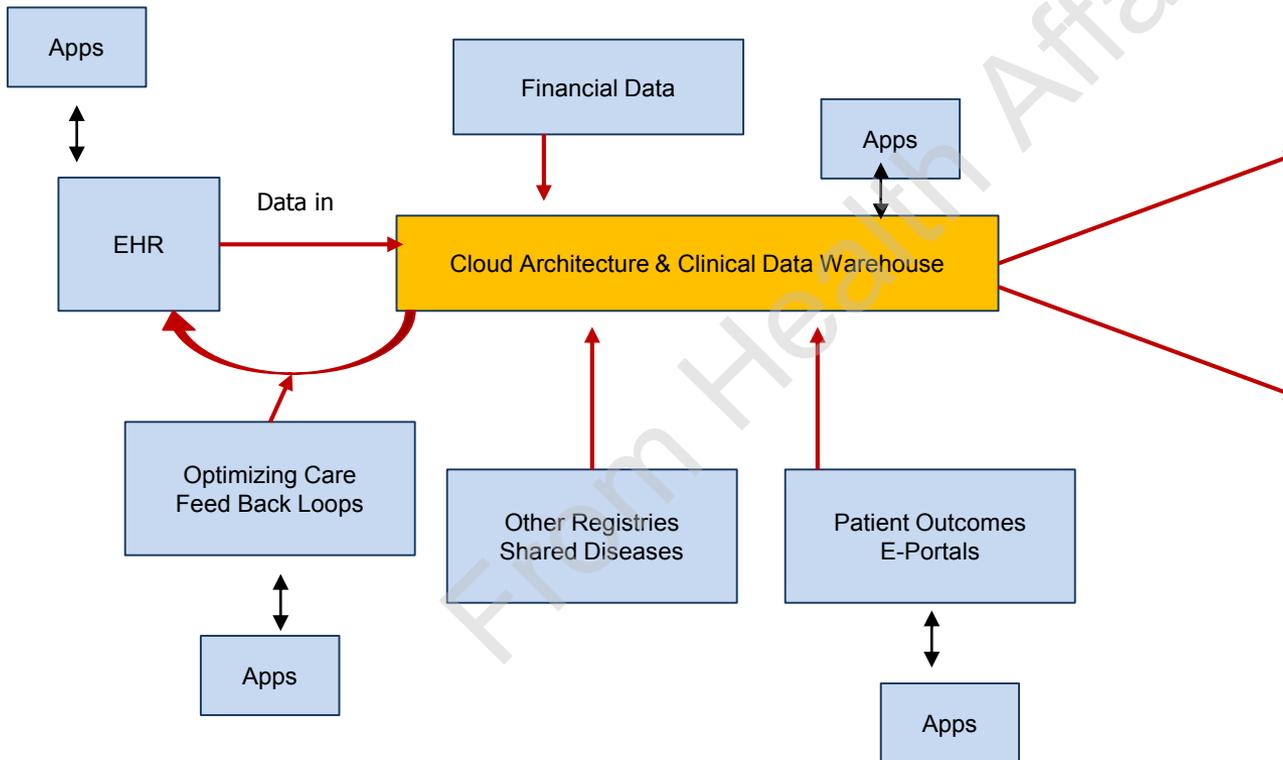

 diabetes: last BP \leq 140/90
 denom: MedHm sustained 6/12



Graph uses data from quarters 200901 through 201302
 AWARD criterion = 0.60, 25th and 75th percentiles: see lines on graph

Clouds are more than servers and registries! HealthAffairs





Value = Quality/Cost

DASHBOARDS:

LEADING INDICATORS:

- Physician work flow CDS
- Patient level dashboards
- Clinical Service Line dashboards
- Pop Health Dashboards
- ACO Performance Dashboards

LAGGING INDICATORS:

- Support CQI
- Support MOC
- Support OPPE
- Support MIPS, APM
- Support Public Reporting

Research

- Observational Clinical Trials
- RCT
- Comparative Effectiveness

Thank you!

