



UNIVERSITY OF
SOUTH CAROLINA

School of Medicine
Greenville



GREENVILLE
HEALTH SYSTEM

Right Patient, Right Test, Right Time

Clinical Use of Appropriate Use Criteria

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Disclosure

- No financial disclosures

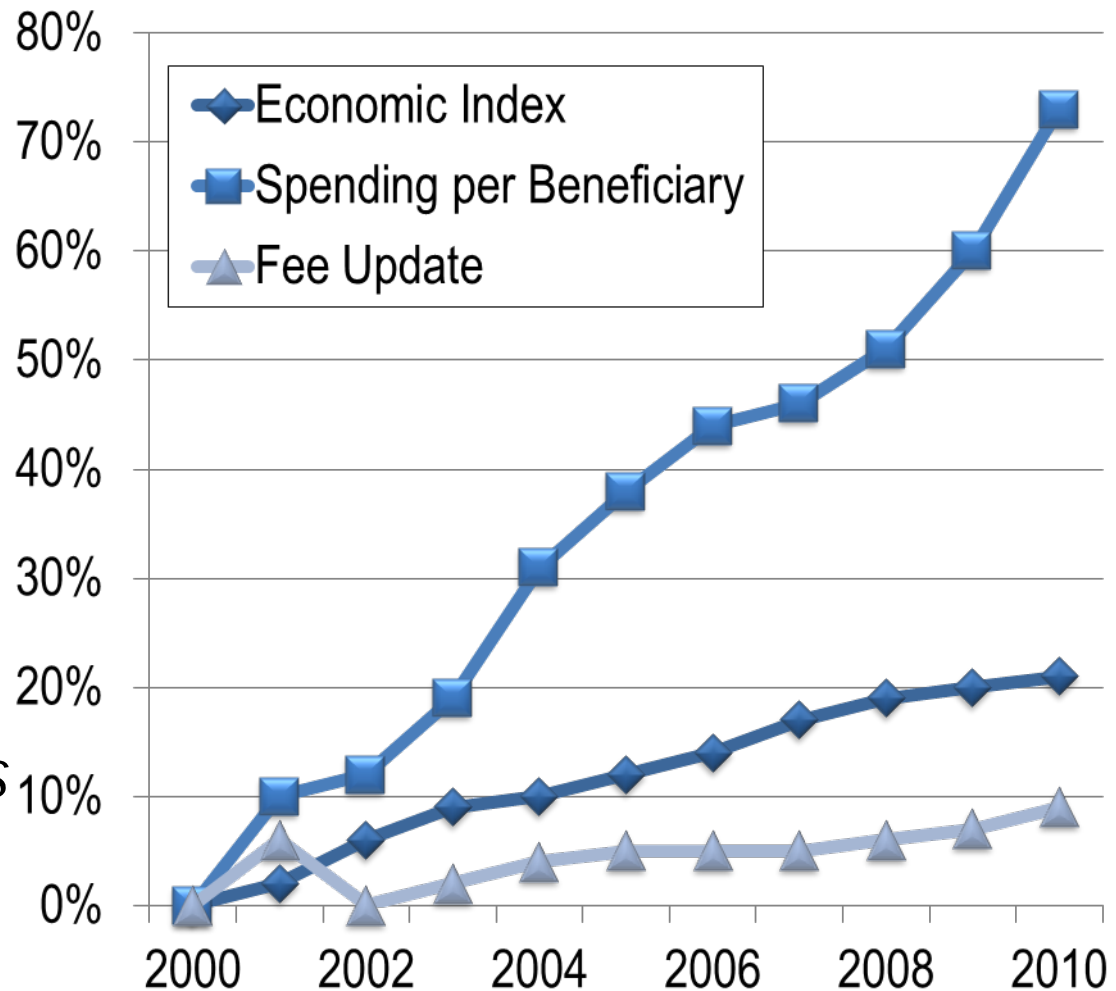
How did we get where
we are today?

Escalating Healthcare Costs

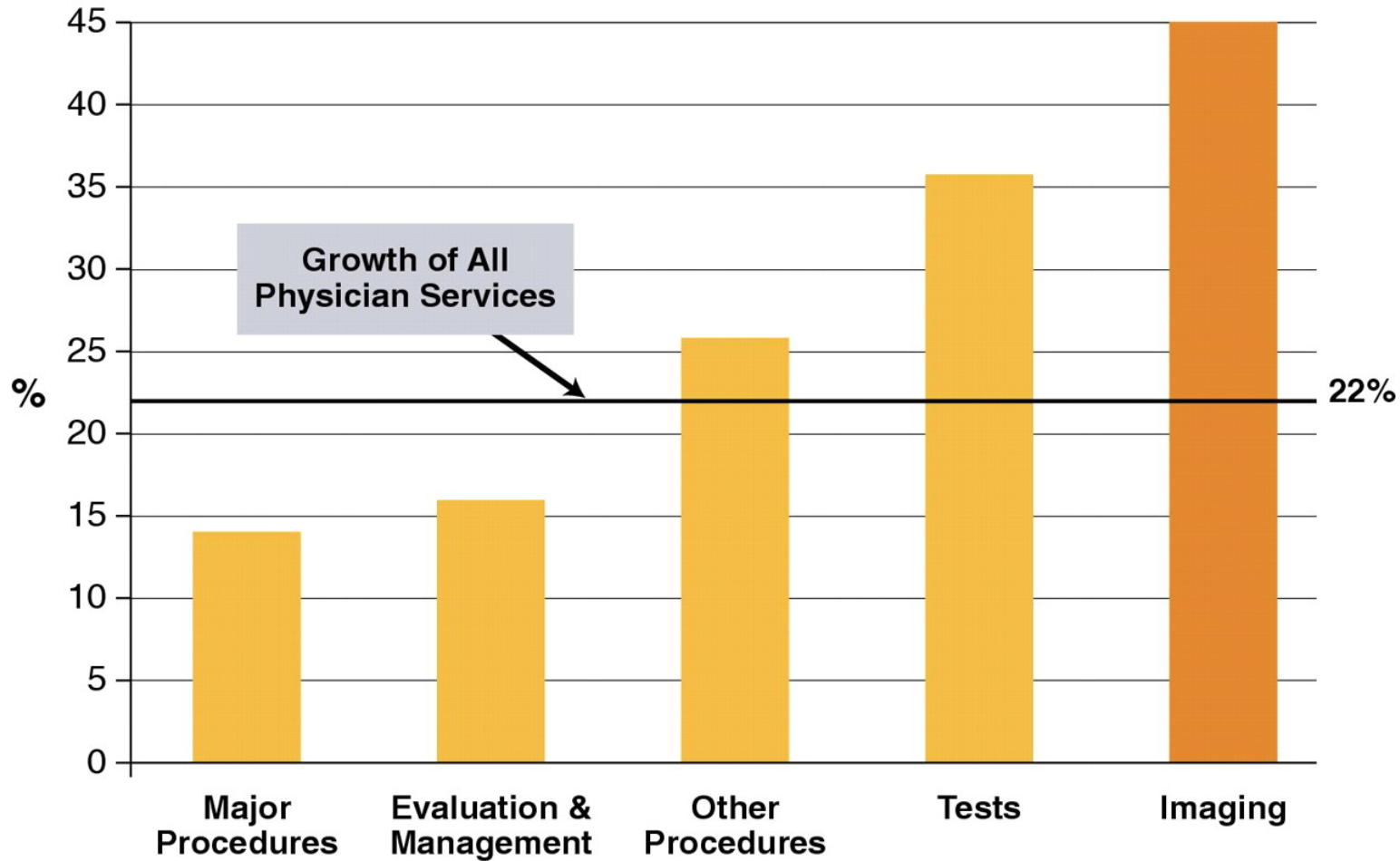
- Medicare fee-for service spending for physician services grew by 73% - from \$37 b to \$64 b from 2000-2010

