Using Performance Measurement to Motivate Practice Change: Opportunities and Pitfalls
Value in Cancer Care Summit 2018

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The Paradox of Performance Measurement

"Not everything that can be counted counts, and not everything that counts can be counted."

-Albert Einstein (1879-1955)

From a sign hanging in Albert Einstein's office at Princeton

How can we measure what counts to motivate practice change?

Mr. B and the Case of the Performance Report

- 71 year-old man with COPD, CHF, DJD who is due for colorectal cancer screening
- Lives alone
- Has no family history of colorectal cancer
- Takes aspirin 81 mg daily, metoprolol, inhalers
- Last screening colonoscopy 10 years ago was normal

HEDIS Measure: % of patients aged 50-75 who got a screening test

Mr. B and the Screening Decision

- He did not have a good experience with past colonoscopy and is worried about complications
- He wants to maximize his time playing golf and not at doctors' offices
- How much will a colonoscopy help me?

Patient-centered performance measure

- How did we get here: a little bit of US history of performance measurement
- Where are we now: some pitfalls of current measurement approaches
- The way forward: how can performance measurement drive patient-centered, high value care

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- **How did we get here: a little bit of US history of performance measurement**
- **Where are we now: some pitfalls of current measurement approaches**
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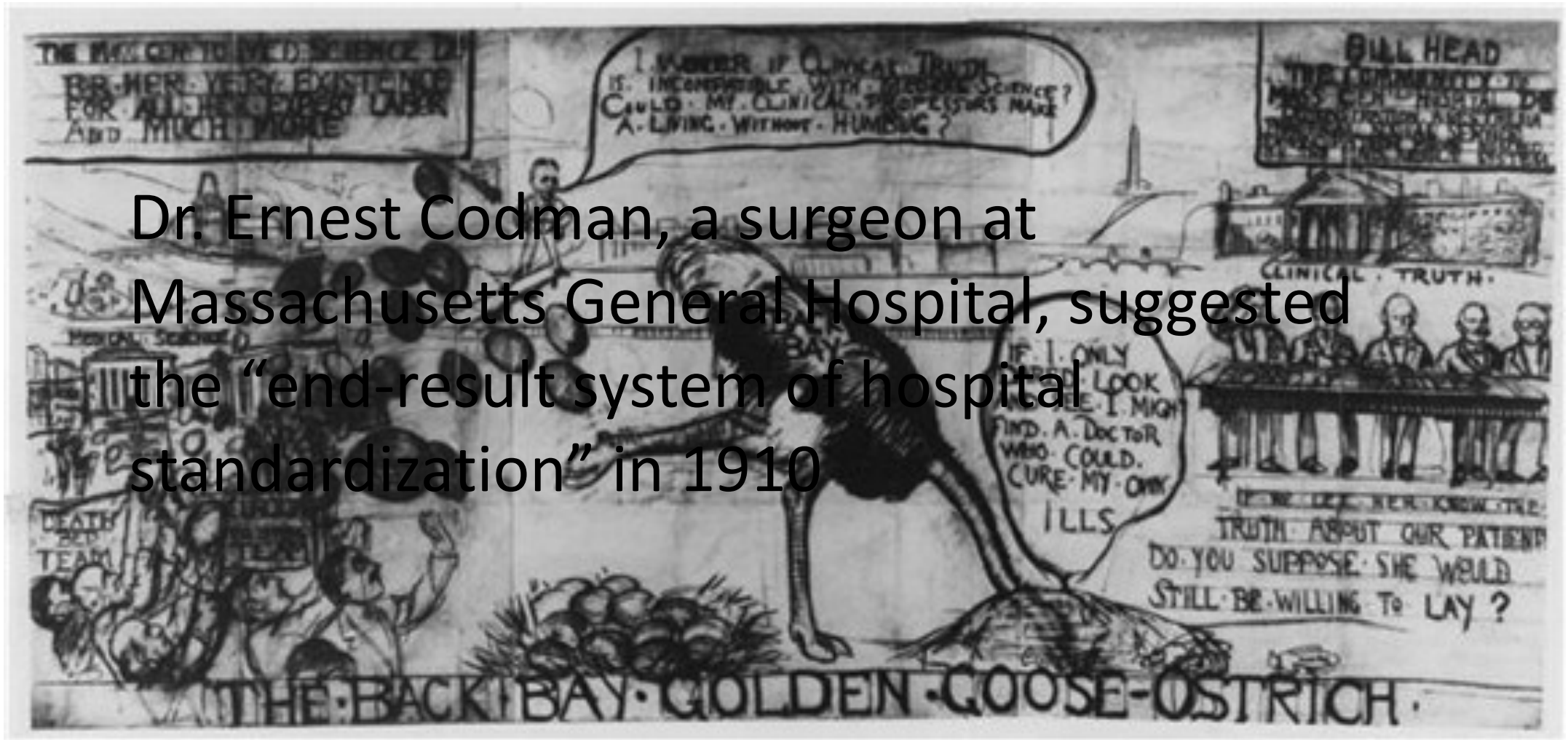
How Did We Get Here:
A Little Bit of History of Performance Measurement



Dr. Ernest Codman, a surgeon at Massachusetts General Hospital, suggested the "end-result system of hospital standardization" in 1910

How Did We Get Here:
A Little Bit of History of Performance Measurement

- American College of Surgeons – 1913 – developed “Minimum Standards for Hospitals”
- Joint Commission on Accreditation of Hospitals – 1951
- Professional Standard Review Organization – 1960s-70s
- National Committee on Quality Assurance – 1991
- National Quality Forum – 1999
- Centers for Medicare and Medicaid Services (CMS)

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

The Quality of Health Care Delivered to Adults in the United States

Elizabeth A. McGlynn, Ph.D., Steven M. Asch, M.D., M.P.H., John Adams, Ph.D., Joan Keesey, B.A., Jennifer Hicks, M.P.H., Ph.D., Alison DeCristofaro, M.P.H., and Eve A. Kerr, M.D., M.P.H.

N Engl J Med 2003; 348:2635-2645 | June 26, 2003 | DOI: 10.1056/NEJMsa022615

CONCLUSIONS

The deficits we have identified in adherence to recommended processes for basic care pose serious threats to the health of the American public. Strategies to reduce these deficits in care are warranted.

Table 3. Adherence to Quality Indicators, Overall and According to Type of Care and Function.

Variable	No. of Indicators	No. of Participants Eligible	Total No. of Times Indicator Eligibility Was Met	Percentage of Recommended Care Received (95% CI)*
			98,649	54.9 (54.3–55.5)
Preventive	58	6711	55,268	54.9 (54.2–55.6)
Acute	153	2318	19,815	53.5 (52.0–55.0)
Chronic	248	3387	23,566	56.1 (55.0–57.3)

Improving Care through Performance Measurement: Experiences in VHA

Measurement and public reporting of performance results:

