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# Chest Pain Wave I Webinar

May, 30th 2017

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# Disclaimer

The project described is supported by Funding Opportunity Number CMS-1L1-15-002 from the U.S. Department of Health & Human Services, Centers for Medicare & Medicaid Services. The contents provided are solely the responsibility of the authors and do not necessarily represent the official views of HHS or any of its agencies.

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# Practice Transformation

- Individual Patient → Treating Populations
- Fragmented Care → Coordinated Care
- Payer-driven change → Provider-driven
- Volume-based $ → Value-based $

***But where does Emergency Medicine Fit in?***

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"engage emergency clinicians and leverage emergency departments to improve clinical outcomes, coordination of care and to reduce costs"

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# Emergency Quality Network Focus Areas

1. Improving outcomes for patients with sepsis

2. Reducing avoidable imaging in low risk patients by implementation of ACEP's Choosing Wisely recommendations
    - High-cost imaging for low back pain
    - Head CT scan after minor head injury
    - Chest CT for pulmonary embolus
    - Abdominal CT for renal colic
    - Head CT for syncope

3. **Improving the value of ED evaluation for low risk chest pain by reducing avoidable testing and admissions**

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# Goal: National Impact

- Support widespread implementation early recognition and treatment interventions to save **60,000 lives**

- Reduce **one million imaging studies** by supporting clinicians and patients in implementing ACEP's Choosing Wisely™ recommendations

- **Save over $200 million** by improving the value of care for ED patients with low-risk chest pain by:
    - Improving appropriateness of noninvasive cardiac diagnostic testing
    - Improving care coordination to reduce hospitalization rates

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# Chest Pain Wave I Activities

**Recruitment & Enrollment**

- Enrollment Pledge
- Quality Readiness Assessment Survey

**Learning Period (10 months)**

- Monthly Webinars, Office Hours
- Tool kit
- Publicize guidelines
- Disseminate CME
- Submit benchmarking data

**Wrap Up**

- Data Reports
- Summary Report
- Lessons Learned
- eCME, MOC, MIPS credit

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# Monthly Activity Tracker

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## Activity Tracker

Use the E-QUAL portal to track and complete activities for the Wave II Sepsis Initiative. Activities are aligned with E-QUAL webinars and educational offerings but can be completed at any time.

**Activity 1** Kick-Off

Submit your E-QUAL Sepsis Initiative Participation Agreement, assemble your list of local clinicians and leaders, and kick-off your E-QUAL sepsis quality improvement project with a short presentation.

**Activity 2** Benchmarking

Submit benchmarking data to assess current performance (October through December 2015) on sepsis bundle metrics.

**Activity 3** Engage Leadership and Review Best Practices

Identify interest in best practices to improve emergency sepsis care and gain early sponsorship and support form hospital and ED leadership to ensure the success of your Sepsis QI work. Report on your sepsis quality improvement plan.

**Activity 4** Download and Review Data — Coming Soon

Get your Benchmarking results from Activity 2. Download your personalized, confidential benchmarking report and review results with both ED and hospital leaders as well as front-line clinicians to develop common goals.

**Activity 5** Commit to Data-Driven Best Practices — Coming Soon

Tell us about your efforts to disseminate your Benchmarking reports locally and how you will use sepsis quality metrics to focus quality improvement efforts on data-driven targets. Commit to implement best practices that meet local quality gaps.

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**Activity 6** **Front-line engagement** Coming Soon

Practice change requires the engagement and enthusiasm of front-line clinicians. Help us understand which E-QUAL products your clinicians have found most useful and how you integrated evidence-based sepsis care tools in your ED.

**Activity 7** **Develop a QPP Plan** Coming Soon

Requirements of the new CMS Quality Payment Program (QPP) can be met through participation in E-QUAL and by your sepsis quality improvement efforts. Your quality improvement activities in 2017 can determine up to 4% of your payments in 2019. Develop your 2017 QPP plan before June 1, 2016 to ensure you meet all deadlines.