– *Growth in the volume & intensity of services*

Medicare Spending for Physician Services

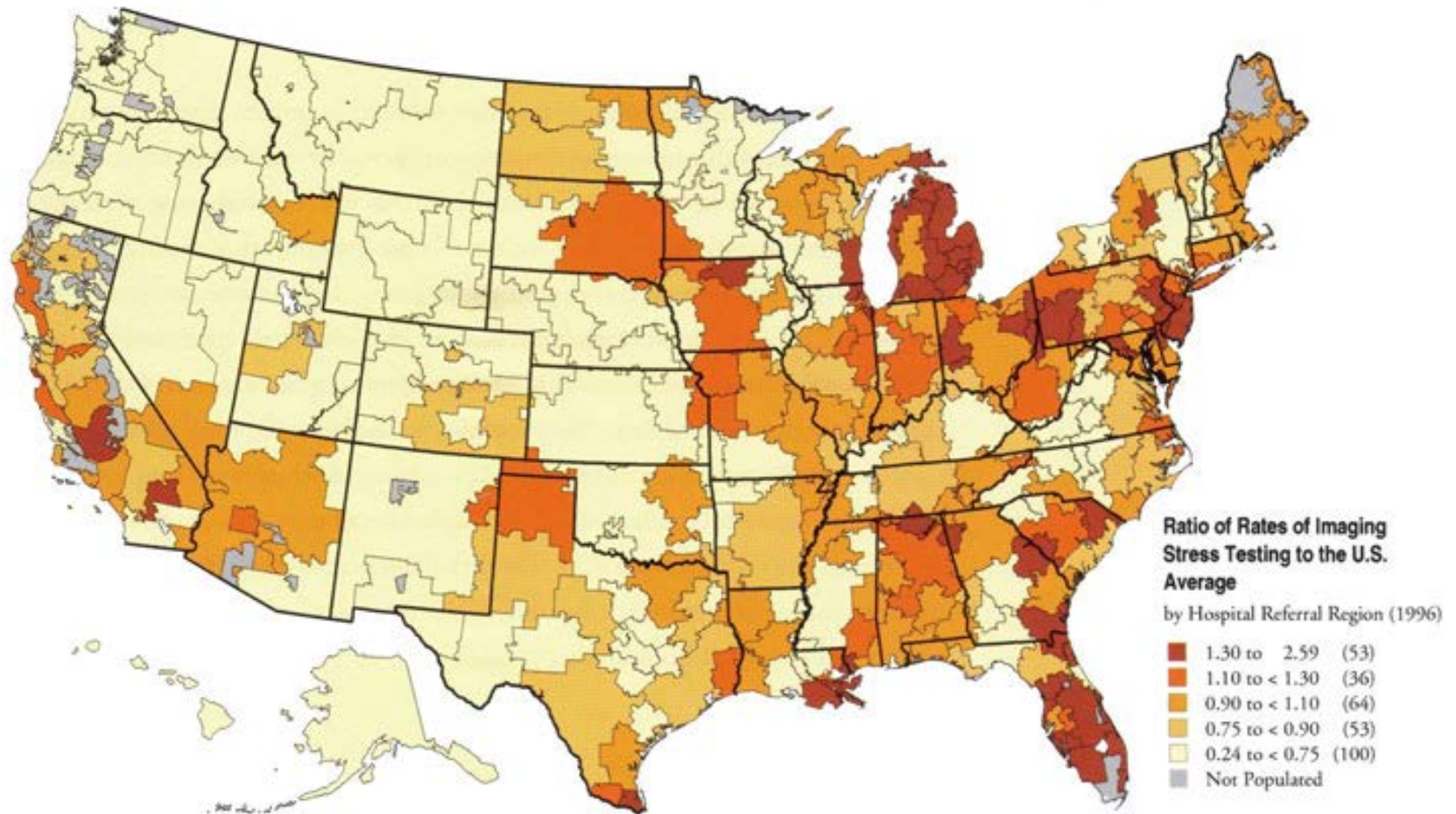


MedPAC Evaluation of Growth in Physician Services From 1999 to 2000



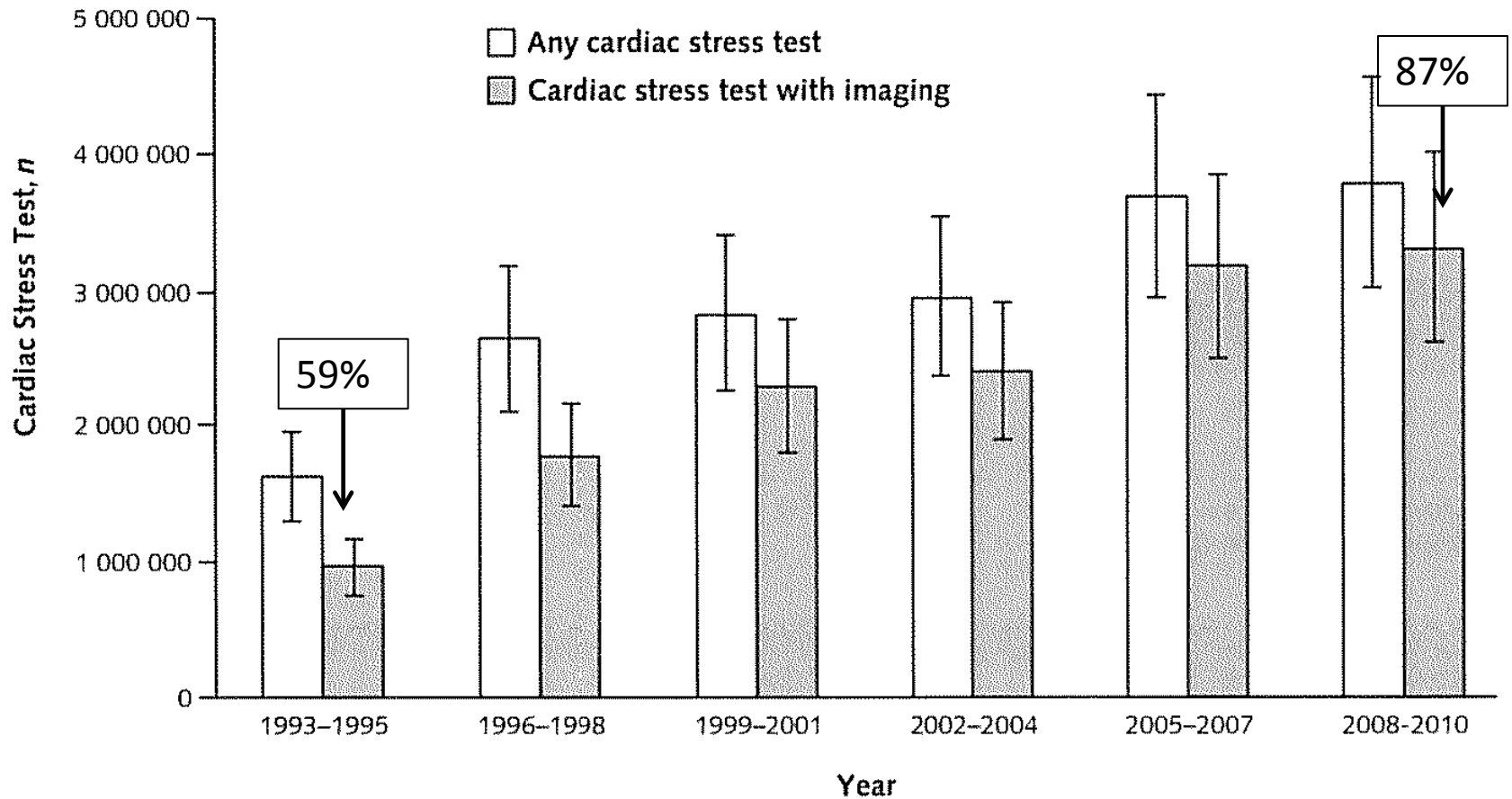
Hendel, R. C. J Am Coll Cardiol Img 2008;1:241-248

Regional Variation Imaging Stress Tests



Wennberg, D. *The Dartmouth Atlas of Cardiovascular Health Care* 1999: 60-61

Trends in the Use of Cardiac Stress Testing



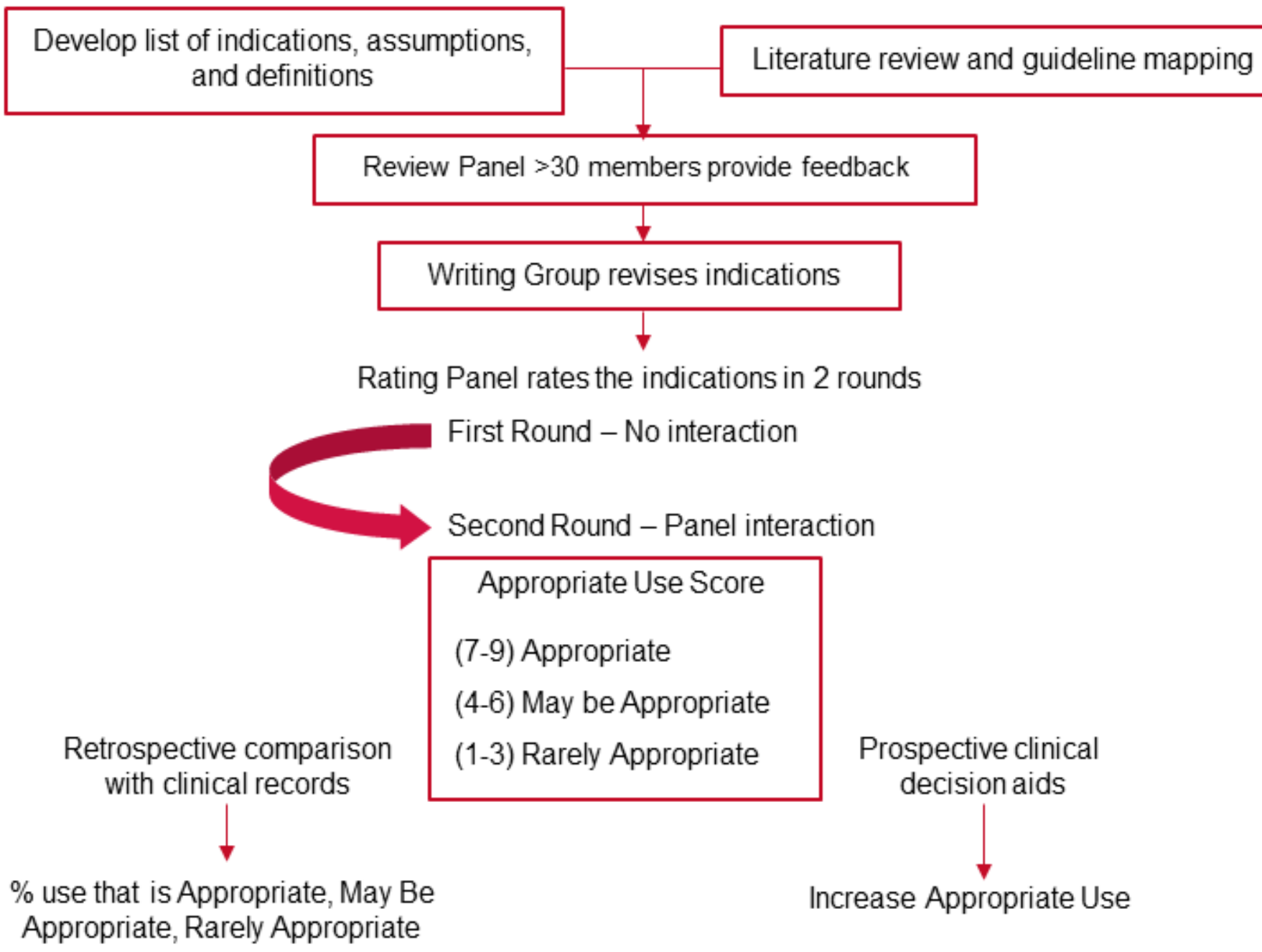
Response to the Utilization and Cost Problem

- Reimbursement reduction
 - 2008 reimbursement adjustment
- Radiology benefits managers
- Appropriate Use Criteria
- MIPPA
 - Requirement for accreditation
 - Emphasis on quality

IMAGING UTILIZATION AND A NEED FOR GUIDANCE

- Unprecedented focus on assessment and improving quality
- Explosive growth of CV imaging
- Substantial regional variation
- True nature of utilization unknown
 - Overuse/ Under-use/Appropriate
- Clinicians, patients, and especially payers seeking guidance

Development
Indication
Determination
Appropriateness
Validation



Develop list of indications, assumptions, and definitions

Literature review and guideline mapping

Review Panel >30 members provide feedback

Writing Group revises indications

Rating Panel rates the indications in 2 rounds

First Round – No interaction

Second Round – Panel interaction

Appropriate Use Score
(7-9) Appropriate
(4-6) May be Appropriate
(1-3) Rarely Appropriate

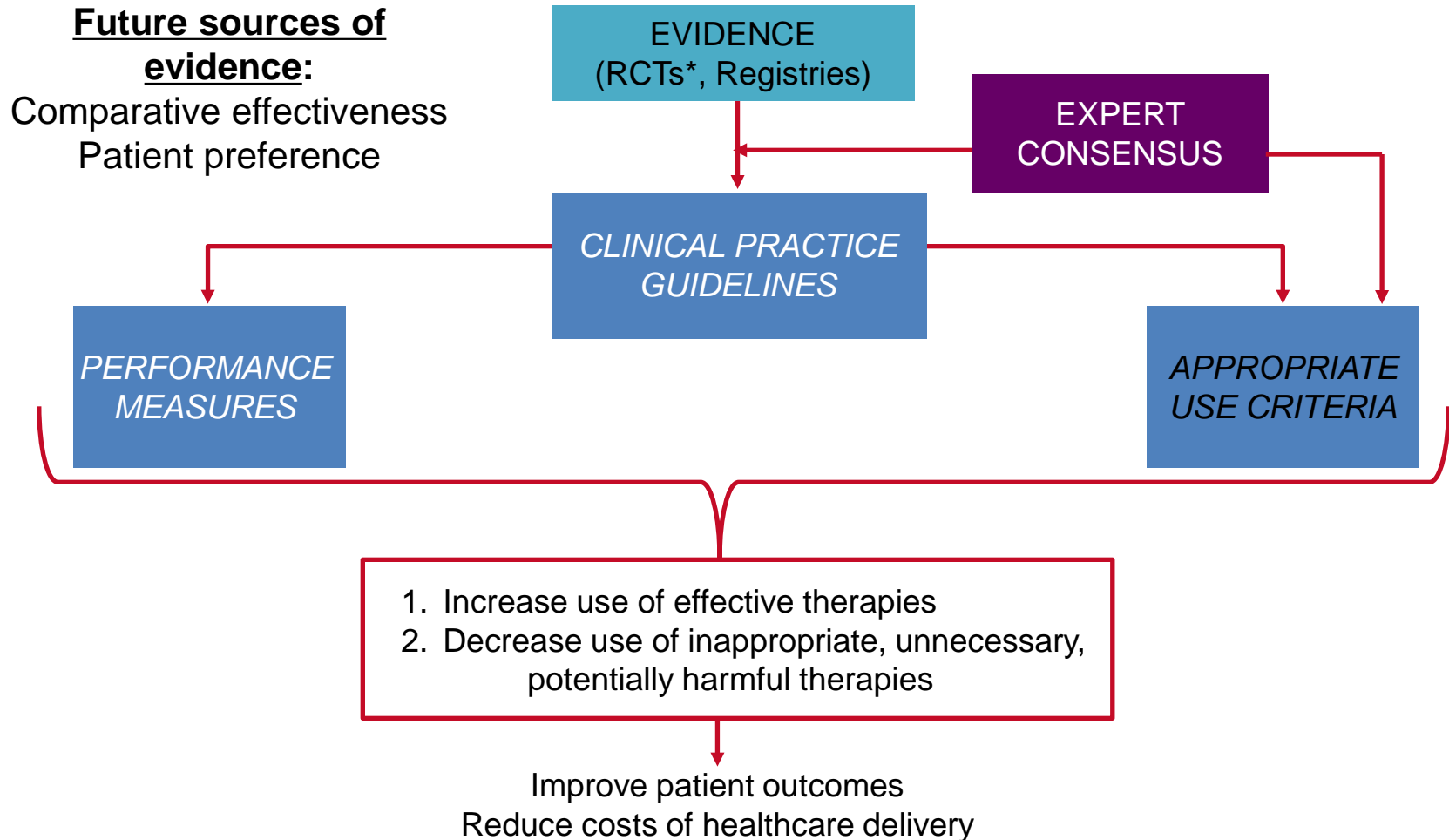
Retrospective comparison with clinical records

