

WHY APPROPRIATENESS?

Background

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

UTILIZATION MANAGEMENT FOR CARDIAC IMAGING

METHODS

- Non-coverage
- Provider exclusion
- Prior notification
- Pre-certification

RBM

(RADIOLOGY BENEFITS MANAGERS)

- Procedural governors
- Increasing penetration
- Incentivized to reduce volume/cost

CONCERNS REGARDING PRE-CERTIFICATION AND PRIOR NOTIFICATION

- No evidence for improved quality of care
- Favors indiscriminant volume reduction
- Lack of transparency
- Not firmly based on appropriateness criteria
- Inconsistent processes, with confusion and inefficiency
- Reduced timeliness
- Labor intensive
- Negative economic impact
- Steerage to the test of least resistance
- Scant data available for feedback/education
- No opportunity to refine process
- No correlation with imaging results or outcome
- No mechanism to understand practice variation or local expertise

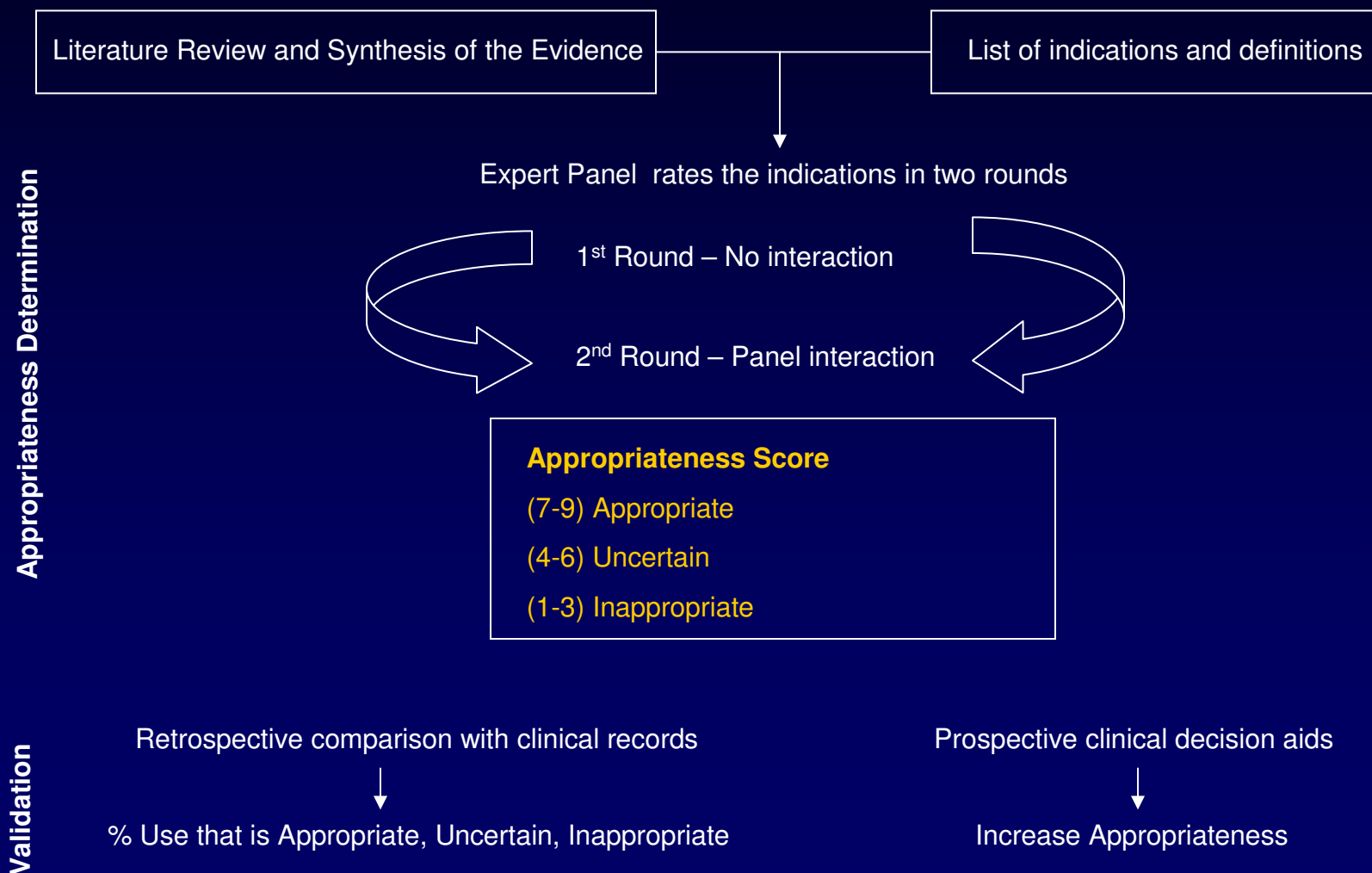
WHAT IS AN APPROPRIATE IMAGING STUDY?

