

Echocardiography: The Value Choice in Cardiac Imaging

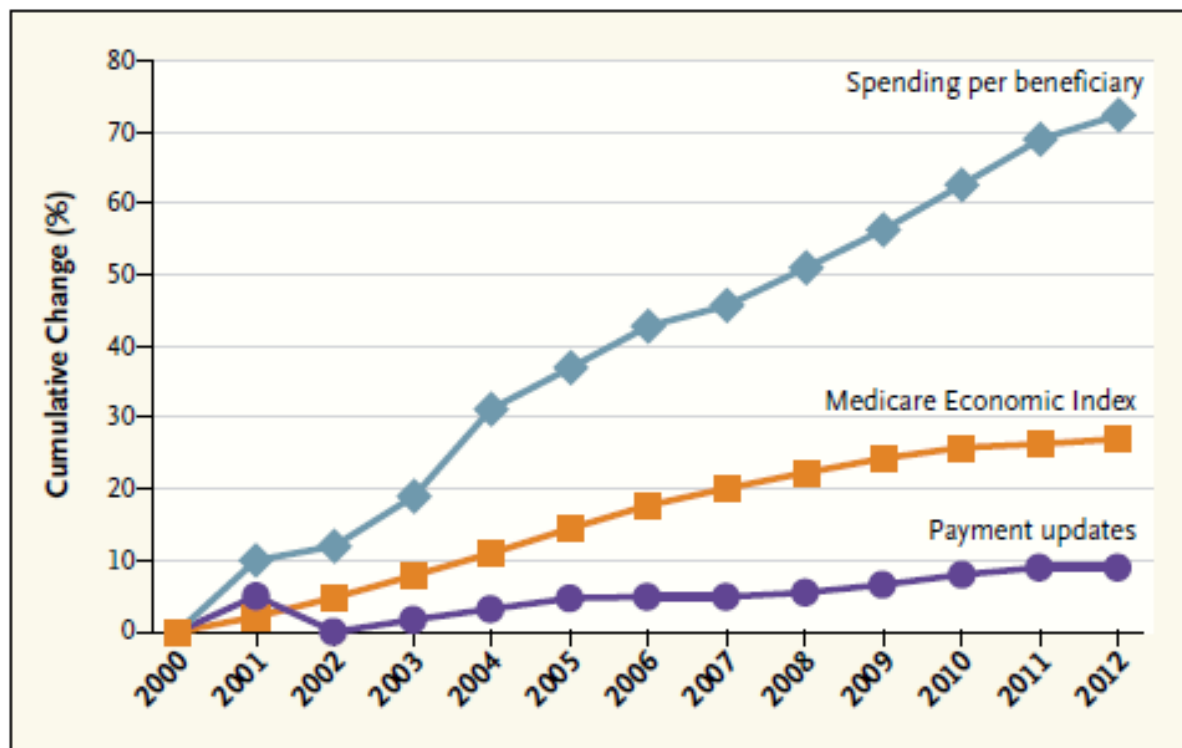


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How did we get here?

Historical Facts



Cumulative Changes in Payment Updates, in the Medicare Economic Index, and in Spending per Medicare Beneficiary (2000–2012).

Volume growth has raised physician spending more than input prices and payment updates. Data are from Medicare.



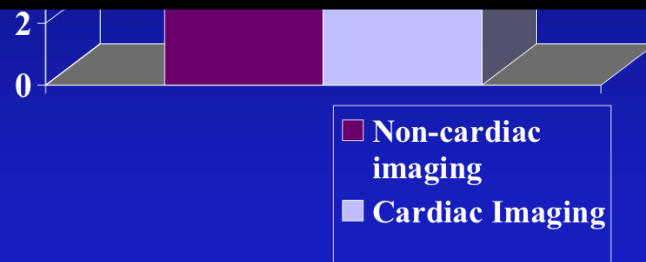
How did we get here?