**Activity 8** **Assess performance** Coming Soon

Take stock of your sepsis quality improvement initiative by assessing clinician engagement and performance. Report on best practices developed and utilized to earn Clinical Practice Improvement Activity credit.

**Activity 9** **Tell your Success Story** Coming Soon

Tell us your sepsis quality improvement success story (in 100 words) that will be disseminated across the E-QUAL Network.

**Activity 10** **Benchmarking II** Coming Soon

Sepsis quality improvement requires the use of iterative Plan-Do-Study-Act Cycles. Submit recent data (July to September 2016) for benchmarking local sepsis care performance.

**Activity 11** **Post Wave II Quality Readiness Assessment** Coming Soon

Transforming clinical practice in the ED requires sustained focus and re-assessment. Submit your post-Wave II Quality Readiness Assessment to benchmark quality improvement activities and identify future opportunities for practice improvement.

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# Chest Pain Website

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## Wave I Webinar Topics

- Risk Stratification Scores and Shared Decision Making
- MIPS, QPP and CPIA- How these relate to the E-QUAL Learning Collaborative Activities
- Biomarker Testing in Chest Pain – Past, Present, and Future
- Making the Most Out of an Observation Stay
- What Test Next? Dollars and Sense of Imaging Options for Chest Pain
- Tale of two lawyers (plaintiff and defendant)
- Chest Pain Protocols and Coordinated Care Pathways
- What Defines Quality? Metrics, Outliers, and Medicolegal Risk
- Office Hours

www.acep.org/equal

### E-QUAL Network Chest Pain Initiative

Launching May 30th 2017

**Sign up today! Deadline to sign up for the learning collaborative is May 31st.**

Step 1: Complete E-QUAL Quality Improvement Readiness Assessment Survey- 10 minutes

*(Please note that a survey needs to be completed for each ED site)*

Step 2: Contact the E-QUAL team with any questions or to confirm registration

**Chest Pain Goal**- Improving the value of ED chest pain evaluation by reducing avoidable admissions in low risk patients with chest pain.

#### Chest Pain Wave I Webinar Series

**All live webinars will take place from 12:00-1:00 pm ET on the scheduled date below.**

| DATE | TOPIC |
|---|---|
| May 30 | Introduction to the Chest Pain Initiative<br>Register |
| June 9 | Risk Stratification Scores and Shared Decision Making<br>Register |
| June 13<br>1:00-2:00 pm | MIPS, QPP and CPIA- How these relate to the E-QUAL Learning Collaborative Activities<br>Register<br>**Please submit any questions prior to the presentation by emailing equal@acep.org** |

**E-QUAL Initiatives Portal**

**Why Participate in E-QUAL?**

The Chest Pain learning collaborative will have a learning period of 9 months with numerous benefits:

- Meet new CMS MIPS requirements for Clinical Practice Improvement Activities
- Submit and receive benchmarking data
- Feature ED's commitment to high value care to payers
- Provide ED with access to initiative aligned with CMS hospital quality reporting and payment initiatives

**Chest Pain Initiative Tool Kit**

- Guidelines and Materials
- ACEP eCME Credit
- Patient Engagement Materials
- Podcasts
- Rural Emergency Quality Series

**MIPS and CPIA Credit**

- Use ACEP Tools to meet your CPIA/MIPS Requirement
- E-QUAL Portal Activities and CPIA Cred

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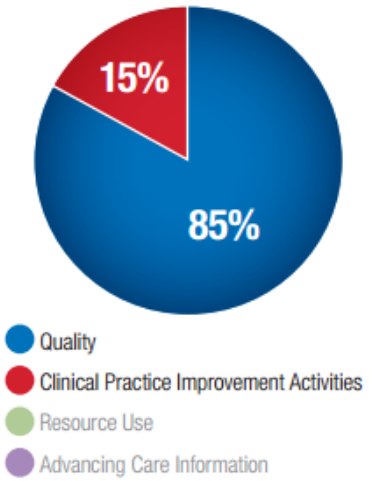
# Use ACEP Tools to meet your Improvement Activity requirement

## What is MIPS?

Participating in MIPS will earn you performance-based payment adjustments of up to 9% of your Medicare payment

Most emergency clinicians will only be measured on Quality and CPIA for 2017.