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).*

APPROPRIATENESS OF CARDIOVASCULAR IMAGING

RAND Method with Modified Delphi Process



APPROPRIATENESS OF CARDIOVASCULAR 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

The ACC Queue

- ✓ Nuclear cardiology (SPECT)
October, 2005
- ✓ Cardiac CT/CMR
September, 2006
- ✓ Echocardiography (TTE, TEE)
July, 2007
- ✓ Echocardiography (Stress)
December, 2007
- ✓ Percutaneous coronary intervention
Fall, 2008 (In Press)
- Revised SPECT Criteria (in preparation)
- CV imaging cross modality (efficiency) evaluation (in preparation)

APPROPRIATENESS OF CARDIOVASCULAR IMAGING

Potential Impact of Appropriateness Criteria

- 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” and “uncertain” indications
- Support for requirement of preauthorization or denial of reimbursement for “inappropriate” indications
- Improve cost-effectiveness of cardiovascular imaging

HOW **NOT** TO USE APPROPRIATENESS CRITERIA

- Should NOT be used to provide information regarding the technical aspects of imaging nor delineate training/performance requirements
- Appropriateness ranking and scores should NOT be compared across modalities
 - Different panels
 - Background information and dialog different
 - Inherent variation
- Uncertain indications should NOT be grounds for denials/lack of payment
- Appropriateness criteria are NOT substitutes for sound clinical judgment and practice experience