Frank G Opelka, MD FACS

fopelka@facs.org

HealthAffairs

Does better data promise to improve value-based payment?

Melinda Buntin, PhD
Vanderbilt Health Policy

Andy Slavitt @

**#hdpalooza: “[...]the
“physician data paradox.”**

**They are overloaded on
data entry and yet
rampantly under-
informed.”**

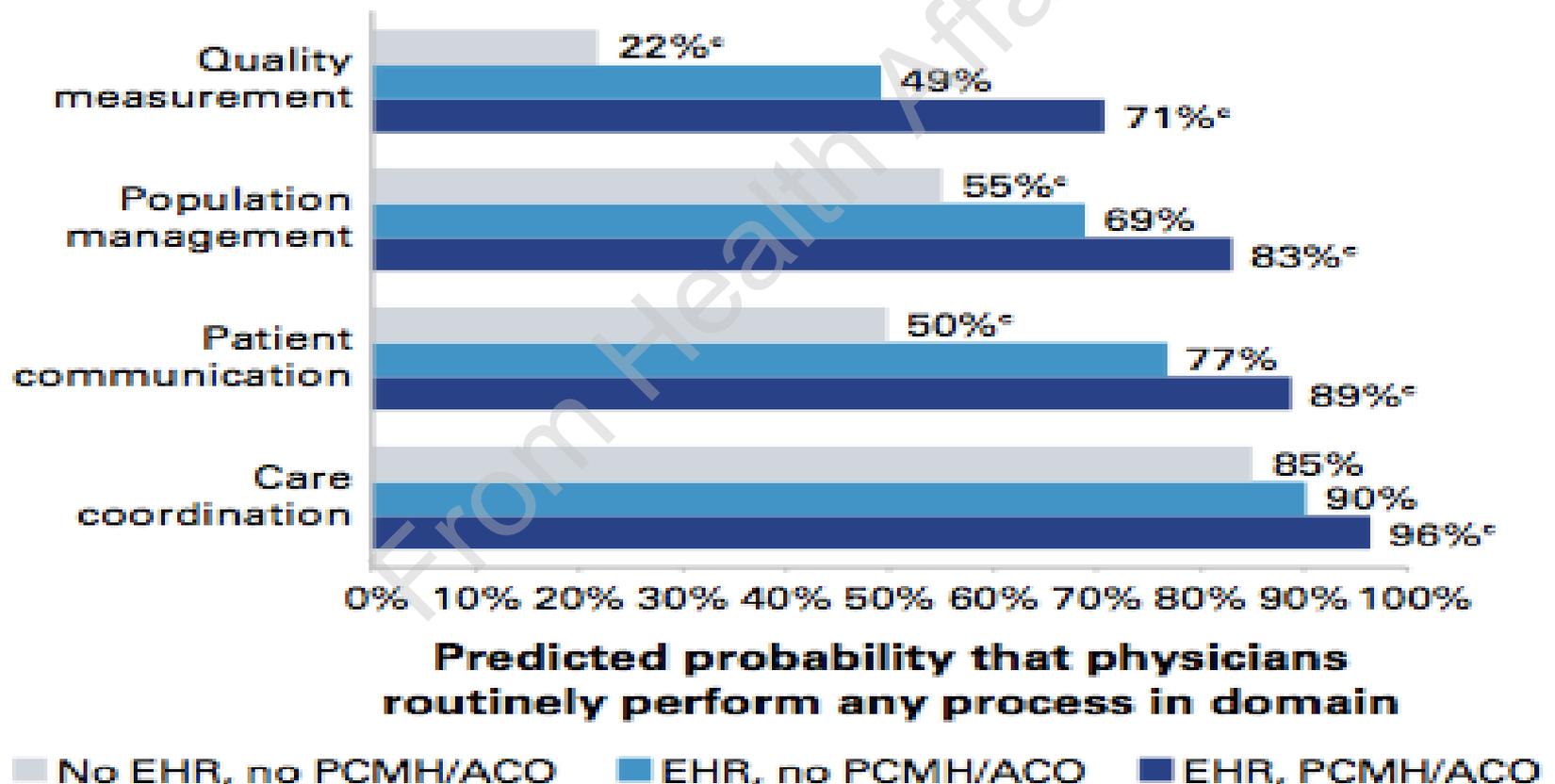
Farzad Mostashari

@DanDiamond:

“I hate compliance, it is such a low bar, it is such a pity to waste one’s time checking boxes.”