## What is CPIA?

Clinical Practice Improvement Activities (CPIA) must be attested to by groups and clinicians as evidence of active efforts to improve quality and reduce the cost of care.

**2017 CPIA Goal:** Maximum 40 points can be earned — 40

**2018 CPIA Goal:** Maximum 60 points can be earned — 60

**2019 CPIA Goal:** Maximum 60 points can be earned — 60

| E-QUAL Activities | Points |
|---|---|
| **Completion of all Core Activities in E-QUAL Learning Collaborative will complete three CPIAs** | |
| Implementation of formal QI methods or practice improvement processes (PSPA 19) | 30 points |
| Measurement and improvement at the practice and panel level (PSPA 18) | |
| Leadership Engagement in practice improvement (PSPA 20) | |
| **Additional CPIA points available by implementing each E-QUAL Core Activity Best Practices** | |
| Use of decision support and standardized treatment protocols (PSPA 16) | 10 points |
| Engage patients and families in system of care (BE 14) | 10 points |
| Implement Analytic capabilities to manage total cost of care (PSPA 17) | 10 points |
| Disseminate patient self-management and engagement materials (BE 21) | 10 points |
| Develop standard care coordination agreements and operational improvements (CC 11, CC 12) | 10 points |
| Use evidence-based decision aids for shared decision making (BE 12) | 10 points |

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# What do I need to do NOW?

**Deadline to signup to participate is Today! Tuesday, May 31st.**

- **Required**: Complete E-QUAL Quality Improvement Readiness Assessment Survey- 10 minutes
- **Required**: Submit provider NPIs and group Tax ID Number (TIN) to ensure registration in TCPI program with CMS
- **Required**: Activate the Chest Pain E-QUAL Portal
- **Required**: Register for next webinar in June

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# Low Risk Chest Pain

- Goal:
  - To improve the value of ED chest pain evaluations by safely reducing avoidable admissions and imaging in low risk chest pain patients

- Choosing Wisely:
  - Initiative of the ABIM Foundation and Consumer Reports
  - Aim to advance national dialogue on avoiding unnecessary tests, treatments, procedures
  - Identified "Top 5" list from nine specialty societies

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# EQUAL: Low Risk Chest Pain (LRCP)

- Aims:
  - Improve door to ECG time for potential ACS patients
  - Improve patient engagement in decision making
  - Safely decrease LRCP inpatient admissions
  - Safely decrease LRCP observation visits
  - Safely decrease stress imaging and coronary CTA
  - Provide data collection and outcomes tools for LRCP

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# Interventions to Improve Care

- Implementation of standard diagnostic algorithms for chest pain patients in the ED
- Utilization of EMR for decision support
  - Creation of condition specific order sets and advanced decision support to drive best care
- Leverage CEDR and E-QUAL data analytics tools to provide feedback to providers

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# Why Chest Pain?

- High Volume
- High Risk
- High Liability
- High Cost

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# Chest Pain – High Volume

- Second most common reason for any ED visit
  - 5.5% of all U.S. ED visits
  - 7.1 million ED visits annually

CDC NHAMCS 2017 reports

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# Chest Pain - High Risk

- In 2014, 23% of all U.S. deaths were from heart disease
  - Most common cause was ischemic heart disease (60%)
  - Chest pain is the most common symptom for acute myocardial infarction:
    - 78% of all STEMI
    - 67% of STEMI and NSTEMI

CDC NHAMCS 2017 reports

JAMA 2000;283:3223-29

Am Heart J 2012;163:372-82

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# Chest Pain - High Liability

- 37% of malpractice claims are for “failure to diagnose” – the leading malpractice category.
- The second most common ED lawsuit is for acute myocardial infarction – 5% of all
- Historically 4.4% of ACS patients were sent home (2.1% MI, 2.3% UA), with higher mortality rates

