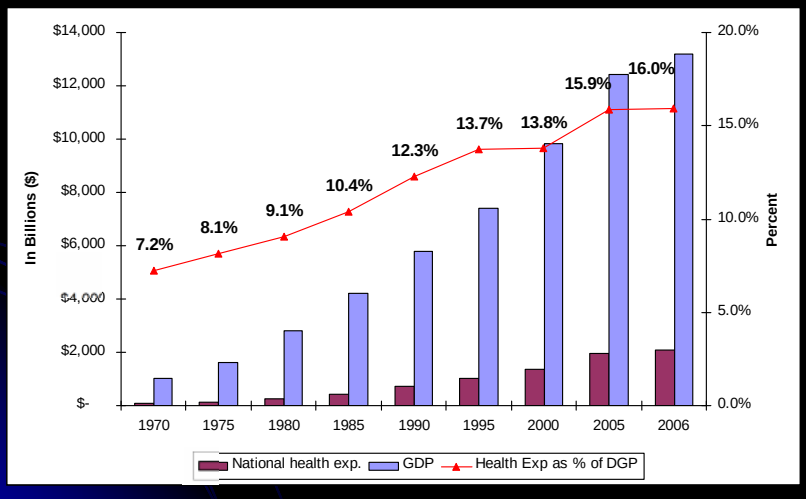
Imaging under Fire: Appropriate Use and Reimbursment

Douglas S. Segar, MD FACC
The Care Group

Health Care Expenditures as % of GDP

Between 2001 and 2016, health spending is projected to grow 2.5% per year faster than GDP, so that by 2016 it may constitute 20% of GDP.



SOURCE: CMS, Office of the Actuary, National Health Statistics Group.

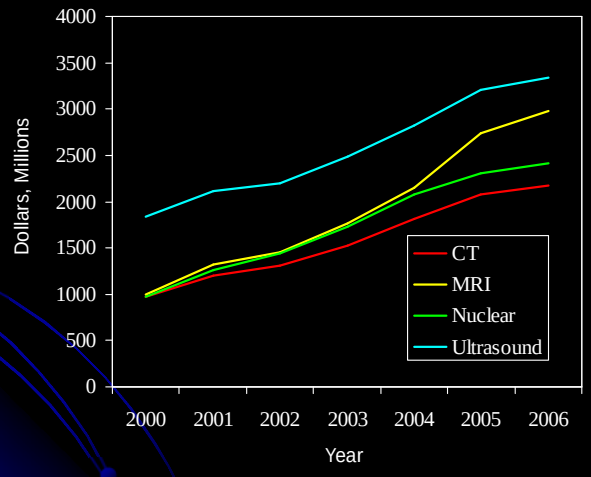
Heart Disease Consumes 13% of Total Healthcare Expenditures

EXHIBIT 4
Estimated Direct And Indirect Costs (In Billions Of Dollars) Of Cardiovascular Disease (CVD) And Stroke, United States, 2006

	Heart diseases ($)	Coronary heart disease ($)	Stroke ($)	Hypertensive disease ($)	Heart failure ($)	Total CVD ($)[b]
Direct costs						
Hospital	81.3	41.8	15.5	6.2	15.4	114.8
Nursing home	20.7	10.9	14.3	4.2	3.9	42.6
Physicians/other professionals	19.7	11.1	3.1	11.0	2.0	38.3
Drugs/other medical durables	21.2	9.8	1.3	24.4	3.1	50.1
Home health care	5.2	1.6	3.1	1.7	2.4	11.8
Total expenditures[b]	148.1	75.2	37.3	47.5[c]	26.8	257.6
Indirect costs						
Lost productivity/morbidity	21.9	9.6	6.4	7.7	–[d]	35.6
Lost productivity/mortality[e]	88.5	57.7	14.2	8.3	2.8	109.9
Grand totals[b]	258.5	142.5	57.9	63.5	29.6	403.1