Historical Facts

↑ Cardiac Imaging the

Echo = Major Contributor

- ✓ Transthoracic Echo Highest Volume Cardiac Imaging Test



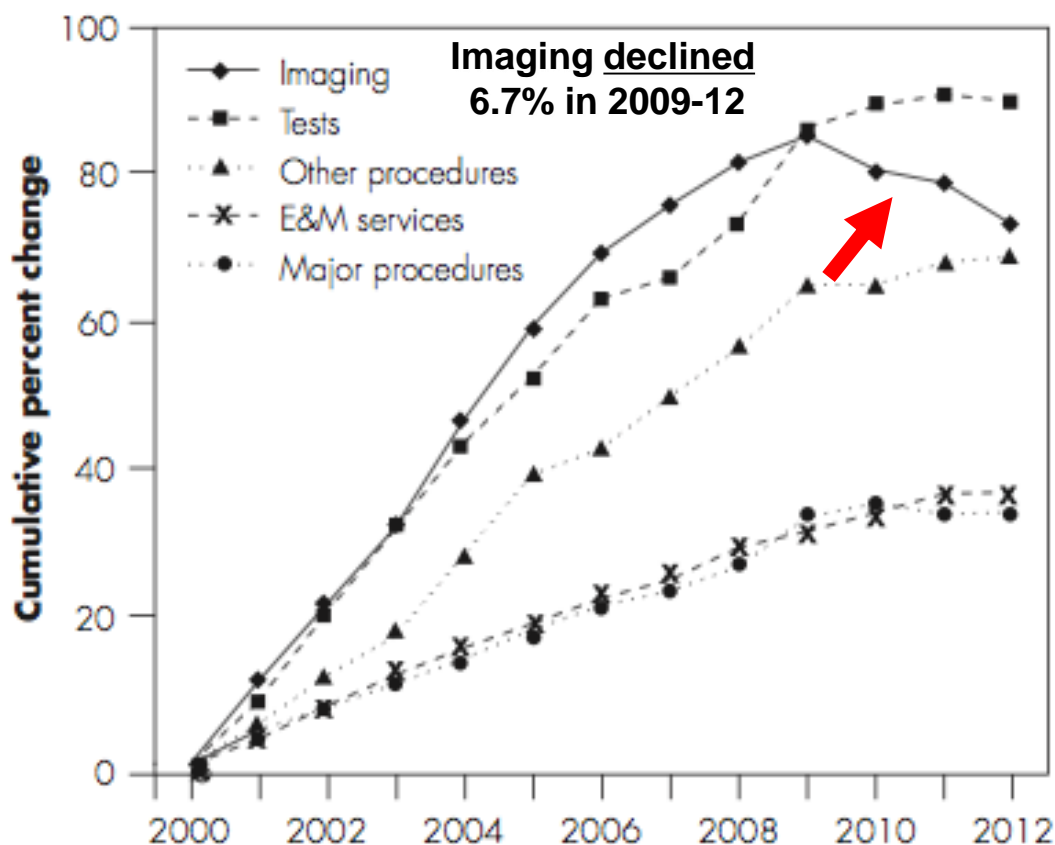


The Facts Have Changed!

A New Era of Utilization

**FIGURE
4-3**

**Growth in the volume of
practitioner services, 2000-2012**





The Facts Have Changed!

What about Echo

Annual transthoracic echo procedures
among Medicare beneficiaries

1999-2005: 10.6%

2005-2009: 3.7%

2010: DECLINED 1.8%

2011: DECLINED 3.7%

2012: DECLINED 5.1%

Why have the Facts Changed??

1) Government



Utilization Reduced

But did any of this....

Improve Quality?

Add Value?