APPROPRIATENESS OF CARDIOVASCULAR IMAGING

Potential Concerns Regarding the Appropriateness Criteria

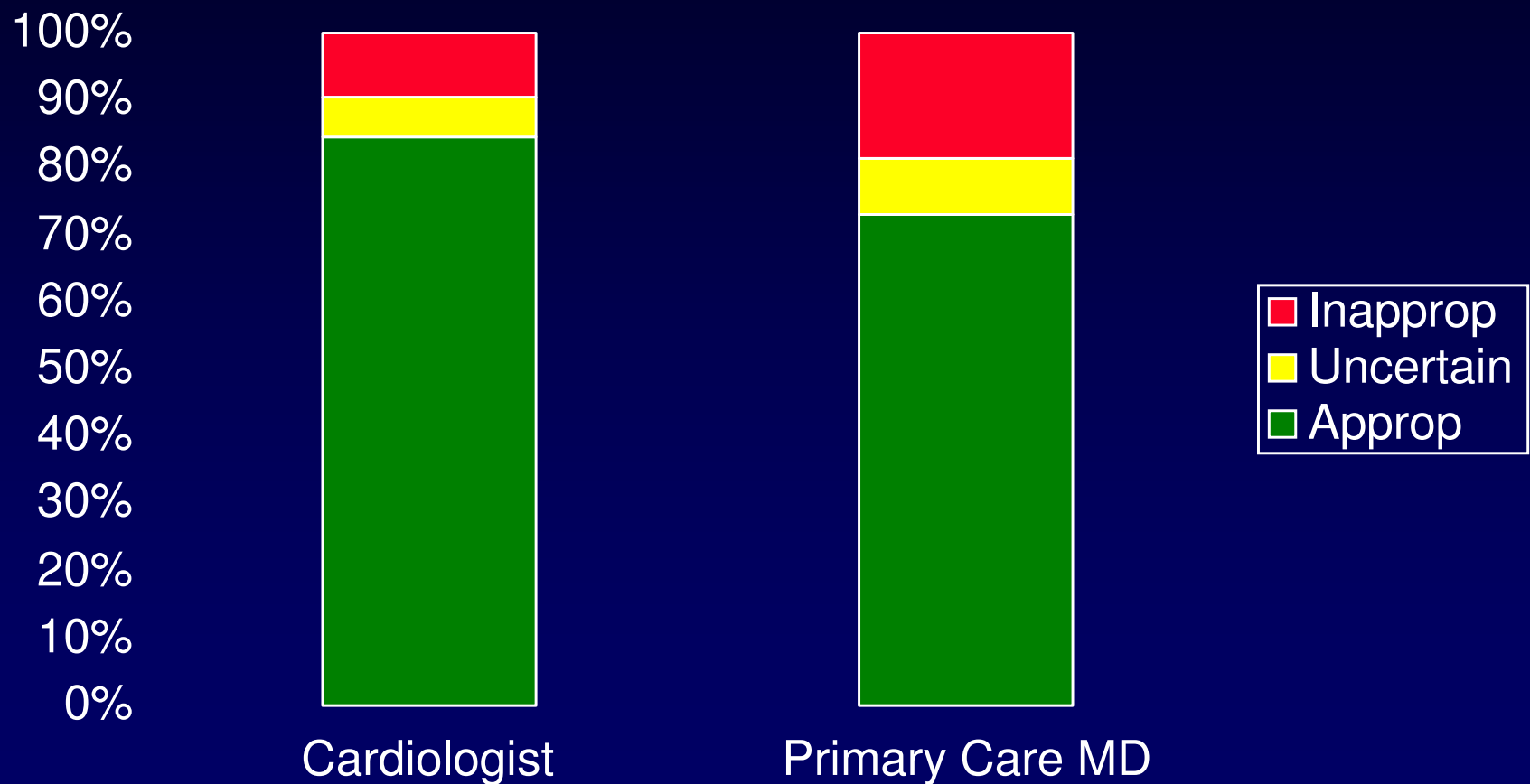
- Small number of panel members may drive “consensus” score into a particular category
- “Abundance” of specialized cardiologists
- Problems with indications/clinical vignettes
 - Not inclusive
 - Too specific
 - Misunderstanding (i.e. post-PCI asymptomatic)
 - Differences from published guidelines
- Criteria difficult to use
- Does not currently address “underutilization”

EVALUATION OF APPROPRIATENESS

	Appropriate	Uncertain	Inappropriate
Hendel, 2006	83%	6%	11%
Williams, 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%

EVALUATION OF APPROPRIATENESS - PILOT DATA

Based on Type of Ordering Physician (n=1,396)



INAPPROPRIATE STRESS IMAGING PROCEDURES AT MAYO CLINIC

• Asymptomatic, low risk	48%
• Pre-op, intermediate risk surgery, able to exercise	17%
• Symptomatic, low pre-test probability, able to exercise	13%
• Pre-op, low risk surgery	10%
TOTAL	88%