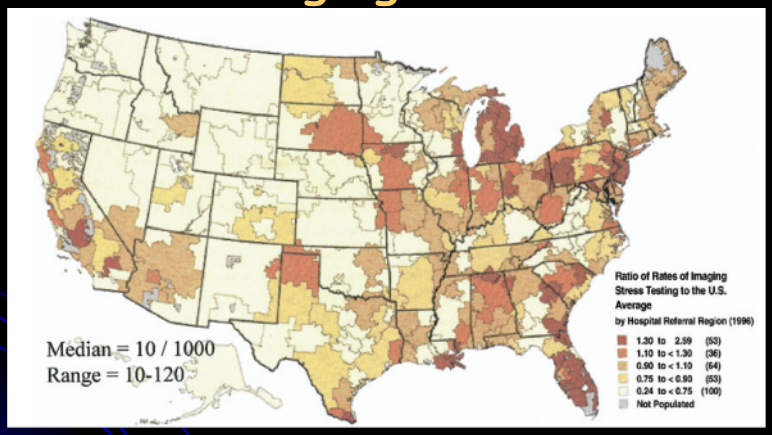
Mensah and Brown, Health Affairs, '07

Medicare Spending on In-Office Imaging



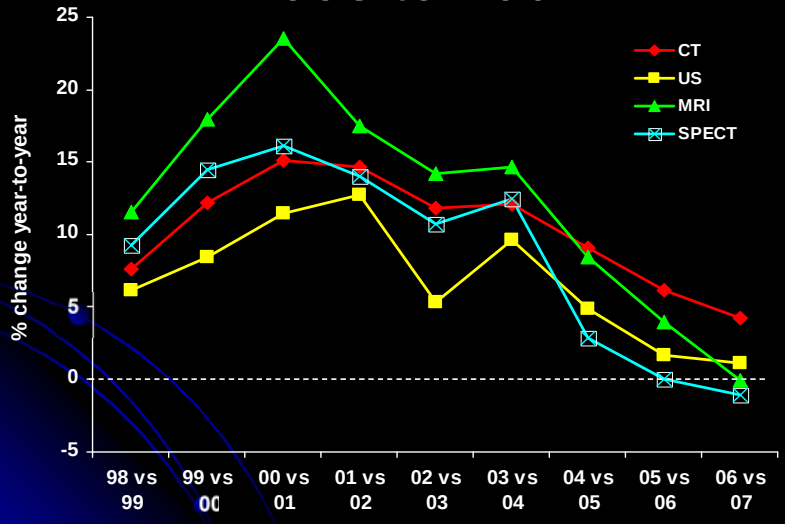
GAO Report to Congress: Medicare Part B Imaging Services, June '08

Geographic Variation in Stress Imaging Rates



Wennberg et al, Dartmouth Atlas of CV Health Care

Growth of Imaging 1998 to 2007



The Moran Company, 2009

Understanding the Private Payers

Presented to: American Society for Echocardiography
By: Preferred Health Strategies
September 2, 2009

Understanding the Private Payers

- The private commercial market is much different than traditional Medicare
- Coverage and reimbursement for the private payers is defined by the individual insurance plan and/or by the employer group
- The big plans have both national and local accounts - coverage and medical management may vary for each type of account (e.g. Anthem has standard separate pre-cert requirements for national accounts by region)
- Coverage and reimbursement also varies by the type of plan (HMO, PPO, etc.)

Decision-making process

- The Medical Directors play a key role in decision-making regarding issues concerned with:
  - Quality
  - Coverage
  - Clinical protocols
  - Medical management
- Ultimately, however, cost is a major factor in policy decisions and all the Medical Directors are held accountable within the corporate structure

Major Players

- The top ten health plans in the U.S. now account for an estimated 40% of the total number of covered lives
- In total, approximately 132 million people are insured by these 10 plans

Top 10 Health Plans

Company Name	***Estimated Enrollment (in millions)***
Wellpoint	34.2
UnitedHealth Group	25.0
Aetna	19.0
Health Care Service Corp. (BCBS of TX, OK, IL, NM)	12.4
Humana	11.4
Cigna	9.1
Kaiser	8.8
Highmark	4.8
BCBS of Michigan	4.7
HIP (now Emblem)	3.4

Source: AISHealth.com updated by corporate website data where available

Utilization/Medical Management Trends

- During the early 1990's, utilization management tools, including prior authorization, became much more prevalent as way of controlling costs
- Prior-authorization was initially focused on elective admissions and other high ticket items
- By early 2000, many plans pulled back from these programs as a result of increasing consumer and provider dissatisfaction

Utilization/Medical Management Trends

- Over the last few years, prior-authorization and similar strategies have come back with a vengeance, particularly for imaging
- The trend also spawned a new industry - RBMs (radiology benefit managers) an outgrowth of the success of the PBMs (pharmaceutical benefit managers) and behavioral health management companies
- According to a recent OIG report, about 109 million privately insured Americans are now subject to prior-authorization for imaging

RBMs

- Who are the major RBMs?
  - CareCore
  - American Imaging Management (owned by Wellpoint)
  - National Imaging Associates
  - MedSolutions

How do the RBMs work?

- The RBM typically contracts with a health plan on either a fee-for-service, flat rate or full risk capitation basis
- Under a *Fee-for-Service* arrangement, the health plan selects the services they want and pays the RBM a specific amount per member per month (PMPM)for each service; the health plan retains the risk and realizes all the savings

How do the RBMs work?

- Under a *flat rate* approach, the RBM also charges a flat fee per member per month, but includes all utilization management services and access to a network of providers. The network enables them to channel services and to provide a guaranteed maximum on per procedure costs

How do the RBMs work?

- *Full risk capitation* entails the complete transfer of financial risk for specified radiology services from the insurer to the RBM. The health plan pays a set fee per member per month for the duration of the contract

What Services do they provide?