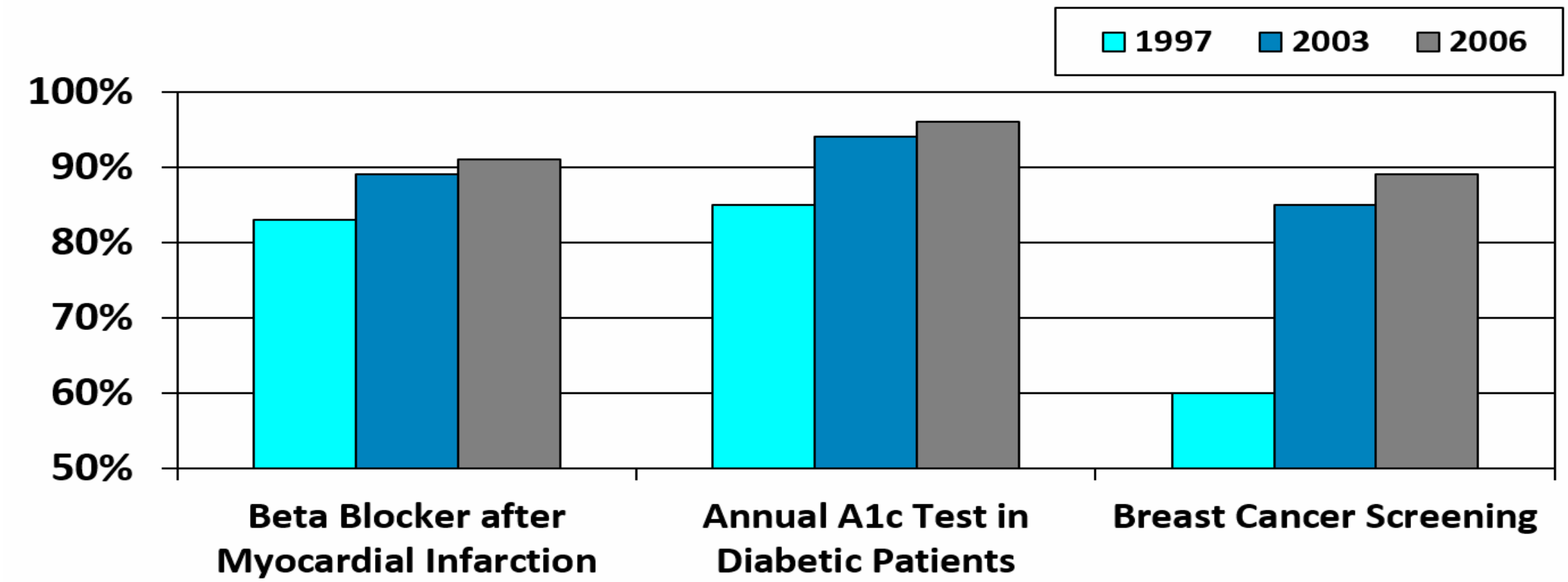
- Program started in 1995
- Measures focused on a limited number of conditions with evidence-based practices
- Improvement at the local level was encouraged
- Performance on the measures was linked to financial rewards for VISN directors

BMJ Helping doctors make better decisions

Making performance indicators work: experiences of US Veterans Health Administration

Eve Kerr and **Barbara Fleming**

BMJ | 10 NOVEMBER 2007 | VOLUME 335

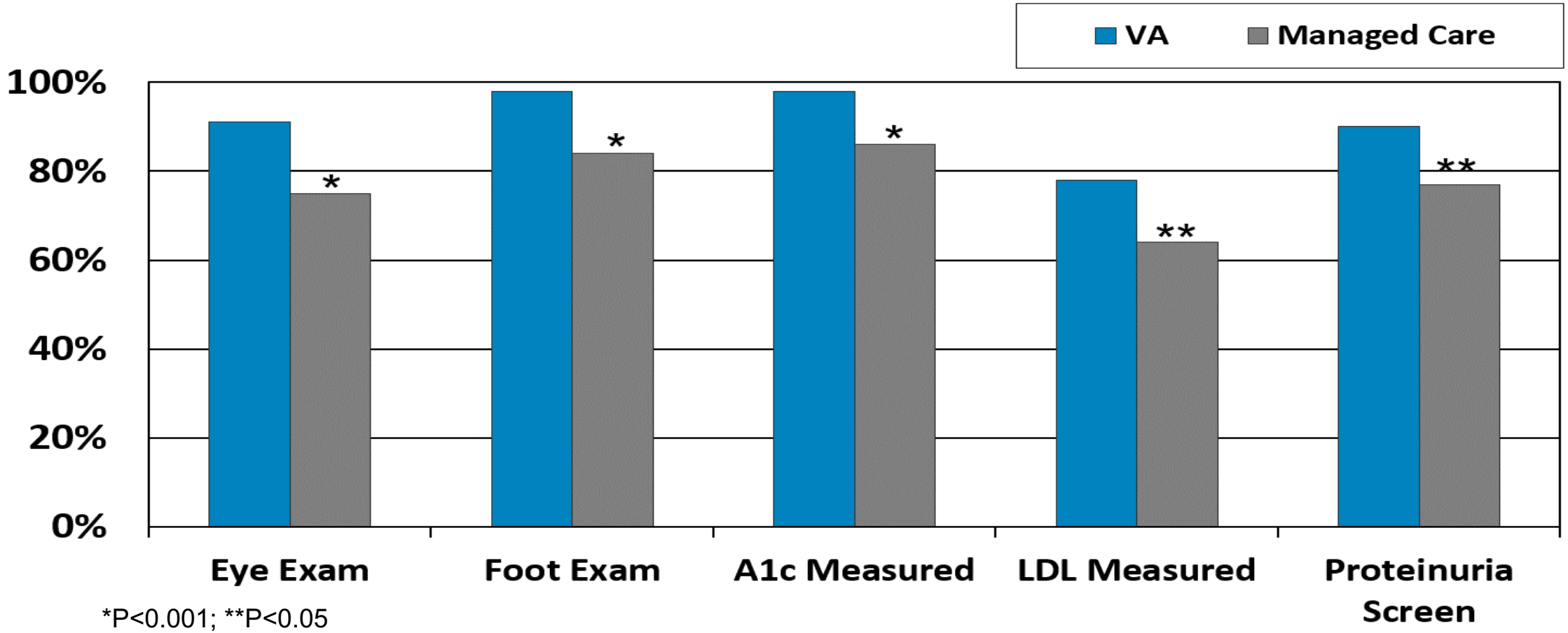


Annals of Internal Medicine

Diabetes Care Quality in the Veterans Affairs Health Care System and Commercial Managed Care: The TRIAD Study

Eve A. Kerr, MD, MPH; Robert B. Gerzoff, MS; Sarah L. Krein, PhD, RN; Joseph V. Selby, MD, MPH; John D. Piette, PhD; J. David Curb, MD, MPH; William H. Herman, MD, MPH; David G. Marrero, PhD; K.M. Venkat Narayan, MD, MSc, MBA; Monika M. Safford, MD; Theodore Thompson, MS; and Carol M. Mangione, MD, MSPH

Ann Intern Med. 2004;141:272-281.



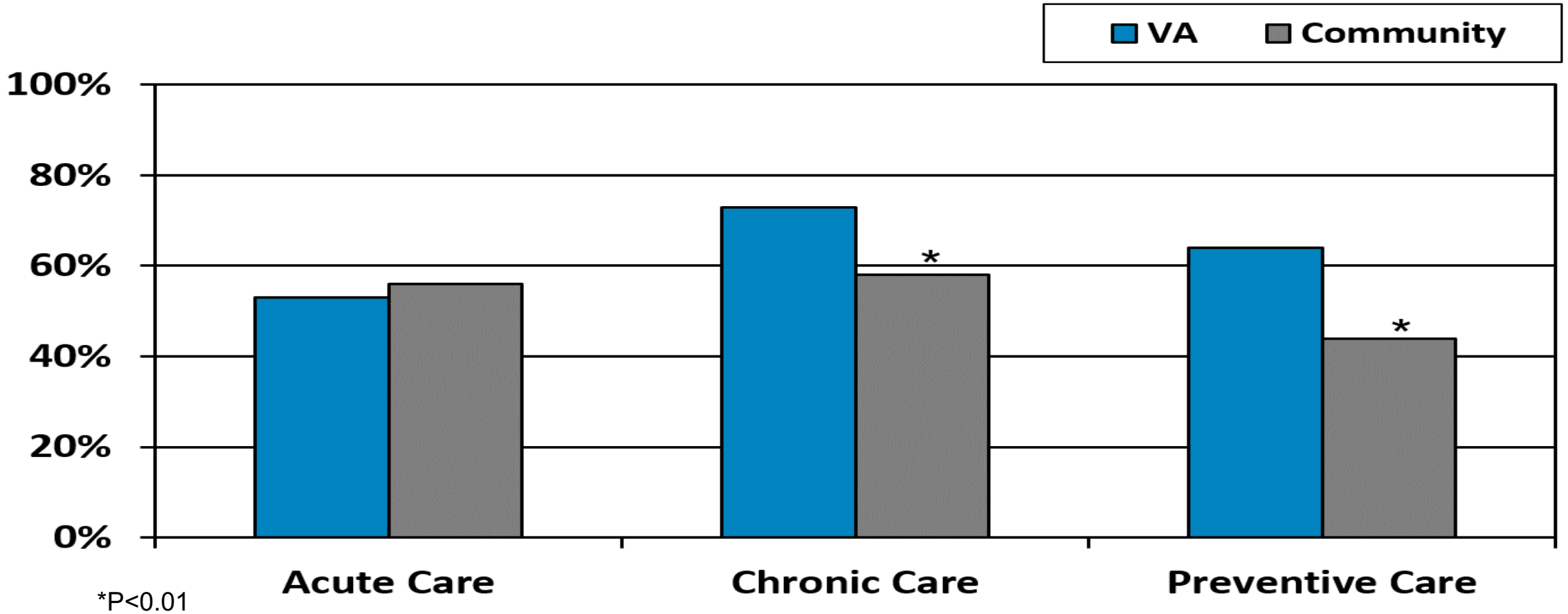
*P<0.001; **P<0.05

Annals of Internal Medicine

Comparison of Quality of Care for Patients in the Veterans Health Administration and Patients in a National Sample