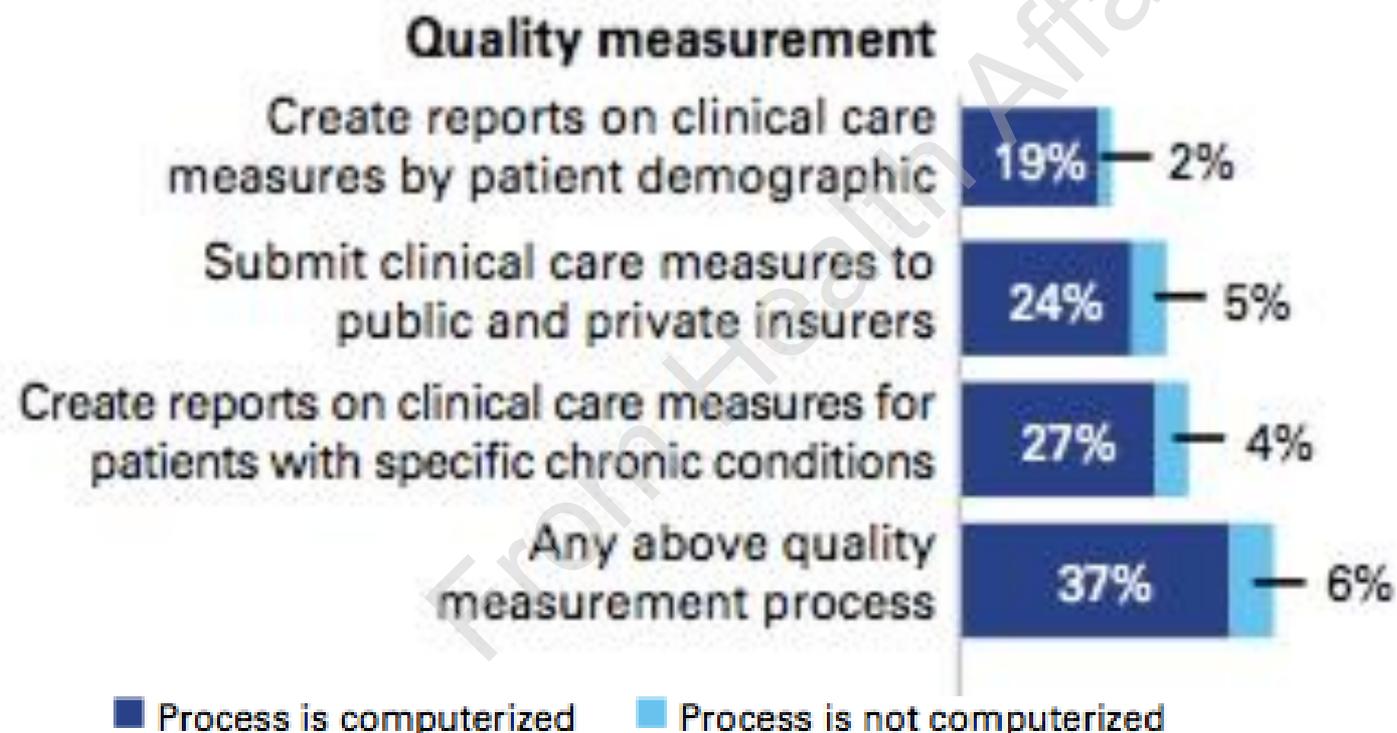
Mutually Reinforcing Policies HealthAffairs

Figure 3. Predicted Probabilities That Physicians Routinely Perform Care Processes by Health IT and Payment/Delivery System Characteristics^{a,b}



Source: King et al. Am J Manag Care. 2016;22(4):258-265

■ Figure 2. Percent of Physicians Who Routinely Perform Care Processes^a



^aEstimates are unadjusted.