3) Physicians



Use Criteria

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APPROPRIATE USE CRITERIA

**ACCF/ASE/AHA/ASNC/HFSA/HRS/SCAI/SCCM/SCCT/SCMR
2011 Appropriate Use Criteria for Echocardiography**

Prior Authorization – Bumps in the Road

NBC Nightly News



U.S. Senate Committee on
Commerce, Science, and Transportation

Senator John D. (Jay) Rockefeller IV, Chairman

COMMERCE COMMITTEE INVESTIGATION **REVEALS THAT MEDICAL COMPANIES WRONGLY** **DENY PATIENTS CRITICAL TESTS**

April 18, 2011

WASHINGTON, D.C.—Chairman John D. (Jay) Rockefeller IV released a report with the findings of a year-long Commerce Committee staff investigation that found a pattern of inappropriate denials for medically necessary advanced imaging tests for Americans suffering from heart disease. Rockefeller started the investigation following news reports in March, 2010 suggesting that Aetna and Blue Cross Blue Shield of Delaware (BCBS-D) were denying patients critical nuclear cardiac stress tests.

Appropriate Use Criteria

Journal of the American College of Cardiology

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Goal: “To guide physicians and reimbursement agencies in determining a rational approach to the use of diagnostic imaging in the delivery of high quality care”

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May Be Appropriate
Rarely Appropriate

Multi-Modality Appropriate Use Criteria

Table 1.1. Symptomatic

Refer to pages 16 and 17 for relevant definitions, in particular Table A and text for age, sex, symptom presentation, and risk factors relevant to each pre-test probability category								
Indication Text		Exercise ECG	Stress RNI	Stress Echo	Stress CMR	Calcium Scoring	CCTA	Invasive Coronary Angiography
1.	<ul style="list-style-type: none"> Low pre-test probability of CAD ECG interpretable AND able to exercise 	A	R	M	R	R	R	R
2.	<ul style="list-style-type: none"> Low pre-test probability of CAD ECG uninterpretable OR unable to exercise 		A	A	M	R	M	R
3.	<ul style="list-style-type: none"> Intermediate pre-test probability of CAD ECG interpretable AND able to exercise 	A	A	A	M	R	M	R
4.	<ul style="list-style-type: none"> Intermediate pre-test probability of CAD ECG uninterpretable OR unable to exercise 		A	A	A	R	A	M
5.	<ul style="list-style-type: none"> High pre-test probability of CAD ECG interpretable AND able to exercise 	M	A	A	A	R	M	A
6.	<ul style="list-style-type: none"> High pre-test probability of CAD ECG uninterpretable OR unable to exercise 		A	A	A	R	M	A

Appropriate Use Key: A = Appropriate; M = May Be Appropriate; R = Rarely Appropriate.