Prospective clinical decision aids

% use that is Appropriate, May Be Appropriate, Rarely Appropriate

Increase Appropriate Use

DEVELOPMENT OF CLINICAL PRACTICE GUIDELINES, PERFORMANCE MEASURES, AND APPROPRIATE USE DOCUMENTS

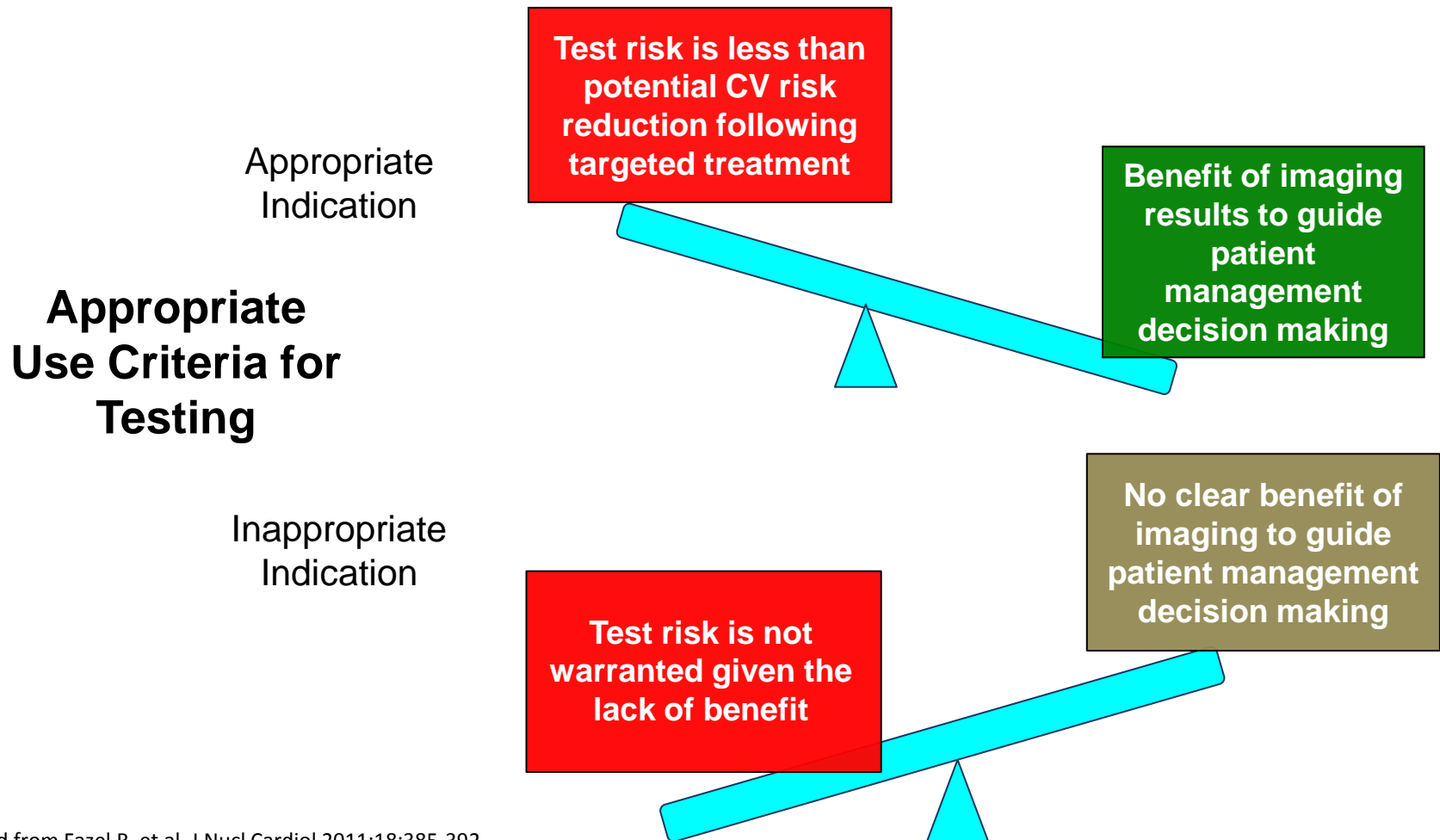


*RCT = randomized clinical trial

Adapted from Antman EM, et al. *Circulation*. 2009;119:1180-1185.

APPROPRIATE USE CRITERIA

Balancing the Risks and Benefits



APPROPRIATE USE CRITERIA

- CT and MR - 2006
- Nuclear Cardiology – 2009
- Echocardiography – 2011
- Catheterization - 2012
- Revascularization – 2012
- ICD and resynchronization – 2013
- Peripheral vascular – venous/arterial – 2012/2013
- Multi-modality
 - Congestive Heart Failure – 2013
 - Stable Ischemic Heart Disease - 2013

ACCF/AHA/ASE/ASNC/HFSA/HRS/SCAI/SCCT/SCMR/STS 2013 Multimodality Appropriate Use Criteria for the Detection and Risk Assessment of Stable Ischemic Heart Disease

A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, American Heart Association, American Society of Echocardiography, American Society of Nuclear Cardiology, Heart Failure Society of America, Heart Rhythm Society, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, Society for Cardiovascular Magnetic Resonance, and Society of Thoracic Surgeons

EXAMPLE OF MULTIMODALITY RATING

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.

69 Indications
 Similar format to prior documents

MULTIMODALITY AUC

Key Points

- Guided by pre-test probability, exercise ability, ECG interpretability
 - Stress radionuclide and echo imaging are appropriate for most categories
- For asymptomatic patients, only exercise ECG is appropriate for high risk patients who can exercise and had an interpretable ECG
- Stress testing appropriate for patients with syncope who have at least an intermediate likelihood of CAD
- Follow-up testing is largely inappropriate in asymptomatic patients or those with stable symptoms
- Among asymptomatic patients who have undergone revascularization, only those with incomplete revascularization should be tested
- For preoperative assessment, testing is indicated only for high risk surgery in patients with poor or unknown functional capacity who also have at ≥ 1 risk factor

AUC: NOT JUST FOR CARDIAC IMAGING

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APPROPRIATE USE CRITERIA

ACCF/HRS/AHA/ASE/HFSA/SCAI/SCCT/SCMR 2013 Appropriate Use Criteria for Implantable Cardioverter-Defibrillators and Cardiac Resynchronization Therapy

A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, Heart Rhythm Society, American Heart Association, American Society of Echocardiography, Heart Failure Society of America, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and Society for Cardiovascular Magnetic Resonance

Endorsed by the American Geriatrics Society

APPROPRIATE USE CRITERIA

ACCF/ACR/AIUM/ASE/IAC/SCAI/SCVS/SIR/SVM/SVS/SVU 2013 Appropriate Use Criteria for Peripheral Vascular Ultrasound and Physiological Testing Part II: Testing for Venous Disease and Evaluation of Hemodialysis Access

A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force

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APPROPRIATE USE CRITERIA

ACCF/SCAI/STS/AATS/AHA/ASNC/HFSA/SCCT 2012 Appropriate Use Criteria for Coronary Revascularization Focused Update

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

Endorsed by the American Society of Echocardiography and the Heart Rhythm Society

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BAD NEWS GETS ALL THE PRESS ATTENTION

Louisiana cardiologist sentenced on health fraud charges

July 13, 2009

A Louisiana cardiologist, Dr. [redacted] was recently sentenced to ten years in prison after his criminal conviction last year for making false claims to government health programs as well as private insurers for medically unnecessary stents and angioplasties. The doctor was sentenced by U.S. District Judge Tucker Melançon to the maximum allowable penalty of ten years in prison, in addition to a \$175,000 fine and restitution charges of \$387,511.

Now that the criminal case is over and the doctor is serving his sentence, a federal False Claims Act lawsuit resumes against the doctor and his heart clinics. Under the False Claims Act, private citizens may conduct investigations of claims of government fraud and retain a percentage of any recovery. The whistleblower suit was filed by Dr. Christopher Malhotra, one of Patel's former associates. The suit was filed against Patel and the hospitals where he worked, Our Lady of Lourdes Regional Medical Center and Lafayette General Medical Center. Both hospitals have paid substantial settlements to resolve charges that their staff failed to respond to complaints that Patel was performing unnecessary medical procedures.

[redacted] was to report to federal prison on July 6.

10 Years in Prison
\$175,000 fine
\$387,511 restitution

LIGHT FOR ALL
THE BALTIMORE SUN 66° F

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Home > News > Maryland News

Senators launch fraud inquiry of Md. hospital

St. Joseph records sought; probe spurred by report of unneeded stents

By Robert Little
 February 20, 2010

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★★★★☆

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- Vote to confirm Swaim-Staley for transportation is delayed
-  Maryland Politics blog

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Federal lawmakers have asked St. Joseph Medical Center to turn over three years of billing records and other documents related to cardiac care, saying they are troubled by reports of unnecessary coronary stents implanted at the Towson hospital and want to investigate for signs of Medicare fraud.

Montana Sen. Max Baucus and Iowa Sen. Charles E. Grassley - the top Democrat and senior Republican, respectively, on the Senate Finance Committee - also asked the hospital for records

Patients learn they might have unneeded stents

Federal probe focusing on procedures
 369 St. Joseph heart patients affected

January 15, 2010 | By Robert Little | Baltimore Sun reporter



Baltimore Sun photo by Algerina Perna

St. Joseph Medical Center in Towson, whose cardiology business is a focus of a continuing federal health-care fraud investigation, has notified hundreds of its heart patients that they may have received expensive and potentially dangerous coronary implants they didn't need.