Source: CDC/NCHS Physician Workflow Survey, 2012.



Doctor Who episode never created...

Colony of humans toils in mines for substance that benefits insect overlords, not themselves.



Paying for Person Centered Value

Eyal Zimlichman MD, MSc

Chief Quality Officer, Sheba Medical Center, Israel

HealthAffairs

The Triple Aim for Driving Value



Better
Health for
Populations



Better
Health for
Patients



Cost
Containment

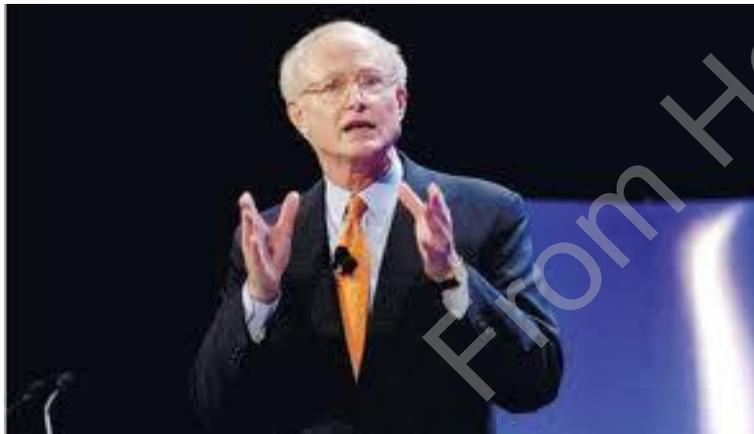


What are we measuring today? How do we define value?



It's all about value for patients

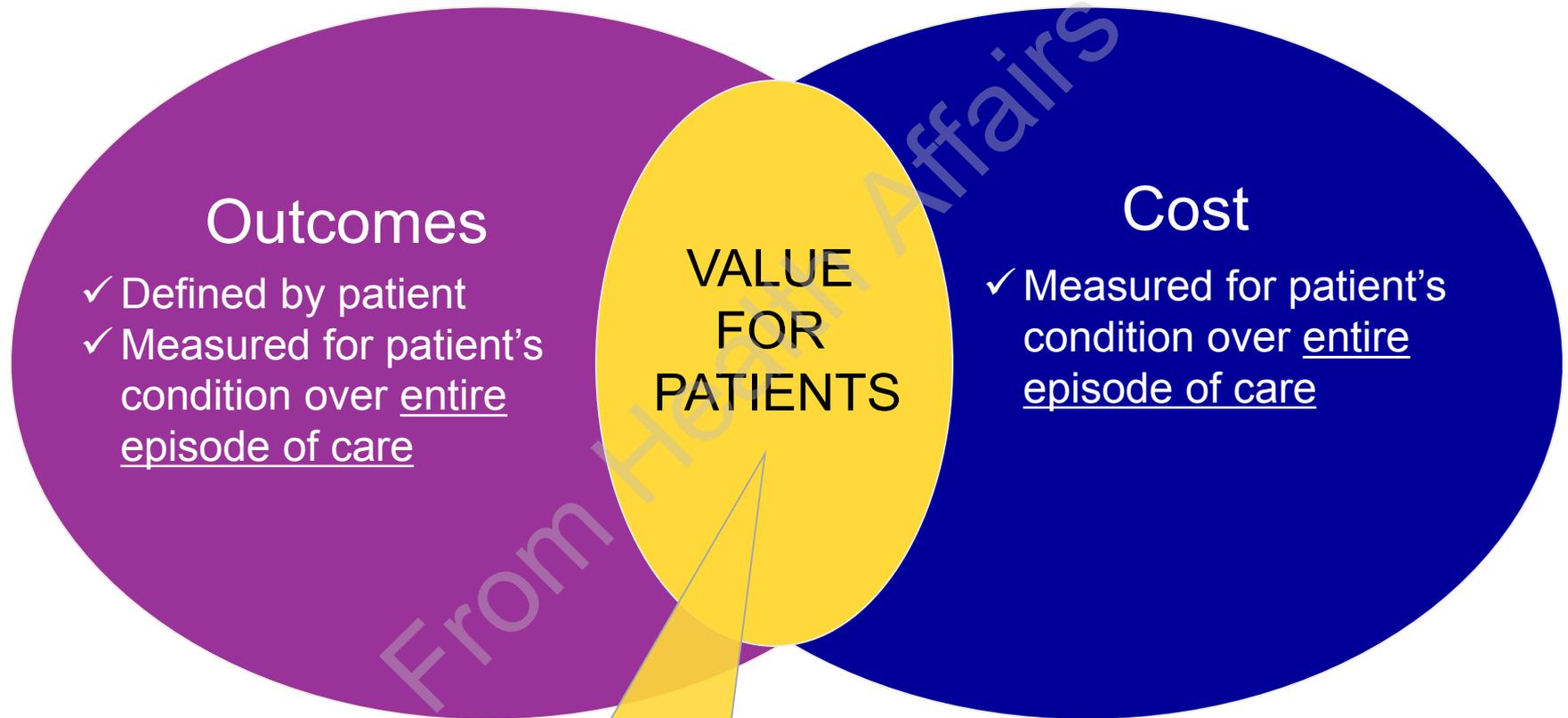
“The central goal in health care must be value for patients, not access, volume, convenience or cost containment”.