- The RBMs offer a menu of services that are designed to address the “cost drivers” behind imaging services
  - Privileging - enables the health plan to limit the number of imaging providers by establishing standards that cut out the little guy and the non-imaging specialist
  - Prior notification - begins the process of collecting data on what is occurring and creates a sentinel effect
  - Prior authorization - educates the providers as to what is “appropriate” vs. “inappropriate” utilization

Pure Benefits Manager vs.. the Owner/Operator Model

- One of the distinguishing feature between RBMs is whether they own imaging centers or focus purely on utilization management services
- CareCore is an example of an owner/ operator model; MedSolutions was an owner/operator until it sold off its facilities to HealthSouth; it now offers access to a network as part of its portfolio
- Owner/operators have a clear incentive to steer patients to their facilities and pose an entirely different set of concerns for providers

Do RBMs work?

- Most health plans say yes
- This is true even if the RBM is not at full risk
- Contrary to popular belief most of the savings are not achieved through claims denials
- They are generated by limiting the network and by reducing inappropriate utilization
- RBMs generally charge between $0.15 to $0.32 PMPM and claim savings of anywhere from $1 to $4 PMPM

Do RBMs Work?

- According to CareCore:
  - 60% of all orders are approved at the initial call;
  - 40% are referred to a second level clinical reviewer (e.g. RN or RT); and
  - about 20% of the original orders are referred to a physician
- Hard denials are estimated at 2% to 10%
- Largely due to the sentinel effect, insurers commonly see a first year reduction in overall imaging costs of between 10% and 30% followed by single digit annual increases thereafter
- A recent GAO study confirmed that prior authorization imaging programs in the Medicare program resulted in significant reductions in first year costs with mixed second year results

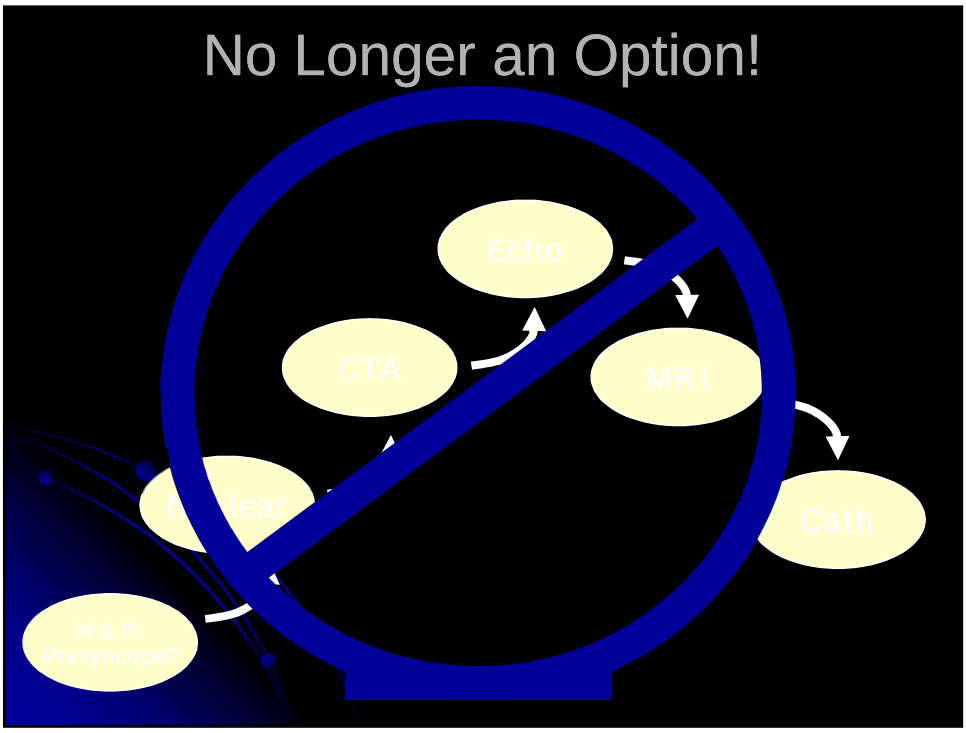
What Can We Expect Next?

- The RBMs are continuing to expand into other services including cardiology, oncology, & sleep management
- New programs are likely to focus on analytic tools that are enabling the RBMs/insurers to drill down on what is considered “appropriate” - that is they are becoming more directly involved in comparative effectiveness

So How do we Address Prior Authorization Programs with the Private Payers?