Steven M. Asch, MD, MPH; Elizabeth A. McGlynn, PhD; Mary M. Hogan, PhD; Rodney A. Hayward, MD; Paul Shekelle, MD, MPH; Lisa Rubenstein, MD; Joan Keesey, BA; John Adams, PhD; and Eve A. Kerr, MD, MPH

Ann Intern Med. 2004;141:938-945.



*P<0.01

An Explosion of Quality Measures

- US quality measurement development and tracking activities are pursued by at least 27 organizations and 36 programs, using 1,235 individual measures*
- An inventory of measures used or promoted by CMS, National Quality Forum, National Committee for Quality Assurance and the Joint Commission numbers over 1000*

** Vital Signs: Core Metrics for Health and Health Care Progress (2015)*

Topics/Conditions for Reported Measures by CMS

TABLE B-4 Selected Topics or Conditions for Reported Measures Employed by the Centers for Medicare & Medicaid Services

Condition/Topic	Number of Measures
Cancer	45
Cardiovascular and stroke	137
Central nervous system (dementia, Parkinson's, epilepsy)	19
Chronic and elder care	57
Communicable diseases (immunizations, methicillin-resistant staphylococcus aureus [MRSA], influenza)	53
Dental	4
Diabetes	40
Mental health and substance abuse	59
Musculoskeletal (osteoarthritis, rheumatoid arthritis, back pain)	29
Patient experience	47
Patient safety	97
Respiratory conditions	34
Surgical procedures	54

SOURCE: U.S. Department of Health and Human Services Measure Inventory, 2013.

HealthAffairs

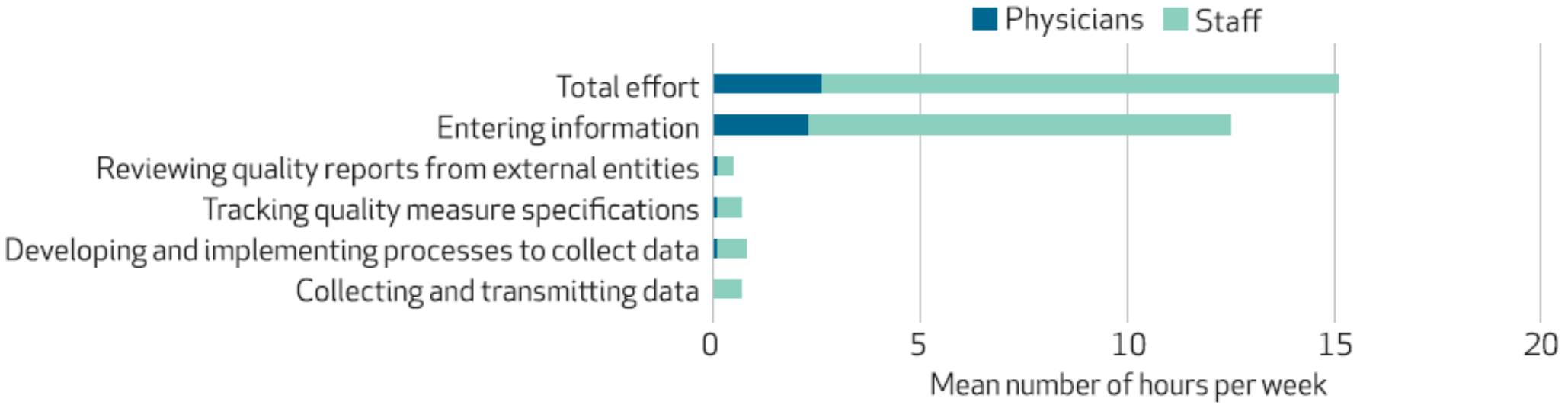
US Physician Practices Spend More Than $15.4 Billion Annually To Report Quality Measures

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

2016; 35(3):401-406

EXHIBIT 1

Hours spent per physician per week dealing with external quality measures, 2014



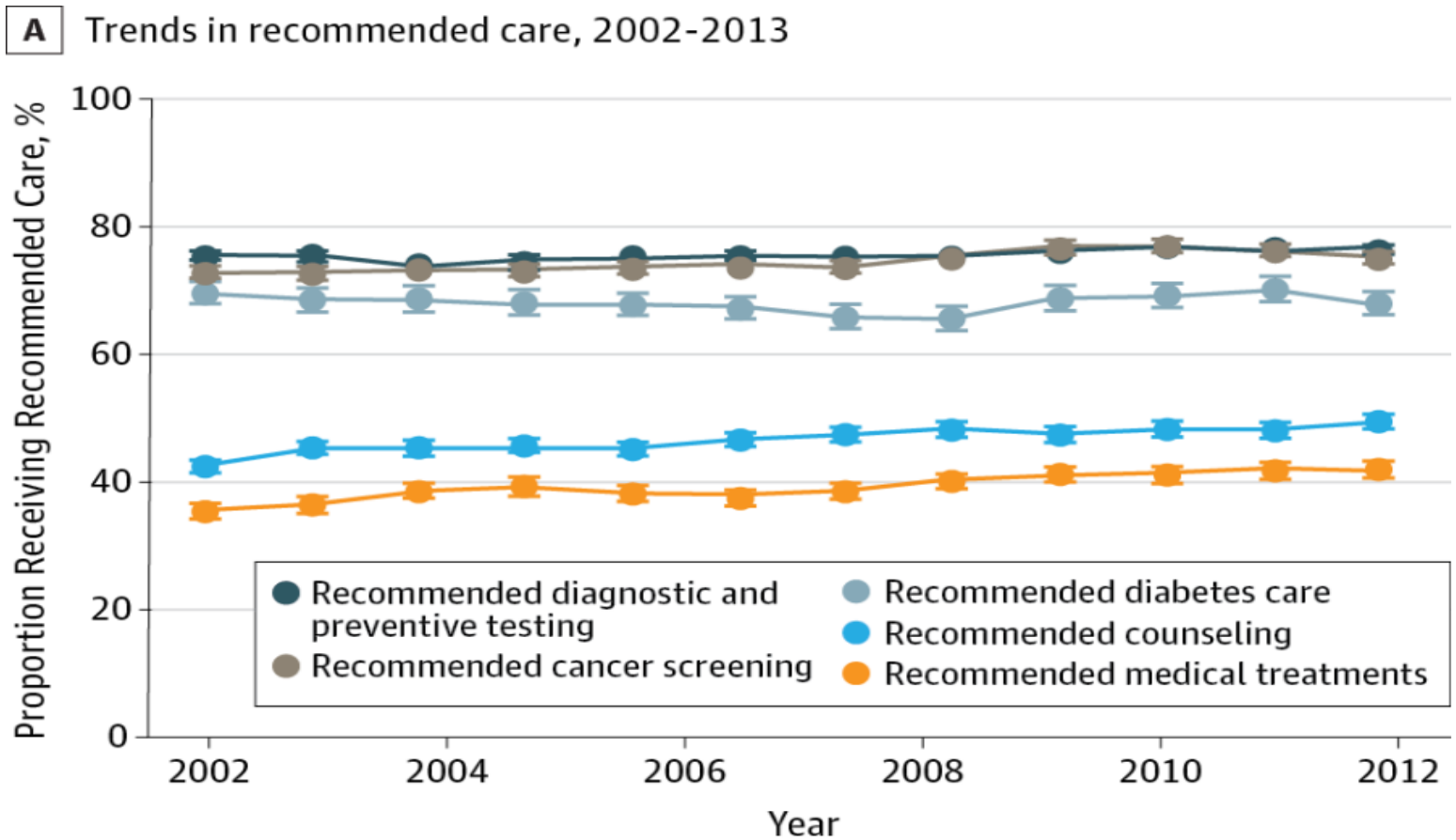
SOURCE Authors' analysis of responses to web-based survey of physician practices conducted for this research.