*Michael E. Porter
Harvard Business School*



“Health care systems need to be redesigned so that they dramatically improve patient value”.



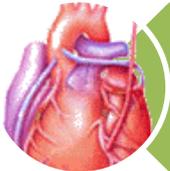
Value for Patients over their condition =

$$\frac{\text{Health Outcomes}}{\text{Cost of delivering outcomes}}$$

What would be outcomes that matter to patients?



Hip replacement – functional status



Cardiac surgery – functional status, survival



Cancer – survival, quality of life



Diabetes – quality of life

What are patient reported outcomes?

Information about the status of a patient's health condition that comes directly from the patient, without interpretation of the patient's response.

These include:

- Symptoms
- Functional status – physical and mental
- Health-related quality of life

Why PROs

- **Intendent consequences**
- **Value as seen by the patient**
- **Across the continuity of care (ACOs)**
- **Support accountability**
- **Additional benefits**
 - patient activation, comparative effectiveness, transparency will drive value**

Experience in the U.S.

- **The Dartmouth Spine Center**
- **Memorial Sloan-Kettering Urology Clinic**
- **Partners Healthcare**
- **Cleveland Clinic – Neurology**
- **Recently – registries such as:**
 - **Society of Thoracic Surgeons – TAVR**
 - **The National Neurosurgery Quality and Outcomes Database**

NHS National PROMS Program (UK)