Brown TW, Acad Emerg Med 2010 May;17(5):553-60

Pope JH, NEJM 2000;342:1163-70

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- High Liability
- High Cost

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# Chest Pain – High Cost

- Avoidable inpatient admissions – Medicare 2014
  - $2.9 billion spent on “avoidable” INPATIENT admissions
  - Top two conditions – 31,001 inpatient admissions
    - Chest Pain – 3.5% of avoidable admissions
    - Irregular heart beat – 3.8% of avoidable admissions

- Average Medicare patient “out of pocket” costs are higher for inpatient admissions:
  - Inpatient patient costs = $981
  - Observation patient costs = $344

OIG report Dec 2016 OIE-02-15-00020

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# Chest Pain – EQUAL ***Good news !!!***

- Rapid diagnostic protocols can facilitate the timely diagnosis of acute MI patients
- Chest pain decision aids and protocols can safely avoid many admissions and prevent the overuse of advanced cardiac imaging
- EQUAL tools can help you find the balance between the timely diagnosis of acute coronary syndromes and avoidable admissions
- Get the right patient to the right place at the right time!

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# Who is at Risk?

- NRMI-2 database of 434,877 patients
  - **33%** presented to ED without chest pain
- MI patients without chest pain:
  - 7 years **older, m**ore **women, m**ore **diabetics**, more prior **CHF**
- **Higher In-hospital** mortality: 23% v.s. 9% **(adjusted O.R. = 2.21)**

JAMA 2000;283:3223-29

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# Who Needs a 10 minute ECG?

## Two Validated Criteria

| Graff Rule for Rapid ECG (1994) [STEMI – 100% sens] | Glickman Rule for Rapid ECG (2012) [STEMI - 92% sens; 99% NPV] |
|---|---|
| **Age ≥ 30** - Chest Pain | **Age ≥ 30** - Chest Pain |
| **Age ≥ 50** | **Age ≥ 50** |
| • Weakness | • Weakness |
| • Syncope | • Syncope |
| • Shortness of Breath | • Dyspnea |
| • *Rapid Heartbeat* | • *Altered Mental Status* |
| | • *Upper Extremity Pain* |
| | ***Age >= 80*** |
| | • *Abdominal Pain* |
| | • *Nausea/Vomiting* |

**Graff, L. et al; Ann Emerg Med, 2000. 36(6): p. 554-604.**
**Glickman, S.W., et al. Am Heart J, 2012. 163(3): p. 372-82.**

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# Chest Pain - Avoidable Admissions

- Use of chest pain decision aids might safely decrease observation stays and stress imaging by 21% - 80%

Mahler et. al, Crit Path Cardiol, 2011

Mahler et al, Circ CVQO J, 2015.