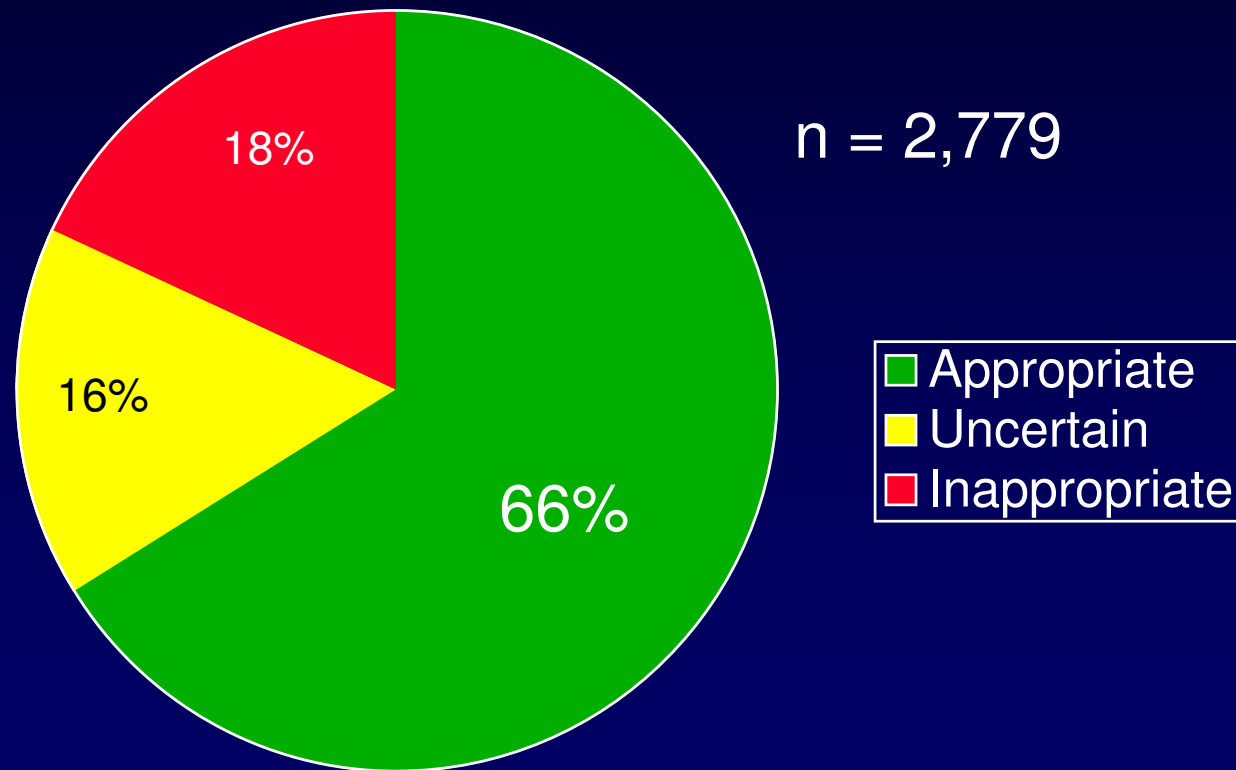
ACC/ACCF/ASNC & UHC PROJECT FOR THE EVALUATION OF APPROPRIATENESS IN SPECT IMAGING

PROJECT GOALS

- Quality improvement
- Assess validity of appropriateness criteria
- Determine patterns of clinical practice
- Analysis of decision making
- Provide alternative to prior notification