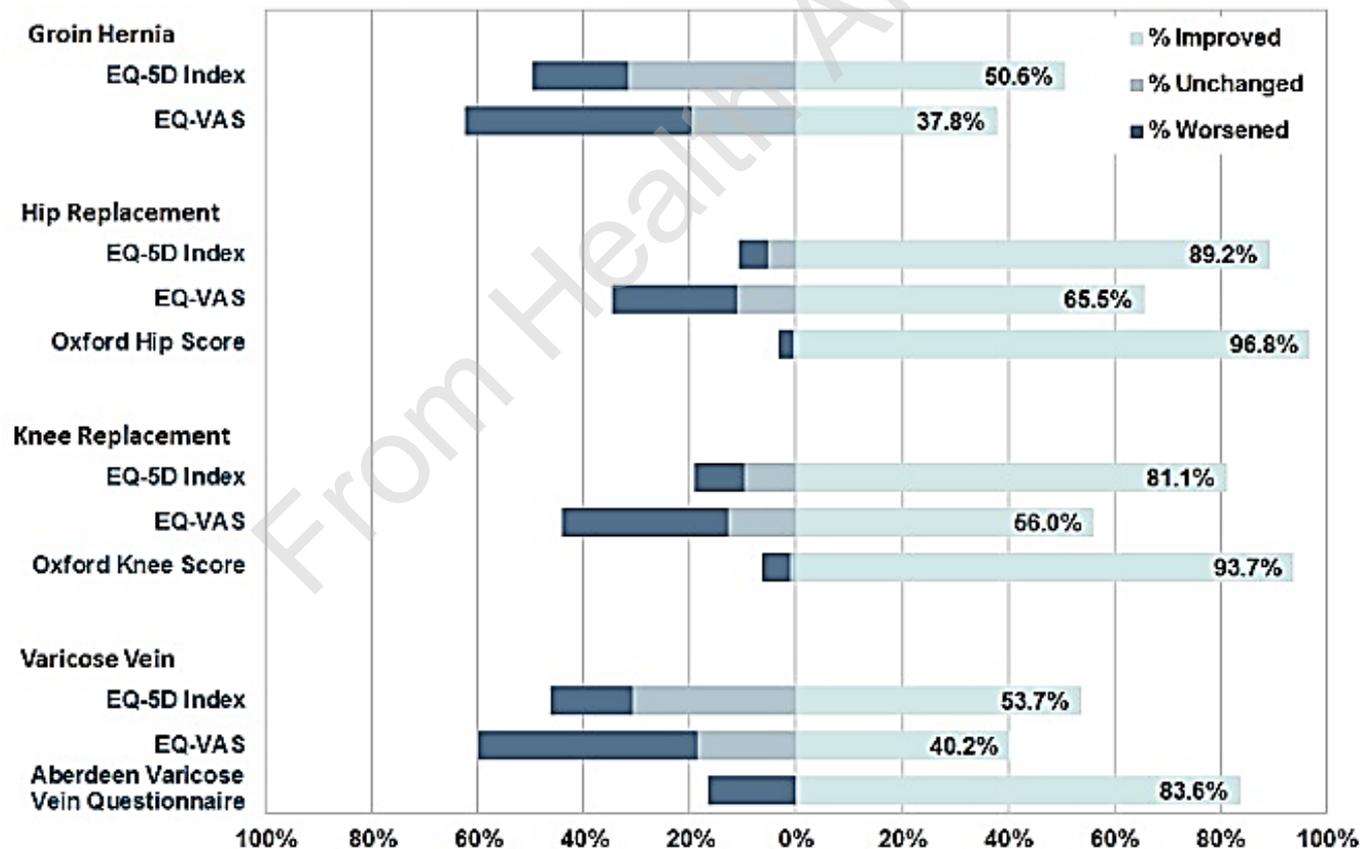
- First country in the world to implement a National PROMs program.
- Focusing on four surgical conditions

Condition	Generic component	Condition-specific component
Total hip replacement	EQ-5D	Oxford Hip Score
Total knee replacement	EQ-5D	Oxford knee score
Varicose vein	EQ-5D	Aberdeen varicose vein questionnaire
Hernia repair	EQ-5D	None

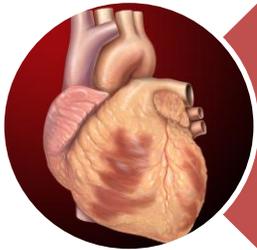
NHS Results 2014

For the coverage period 1 April 2014 to 31 December 2014.