An internal review, begun last May at the behest of federal investigators and in response to a patient complaint, has turned up 369 patients with stents that appear to have been implanted in their arteries unnecessarily, CEO Jeffrey K. Norman said in an interview yesterday. Patients began receiving letters alerting them to the finding early last month, and more notifications are expected as the review continues.

"We take our interaction and the care of our patients with the utmost seriousness, and so we wanted to alert

patients and their physicians to what we found," said Norman.

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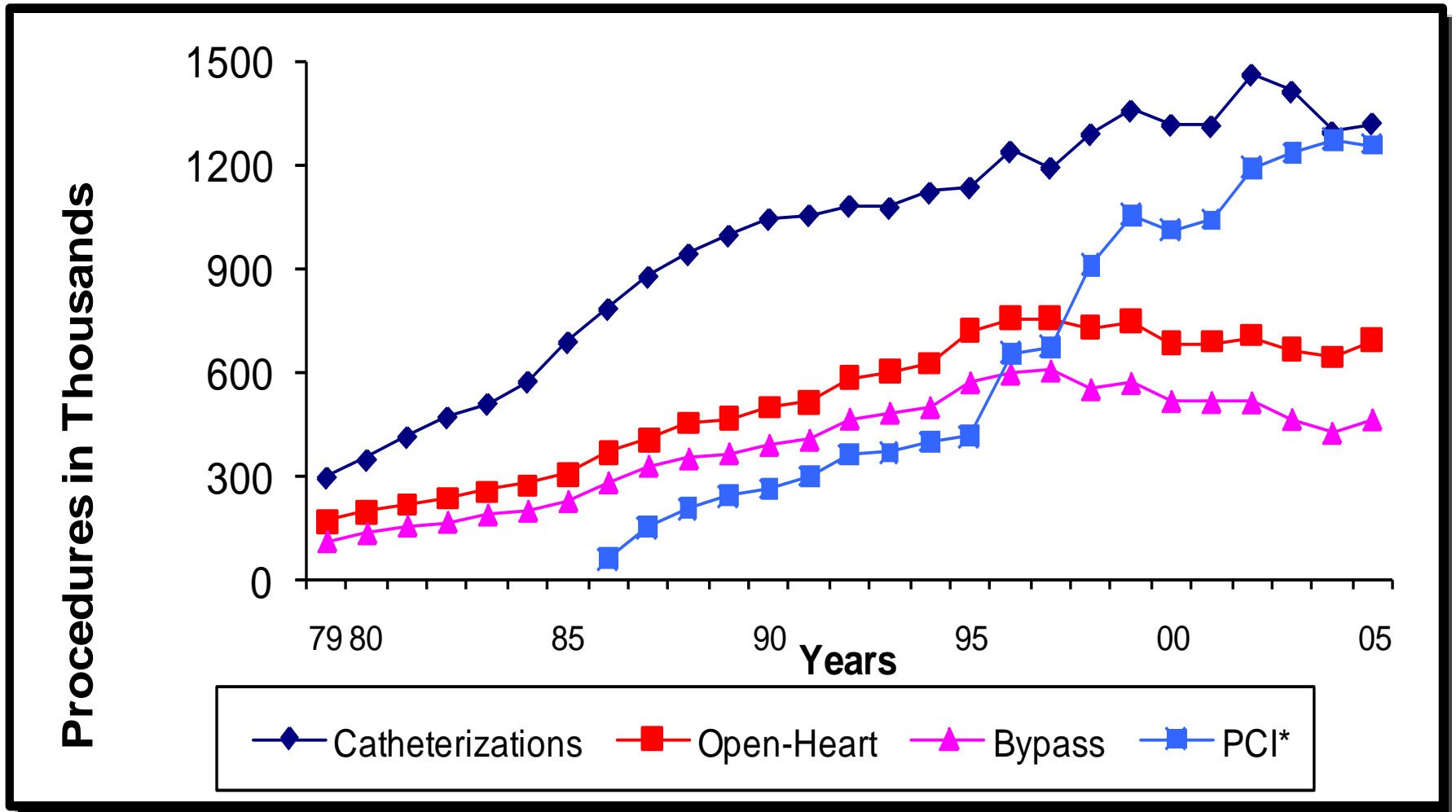
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CORONARY REVASCULARIZATION PROCEDURES: *Growth of PCI*



Trends in Cardiovascular Operations and Procedures. Source: NCHS and NHLBI.

15-FOLD VARIATION IN THE USE OF PCI

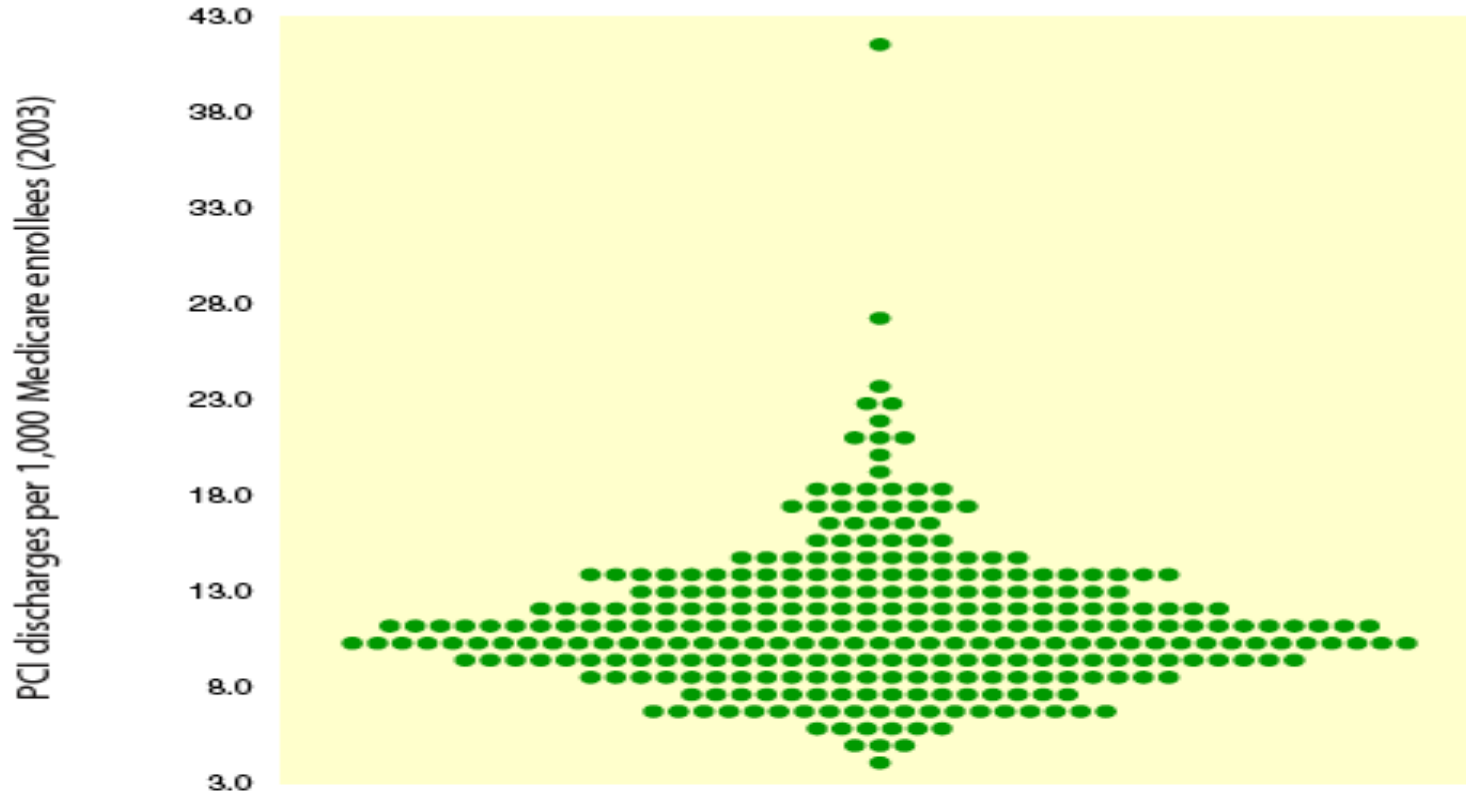
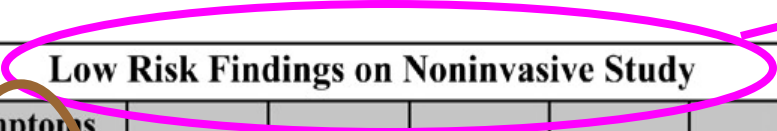


Figure 11. Rates of PCI Among Hospital Referral Regions, 2003
Each point represents the rate in one of the 306 HRRs in the United States.

LOW-RISK FINDINGS ON NONINVASIVE IMAGING STUDY AND ASYMPTOMATIC (NO PRIOR BYPASS SURGERY)

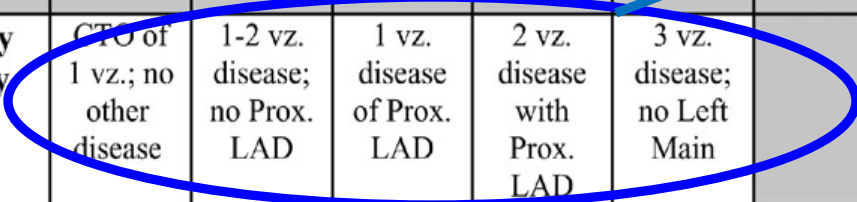
Non-invasive testing

Low Risk Findings on Noninvasive Study						Asymptomatic					
Symptoms						Stress					
Med. Rx						Symptoms/Rx					
Class III or IV Max Rx	U	A	A	A	A	High Risk Max Rx	U	A	A	A	A
Class I or II Max Rx	U	U	A	A	A	High Risk No/min Rx	U	U	A	A	A
Asymptomatic Max Rx	I	I	U	U	U	Int. Risk Max Rx	U	U	U	U	A
Class III or IV No/min Rx	I	U	A	A	A	Int. Risk No/min Rx	I	I	U	U	A
Class I or II No/min Rx	I	I	U	U	U	Low Risk Max Rx	I	I	U	U	U
Asymptomatic No/min Rx	I	I	U	U	U	Low Risk	I	I	U	U	U
Coronary Anatomy	CTO of 1 vz.; no other disease	1-2 vz. disease; no Prox. LAD	1 vz. disease of Prox. LAD	2 vz. disease with Prox. LAD	3 vz. disease; no Left Main	Coronary Anatomy	CTO of 1 vz.; no other disease	1-2 vz. disease; no Prox. LAD	1 vz. disease of Prox. LAD	2 vz. disease with Prox. LAD	3 vz. disease; no Left Main



Symptoms/Rx

Burden of disease



CONSIDERATION FOR REVASCULARIZATION AMONG PATIENTS WITH HIGH-RISK FINDINGS ON NONINVASIVE IMAGING STUDY AND CCS CLASS III OR IV ANGINA

