

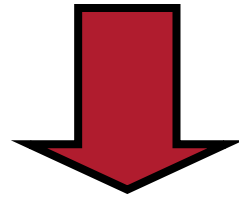
QUALITY INDICATORS



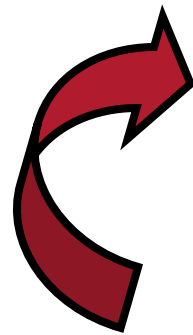
Toy
or
Tool

Prof dr M Claeys

Research (RCT)



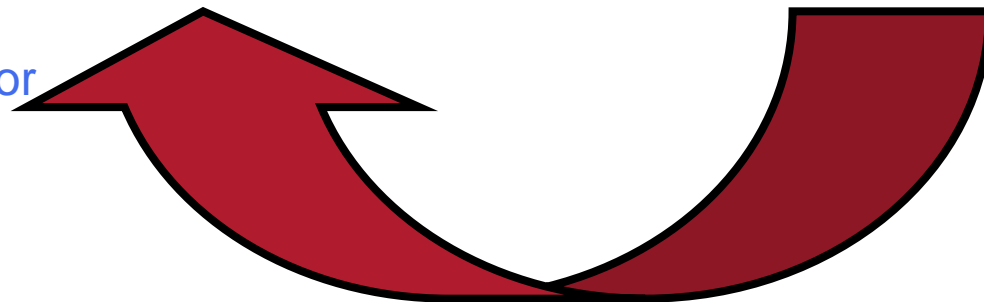
Guidelines



Evaluation



Education



Registry
Quality indicator

The ideal QI



- Simple indicator of a frequent pathology:
 - easy to record, easy to check,
 - expressed as % numerator/denominator
- Early marker of hazard
- Supported by evidenced based medicine
- Possibility to improve process - outcome

International QI

- USA
 - National Quality Forum-endorsed outcome measures (www.qualityforum.org)
 - AHA/ACC task force Performance Measures and PCI (2013)
 - AHA/ACC task force Performance Measures and reperfusion therapy (2008)
- Europe
 - swedeheart

Proposed Structural Measures

- Annual operator PCI volume*
- Annual hospital PCI volume
- Regional or national PCI registry participation

Proposed Process Measures

- Documentation of pre-procedural GFR & contrast dose used during the procedure*
- Radiation dose documented*
- Comprehensive documentation of indications for PCI
- Appropriate indication for elective PCI*
- Use of embolic protection devices in the treatment of SVBG disease*
- Cardiac rehabilitation patient referral
- Post-procedural optimal medical therapy composite
- Assessment of candidacy for dual antiplatelet therapy

Existing Process Measures

- Therapy w/ aspirin, P2Y12 inhibitor, & statin at discharge following PCI in eligible patients (ACCF, NQF-endorsed®)
- Primary PCI w/in 90 minutes of hospital arrival (CMS; NQF-endorsed®)

Process & Structural Measures / Domains...

- Safety of Procedure
- Overuse / Inappropriate Use of Procedure
- Underuse of Effective Services (Evaluation & Treatment Strategies)
- Reduce Delays in PCI Care

linked to . . .

Improved Outcomes

PATIENTS UNDERGOING PCI PROCEDURE

- Reducing mortality
- Reducing procedural complications
- Reducing "avoidable" readmissions related to the procedure
- Improving angina or its equivalent ischemic symptoms
- Achieving patient's goals and preferences for functional status, activity and quality of life

Existing Outcome Measures

- 30-day all-cause risk-standardized PCI mortality rate for patients without STEMI and without cardiogenic shock (CMS; NQF-endorsed®)
- 30-day all-cause risk-standardized PCI mortality rate for patients with STEMI or cardiogenic shock (CMS; NQF-endorsed®)
- Hospital 30-day risk-standardized readmission rates following PCI (CMS; NQF-endorsed®)

Proposed Patient Experience Measure

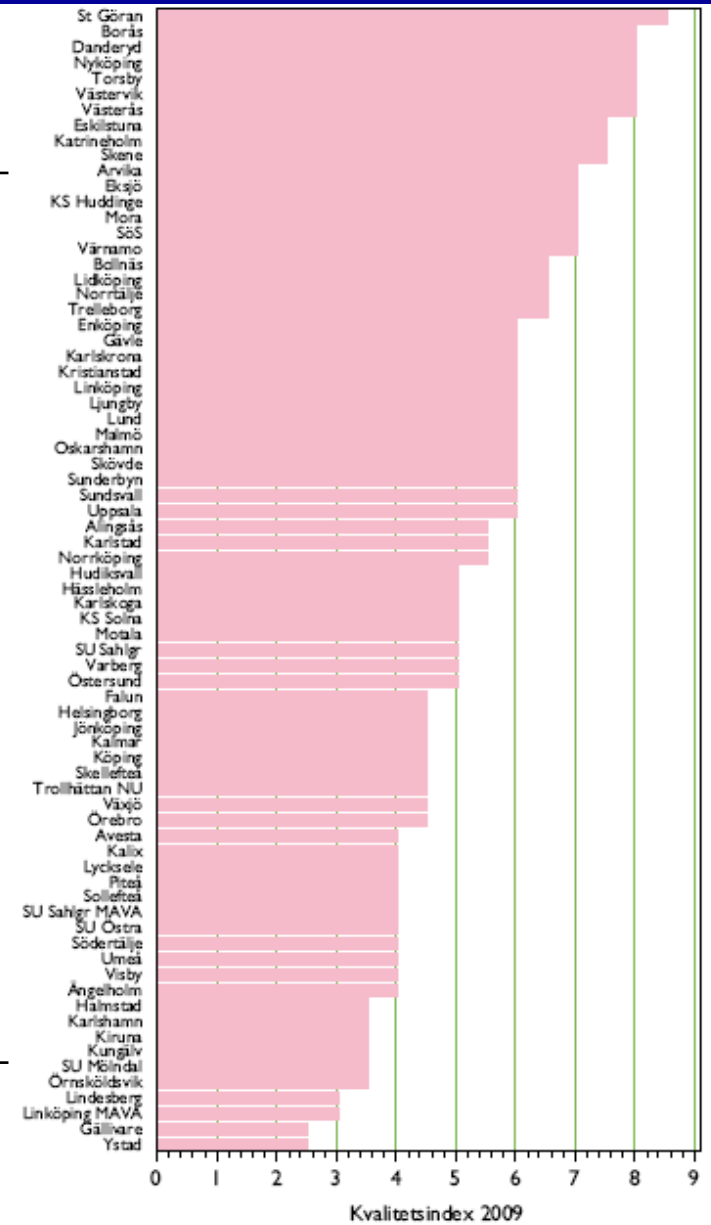
Future work needed to develop a measure that could focus on assessment of patient knowledge regarding benefits & risks of PCI

