# Certification of “meaningful use” – a health care purchaser view

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# Purchaser expectations for clinical information infrastructure

- Evaluating and monitoring new technology
- Planning and evaluating workflow and payment redesign experiments
- Implementing recognition and payment programs
  - Individual provider measurement
  - Tiering, centers of excellence
  - Virtual aggregation to episodes for payment
- Supporting continuous improvement
  - Feedback to clinicians
  - Input from patients – symptoms, outcomes …
  - Feedback to patients

# Purchaser expectations for clinical information infrastructure

- Note *public interest* core of ARRA provisions; in the eyes of Congress, these are as important as bedside care:
  - E-prescribing
  - Information sharing
  - Clinical quality reporting
- Short-term implications for “meaningful use”
  - Permit measurement & documentation at individual physician level
  - Align Medicare, Medicaid and commercial incentives
  - Focus on areas of qualify deficits, high variation, inappropriate utilization, high costs (which vary across insurance class)

# Process to assess value of health information technology

- Long history of “certifying” capabilities but experiencing mediocre performance (managed care, hospitals, disease management)
- Performance is only test of achieving value
- Burden is on specifying public interest objectives and assessing whether deployed EHR is achieving those objectives
- Certification is one linked step in an improvement cycle (certify-validate-measure-feedback-reward)

# Example: cardiology measurement

- Purchaser interests:
  - Appropriate use of imaging, stress test, diagnostic cath, interventions (PCI/stent)
  - Outcomes, including symptom relief, functioning, survival
- Current PQRI measures:
  - ACE or ARB therapy for heart failure patients with left ventricular systolic dysfunction (LVSD)
  - Antiplatelet therapy prescribed for CAD patients
  - Beta-blocker therapy prescribed for heart failure patients with LVSD
  - ACE/ARB Therapy for Coronary Artery Disease and Diabetes and/or LVSD
  - Lipid Profile in patients with CAD

# NPP Areas of "overuse"

- **Inappropriate medication use, targeting:**
  - *Antibiotic use*
  - *Polypharmacy (for multiple chronic conditions; of antipsychotics)*
- **Unnecessary laboratory tests, targeting:**
  - *Panels (e.g., thyroid, SMA 20)*
  - *Special testing (e.g., Lyme Disease with regional considerations)*
- **Unwarranted maternity care interventions, targeting:**
  - *Cesarean section*
- **Unwarranted diagnostic procedures, targeting:**
  - *Cardiac computed tomography (noninvasive coronary angiography and coronary calcium scoring)*
  - *Lumbar spine magnetic resonance imaging prior to conservative therapy, without red flags*
  - *Uncomplicated chest/thorax computed tomography screening*
  - *Bone or joint x-ray prior to conservative therapy, without red flags*
  - *Chest x-ray, preoperative, on admission, or routine monitoring*
  - *Endoscopy*
- **Inappropriate nonpalliative services at end of life, targeting:**
  - *Chemotherapy in the last 14 days of life*
  - *Aggressive interventional procedures*
  - *More than one emergency department visit in the last 30 days of life*
- **Unwarranted procedures, targeting:**
  - *Spine surgery*
  - *Percutaneous transluminal coronary angioplasty (PTCA)/Stent*
  - *Knee/hip replacement*
  - *Coronary artery bypass graft (CABG)*
  - *Hysterectomy*
  - *Prostatectomy*
- **Unnecessary consultations**
- **Preventable emergency department visits and hospitalizations, targeting:**
  - *Potentially preventable emergency department visits*
  - *Hospital admissions lasting less than 24 hours*
  - *Ambulatory care-sensitive conditions*
- **Potentially harmful preventive services with no benefit, targeting:**
  - *BRCA mutation testing for breast and ovarian cancer – female, low risk*
  - *Coronary heart disease screening using electrocardiography (ECG), exercise treadmill test (ETT), electron-beam computed tomography (EBCT) – adults, low risk*
  - *Carotid artery stenosis screening – general adult population*
  - *Cervical cancer screening – female over 65, average risk and female, posthysterectomy*
  - *Prostate cancer screening – male over 75*

*(See U.S. Preventive Services Task Force D Recommendations List at www.ahrq.gov/clinic/prevenix.htm)*

# Case study: PCI procedures

## Frequency of Stress Testing to Document Ischemia Prior to Elective Percutaneous Coronary Intervention

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**Context** Guidelines call for documenting ischemia in patients with stable coronary artery disease prior to elective percutaneous coronary intervention (PCI).

**Objective** To determine the frequency and predictors of stress testing prior to elective PCI in a Medicare population.