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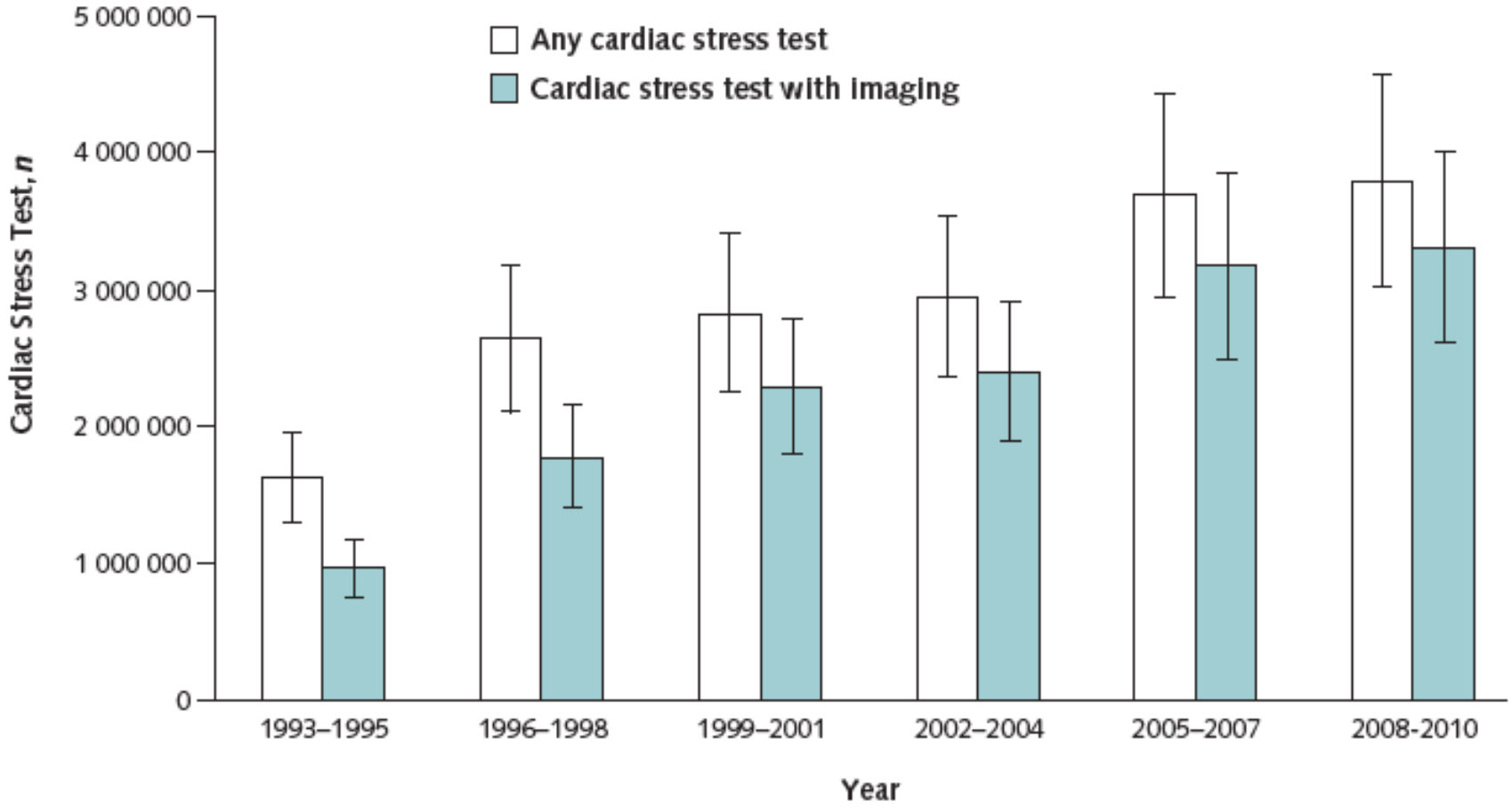
# Physician Decision Making and Trends in the Use of Cardiac Stress Testing in the United States

## An Analysis of Repeated Cross-sectional Data






Ladapo et al. Ann Intern Med. 2014;161:482-490.