- First, let's take stock of where we are now in terms of prior authorization programs for echo among the major payers

Payer	*Prior auth for Echo*	*Overall imaging*	*Contracted RBM*
Wellpoint	In development (currently pre-notification scheduled to go prior auth in 2010)	CT, CTA, MRI, MRS, QCT, PET, CTC, PET/CT, FMRI, Echo	AIM (owned by Wellpoint
United	Imaging accreditation required for cardiology	Prior notification only for CT, CTA, PET, MR, MRA; quality designated MDs exempt	Internal program
Aetna	Eff. 8/1/09 for HMO members in NY/N.NJ echo prior auth by CareCore (and left heart caths)	Prior auth for CT, CTA, MRI, MRA, PET, nuclear cardiology, nuclear medicine	MedSolutions, CareCore, and NIA depending on region
HCSC	NA	Radiology Quality Initiative for CT, CTA, MRI, MRA, nuclear cardiology, PET	AIM
Highmark	NA	Prior auth for CT, MRI, MRA and PET; providers must be privileged	NIA
BCBS Michigan	NA	Prior auth for CT, MRI, PET and nuclear; physician based incentive program and network accreditation	AIM



Our Options

- Across-the-board pay cuts
- Precertification/RBMs
- HIT/point-of-ordering tools
- Appropriateness criteria
- Selective reimbursement

Journal of the American College of Cardiology
© 2006 by the American College of Cardiology Foundation
Published by Elsevier Inc.

Vol. 48, No. 7, 2006
ISSN 0735-1097/06/$32.00
doi:10.1016/j.jacc.2006.07.003

ACCF/ACR/SCCT/SCMR/ASNC/NASCI/SCAI/SIR APPROPRIATENESS CRITERIA

ACCF/ACR/SCCT/SCMR/ ASNC/NASCI/SCAI/SIR 2006 Appropriateness Criteria for Cardiac Computed Tomography and Cardiac Magnetic Resonance Imaging*

A Report of the American College of Cardiology Foundation Quality Strategic Directions Committee Appropriateness Criteria Working Group, American College of Radiology, Society of Cardiovascular Computed Tomography, Society for Cardiovascular Magnetic Resonance, American Society of Nuclear Cardiology, North American Society for Cardiac Imaging, Society for Cardiovascular Angiography and Interventions, and Society of Interventional Radiology

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ACCF/ASNC/ACR/AHA/ASE/SCCT/SCMR/SNM 2009 Appropriate Use Criteria for Cardiac Radionuclide Imaging: A Report of the American College of Cardiology Foundation Appropriate Use Criteria Task Force, the American Society of Nuclear Cardiology, the American College of Radiology, the American Heart Association, the American Society of Echocardiography, the Society of Cardiovascular Computed Tomography, the Society for Cardiovascular Magnetic Resonance, and the Society of Nuclear Medicine Endorsed by the American College of Emergency Physicians

Robert C. Hendel, Daniel S. Berman, Marcelo F. Di Carli, Paul A. Heidenreich, Robert E. Henkin, Patricia A. Pellikka, Gerald M. Pohost, and Kim A. Williams

J. Am. Coll. Cardiol. 2009;53;2201-2229; originally published online May 18, 2009;

doi:10.1016/j.jacc.2009.02.013

ACCF/ASE/ACEP/AHA/ASNC/SCAI/SCCT/SCMR 2008 Appropriateness Criteria for Stress Echocardiography: A Report of the American College of Cardiology Foundation Appropriateness Criteria Task Force, American Society of Echocardiography, American College of Emergency Physicians, American Heart Association, American Society of Nuclear Cardiology, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and Society for Cardiovascular Magnetic Resonance Endorsed by the Heart Rhythm Society and the Society of Critical Care Medicine

Pamela S. Douglas, Bijoy Khandheria, Raymond F. Stainback, Neil J. Weissman, Eric D. Peterson, Robert C. Hendel, Raymond F. Stainback, Michael Blaivas, Roger D. Des Prez, Linda D. Gillam, Terry Golash, Loren F. Hiratzka, William G. Kussmaul, Arthur J. Labovitz, JoAnn Lindenfeld, Frederick A. Masoudi, Paul H. Mayo, David Porembka, John A. Spertus, L. Samuel Wann, Susan E. Wiegers, Ralph G. Brindis, Pamela S. Douglas, Robert C. Hendel, Manesh R. Patel, Eric D. Peterson, Michael J. Wolk, and Joseph M. Allen

J. Am. Coll. Cardiol. 2008;51;1127-1147; originally published online Mar 3, 2008; doi:10.1016/j.jacc.2007.12.005

Journal of the American College of Cardiology
© 2007 by the American College of Cardiology Foundation
Published by Elsevier Inc.

Vol. xx, No. x, 2007
ISSN 0735-1097/07/$32.00
doi:10.1016/j.jacc.2007.05.003

ACCF/ASE/ACEP/ASNC/SCAI/SCCT/SCMR APPROPRIATENESS CRITERIA

ACCF/ASE/ACEP/ASNC/SCAI/SCCT/SCMR 2007 Appropriateness Criteria for Transthoracic and Transesophageal Echocardiography*

A Report of the American College of Cardiology Foundation Quality Strategic Directions Committee Appropriateness Criteria Working Group, American Society of Echocardiography, American College of Emergency Physicians, American Society of Nuclear Cardiology, Society for Cardiovascular Angiography and Interventions, Society of Cardiovascular Computed Tomography, and the Society for Cardiovascular Magnetic Resonance

Endorsed by the American College of Chest Physicians and the Society of Critical Care Medicine

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†American Society of Echocardiography Representative

WHAT IS AN APPROPRIATE IMAGING STUDY?