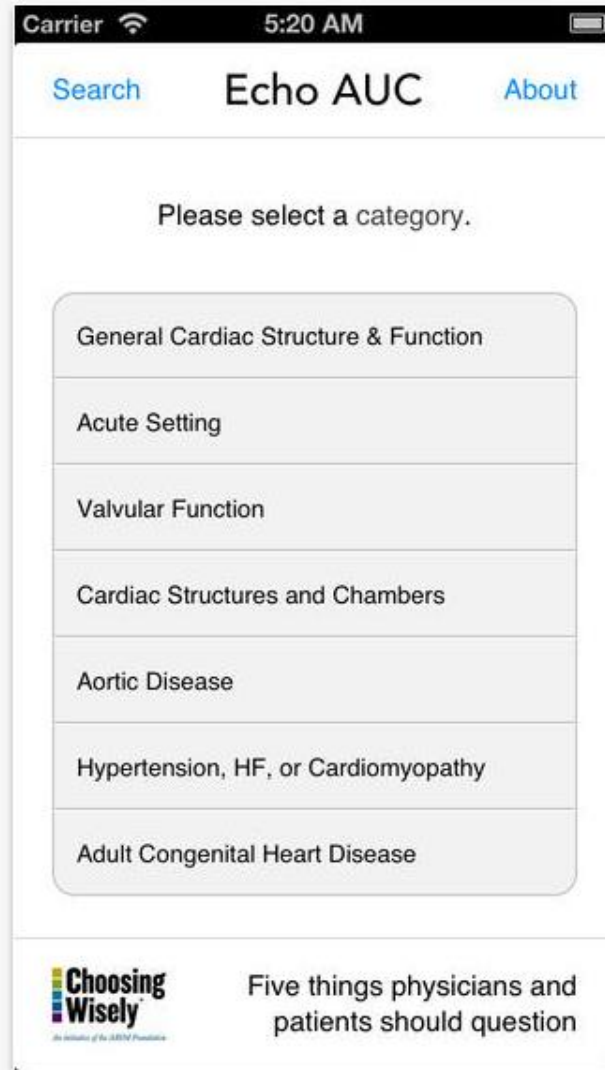
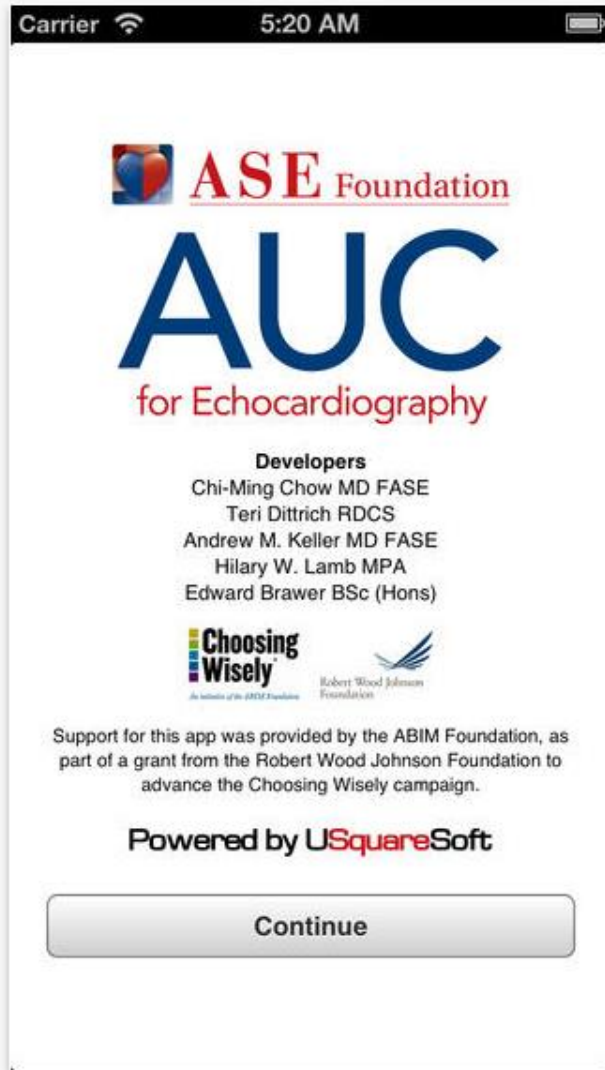
A = Appropriate; CAD = coronary artery disease; CCTA = coronary computed tomography angiography; CMR = cardiac magnetic resonance; ECG = electrocardiogram; Echo = echocardiography; M = May Be Appropriate; R = Rarely Appropriate; RNI = radionuclide imaging.

“Right test, Right patient, Right time”