*indicates measure is appropriate for QI only

RIKS-HIA quality index



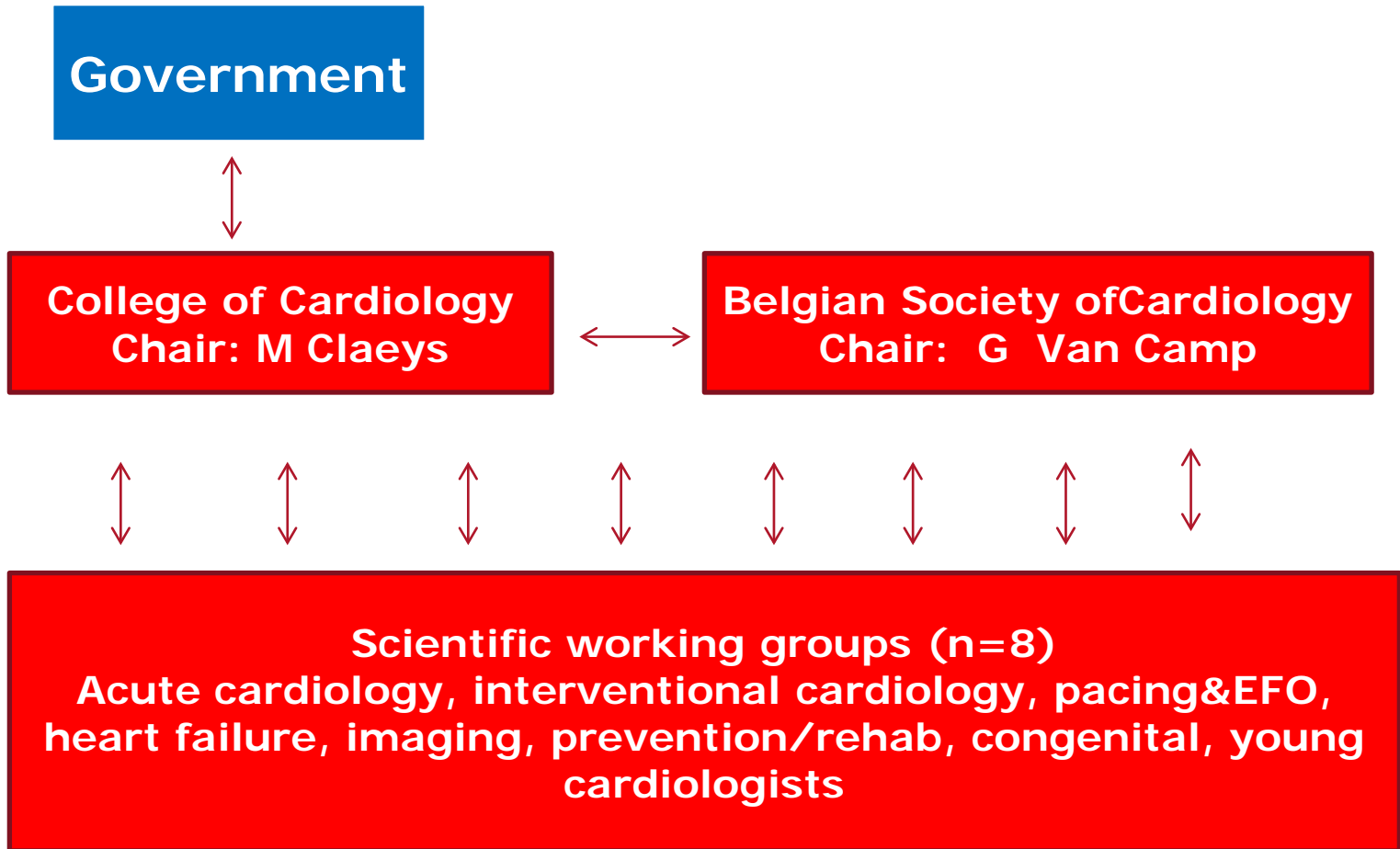
Quality indikator	0,5 points	1 points
Reperfusion for STEMI/LBBB.	80%	85%
Reperfusion for STEMI/LBBB within recommended time	75%	90%
Coronary angiogram for target population with NSTEMI	75%	80%
LMW Heparin/ Heparin/ Fondaparinux for NSTEMI	90%	95%
ASA, other platelet inhibitor or anticoag for MI	90%	95%
P2Y12-blocker for NSTEMI	85%	90%
Betablocker for MI.	85%	90%
Lipid lowerer post MI	90%	95%
ACEinh/ARB for target population post MI.	85%	90%