An appropriate imaging study is one in which the expected incremental information, combined with clinical judgment, exceeds the expected negative consequences* by a sufficiently wide margin for a specific indication that the procedure is generally considered acceptable care and a reasonable approach for the indication.

**Negative consequences include the risks of the procedure (i.e., radiation or contrast exposure) and the downstream impact of poor test performance such as delay in diagnosis (false negatives) or inappropriate diagnosis (false positives).*

METHOD USED FOR DETERMINING CARDIOVASCULAR IMAGING APPROPRIATENESS

Step 1 – Develop list of specific clinical indications and review literature for an imaging modality

Step 2 – Expert Panel (n=9-15) Review of clinical indications and ratings

Step 3 – Expert Panel Meeting and discussion followed by re-ratings

Step 4 – Tabulation of appropriateness recommendations – for one imaging modality across multiple indications.

- Consensus score
- Clear link to level of evidence for each indication

Repeat steps 1-4 for each cardiovascular imaging modality

Patel MR, et al. *JACC*;46: 1606-1613

APPROPRIATENESS OF CV IMAGING

Ranking of Indications

- 7-9: Appropriate test for specific indication
  - Test **is** generally acceptable and **is** a reasonable approach for the indication
- 4-6: Uncertain or unclear if appropriate for specific indication
  - Test **may** be generally acceptable and **may** be a reasonable approach for the indication
- 1-3: Inappropriate test for specific indication
  - Test is **not** generally acceptable and is **not** a reasonable approach for the indication

Appropriateness Criteria Methodology

Appropriateness Designation	Score	AHA/ACC Rec.	Level of Evidence	Additional Published Characteristics of Appropriate Imaging Tests
Appropriate	9	I	A – B	• Wide **spectrum** of patients studied • No **patient selection** bias (consecutive) • All patient image results **verified** ("gold standard" or prognosis) • Blinded **interpretation** • **Reproducible** acquisition and interpretation
	8	IIa	C	
	7	IIb		
Uncertain	6	IIb	B - C	
	5			
	4			
Inappropriate	3	III	C	
	2		A - B	
	1			

Patel et al, JACC '05

GUIDELINES, MEASURES, AND APPROPRIATENESS CRITERIA

- Clinical Guidelines[1]
  - Exhaustive review of literature
  - Virtually all-inclusive
  - Best practice
  - "Should do, should not do"
- Performance Measures[2]
  - Selective, focused, measurable
  - Based on guidelines
  - "Must do"
  - Tools for quality measurement
- Appropriateness Criteria[3]
  - Selective indications
  - Largely guideline based
  - Clinical scenarios
  - "Reasonable to do"

1. Quiñones,GA, Douglas PS, Foster E et al. ACC/AHA clinical competence statement on echocardiography : A Report of the ACC/AHA/ACP Task Force on Clinical Competence Developed in Collaboration with the ASE. JACC., Feb 2003; 41:687 - 708.

2. Krumholtz HM, Anderson JL, Brooks, et al. ACC/AHA clinical performance measures for adults with ST-elevation and non-ST-elevation myocardial infarction. J Am Coll Cardiol 2006; 47: 236-65.

3. Douglas PS, Khandheria B, Stainback RF, Weissman NJ et al. ACCF/ASE appropriateness criteria for TTE / TEE . J Am Coll Cardiol 2007 (in press).

Who Orders an Echo?

Table 7 Specialty of Requesting Physicians on Echocardiography Claims, 2004

Specialty	Count of 5% Sample Claims Lines, 1000s	Fraction of Claims Lines
Total	1,068	100%
Internal medicine	382	36%
General practice	217	20%
Cardiology	312	29%
Pulmonary disease	23	2%
Nephrology	14	1%
Emergency medicine	14	1%
General surgery	13	1%
All others	92	9%

Pearlman et al, JACC 2007

The Facts About Medical Billing in the US

- Centers for Medicare and Medicaid Services (CMS) rejects 26% of all services it processes[1]
- Imaging claims have come under particular scrutiny lately
- The adoption of the Appropriateness Criteria will likely influence payment of future claims for echocardiography services
- Precertification by the ordering physicians for outpatient echos becoming more common

[1]Walker Deborah L, Larch Sara M, Woodcock Elizabeth W. The Physician Billing Process: Avoiding Potholes in the Road to Getting Paid. Medical Management Group Association. Denver, CO 2004. p.xviii

Common Reasons for Rejected Claims

- Incorrect or missing data in submitted claim
- Insufficient coding to support service being billed
- Service found to be “unnecessary”