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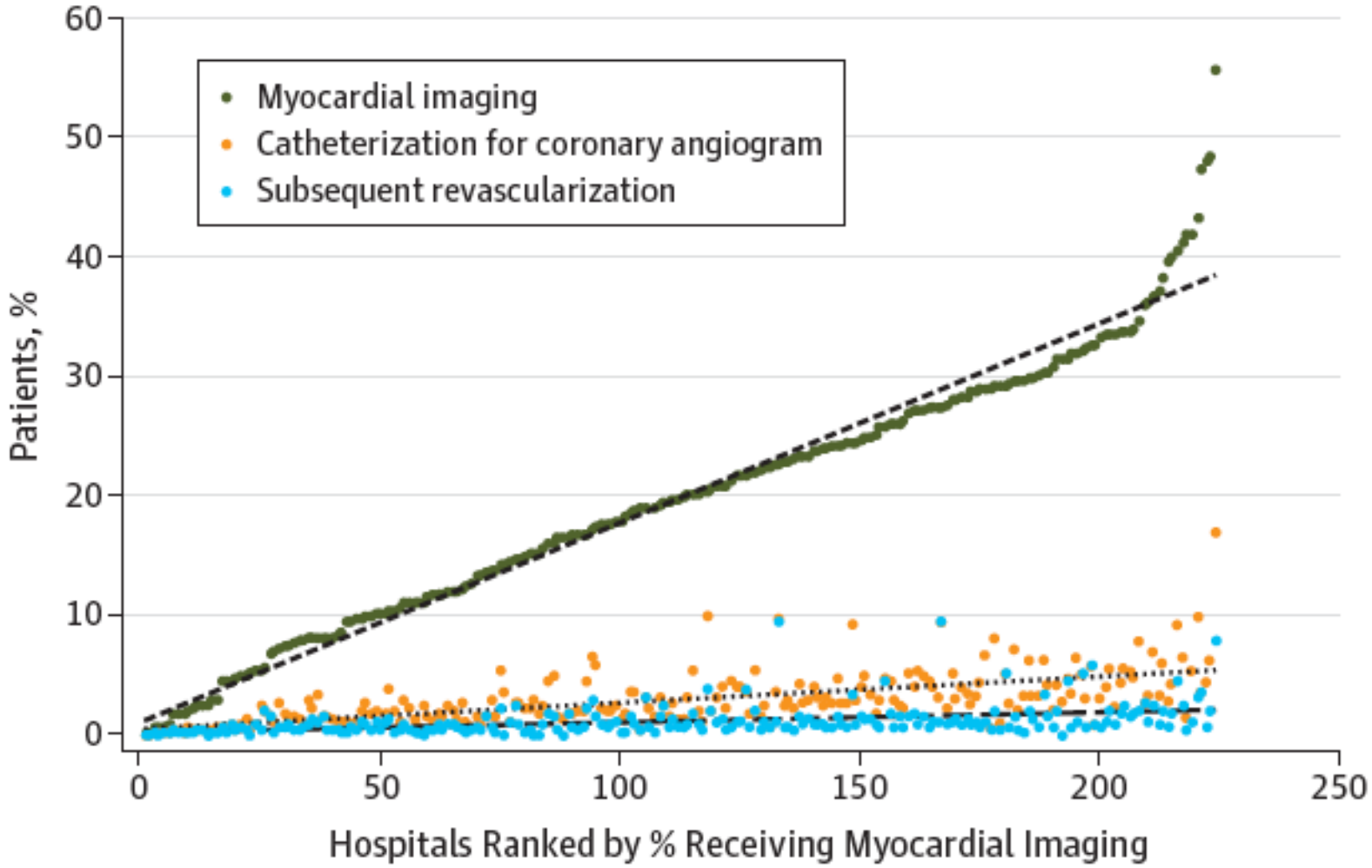
# Hospital Variation in the Use of Noninvasive Cardiac Imaging and Its Association With Downstream Testing, Interventions, and Outcomes






Safavi et al JAMA Internal Medicine 2013;173:546–53.