QI in Belgium



Cardiology in Belgium



National Quality Indicators

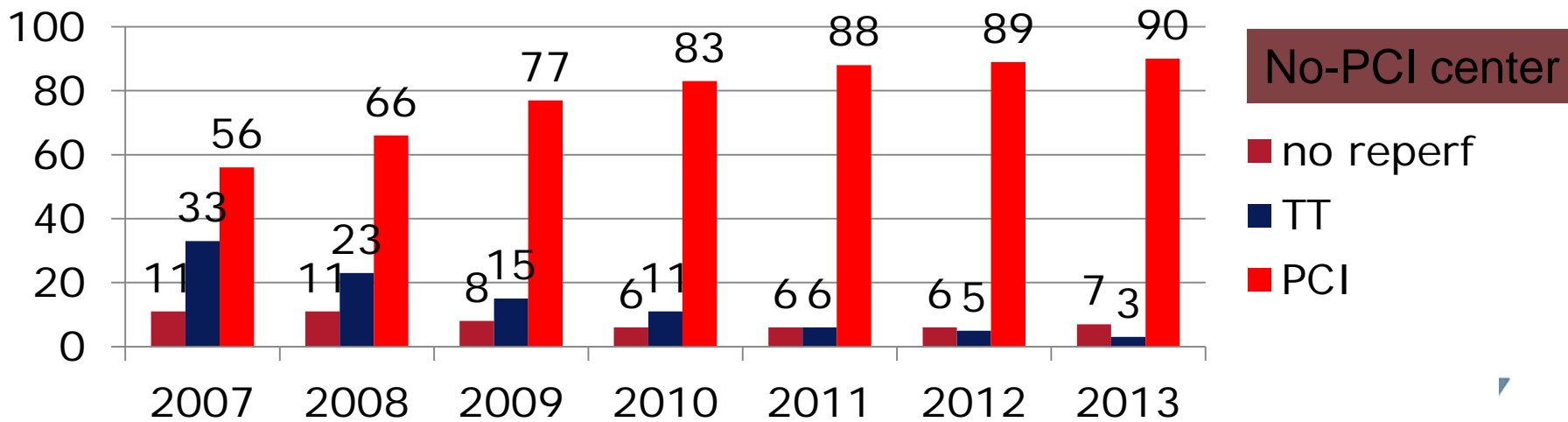
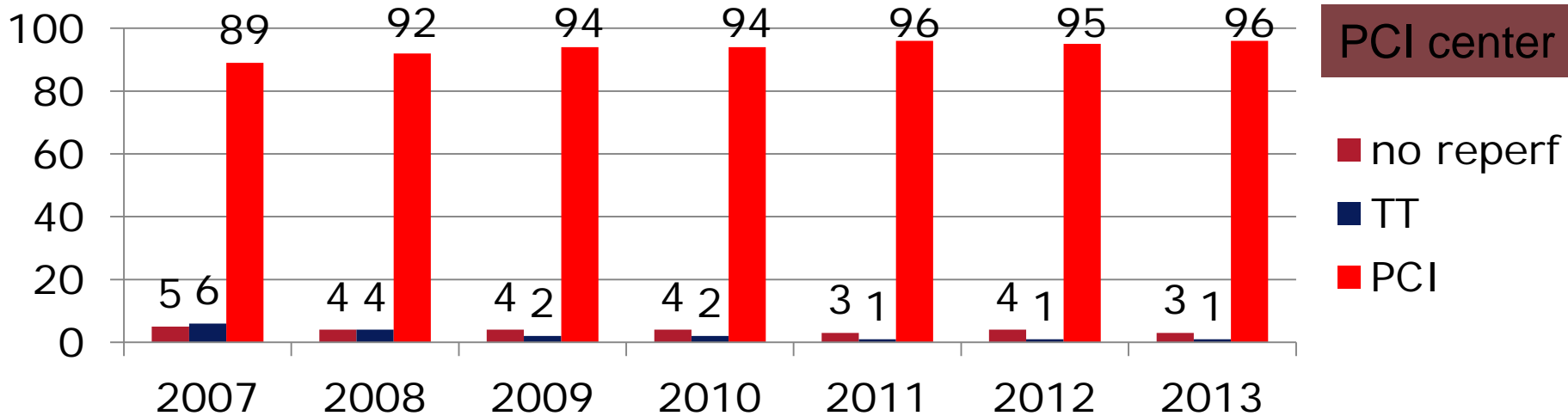
ST Elevation Myocardial infarction

Description	Num/denom	Evidence(ECS)
Reperfusion therapy: % PCI/TT	Num: #PCI/TT Denom: all STEMI	I A
"System" time <120min DTB (PCI centre)<90min	Num: # system time <120 # DTB <90 Denom: all pPCI	IA
Discharge medication dual antiplatelet T statine beta-blocker ACE inhibition/ARB	Num: #medication Denom: all STEMI	IA IA IIaB IIaA
Adjusted mortality,% in hospital-1y	Num: #death Denom: all STEMI	