JAMA Internal Medicine

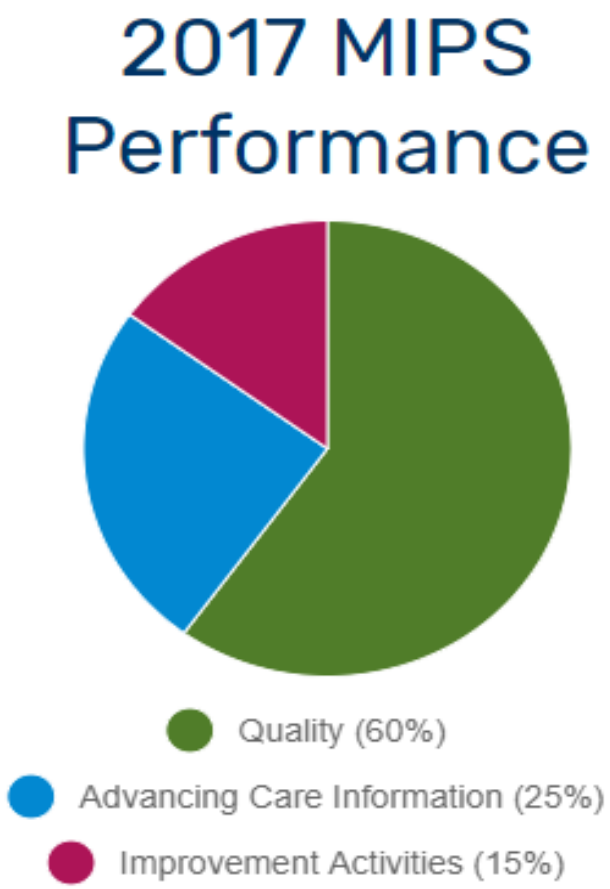
The Quality of Outpatient Care Delivered to Adults in the United States, 2002 to 2013

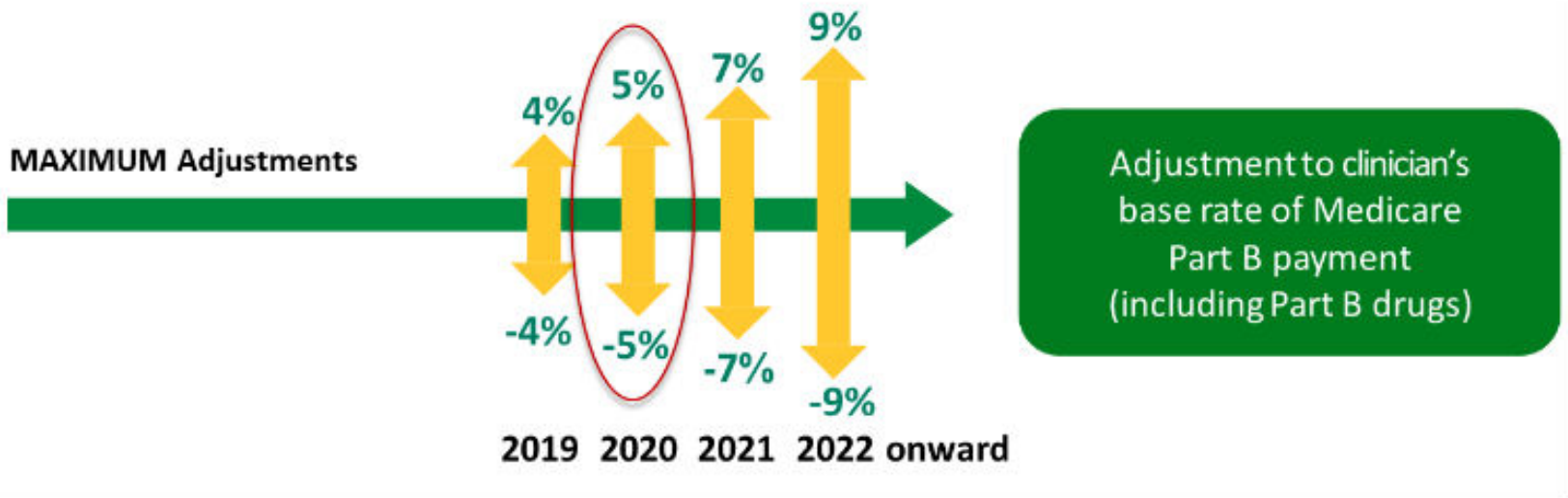
David M. Levine, MD, MA; Jeffrey A. Linder, MD, MPH; Bruce E. Landon, MD, MBA, MSc

2016;176(12):1778-1790



Merit Based Incentive Payment System - MIPS





The NEW ENGLAND JOURNAL of MEDICINE

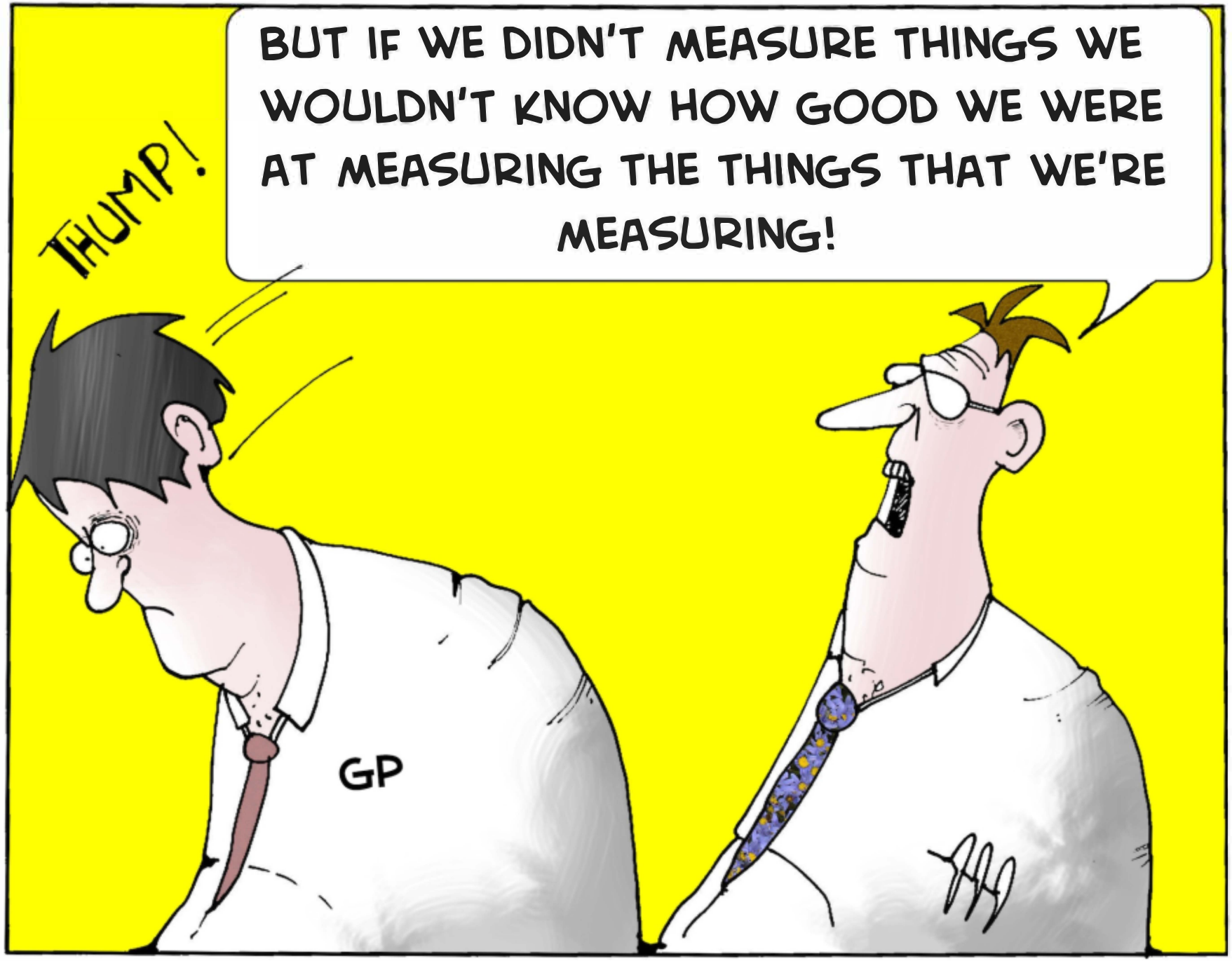
Perspective

Time Out — Charting a Path for Improving Performance Measurement

Catherine H. MacLean, M.D., Ph.D., Eve A. Kerr, M.D., M.P.H., and Amir Qaseem, M.D., Ph.D., M.H.A.