Chart 1 - Improvement rate (unadjusted scores) by procedure and measure



Israel – PROMs national demonstration project



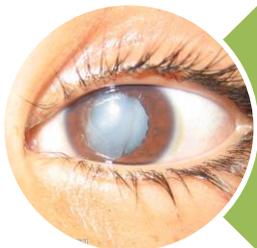
Coronary artery disease

- Functional status, symptoms



Prostate cancer

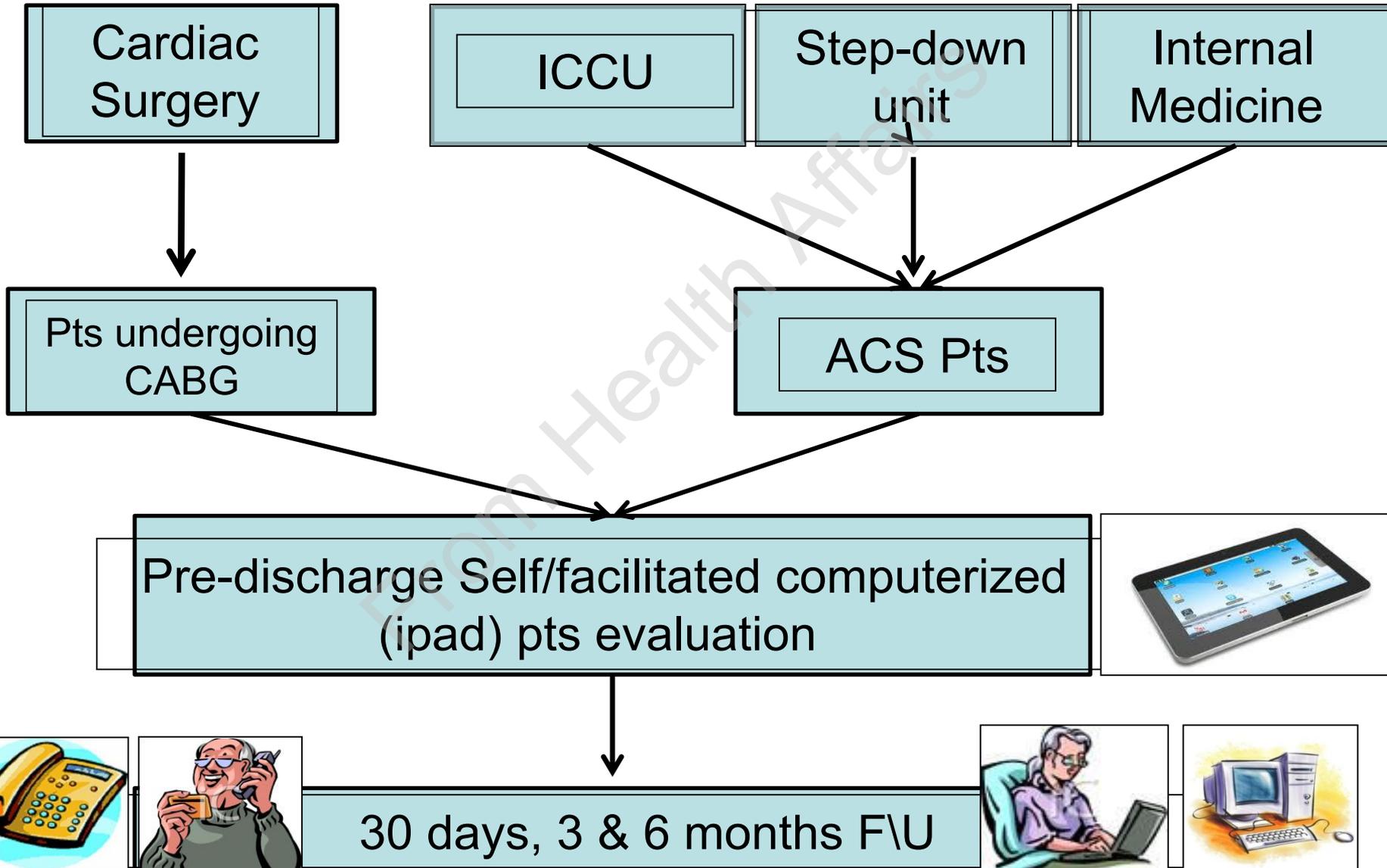
- Functional status, pts reported complications, quality of life