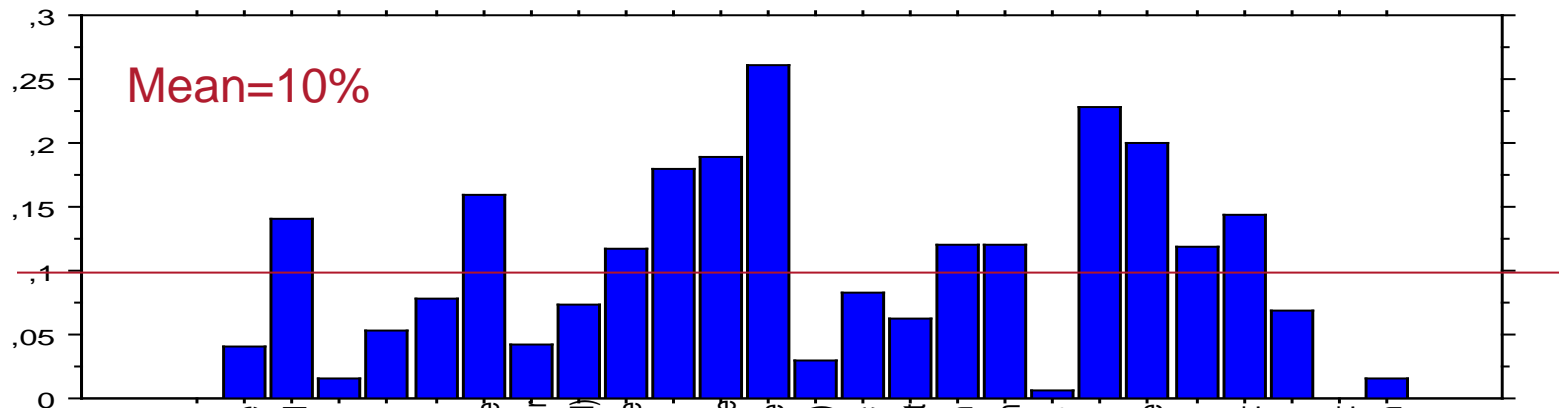
PROCESS

OUTCOME

Evolution reperfusion therapy



Quality indicator: System time > 120' in PCI centres



% system time >120 in non-PCI centres: 20%

National Quality Indicator

Percutaneous coronary intervention (PCI)

Description	Num/denom	Evidence(ECS)
Appropriate Indication: %PCI/coronaro	Num: #PCI Denom: all coronaro's	I A
%pos ischemic test /elective PCI	Num : # pos tests Denom: all elective PCI	
% successful PCI TIMI 2-3,%DS<50%	Num: # successfulPCI Denom: all PCI's	
% Urgent (<24h) CABG	Num: #urgent CABG Denom: all PCI's	
%Adjusted mortality, in hospital-1y	Num: #death Denom: all PCI's	
% target vessel re-PCI at 1 year	Num: # rePCI at 1y Denom: all PCI's	

PROCESS
OUTCOME

Quality indicator: feedback

- On-line reports: individual hospital versus national mean
- Peer review:
 - Within scientific working group
 - Audit of outliners
- Public reporting of QI's of each hospital?
 - Selection of some QI's ?