High-Risk Findings on Noninvasive Study						CCS Class III or IV Angina					
Symptoms Med. Rx						Stress Test Med. Rx					
Class III or IV Max Rx	A	A	A	A	A	High Risk Max Rx	A	A	A	A	A
Class I or II Max Rx	A	A	A	A	A	High Risk No/min Rx	A	A	A	A	A
Asymptomatic Max Rx	U	A	A	A	A	Int. Risk Max Rx	A	A	A	A	A
Class III or IV No/min Rx	A	A	A	A	A	Int. Risk No/min Rx	U	U	A	A	A
Class I or II No/min Rx	U	A	A	A	A	Low Risk Max Rx	U	A	A	A	A
Asymptomatic No/min Rx	U	U	A	A	A	Low Risk No/min Rx	I	U	A	A	A
Coronary Anatomy	CTO of 1-vz.; no other disease	1-2-vz. disease; no prox. LAD	1-vz. disease of prox. LAD	2-vz. disease with prox. LAD	3-vz. disease; no left main	Coronary Anatomy	CTO of 1-vz.; no other disease	1-2-vz. disease; no prox. LAD	1-vz. disease of prox. LAD	2-vz. disease with prox. LAD	3-vz. disease; no left main

APPROPRIATE USE OF PERCUTANEOUS CORONARY INTERVENTION

Results of the NCDR Registry

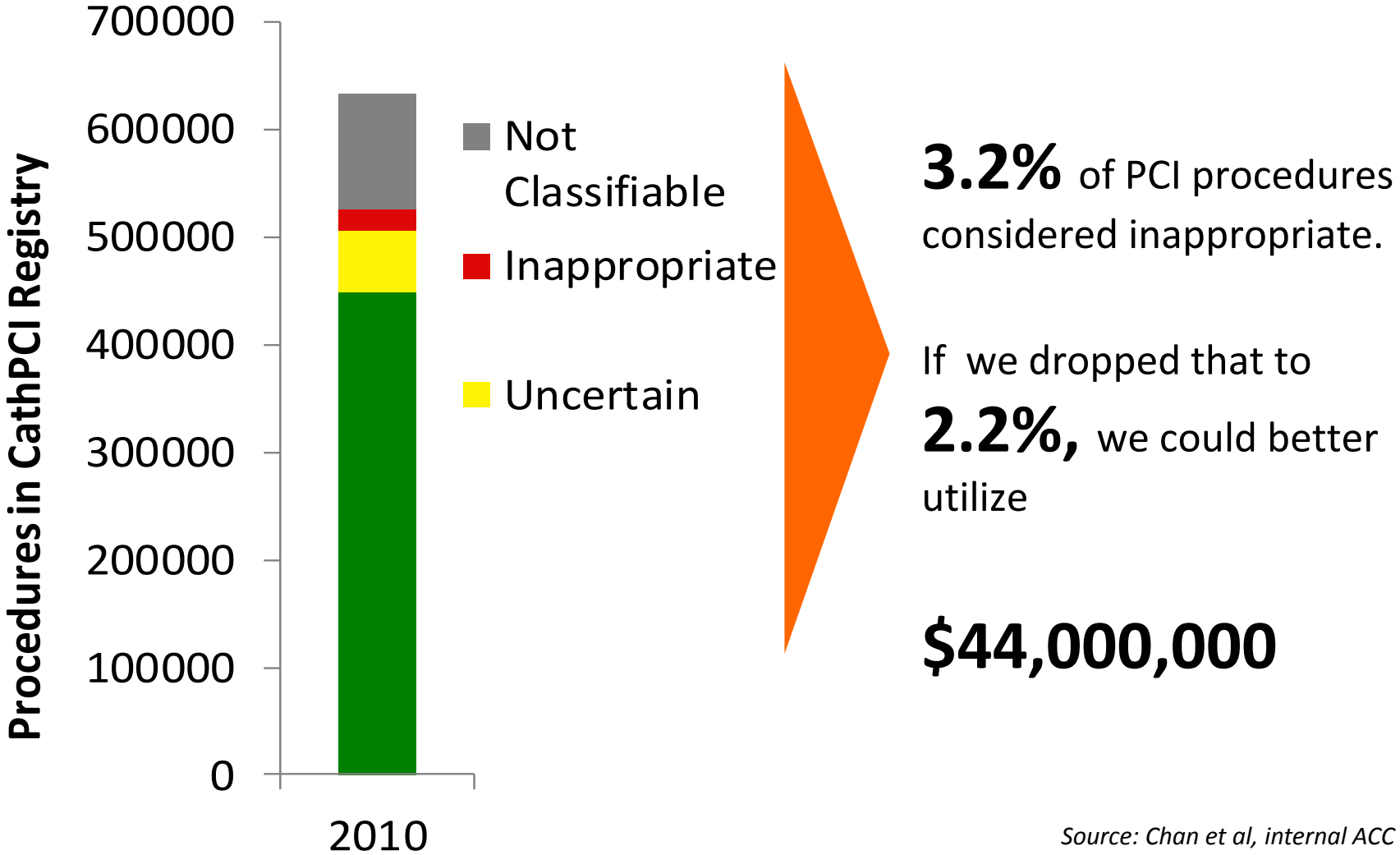
	OVERALL	ACUTE	NON-ACUTE
	n=500,154	n=355,417	n=144,737
Appropriate	84.6%	98.6%	50.4%
Uncertain	11.2%	0.3%	38.0%
Inappropriate	4.1%	1.1%	11.6%

APPROPRIATENESS OF CORONARY REVASCULARIZATION

Most Common Reasons for Inappropriate Use

	Anatomy	Symptoms	Stress test, risk	Anti-Ischemic Rx	n (%)
CABG	1, 2 V, non-PLAD	Asymptomatic	Interm	None/Min.	51 (55%)
	1, 2 V, non-PLAD	CCS I-II	Low	None/Min.	20 (22%)
PCI	1, 2 V, non-PLAD	Asymptomatic	Interm	None/Min.	1,583 (45%)
	1, 2 V, non-PLAD	CCS I-II	Low	None/Min.	1,203 (34%)
	1, 2 V, non-PLAD	Asymptomatic	Low	None/Min.	488 (12%)

OPPORTUNITIES FOR COST SAVINGS OR BETTER RESOURCE DEPLOYMENT



Source: Chan et al, internal ACC analysis

STRESS TESTING AND SPECT MPI AFTER REVASCULARIZATION

- Medicare database review in 28,172 patients
- High frequency of post-procedural stress testing
 - 39% @ 1 year
 - 59% @ 2 year
 - Clustering at 6 and 12 months (“routine”)
- SPECT is most common
- Geographic variation noted
- Rate exceeds historical recurrence rate of angina (18%)
- Post-test: 11% cath, 5% revascularization

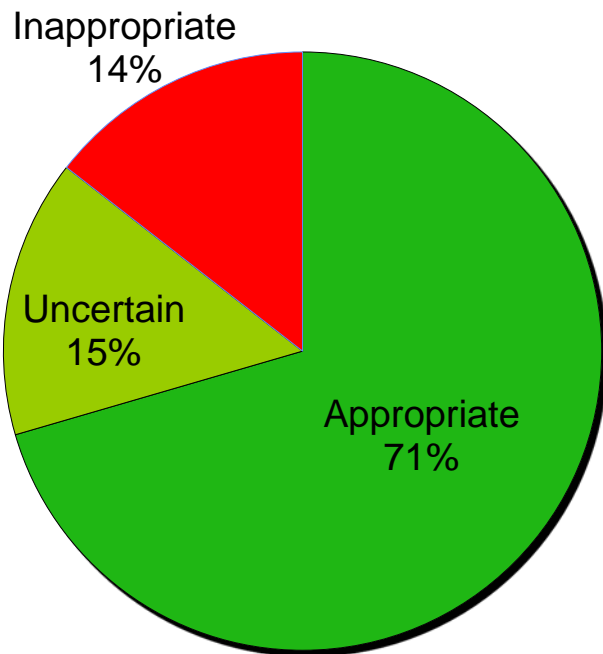
EVALUATION OF APPROPRIATENESS FOR RADIONUCLIDE IMAGING

	Appropriate	Uncertain	Inappropriate
Hendel, 2006	83%	6%	11%
Mehta, 2006	78%	5%	8%
Ayyad, 2007	85%	5%	10%
Druz, 2007	57%	33%	10%
Gaztanega, 2007	55%	28%	17%
Al-Mallah, 2007	75%	12%	13%
Gibbons, 2008	64%	11%	14%
Hendel, 2009	71%	15%	14%
Gibbons, 2010	66%	15%	7%
Koh, 2010	82%	5%	10%
Carrier, 2010	60%	16%	24%
Gupta, 2011	84%	5%	11%
Lin, 2013	53%	29%	15%
Lalude, 2014	77%	10%	13%
Medolago, 2014	84%	9%	7%
Singh, 2014	88%	7%	5%

EVALUATION OF APPROPRIATENESS FOR RADIONUCLIDE IMAGING

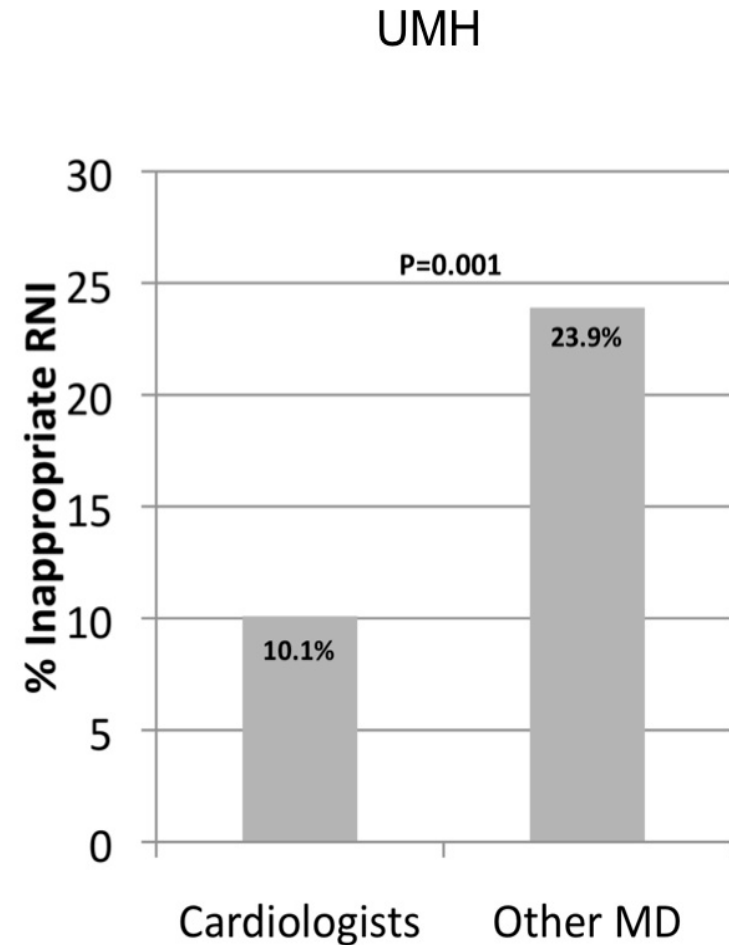
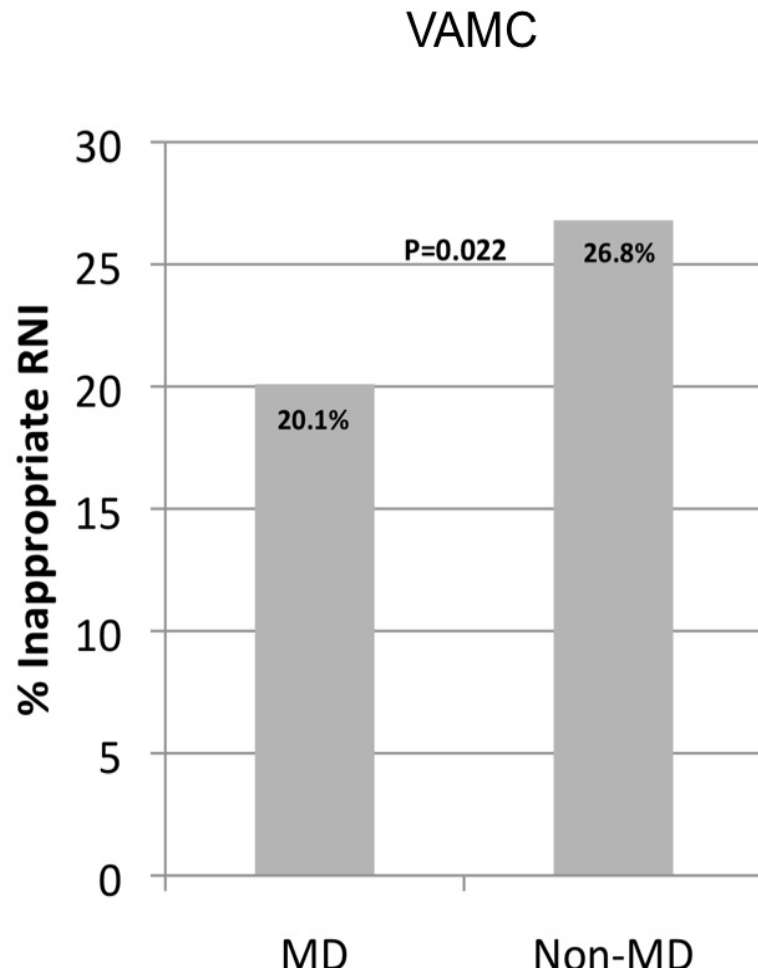
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Gibbons, 2010	66%	15%	7%
Koh, 2010	82%	5%	10%
Carrier, 2010	60%	16%	24%
Gupta, 2011	84%	5%	11%
Lin, 2013	53%	29%	15%
Lalude, 2014	77%	10%	13%
Medolago, 2014	84%	9%	7%
Singh, 2014	88%	7%	5%