ASE/Choosing Wisely

Free iPhone AUC App





Impact of Point of Care AUC Automated Decision Support Tool

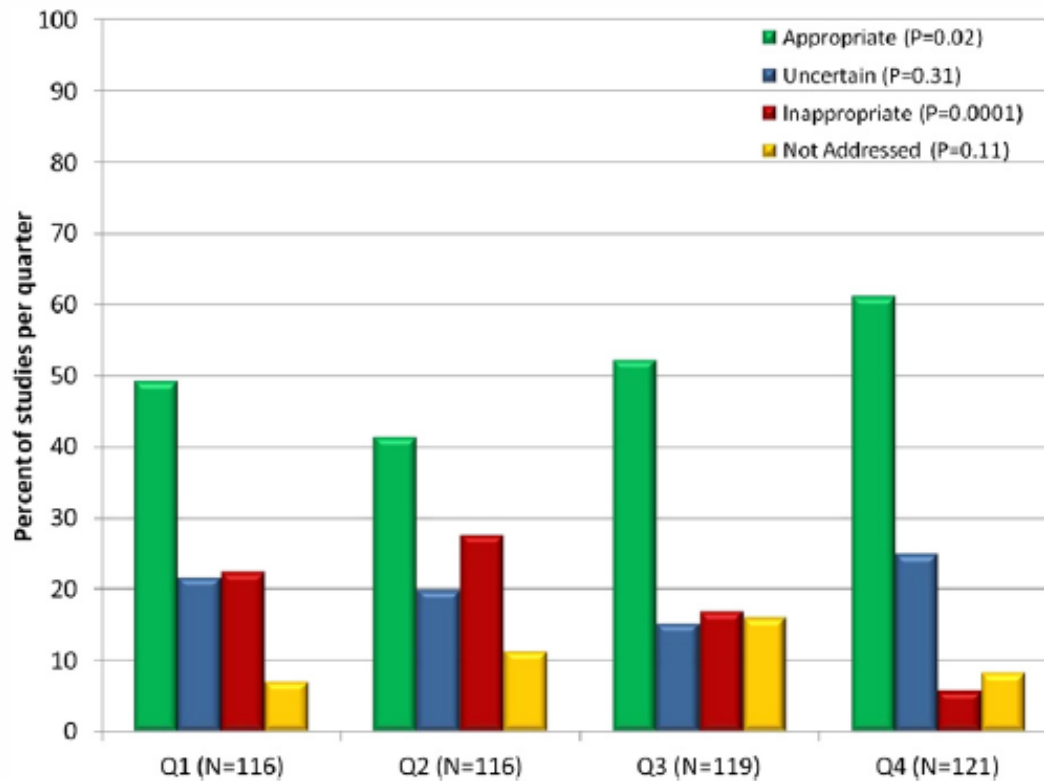


Figure 1

Changes in the Percentage of Studies at Each Level of Appropriateness Using the AUC-DST From Q1 to Q4 of the Intervention

Multi-center study

472 patients referred for stress echo, MPI, or CTA

Automated AUC DST applied by clinicians at point of order

Practices granted waiver from Prior Authorization private payer during 8 month study period

Inappropriate studies decreased:

22% → 6%

Value is hard to measure!

The Hidden Value Conundrum



Patient with
Shortness of Breath



Physician orders an
echocardiogram



Heart Problem!

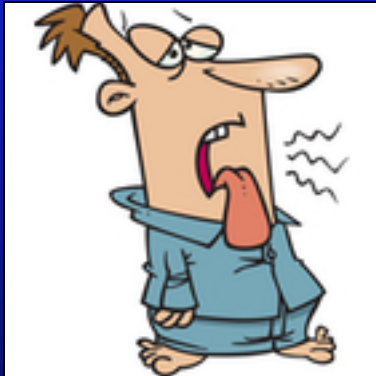
Obvious
VALUE



Patient feels better/
lives longer



The Hidden Value Conundrum



Patient with
Shortness of Breath



Physician orders an
echocardiogram



No Heart Problem!

No VALUE??

What if.....

Normal
Echo



Prompts
Additional
Testing



Lung
Problem



Rx
Improved
Outcome



Appropriate Use Criteria and Clinical Impact of Echocardiography

- 1525 patients referred for TTE
- Minimum of 2 years of longitudinal follow
- Clinical Impact Index applied

SCORE	IMPACT	DEFINITION
0	None	TTE normal ^{or} unchanged, no further work-up ^{and} no change in care
1	Indirect	TTE normal ^{or} unchanged, prompts w/u or services for alternative diagnosis
2	Direct	Abnormal TTE finding prompts further diagnostics/treatment

Results: 82% of Appropriate studies had demonstrable clinical impact, half of which was “indirect”

What about the flip side of Value?

Are there “Missed Opportunities” for echocardiography to impact and facilitate high quality care?

**In a study of 259 patients admitted to the hospital
who did not have an echocardiogram,**

16%

had an Appropriate indication for echocardiography.

**When it comes to value,
let's not miss what is important!**



**Our sole focus should be on finding ways to efficiently,
and cost-effectively, utilize echocardiography to optimize
patient care.**