Overview

- 44 clinical scenarios deemed appropriate
- 14 deemed inappropriate
- 1 deemed uncertain

- In general echocardiograms were deemed appropriate for the initial evaluation for suspected cardiac conditions and for F/U of significant conditions or change in clinical status.
- Deemed inappropriate in routine f/u of clinically insignificant conditions, or in the stable patient

APPROPRIATENESS CRITERIA FOR ECHO SUMMARY

- Because echo is widely available, low risk, easy on the patient and provides comprehensive information, the opportunity exists for inappropriate use in patients who may not benefit from having the exam. Fourteen scenarios addressed in the Criteria were found to be inappropriate reasons for the performance of the TTE/TEE study.
- Routine repeat testing and general screening uses in certain clinical scenarios were viewed less favorably (14 I)
- In general, TTE / TEE was viewed favorably for initial assessment of a wide variety of cardiac structures and function (44 A)

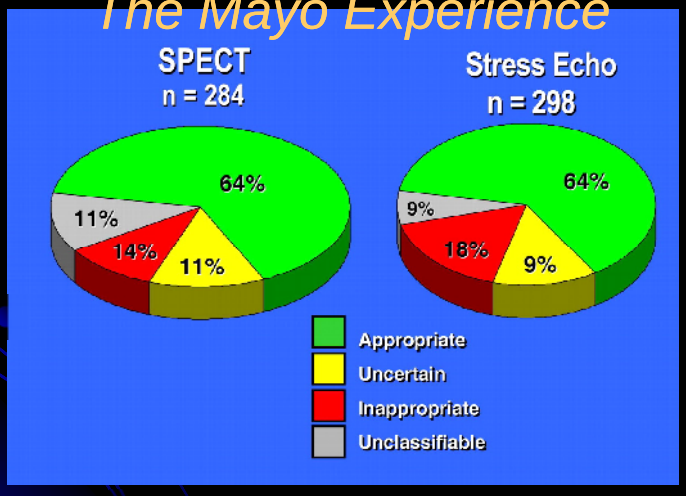
Regulatory and External Forces

How should the continued **growth of echo** best be managed?

Tie reimbursement to appropriateness criteria	72%
Limit reimbursement to labs that demonstrate quality	62%
Create a point-of-order tool	22%
Require precertification as a condition for payment	19%
Reduce reimbursement across the board	12%
No need to do anything	9%

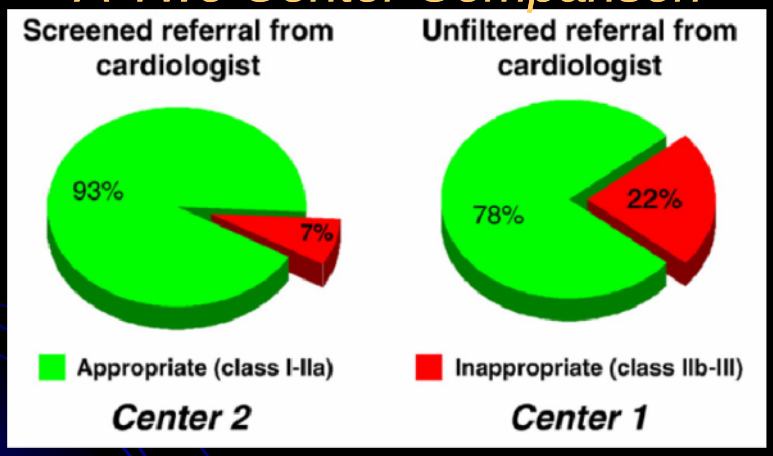
Thomas Ryan, MD
ASE June 2009

Appropriateness Criteria for Stress Imaging: *The Mayo Experience*



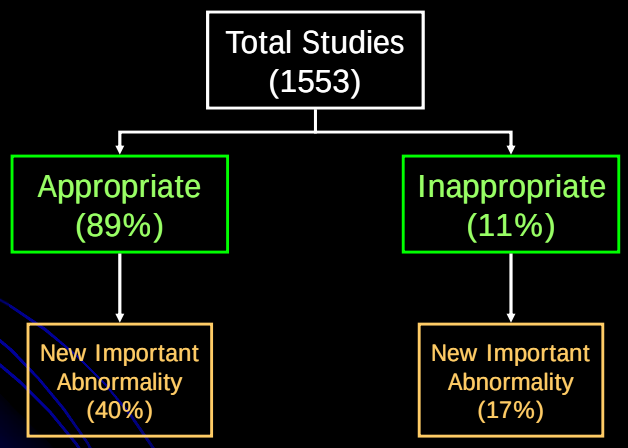
Gibbons et al, JACC '09

Appropriateness of Stress Echo: *A Two Center Comparison*



Picano et al, AHJ '07

Prospective Evaluation of Echo Appropriateness Criteria



Ward et al, JACC Imag '08

Yield of "Inappropriate" Echos

Inappropriate indication (n=157)	% w/ new major abnormality
1. Yearly evaluation of asymptomatic valvular heart disease	33%
2. Yearly evaluation of stable heart failure	24%
3. Yearly evaluation of stable prosthetic valve	22%
4. Initial evaluation of suspected pulmonary embolus	17%
5. Re-evaluation of stable hypertensive heart disease	15%