Appropriateness Classification (n=5,928)



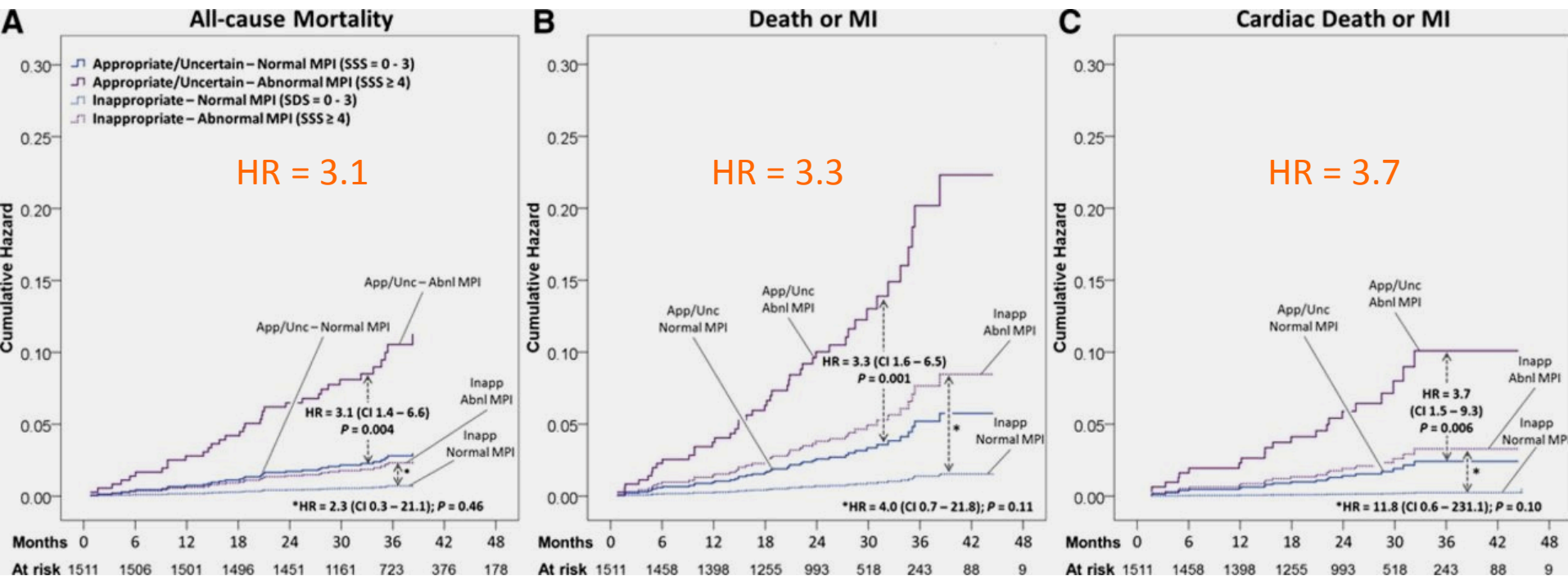
INDICATION	% INAPPRO INDICATIONS	% TOTAL STUDIES
Detection of CAD Asymptomatic, low CHD risk	44.5%	6.0%
Asymptomatic, post-revascularization < 2 years after PCI, symptoms before PCI	23.8%	3.2%
Evaluation of chest pain, low probability pt Interpretable ECG and able to exercise	16.1%	2.2%
Asymptomatic/stable symptoms, known CAD, < 1 year after cath/abnormal SPECT	3.9%	0.5%
Pre-operative assessment Low risk surgery	3.8%	0.5 %
TOTAL	92.1%	12.4 %

INAPPROPRIATE USE OF RADIONUCLIDE IMAGING BASED ON ORDERING CLINICIAN AND INSTITUTION



PROGNOSTIC IMPACT OF AUC

Adverse Cardiac Events Based On MPI Results And Appropriateness (n=1,511)



- Abnormal MPI among patients with **appropriate** indication **predicted** MACE, with HR as above
- Abnormal MPI among patients with **inappropriate** indication **failed** to predict MACE

APPROPRIATE USE OF CARDIOVASCULAR TECHNOLOGY

Potential Impact of AUC

- Establishment of partnership among clinicians, educators, and payers regarding rational practices in cardiovascular imaging and fair reimbursement
- Education of clinicians regarding their practice habits
- Emphasis of clinical indications to drive testing
- Facilitate reimbursement for “appropriate”
- Support for requirement of preauthorization or denial of reimbursement for “rarely appropriate” indications
- Optimize cardiovascular care
- Improve cost-effectiveness

IMPROVING APPROPRIATENESS

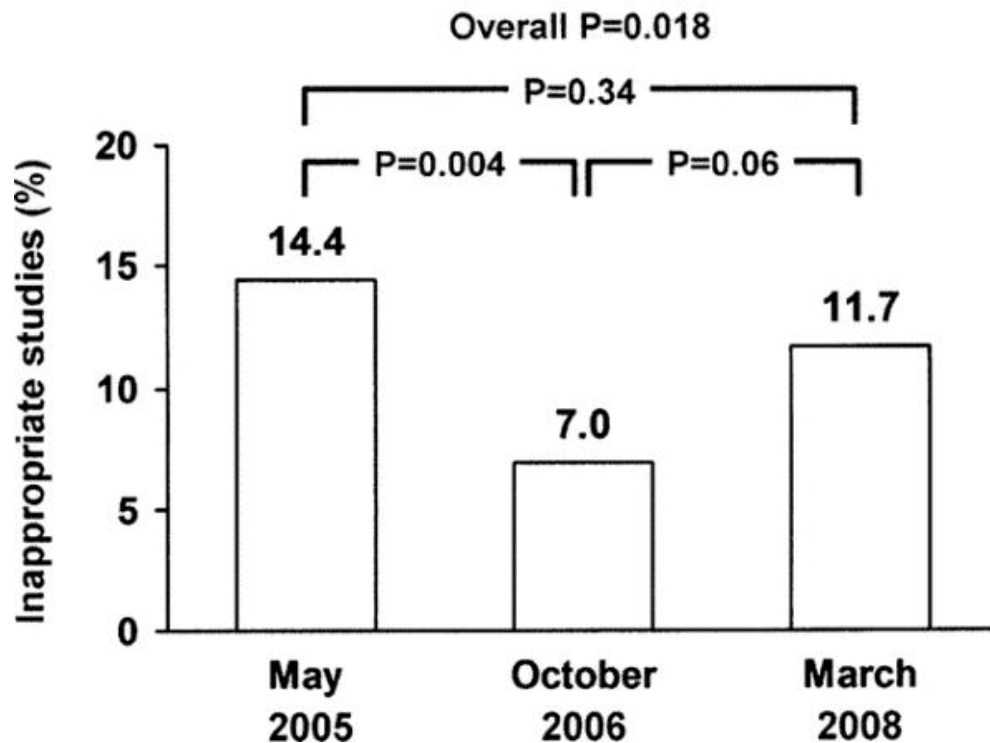
- Does education work?
- What methods?
 - Multifaceted approach (cases, peer discussions)
 - Interactive
 - Longitudinal
 - Behavior reinforcement (feedback)
 - Integrated into workflow (clinical decision support)

So What Works?

- Education (99 RCT's and Cochrane analysis)
 - CME alone – very little effect
 - Printed materials – small effect
 - Outreach with opinion leaders – additive effect
- Academic detailing (Cochrane analysis 18 trials)
 - Multi-factorial approach (written, conferences) – somewhat effective
 - Professional societies – most effective

Education Alone

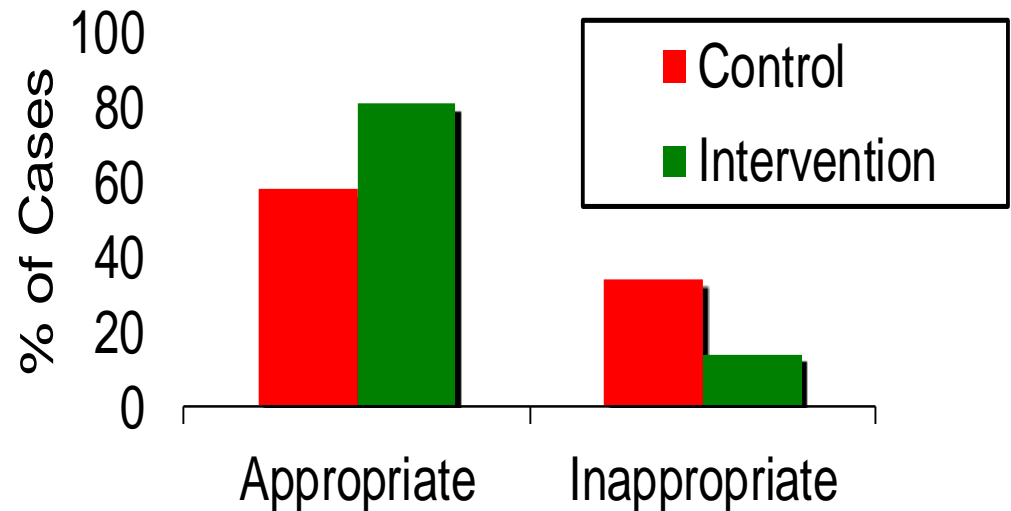
Stress SPECT Studies



- Grand Rounds presentation
- Staff newsletter
- Administrator meetings
- Dept/division presentations