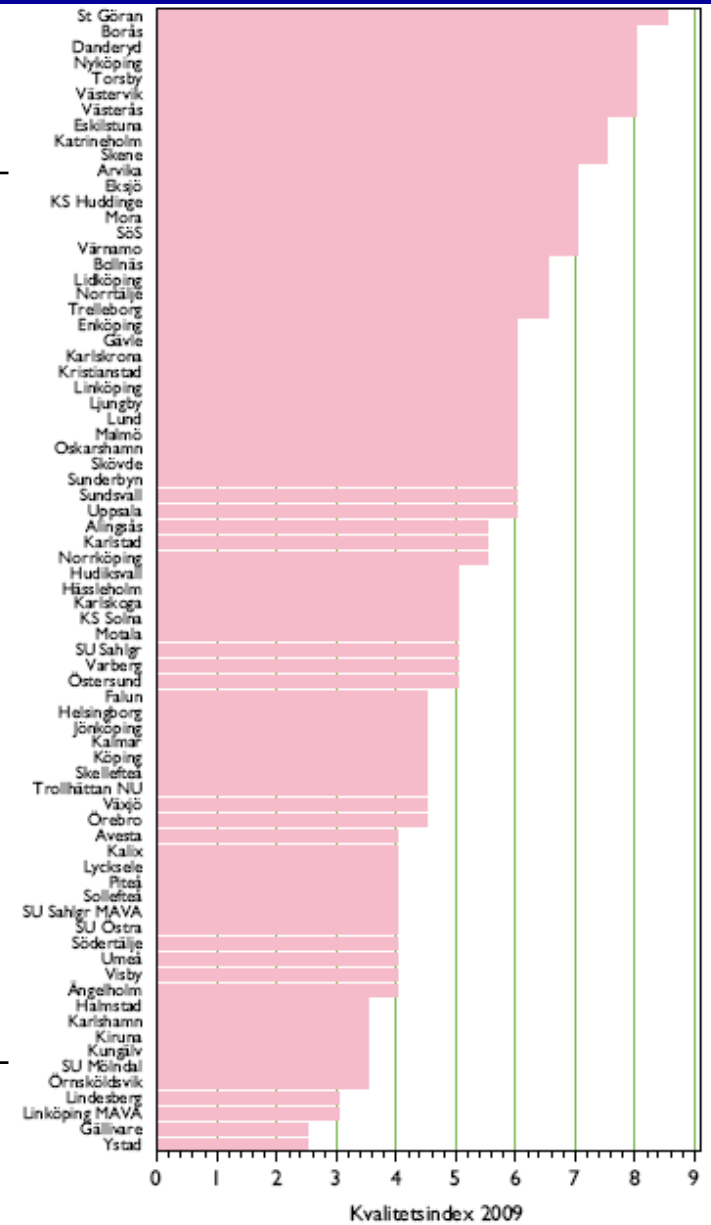
Public reporting



RIKS-HIA quality index

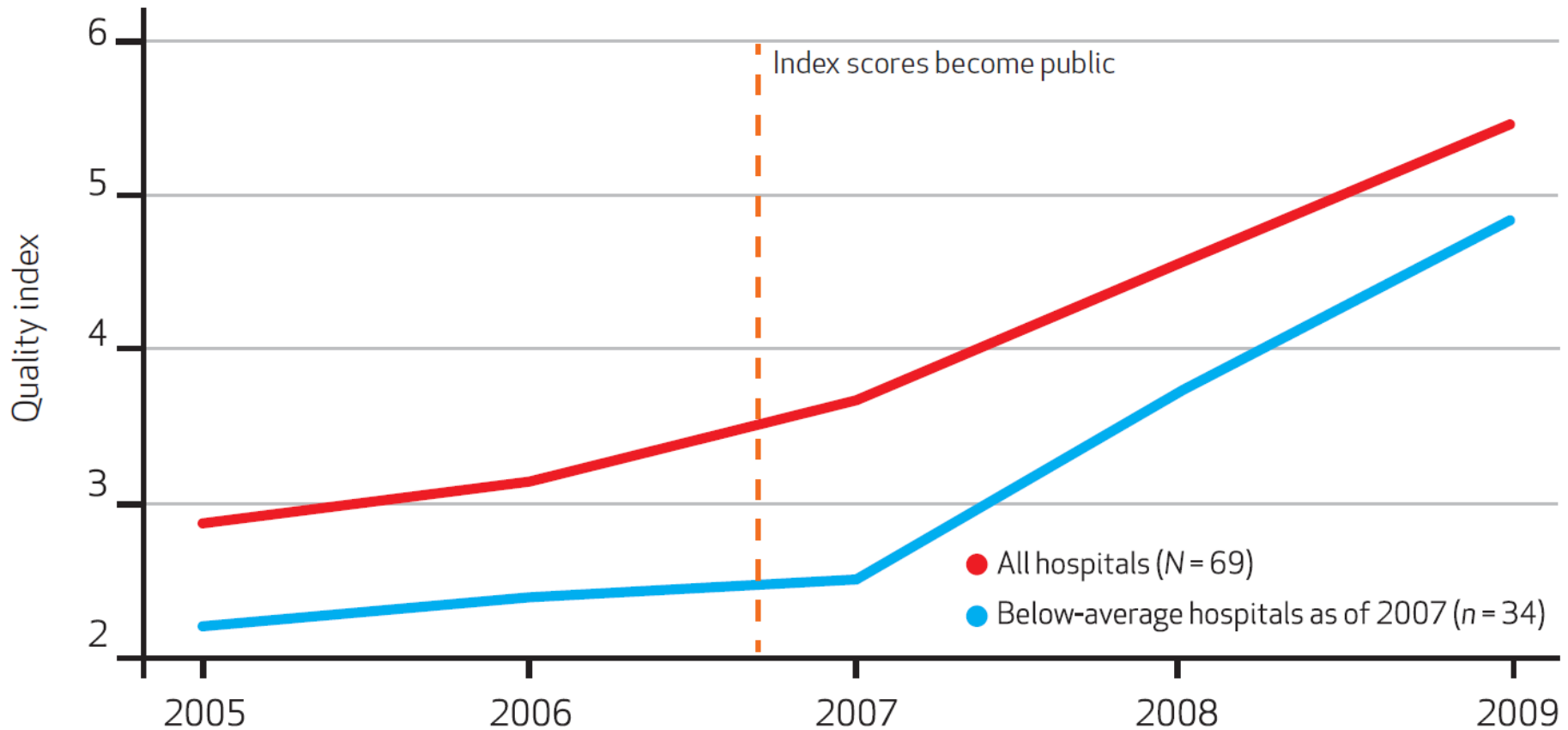


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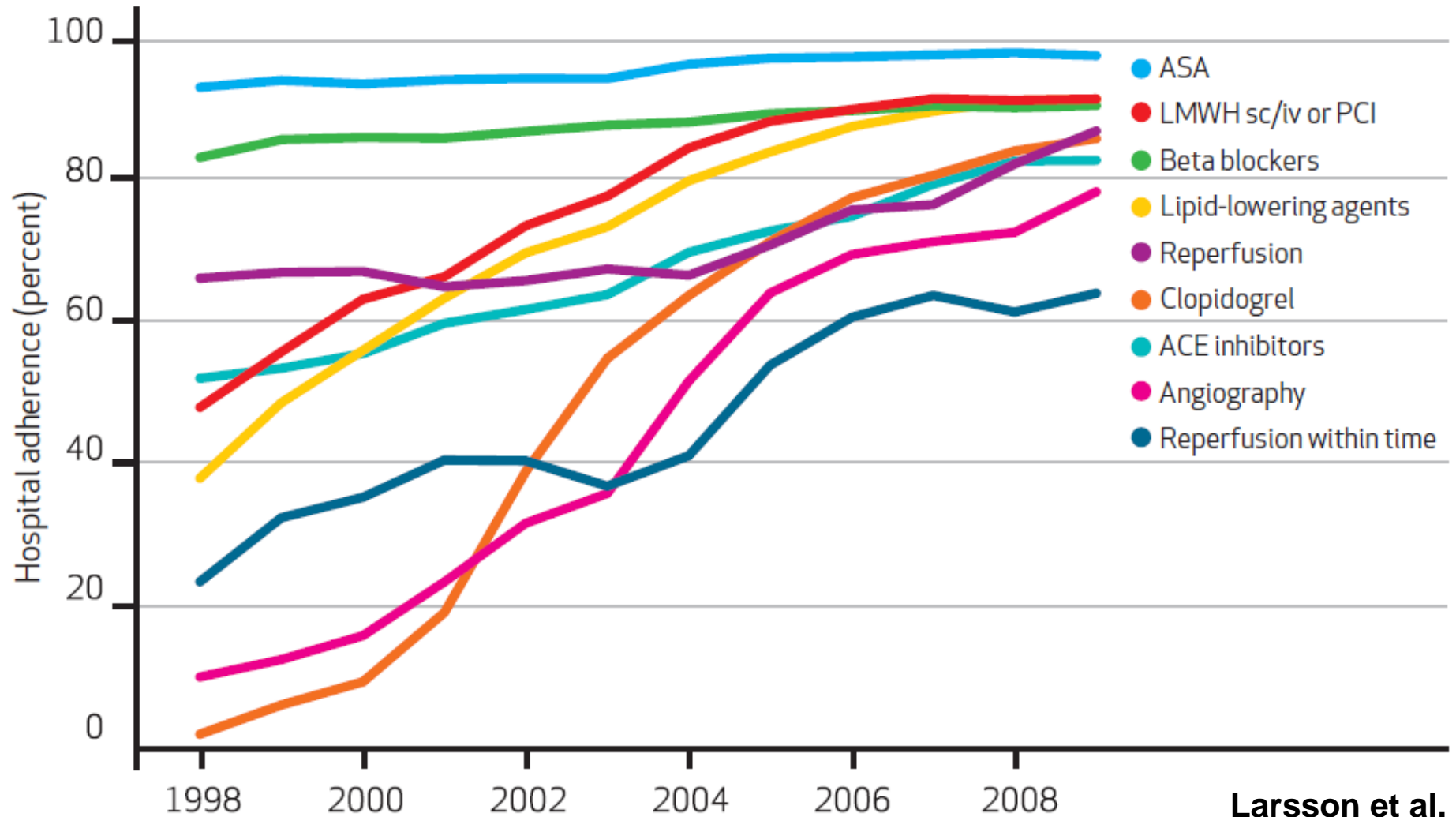
Association to start of public reporting