April 18, 2018

- The American College of Physicians Performance Measurement Committee rated 86 CMS Quality Payment Program Measures related to ambulatory internal medicine
- Only 32 (37%) were found to be valid, while 30 (35%) were found to be not valid



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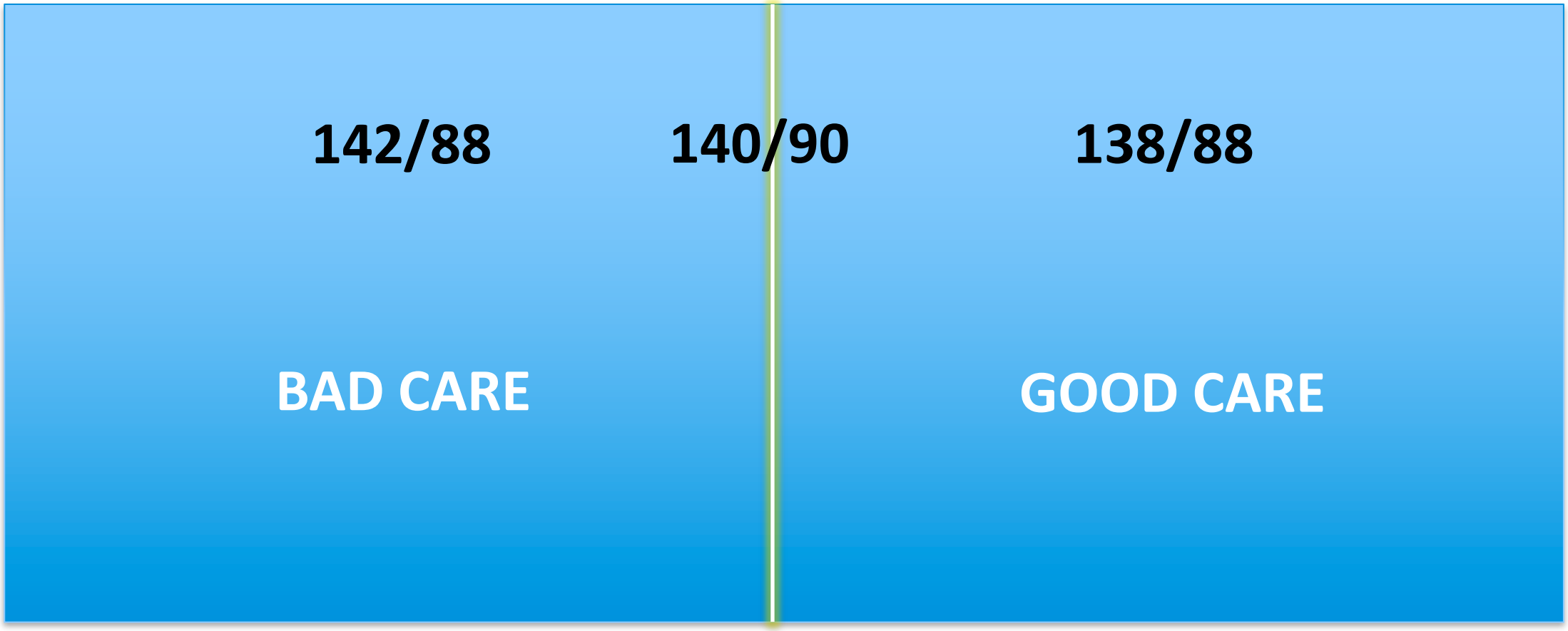
Some Pitfalls of Current Measure Approaches

- Are not scientifically or clinically valid
- Don’t adjust for clinical status
- Promote all-or-nothing thinking
- Ignore patients’ underlying risk and potential for benefit
- Don’t take into account patient preferences

Current Measures Drive “All-or-Nothing” Thinking: The Case of False Dichotomy



High Performance on BP Performance Measures is Associated with Overtreatment

Proportion of Patients Per Facility Meeting the BP <140/90-mm Hg Threshold Measure, by Quartile	Predicted Probability of Potential Overtreatment, % (95% CI)
Lowest quartile (53%-78%)	6 (5.7-6.3)
Second (78%-82%)	7 (6.7-7.4)
Third (82%-86%)	8 (7.6-8.4)
Highest quartile (86%-97%)	9 (8.1-9.0)