Ward et al, JACC Imag '08

Summary of Appropriateness Criteria Findings

Appropriate (n=44)

- Initial evaluation
- Evaluation of changing clinical status
- Follow up of severe or symptomatic conditions

Inappropriate (n=14)

- Routine follow up of mild and/or asymptomatic conditions
- Too frequent follow up interval
- Reevaluation of stable patients

Office visit

I had the pleasure of seeing … back in office on October 16, 2008. She denies any chest pain. She denies

any shortness of breath. ***She has had some chest pressure***. She has a history of coronary artery disease and coronary artery bypass grafting. She also has hypertension.

She is doing well on her Avalide. She is also on Norvasc. She takes Triglide and WelChol for cholesterol.

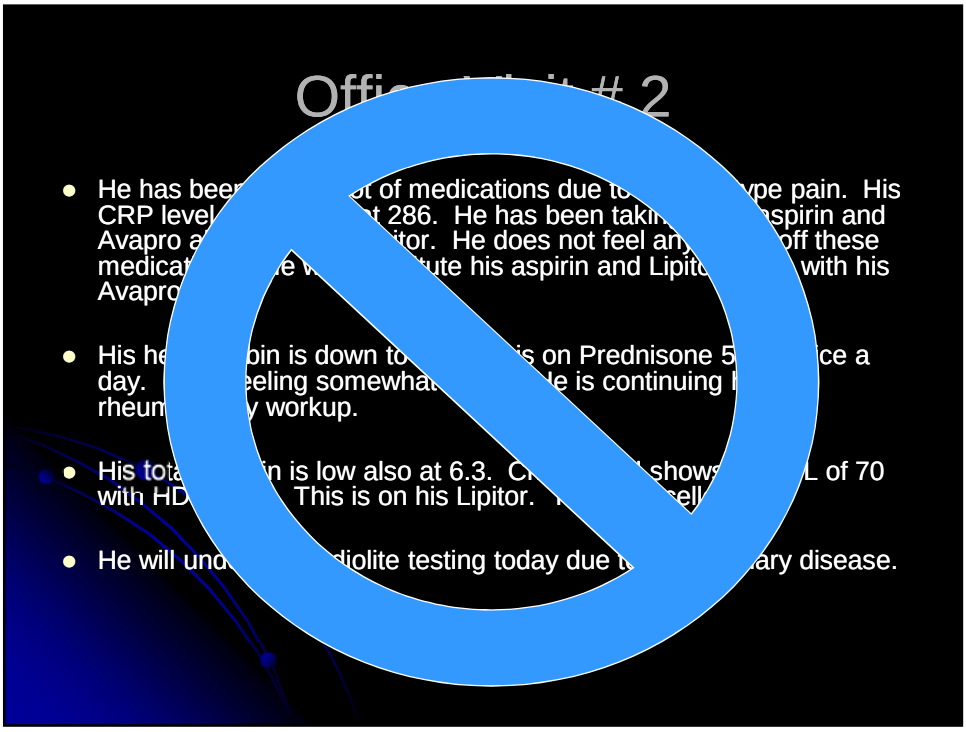
Laboratory examination: Creatinine 1.02 with a BUN of 11. Glucose is 130. Potassium is 4.3. Cholesterol showed an HDL of 67 with an LDL of 101. The patient is on increasing diet.

Because of her chest discomfort, I suggested she undergo Cardiolite testing today. I did not make any changes in medications.

What was the transcriptionist thinking?

Office Visit # 2

- He has been off of a lot of medications due to arthritis type pain. His CRP level is elevated at 286. He has been taking off of aspirin and Avapro along with his Lipitor. He does not feel any better off these medications. He will reinstitute his aspirin and Lipitor along with his Avapro.
- His hemoglobin is down to 9.6. He is on Prednisone 5 mg twice a day. He is feeling somewhat better. He is continuing his rheumatology workup.
- His total protein is low also at 6.3. Cholesterol shows an LDL of 70 with HDL of 44. This is on his Lipitor. This is excellent.
- He will undergo Cardiolite testing today due to his coronary disease.