EDUCATIONAL INTERVENTION TO REDUCE INAPPROPRIATE ECHOCARDIOGRAMS

- Randomized, controlled trial of physicians-in-training
- Educational targets easily identified
- Intervention: lecture, “pocket card”, monthly individual feedback

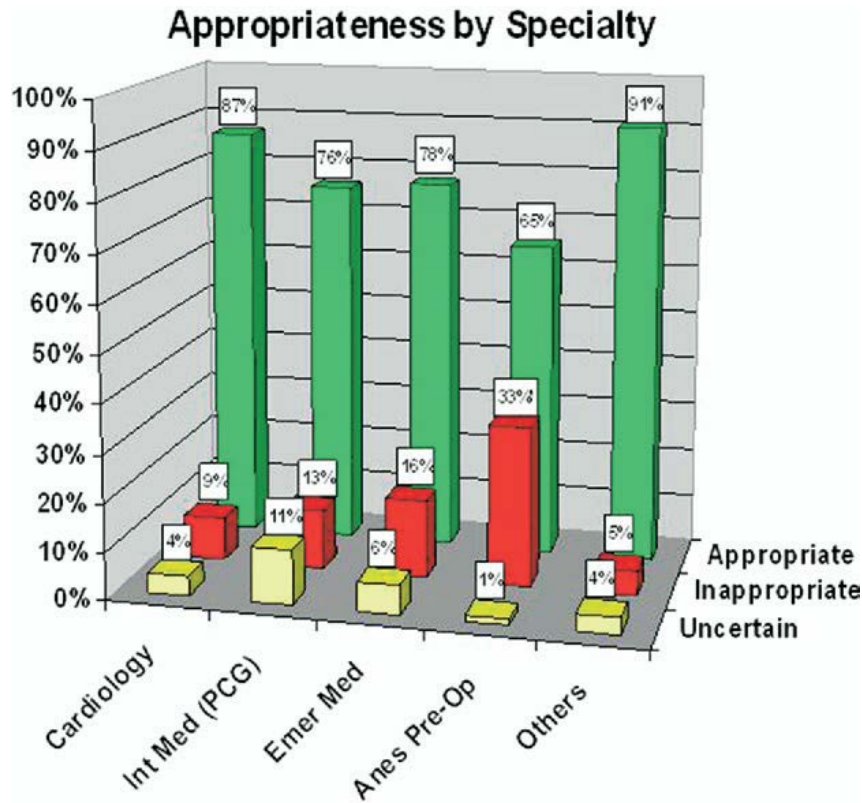


OR: 2.7 (1.5-5.1); $p < 0.002$

So What Works?

- Reminders (42 RCT's)
 - Effective on processes of care
 - Preventive measures
 - At time of care delivery
- Audit and feedback
 - Significant but minimal effect on utilization
 - 12 studies, $p < 0.05$ for direction of effect
 - 8 studies, $p < 0.05$ direct comparison groups
 - 5 studies, OR 1.091, CI 1.045 – 1.136

Utilization of Data

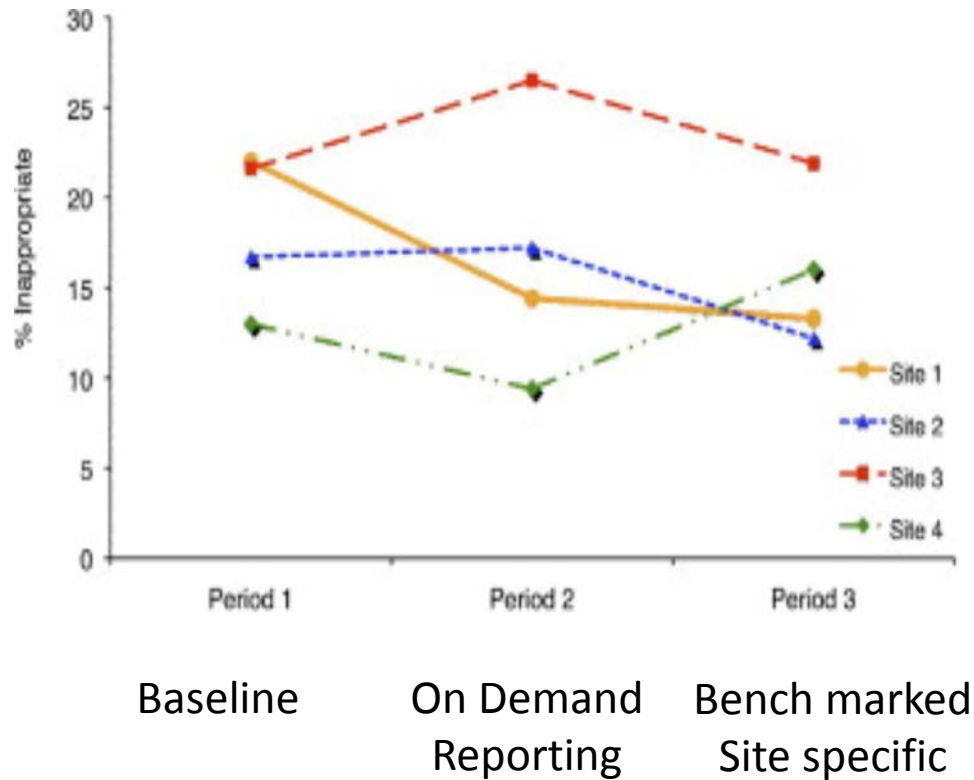


- Data analysis allows for targeted intervention
- Pre-op testing by anesthesia was an outlier
- Focused education

So What Works?

- Guidelines (72 trials)
 - 55/59 demonstrated process improvements
 - 9/11 significant outcome improvements
 - 5/13 (38%) statistically significant differences in primary care
 - High degree of variability in results

Multi-Center Approach



- Internal analysis, group meetings, education prioritized by management
 - Site 1
- No active review or educational sessions –
 - Sites 2-4

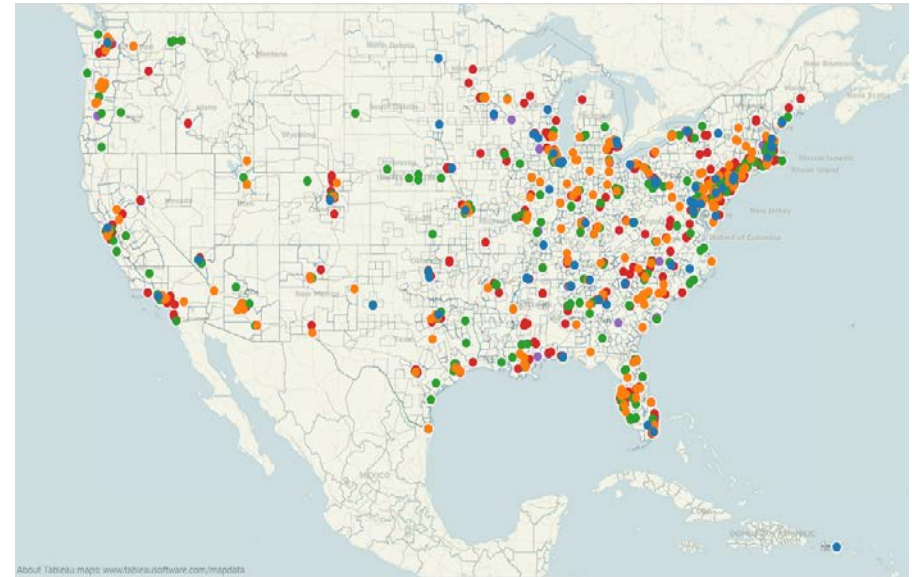
So What Works?

- Combined interventions
 - Passive information dissemination ineffective
 - Small dose education ineffective
 - Guideline dissemination effective but source important
 - Disparate results for any one method
 - Multiple methods are most effective



Formation of Optimal Cardiovascular Utilization Strategies: IMAGING *A National Campaign*

- A collaborative community
 - Share knowledge, experience, and best practices
 - Standardized order sets
- Develop educational materials
 - Non-confrontational
 - Blogs, listservs, webinars
 - Letters to referring clinicians
- Advantage for participation
 - Competitive advantage
 - Laboratory accreditation
 - QI through PIM
 - CME credit opportunities



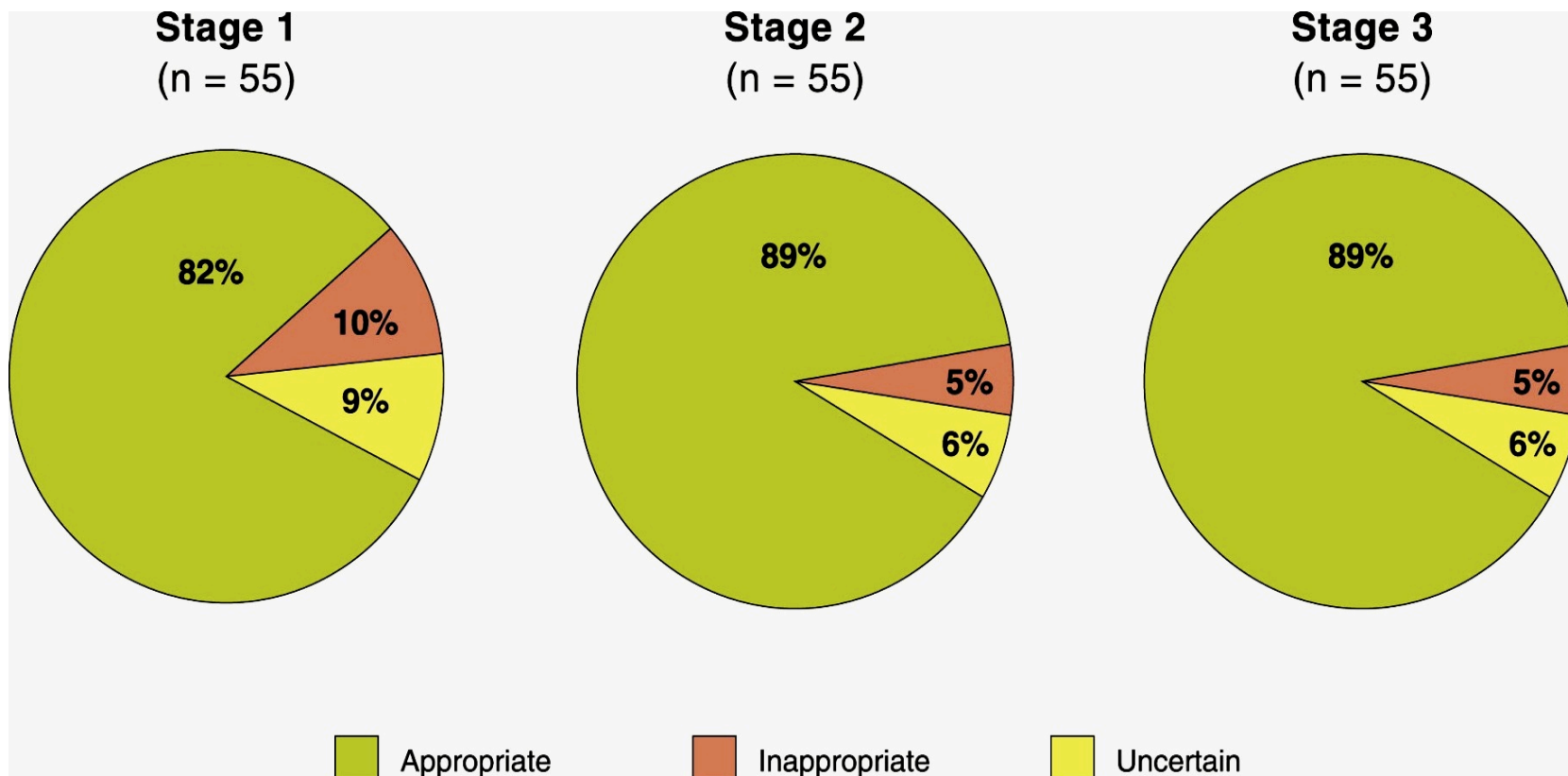
About Tableau maps: www.tableausoftware.com/mapdata