Kerr et al, Arch Int Med, 2012

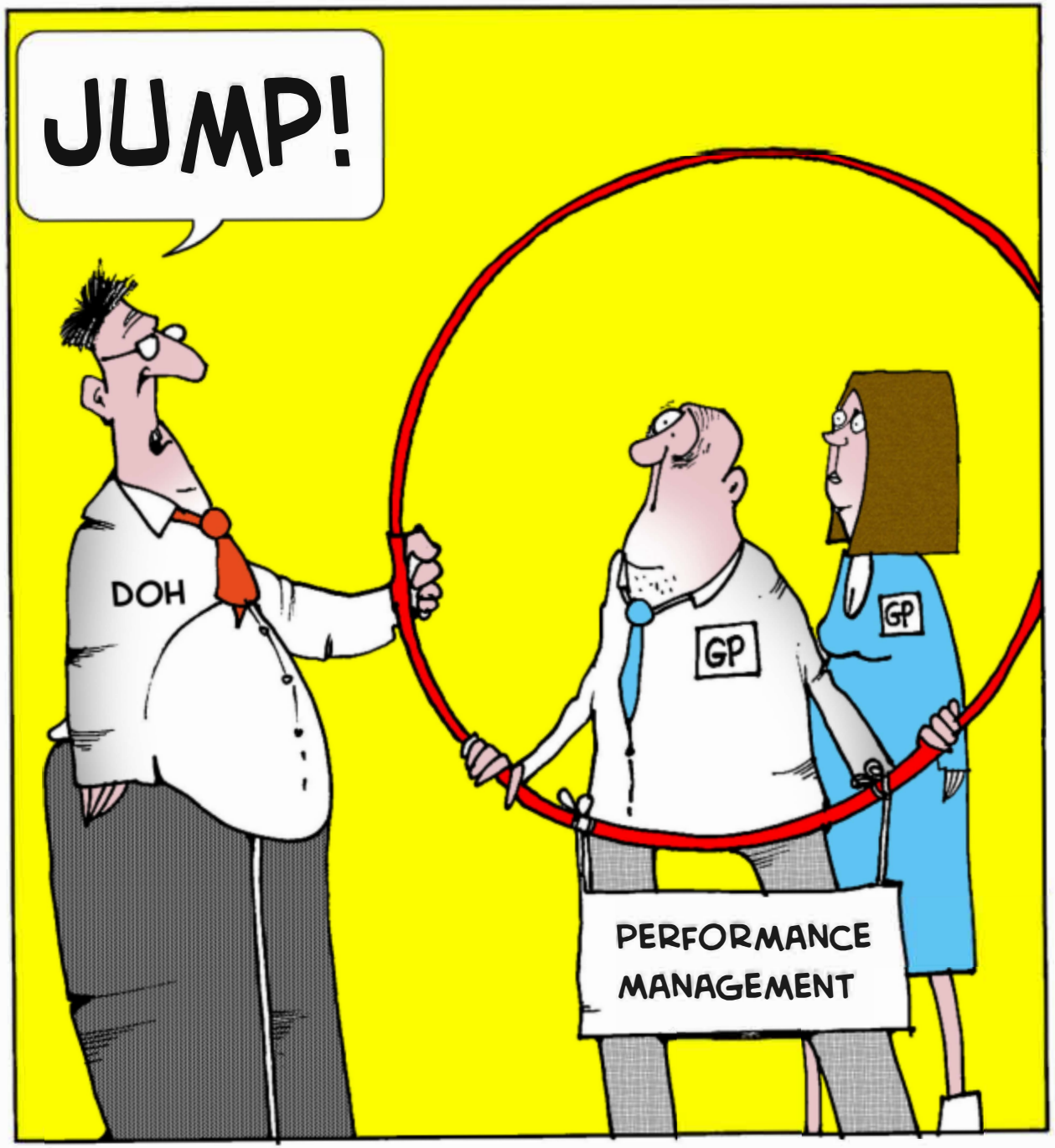
BMJ

Role of quality measurement in inappropriate use of screening for colorectal cancer: retrospective cohort study

Sameer D Saini *research scientist*[1 2], Sandeep Vijan *research scientist*[1 2], Philip Schoenfeld *research scientist*[1 2], Adam A Powell *research scientist*[3 4], Stephanie Moser *data analyst*[1], Eve A Kerr *director and research scientist*[1 2]

BMJ 2014;348:g1247 doi: 10.1136/bmj.g1247 (Published 26 February 2014)

Fig 2 Screening at age 75 *v* age 76 (n=21 499)



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The NEW ENGLAND JOURNAL of MEDICINE

Reimagining Quality Measurement

Elizabeth A. McGlynn, Ph.D., Eric C. Schneider, M.D., and Eve A. Kerr, M.D., M.P.H.

N Engl J Med 2014; 371:2150-2153 | December 4, 2014 | DOI: 10.1056/NEJMp1407883

The quality-measurement enterprise in U.S. health care is troubled. Physicians, hospitals, and health plans view measurement as burdensome, expensive, inaccurate, and indifferent to the complexity of care delivery. Patients and their caregivers believe t and fails to deliver the i o overcome these tro and payers are requiring or penalties to performance. We believe that doing more of the same is misguided: the time has come to reimagine quality measurement.

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The NEW ENGLAND JOURNAL of MEDICINE

Reimagining Quality Measurement

Elizabeth A. McGlynn, Ph.D., Eric C. Schneider, M.D., and Eve A. Kerr, M.D., M.P.H.
N Engl J Med 2014; 371:2150-2153 | December 4, 2014 | DOI: 10.1056/NEJMp1407883

1. Be integrated with care delivery rather than existing as a parallel, separate enterprise;
2. Acknowledge and address the challenges that confront doctors and patients every day — common and uncommon diseases, multiple coexisting illnesses, and management of symptoms even when diagnosis is uncertain;
3. Reflect individual patients' preferences and goals for treatment and health outcomes and enable ongoing development of evidence on treatment heterogeneity.

A Different Way to Think About Quality Goals

Illustrative Quality-Measurement and Care Delivery Matrix for Two Women between the Ages of 45 and 64 Years with the Same Medical Conditions*

Current Care Opportunities	Current Needs Inventory	Goals and Preferences		Care Management Plan and Approach to Quality Measurement
		Patient 1	Patient 2	
Hypertension	Blood pressure, 145/90 mm Hg while taking two antihypertensive agents	Blood-pressure goal: 135/85 mm Hg; willing to add a medication	Blood-pressure goal: 140/85 mm Hg; willing to try lifestyle modification	Achieve blood pressure consistent with patient's goals with either medications (Patient 1) or improvements in diet or exercise (Patient 2)
Diabetes	Glycated hemoglobin level, 8.0% while taking an oral hypoglycemic agent	Glycated hemoglobin goal: 7.5% or less; willing to add a medication	Glycated hemoglobin goal: 8.0% or less; willing to try lifestyle modification	Achieve glycated hemoglobin level consistent with patient's goals with either medications (Patient 1) or improvements in diet or exercise (Patient 2)
Knee osteoarthritis	Pain limits functioning, with an interference score of 6 on the Brief Pain Inventory (ranging from 1 to 10, with higher scores indicating more interference)	Prefers medication	Prefers physical therapy	Submit orders for preferred treatment approach; no arthroscopy
Depression	Score of 17 on the Patient Health Questionnaire-9 (PHQ9, ranging from 1 to 27, with higher scores indicating more severe disease)	Goal: Score of 12 on PHQ9; prefers medication	Goal: Score of 12 on PHQ9; prefers psychotherapy	Submit orders for preferred treatment approach; achieve patient-selected goal for number of mentally healthy days per month
Preventive care	Body-mass index, 28; inactive	Goals: adherence to all preventive care recommendations; become more active	Goals: avoidance of vaccines; adherence to other recommendations; become more active	Determine adherence to agreed-on preventive services and number of days with 30 minutes of activity in past month
Acute care	Sprained ankle	No preference elicited	No preference elicited	Do not order advanced imaging

*The body-mass index is the weight in kilograms divided by the square of the height in meters.

The Way Forward:
Patient-Centered Performance Measurement

Mr. B:

- 71 year-old man with COPD, CHF, DJD
- Lives alone
- No family history, takes aspirin 81 mg daily
- Negative screening colonoscopy 10 years

What Might a Patient-Centered Performance Measure for Colorectal Cancer Screening Look Like?

B2341, John
71 yo Male • 11/11/1957 • 100%

PCP: Kerr, Eve MD
Alt: Resident435

Current: Kerr, Eve
Role: PCP

Medications	Conditions	Possible Interventions
Metoprolol SA 50mg qday	CHF	Cardiac Rehab
Lisinopril 20 mg qday		
Aspirin 81 mg qday	Cardiovascular Prevention	Increase Simvastatin
Simvastatin 20 mg qday		
	Health Maintenance	Colon Cancer Screen

Patient Goals

- Maximize lifespan
- Having energy
- Playing 18 holes
- Minimize co-pays
- Avoid side-effects

Screening a patient like this will prevent about
3 cancer deaths per 1,000 patients screened

This is a **small benefit** that may warrant further discussion before ordering a screening test

Review Decision Aid With Patient

Making a Decision about Colon Cancer Screening

A Guide for Older Adults

PROM-IS
PROMOTING INDIVIDUALIZED SCREENING

What are the **benefits** *and* **harms** *of screening?*

Screening has the potential to benefit you, but it can also cause harm.

Screening can *benefit* you by…

- Preventing you from developing colon cancer.
- Preventing you from dying from colon cancer.
- Giving you a sense of well being from having done something to protect your health.