Cataract surgery

- Visual acuity, functional status

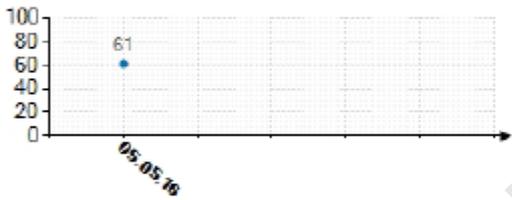
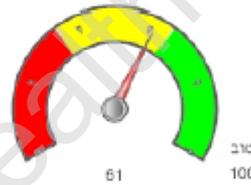
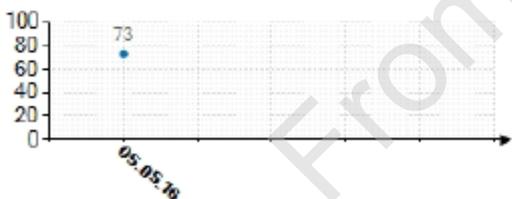
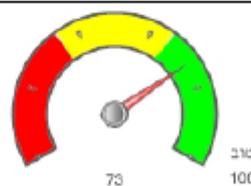
Coronary artery disease PROs HealthAffairs





שאלון - מטופלי מחלת לב כלילית חדה

תודה על מילוי השאלון. על פי התשובות שנתת אנחנו יכולים לתת לך ציון/דרוג במספר תחומי בריאות. בתרשימים למטה תוכל לראות כיצד השתנו עבורך מדדי בריאות אלו לאורך הזמן.

תוצאה שלך לאורך זמן	תוצאה אחרונה שלך	בריאות נפשית
<p>טוב</p>  		<p>בריאות נפשית – מתייחסת לאיכות החיים, מצב רוח, לשביעות הרצון שלך מפעילויות חברתיות ולמצבך הרגשי ציון גבוה פירושו בריאות נפשית טובה יותר לרוב האנשים הציון יהיה בין 35 ל- 65, ציון בסביבות ה-50, משקף מצב רגשי ממוצע עבור האוכלוסייה הכללית</p>
<p>טוב</p>  		<p>תפקוד פיזי תפקוד פיזי - מתייחס לדרוג הבריאות הגופנית שלך, וכולל כאבים, עייפות והיכולת שלך לבצע פעילות גופנית. ציון גבוה פירושו בריאות טובה יותר. לרוב האנשים הציון יהיה בין 35 ל- 65, ציון בסביבות ה-50, משקף בריאות גופנית ממוצעת עבור האוכלוסייה הכללית.</p>
<p>טוב</p>  		<p>כאבים בחזה (seattle angina) כאבים ולחץ בחזה – מתבסס על דיווח של אנשים שיש להם כל הזמן עד לאלו שאין להם בכלל. הדיווח על כאב או לחץ בחזה, יכול להיות בעת פעילות גופנית או מנוחה</p>

What needs to happen for PROMs based VBP to be a reality?

- **Wide spread adoption**
 - Technology driven vs. paper based vs. telephone based
 - Who pays for the infrastructure
- **Patients play along**
 - Needs to be used by clinicians
- **Case-mix adjustment needs to be worked out**

Next steps

- **CMS takes the lead**
- **Establishing A framework and a roadmap**
- **Payments for infrastructure investments**
- **Pay for reporting (based on response rate)**
- **Tied to specific episode-based/ bundled payments**

What the future holds

- Improved data collection and reporting
- Passive data collection
- Real time genotype and phenotype big data to drive personalized medicine



Person Centered Value Based Payments

Let's agree
this is where
we eventually
want to go...
and start on
the journey.



Thank you!

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