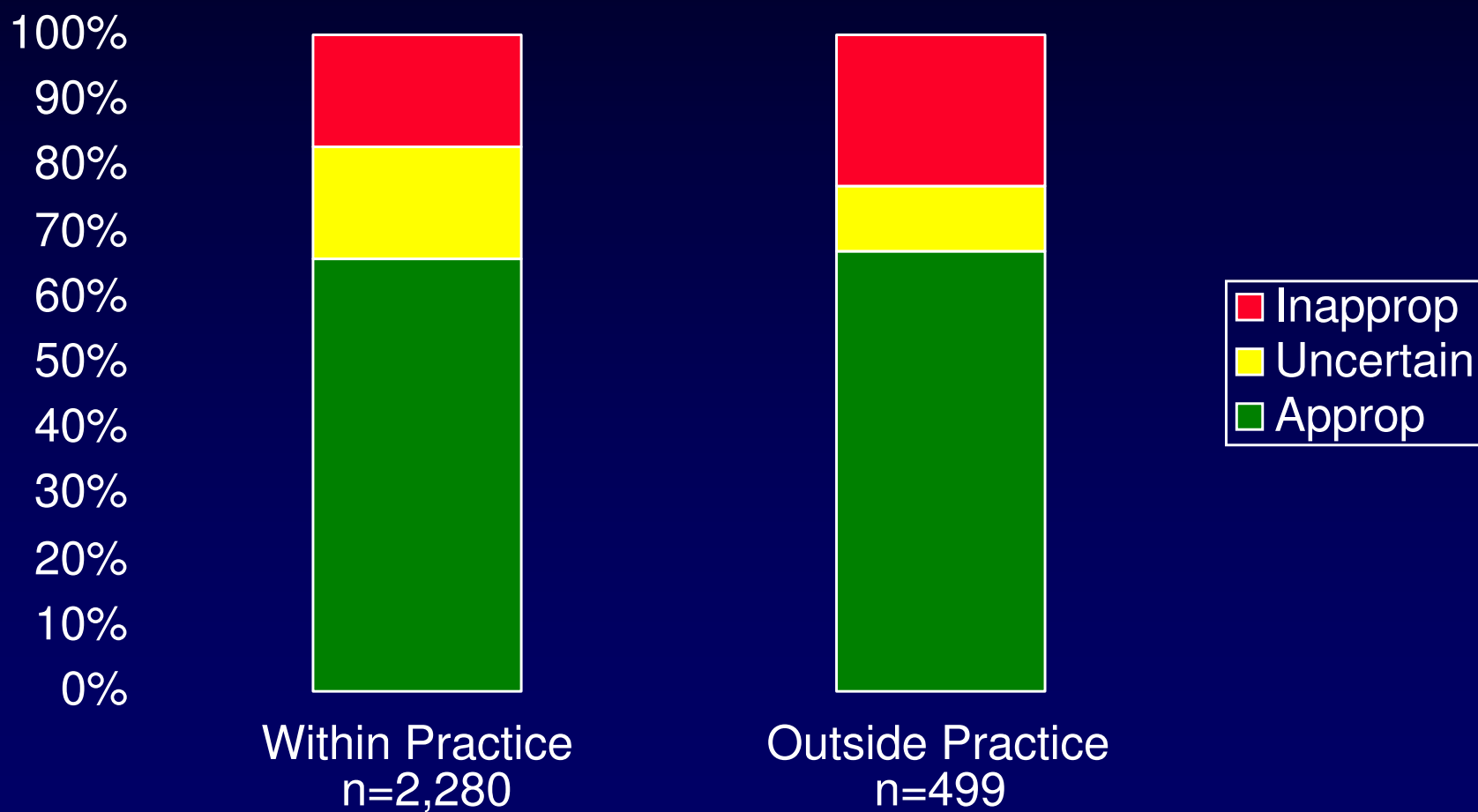
ACCF/ASNC/UHC PILOT- PRELIMINARY DATA

- Data collection from March 3- July 31, 2008
- 7/10 sites recruiting
- 3,035 studies
- 256 excluded
 - 173 for insufficient data
 - 64% from single practice
 - 82 for conflicting scores



ACCF/ASNC/UHC PILOT- PRELIMINARY DATA

Based on Referral (n=2,279)



ACCF/ASNC/UHC PILOT- PRELIMINARY DATA

Most Common “Inappropriate” Indications

INDICATION	FREQUENCY	PERCENT
Detection of CAD Asymptomatic, low CHD risk	262	9%
Asymptomatic, post-revascularization < 2 years after PCI, symptoms before PCI	91	3%
Evaluation of chest pain, low probability pt Interpretable ECG and able to exercise	82	3%
Pre-operative assessment Low risk surgery	21	1%
Asymptomatic or stable symptoms < 1 year after cath or abnormal prior SPECT	16	<1%

APPROPRIATENESS CRITERIA AND NUCLEAR IMAGING

Conclusions

- High profile growth of cardiac imaging
 - Proven clinical value, but suspected inappropriate use
- Utilization management now common
 - Pre-authorization/prior notification
 - Indiscriminant volume reduction
 - Need to preserve access, etc
- Appropriateness criteria provide alternative to UM through **implementation, education, and enforcement**
 - Continued development and revision of Criteria Multiple trials underway
 - Rapid, easy-to-use evaluation tools becoming available and provide feedback (use within EHR ideal)
 - Practice and physician level reports on performance
 - Establish “preferred provider” or “gold star” performer
 - Elimination of prior certification/notification
- We, as health care providers, must accept responsibility for the appropriate and cost-efficient use of cardiac imaging procedures, which provide critical information for patient assessment