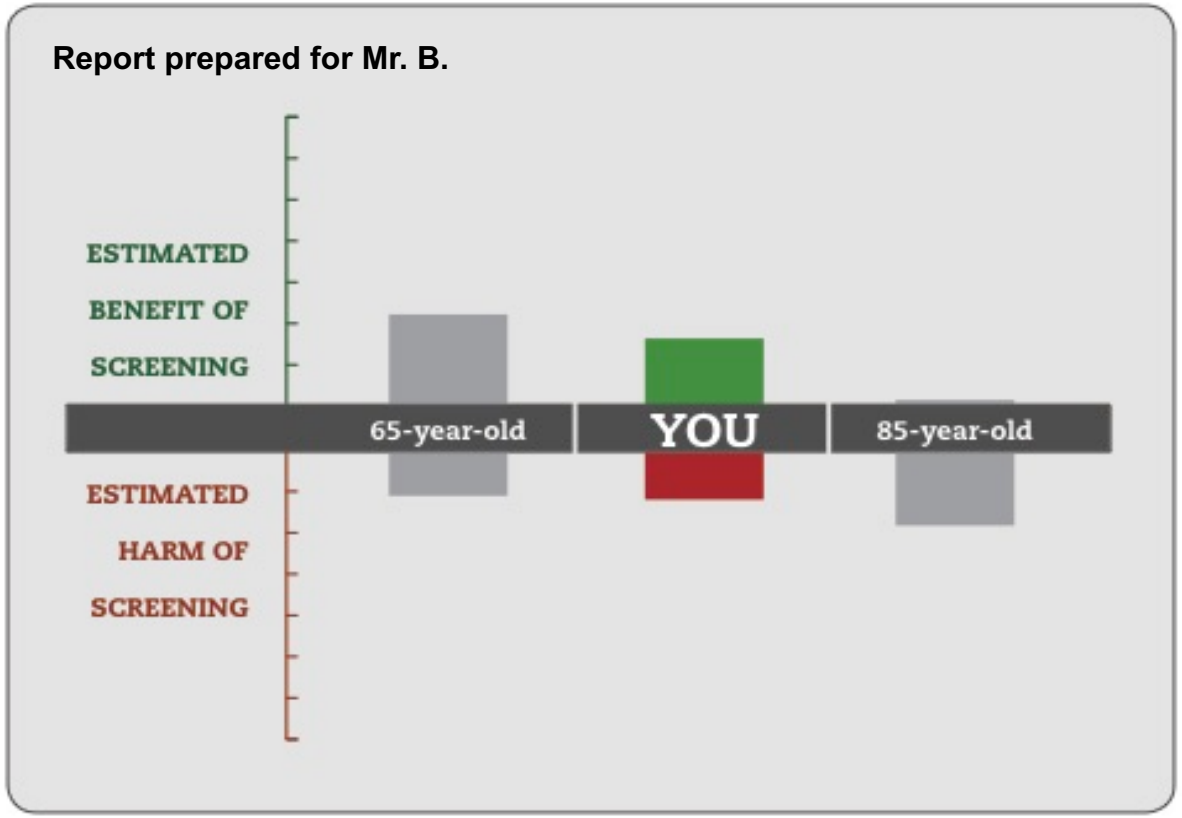
Screening can *harm* you by…

- Leading to complications from a colonoscopy.
- Leading to side effects and complications from unnecessary or excessive cancer treatment.
- Causing unnecessary worry due to positive test results that turn out not to be cancer.

In the pages ahead, you'll learn more about these benefits and harms from stories about patients who got screened.

Your Personal *Estimated Benefit and Harm of Colon Cancer Screening*

Report prepared for Mr. B.



The 65-year-old and the 85-year-old in this graph represent people *who are otherwise similar to you* in terms of overall health and prior screening history.

Screening Benefit Continuum

65 yo healthy man

85 yo man

Very High Benefit Care

Low to Moderate Benefit Care

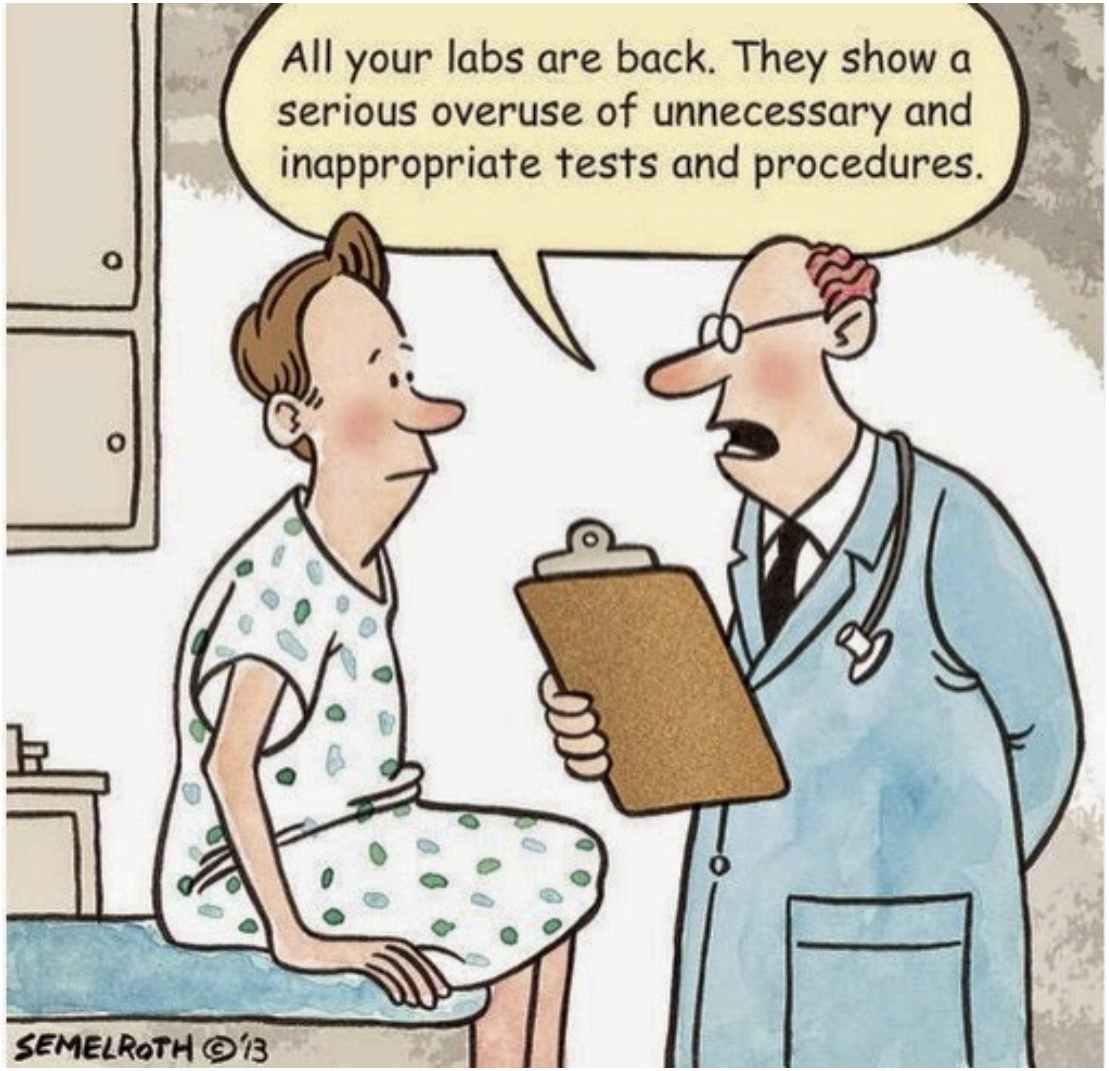
Very Low (or Neg.) Benefit Care

Preference Sensitive

A Patient-Centered Performance Measure for Colorectal Cancer Screening Would:

- Define necessary, inappropriate and **preference sensitive services**
- Be balanced across the continuum of care
- Integrate incentives and *tools* to promote patient-centered care

What About Decreasing Overuse?