Hospital Scores On The Swedish Coronary Care Registry Quality Index, 2005-09





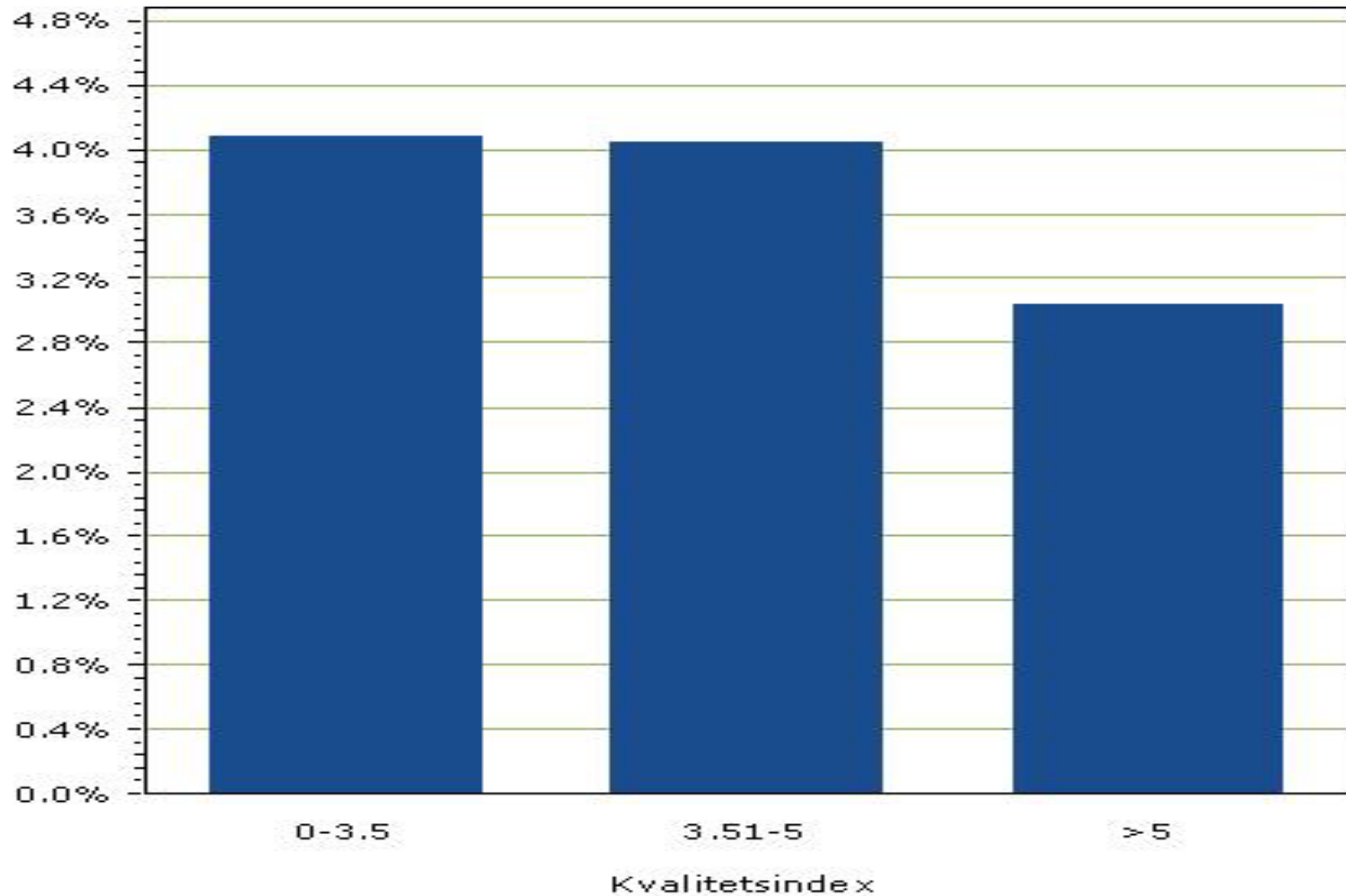
Hospitals' Adherence To Swedish National Guidelines For Treating Acute Myocardial Infarction, 1998-2009



Larsson et al.