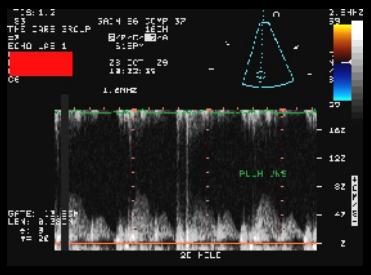


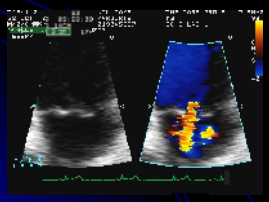
Office Visit # 3

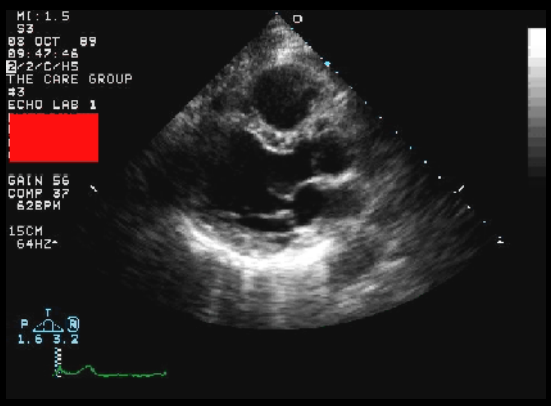
45 y.o. male with newly diagnosed heart murmur. Referred to you for evaluation

On exam lungs are clear, normal HR and BP with a 2/6 mid systolic murmur

Mitral Regurgitation



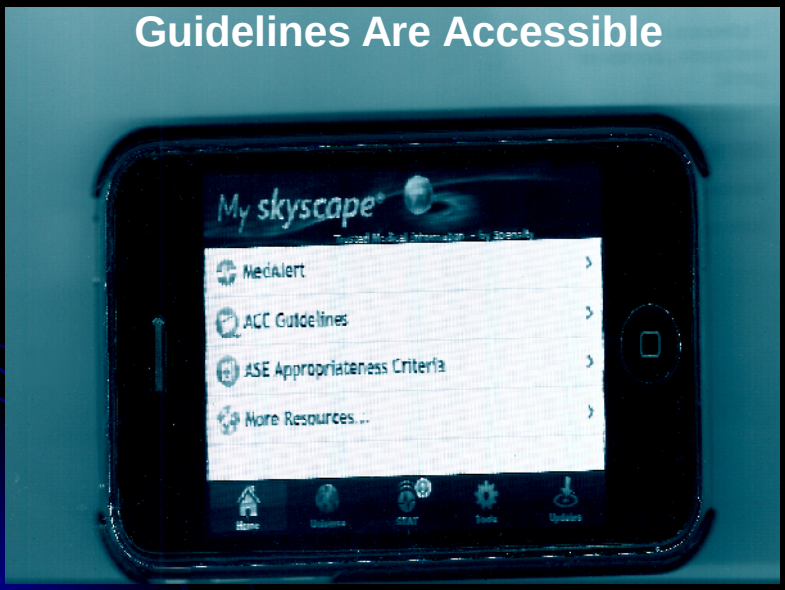




Issues to be Resolved

- Challenge of educating the referring physician
- Absence of specific criteria in many situations
- Expectations of patients
- What to do with moderate?

Guidelines Are Accessible



Future Challenges

- MedPAC apparently wants to consider allowing physicians'offices to provide only those imaging services that are provided at the same time as an office visit--on the theory that it is only when the patient is saved a trip that in-office imaging is worthwhile. On the other hand, there are forces at CMS and at the RUC that want to bundle services that are frequently performed together (which presumably would include office visits and imaging services). In other words, it looks like "heads we win, tails you lose."

Diane Millman,

Demonstration Project Medicare Imaging

135(b)of the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA)

mandates an Appropriate Use of Imaging Services demonstration project. The goal of the demonstration is to collect data regarding physician use of advanced diagnostic imaging services to determine the appropriateness of services in relation to established criteria and physician peers.

What Can I Do?

- Stay involved
  - ACC
  - Sub-speciality societies (ASE, HRS …)
- Contact your representatives (Capwiz, ACC Advocacy web site)

  Personal letter or call from you is good, contact from office staff, nurse, tech or patient is better!

What Can I Do ?

- Keep up to date with private payers, CMS
  - Check their web sites
- Learn the AUC for imaging
- Keep your patients informed

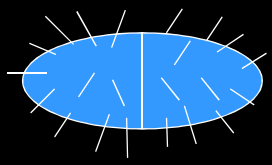
What Can I Do?

- Practice evidence-based imaging
- Get your lab accredited
- Educate colleagues, especially referring doctors
- Avoid unnecessary testing

Ways to Avoid Unnecessary Tests

- Search for recent prior study
  - EMR, Med Records, Ask Patient!
- Most of us need images, not reports
  - Easy access to CD, DVD's
  - Mechanism to download images to server
    - (medical clearinghouse for images)

The Health Care Suppository



It will move things along but its *gonna hurt*!

The Five Stages of Health Care Payment Reform*

- Anger
- Bargaining
- Depression
- Acceptance
- Denial

** With apologies to Elisabeth Kubler-Ross*