HealthAffairs

Choosing Wisely: How To Fulfill The Promise In The Next 5 Years

Eve A. Kerr, Jeffrey T. Kullgren, Sameer D. Saini

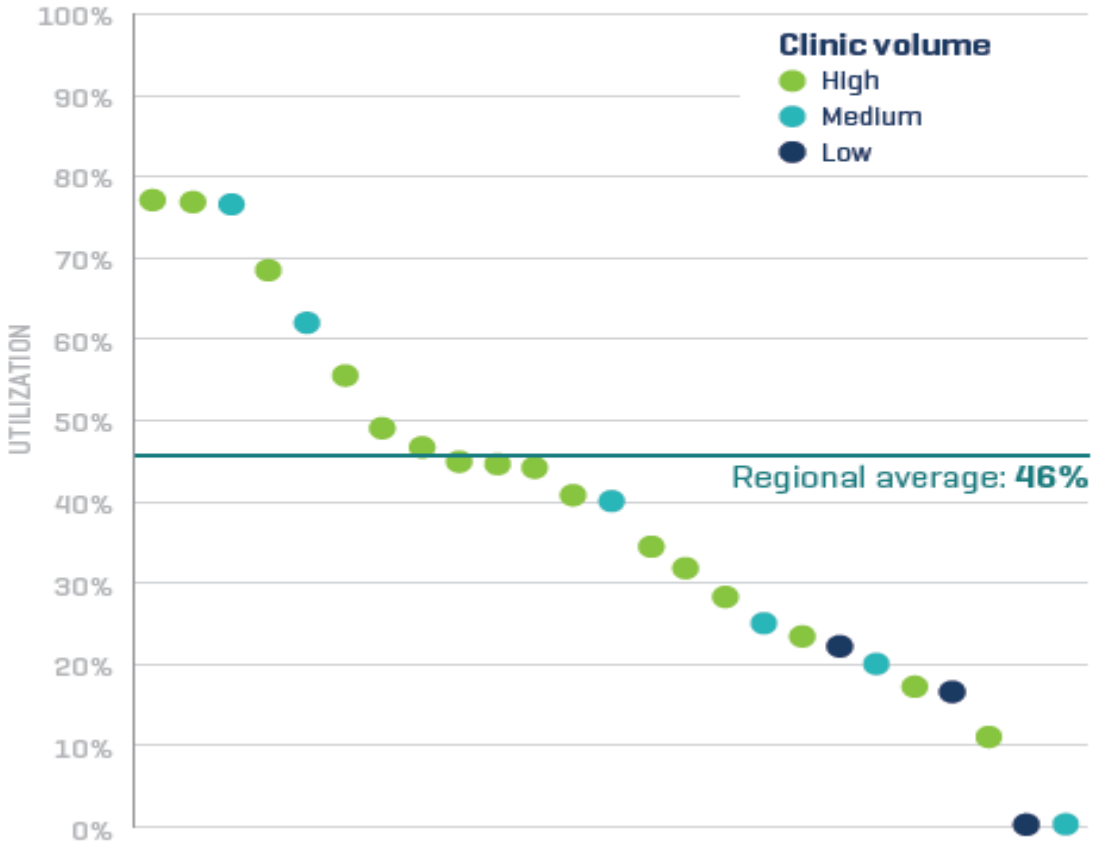
2017; 36(11):2012-2018

- Target root-causes of low value care
- Use meaningful measures and evaluation techniques
- Promote collaborative implementation and dissemination

Breast Cancer Surveillance:
Use of Breast Cancer Marker or Imaging

UTILIZATION BY CLINIC

Clinic variation in the use of testing (with advanced imaging or tumor markers) for breast cancer during the surveillance period ranges from no use at all to use in over 75% of patients.

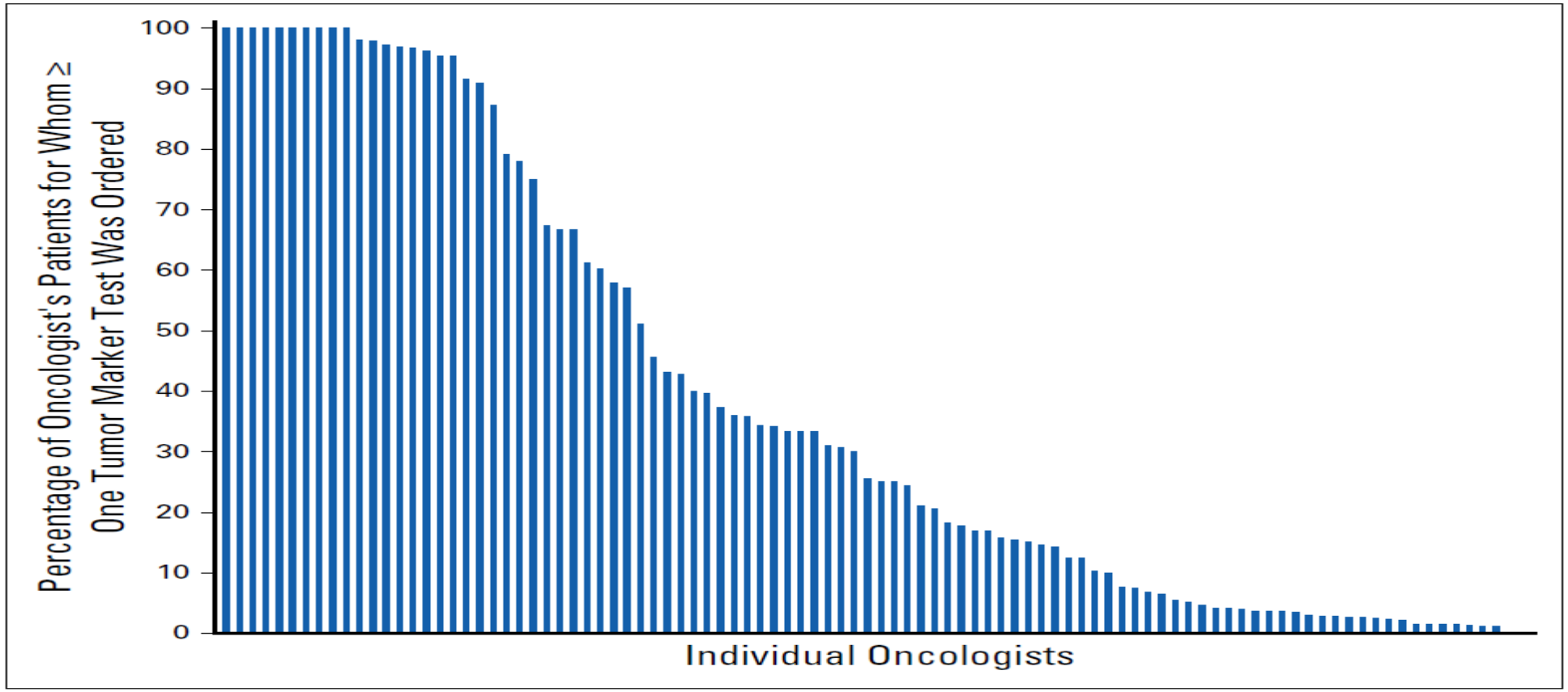


HICOR at FRED HUTCH

Journal of oncology practice
The Authoritative Resource for Practicing Oncology

Anxiety, Culture, and Expectations: Oncologist-Perceived Factors Associated With Use of Nonrecommended Serum Tumor Marker Tests for Surveillance of Early-Stage Breast Cancer

Erin E. Hahn, PhD, MPH, Corrine Munoz-Plaza, MPH, Jianjin Wang, MS, Jazmine Garcia Delgadillo, MPH, Joanne E. Schottinger, MD, Brian S. Mittman, PhD, and Michael K. Gould, MD, MS 2017 Jan;13(1):e77-e90



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- ~~Lack of knowledge~~
- Beliefs that testing will decrease patient, and their own, anxieties
- Fear of patient dissatisfaction or lawsuits
- Patient demand
- Lack of time to explain
- Low confidence in explanations
- Routine use

JAMA Internal Medicine

The Quest to Improve Quality

Measurement Is Necessary but Not Sufficient

Elizabeth A. McGlynn, PhD[1]; John L. Adams, PhD[1]; Eve A. Kerr, MD, MPH[2]

JAMA Intern Med. 2016;176(12):1790-1791.

Physicians generally know what constitutes best practices and show up every day to do the best for their patients, but reliably and consistently offering those services at the point of care delivery requires a systems approach. This means integrating clinically meaningful measurement into care delivery at appropriates points of interaction with patients combined with specific actions to ensure delivery of optimal care.

Collaborative Implementation and Dissemination

Bring together academic partners with health systems, payers, patients, and communities to test, evaluate and disseminate successful approaches

Opportunities

- Define high value, low value and preference sensitive care
- Create meaningful, balanced measures that assess and track performance
- Assess barriers to improving performance
  - Patient
  - Clinician
  - System
- Tailor interventions to address barriers and root causes

Opportunities

- Test different approaches to maximizing quality across a statewide network
  - Benchmark reports and feedback
  - Justification for deviating from best practices
  - Incentives for maximizing high value care, minimizing low value care, and supporting shared decision making
  - Tools for facilitating shared decision making
  - More time for discussions
- Evaluate!

"Everything should be made as simple as possible,
but not one bit simpler."

Albert Einstein (1879-1955)

The time is right to advance performance measurement that promotes high-value, patient-centered care

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QUESTIONS?

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