**Design, Setting, and Patients** Retrospective, observational cohort study using claims data from a 20% random sample of 2004 Medicare fee-for-service beneficiaries aged 65 years or older who had an elective PCI (N=23 887).

**Main Outcome Measures** Percentage of patients who underwent stress testing within 90 days prior to elective PCI; variation in stress testing prior to PCI across 306 hospital referral regions; patient, physician, and hospital characteristics that predicted the appropriate use of stress testing prior to elective PCI.

**Results** In the United States, 44.5% (n=10 629) of patients underwent stress testing within the 90 days prior to elective PCI. There was wide regional variation among the hospital referral regions with stress test rates ranging from 22.1% to 70.6% (national mean, 44.5%; interquartile range, 39.0%-50.9%). Female sex (adjusted odds ratio [AOR], 0.91; 95% confidence interval [CI], 0.86-0.97), age of 85 years or older

IN THE UNITED STATES, PERCUTANEOUS coronary intervention (PCI) has become a common treatment strategy for patients with stable coronary artery disease (CAD) and such patients now account for the majority of PCIs performed.[1,2] However, multiple studies have established that some

# ACCF/SCAI/STS/AATS/AHA/ASNC 2009 Appropriateness Criteria for Coronary Revascularization

A Report of the American College of Cardiology Foundation Appropriateness Criteria Task Force, Society for Cardiovascular Angiography and Interventions, Society of Thoracic Surgeons, American Association for Thoracic Surgery, American Heart Association, and the American Society of Nuclear Cardiology



## Table 2. Patients Without Prior Bypass Surgery

| | Indication | Appropriateness Score (1–9) | | |
|---|---|---|---|---|
| | | CCS Angina Class | | |
| | | Asymptomatic | I or II | III or IV |
| 12. | • One- or 2-vessel CAD without involvement of proximal LAD<br>• Low-risk findings on noninvasive testing<br>• Receiving no or minimal anti-ischemic medical therapy | I (1)* | I (2) | U (5) |
| 13. | • One- or 2-vessel CAD without involvement of proximal LAD<br>• Low-risk findings on noninvasive testing<br>• Receiving a course of maximal anti-ischemic medical therapy | I (2) | U (5) | A (7) |
| 14. | • One- or 2-vessel CAD without involvement of proximal LAD<br>• Intermediate-risk findings on noninvasive testing<br>• Receiving no or minimal anti-ischemic medical therapy | I (2) | U (5) | U (5) |
| 15. | • One- or 2-vessel CAD without involvement of proximal LAD<br>• Intermediate-risk findings on noninvasive testing<br>• Receiving a course of maximal anti-ischemic medical therapy | U (4) | A (7) | A (8) |
| 16. | • One- or 2-vessel CAD without involvement of proximal LAD<br>• High-risk findings on noninvasive testing<br>• Receiving no or minimal anti-ischemic medical therapy | U (6) | A (7) | A (8) |

# ‘Meaningful use’ must recognize:

- Only 37% of US physicians in ambulatory general practice; ~40% doing procedures
- Significant quality, safety, cost variations in specialty & procedural care
- Network of clinical registries provides best access to quality performance info
- “Meaningful use” should encompass systematic use of clinical registries to support public interest objectives

# Current EHR certification

- Will current ambulatory EHR certification meet purchasers' and ARRA's needs?
  - Based on generic ambulatory model
  - Has detailed specs for medication orders
  - Fails to address high cost services, procedures (cancer, ortho, maternity, behavioral)
  - Provides limited value to procedural & specialty practices
  - Need to certify ability to generate *emerging* quality measures
  - Dynamic relationship between PQRI, NQF, and reporting capabilities
  - ***Need to address procedural medicine***
  - ***Opportunity to use HIT incentives for specialists***

# Role of certification

- Needed to inspect capability to provide value
- Must be validated after installation to ensure capabilities are enabled
- Must be structured to allow some “pick and choose” satisfaction of criteria, to permit innovation and bundling of features
- Needs independent, multi-stakeholder governance to avoid capture by incumbents

# Markle recommendations

- Certify for interoperability
- Certify for meaningful use – i.e., that the system can report its performance of meaningful uses
- Certify technical aspects of privacy and security – e.g., disclosures
- Validation after installation
- Pluralistic applications
- Pluralistic certifiers

# Purchaser hopes for certification

- Purchaser question: is info being used to increase appropriate use of expensive, dangerous, varying technology?
- Certification criteria must address information requirements relevant to public interest concerns – outcomes, appropriateness, efficiency
- Meaningful use definition should include specialty (registry) data
- Certification should verify that EHR or registry delivers that value
- Validation assures that user has deployed key functions
- Virtuous circle: improving data permits better measures; better measures drive payment; payment and feedback drive improvement...

# Thank you.

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