Quality index and mortality

POST MI mortality

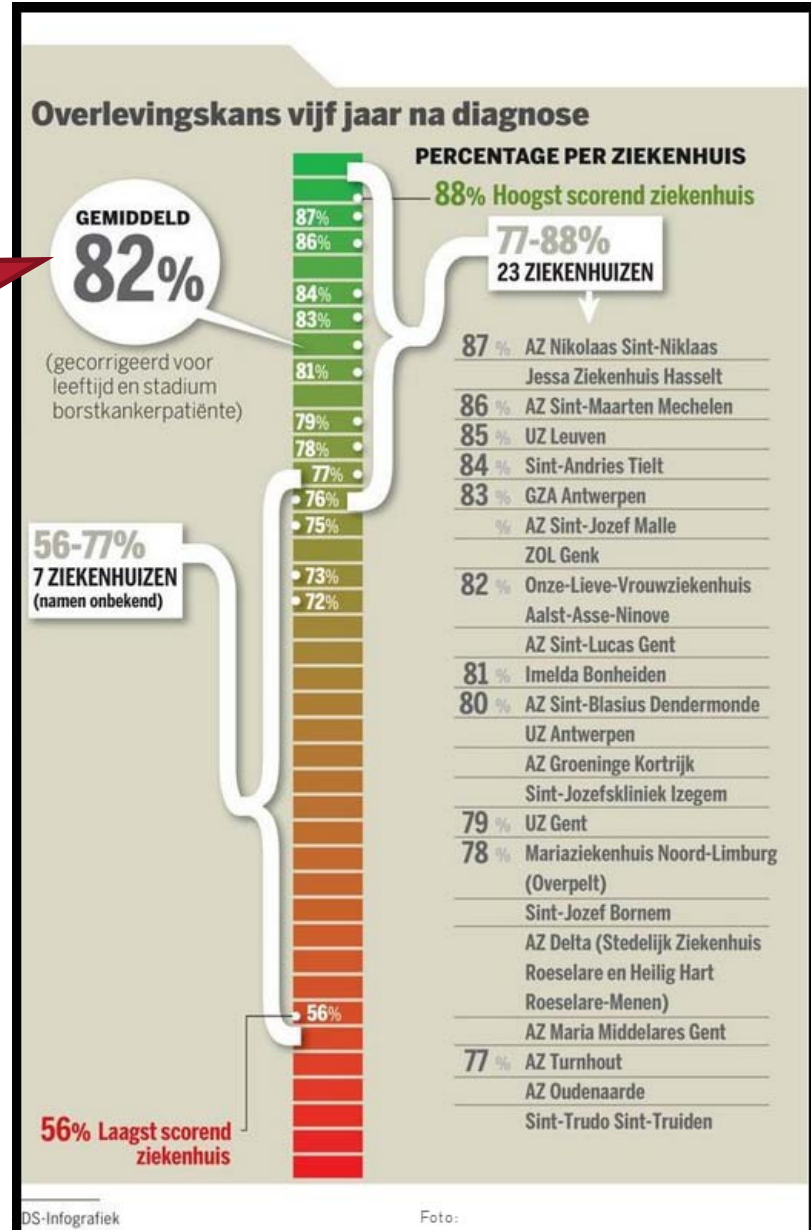


Public reporting





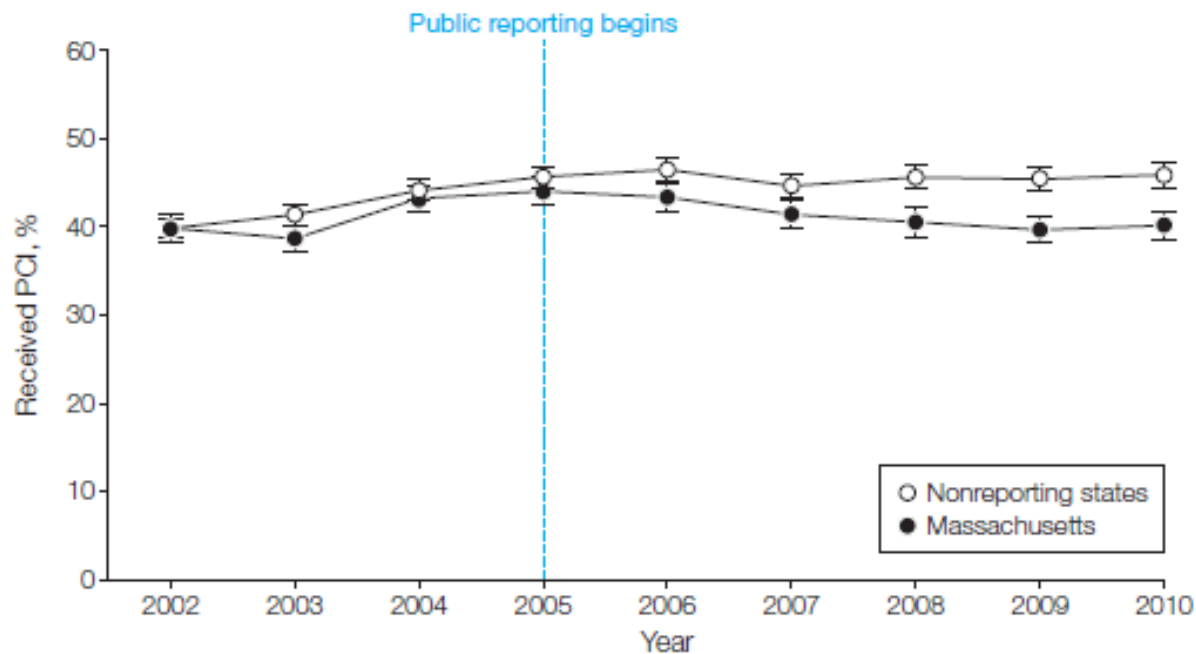
DS 17 march 2014



Public reporting of QI

- Risk of avoidance strategy

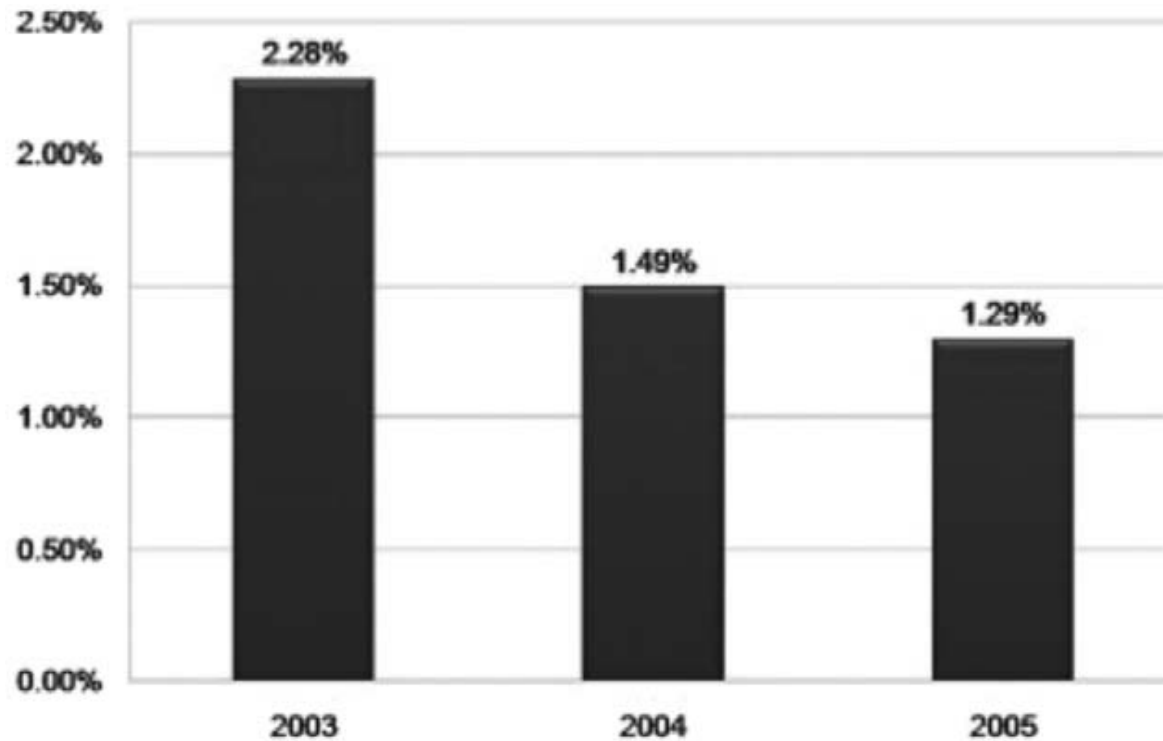
Figure 1. Change in Rates of Percutaneous Coronary Intervention for