Year of Registration Date
■ 2010
■ 2011
■ 2012
■ 2013
■ 2014

- Ⓡ More than 1,100 sites
- Ⓡ More than 12,000 physicians
- Ⓡ 25,000+ cases



IMAGING IN FOCUS



50% reduction in the inappropriate rate (**10% to 5%**)
($p < 0.0001$)

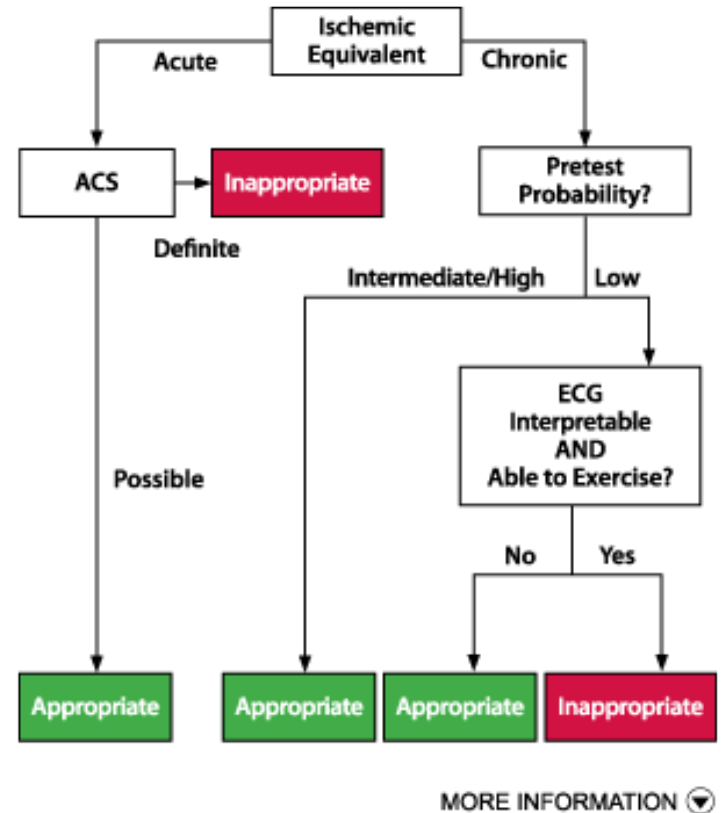
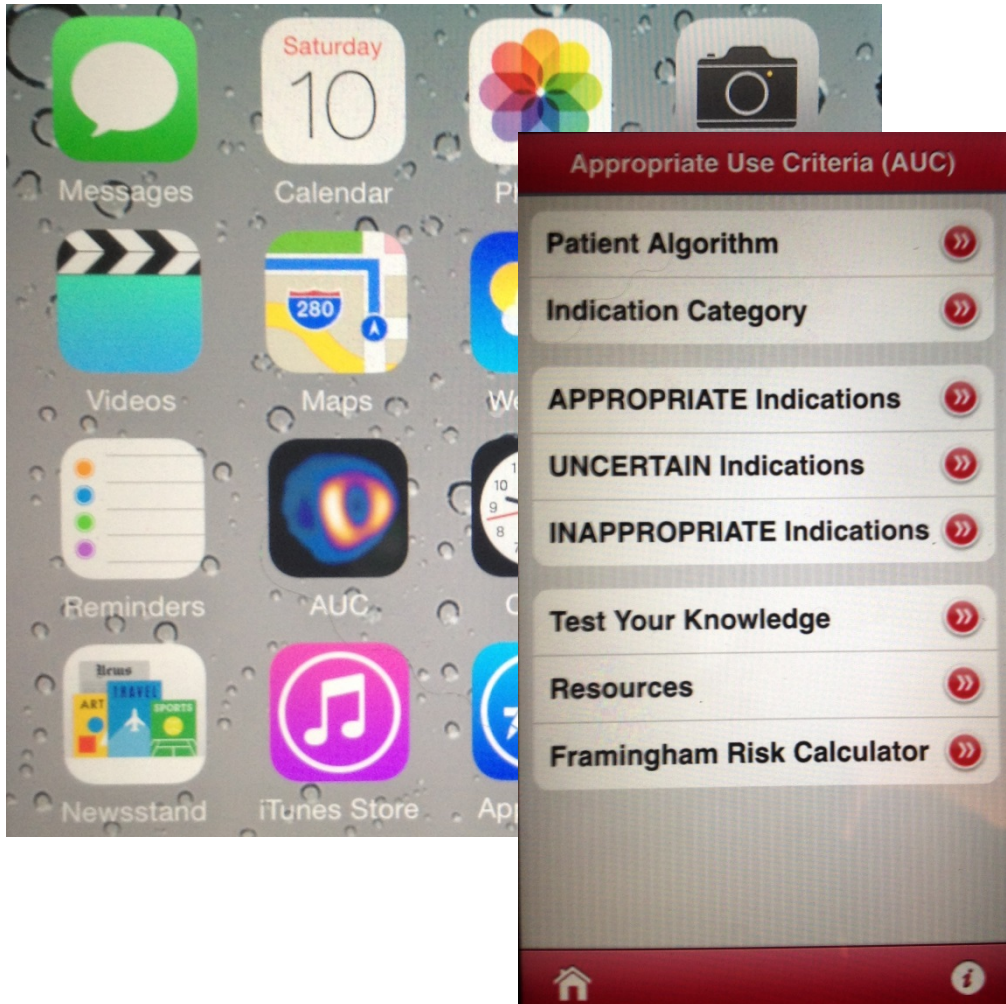


IMAGING IN
FOCUS

Decision Support

- Quick reference at point of order
- App, EHR, or Web portal
- Free for individual cases
- Subscription for tracking cases
- Currently deployed in several markets with single payer
- Lab accreditation, MOC Part IV, PQRS
- Future mandate for CMS

AUC App Decision Support



<http://www.astellasapps.com/Webapp.aspx>

USE OF A DECISION SUPPORT TOOL FOR OPTIMIZING UTILIZATION OF CARDIAC IMAGING

- Point-of-order decision support tool (CycleMD™; MDDX)
- Use for stress echo, SPECT MPI, and CCTA
- Required less than 1 min in >50% of cases; mean=2 min
- Features educational component

- Results
 - Appropriateness increased from 49% to 61% (p=0.02)
 - Inappropriateness decreased from 22% to 6% (p=0.0001)
 - Medical therapy changes increased from 11% to 32%

- Effective alternative to RBM

FOCUS: Cardiovascular Imaging Strategies

POTENTIAL SAVINGS

- Replace inefficient utilization control with more efficient utilization control
- Reduce /realign 2 – 3 FTE currently devoted to third party authorization
- Reduce costs of utilization management from \$.30 - \$1.00 PMPM to \$.06 - .08 PMPM
- Save or better utilize **\$271,000,000 - \$926,400,000** currently spent on third party control



AMERICAN SOCIETY OF
NUCLEAR CARDIOLOGY

CHOOSING WISELY CAMPAIGN



- A national campaign led by the ABIM Foundation to promote commonly misused or overused medical tests.
- ACR, ACC, ASNC are among partnering organizations
- Consumer Reports is also campaign partner
- Campaign Web site: www.choosingwisely.org

Choosing Wisely
An initiative of the ABIM Foundation

About Partners Lists Learn Resources

Partners
See Who Has Joined the Campaign

Consumer Reports Health

Choosing Wisely™ aims to get physicians, patients and other health care stakeholders thinking and talking about the overuse or misuse of medical tests and procedures that provide little benefit, and in some instances harm.

NEWS FEED

No tweets found for @abimfoundation

Choosing Wisely

Four Things Physicians and Patients Should Question



Don't perform stress cardiac imaging or advanced non-invasive imaging in the initial evaluation of patients without cardiac symptoms unless high-risk markers are present.

Asymptomatic, low-risk patients account for up to 45 percent of unnecessary “screening.” Testing should be performed only when the following findings are present: diabetes in patients older than 40-years-old; peripheral arterial disease; or greater than 2 percent yearly risk for coronary heart disease events.

Choosing Wisely

Four Things Physicians and Patients Should Question



Don't perform annual stress cardiac imaging or advanced non-invasive imaging as part of routine follow-up in asymptomatic patients.

Performing stress cardiac imaging or advanced non-invasive imaging in patients without symptoms on a serial or scheduled pattern (e.g., every one to two years or at a heart procedure anniversary) rarely results in any meaningful change in patient management. This practice may, in fact, lead to

Choosing Wisely

Four Things Physicians and Patients Should Question



Don't perform stress cardiac imaging or advanced non-invasive imaging as a pre-operative assessment in patients scheduled to undergo low-risk non-cardiac surgery.

Non-invasive testing is not useful for patients undergoing low-risk non-cardiac surgery (e.g., cataract removal). These types of tests do not change the patient's clinical management or outcomes and will result in increased costs.



Choosing Wisely

Four Things Physicians and Patients Should Question

Don't perform echocardiography as routine follow-up for mild, asymptomatic native valve disease in adult patients with no change in signs or symptoms.

Patients with native valve disease usually have years without symptoms before the onset of deterioration. An echocardiogram is not recommended yearly unless there is a change in clinical status.

AUC AND CONGRESS/CMS

Protecting Access to Medicare Act of 2014

- “Establish a program to promote the use of AUC...for applicable (advanced) imaging services”
- “Criteria developed or endorsed by national professional medical specialty societies ...to the extent feasible, such criteria shall be evidence-based” ; To be completed by 11/15/15
- Applicable to physician’s office or hospital outpatient setting
- Use of clinical decision support, within and independent of EHR’s
- To be initiated on January 1, 2017
- Determine “outlier ordering physician...based on low adherence to applicable AUC” and initiate prior authorization for outliers on 1/1/20



ACCF APPROPRIATENESS USE CRITERIA

- Literature-based (when possible) approach to improve utilization of resource-intensive tests and procedures
 - Developed by physicians/providers
 - Initial focus on cardiac imaging
 - Expansion to revascularization, potential for other procedures
- Serves as a method for focused reduction of procedures based on clinical value, not indiscriminant volume reduction
- Keeps money within the system and permits continuous quality improvement through education
- Preserves patient/provider relationship
- Provides for continued patient access

CONCLUSIONS

- CV tests and procedures have exhibited substantial growth and geographic variability, suggesting possible overuse.
- AUC have been developed/revised for cardiac imaging, coronary revascularization, ICD/pacemaker implantation and other procedures.
- Appropriate use can be measured and relative performance may be evaluated.

CONCLUSIONS

- Multiple educational tools have been developed with a goal of reducing inappropriate testing; provider feedback and clinical decision support appear essential for improvement
- Goal of AUC “movement” is optimized patient care, with a consciousness of cost



UNIVERSITY OF
SOUTH CAROLINA

School of Medicine
Greenville



GREENVILLE
HEALTH SYSTEM

Thank You!