Acute Myocardial Infarction After Public Reporting, Massachusetts vs Nonreporting States



And no effect on adjusted mortality

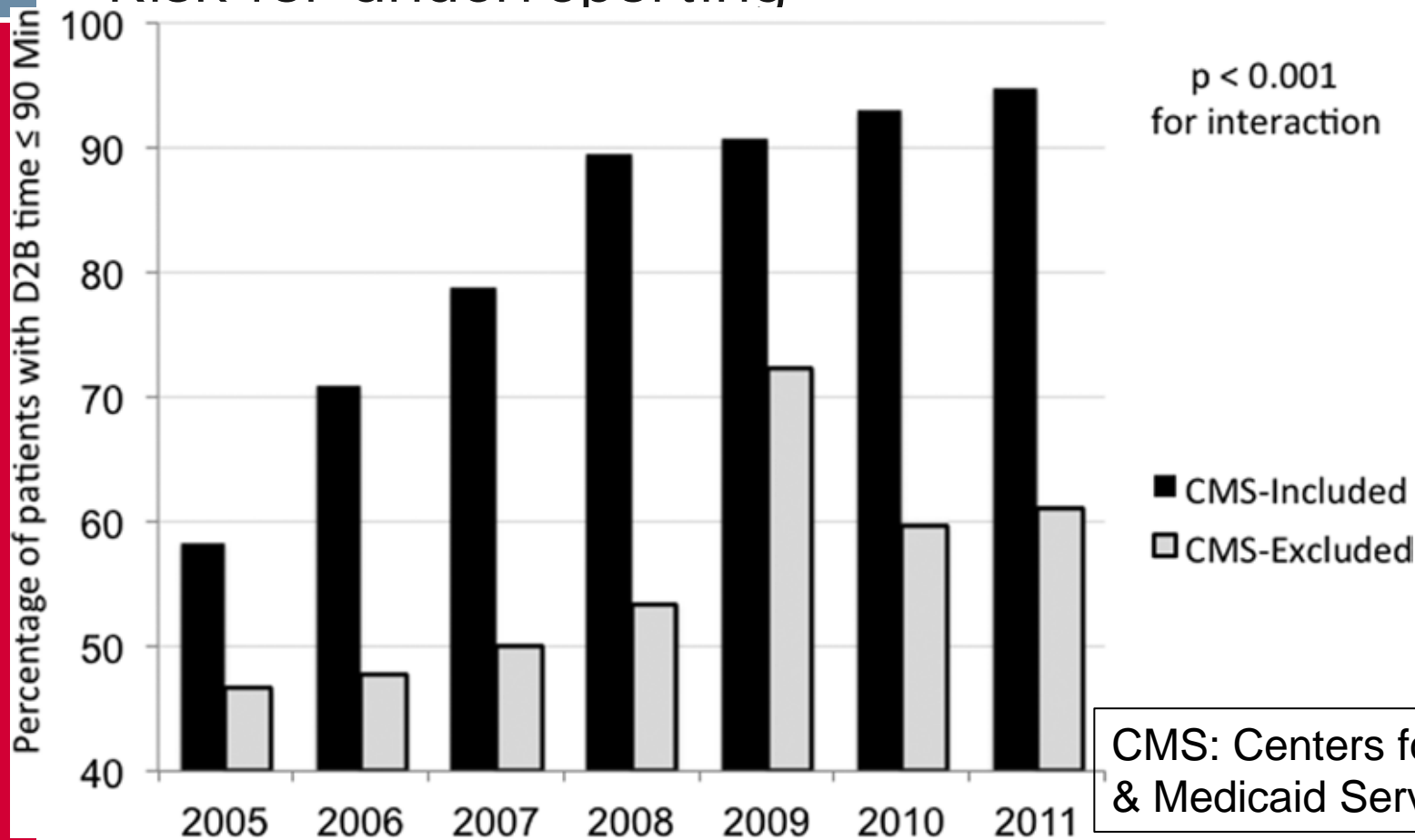
Public reporting of QI

- Risk of avoidance strategy
 - Use of pPCI for cardiogenic shock



Public reporting of QI

- Risk for underreporting





Judgement of QI