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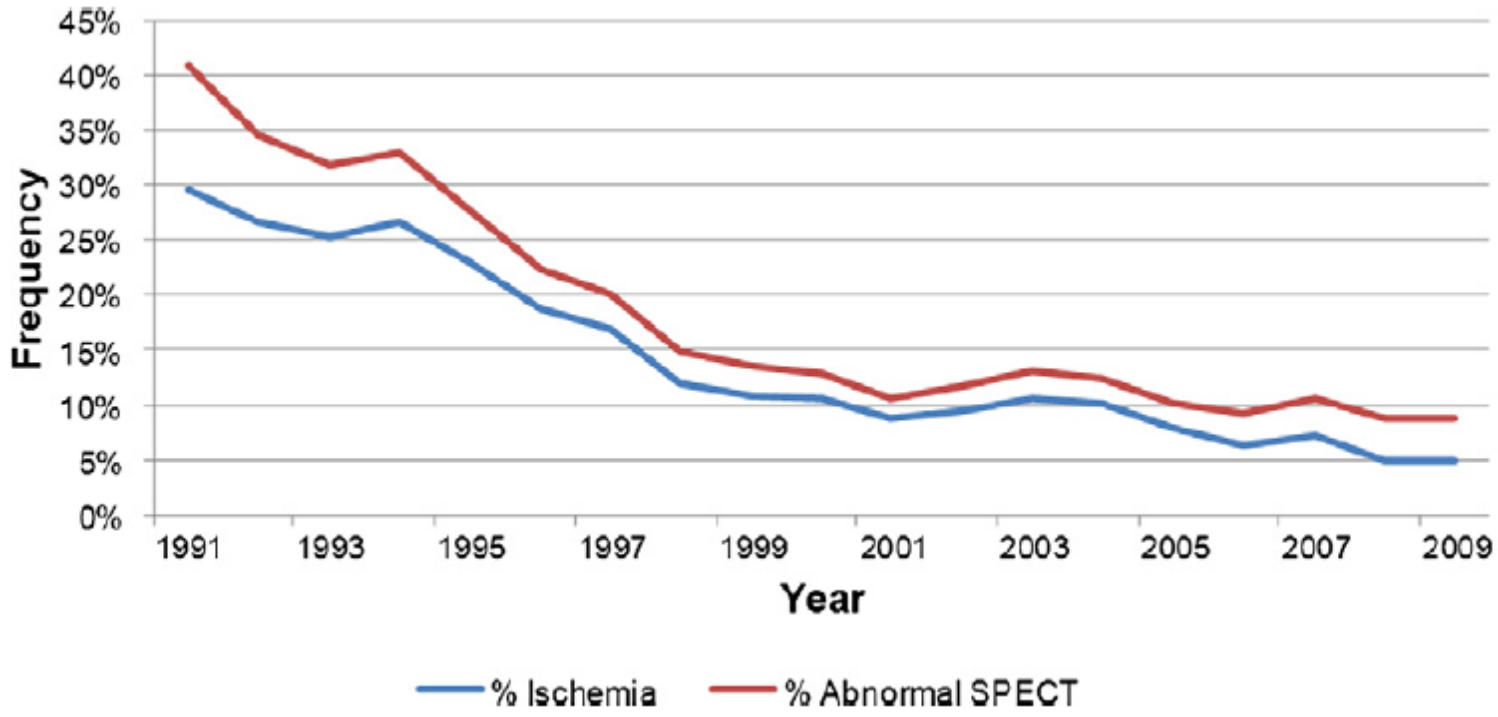
# Temporal Trends in the Frequency of Inducible Myocardial Ischemia During Cardiac Stress Testing

## 1991 to 2009




| Parameters | 1991–1995 (n = 6,335) | 1996–2000 (n = 10,264) | 2001–2005 (n = 14,089) | 2006–2009 (n = 8,827) | p Values (Trend) |
|---|---|---|---|---|---|
| Patient status | | | | | |
| Outpatient | 4,558 (72.0) | 7,371 (71.8) | 8,846 (62.8) | 5,029 (57.0) | |
| Inpatient | 1,777 (28.1) | 2,890 (28.2) | 4,724 (33.5) | 3,000 (34.0) | |
| Emergency department | — | — | 519 (3.7) | 798 (9.0) | <0.001 (<0.0001) |



Rozanski et al. J Am Coll Cardiol 2013;61:1054–65.

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# EQUAL Chest Pain Tools

- Guidelines and materials
  - Rapid (<10 minute) ECG criteria
  - Troponin protocols
  - Chest pain disposition aids – for discharge, observation, and admission
  - Observation protocols
  - Optimal use of advanced cardiac imaging
- Educational resources and lectures for CME
- Update on most recent chest pain literature
- Data collection tools
- Patient engagement and shared decision making materials
- Webinars and podcasts

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# Chest Pain Decision Making

- STEMI? ECG => Cath lab

  **STEP 1. Rapid ECG criteria**

- NSTEMI? Tn => Admission

  **STEP 2. NSTEMI troponin testing**

- ACS (UA)? => Decision Tools:

  **STEP 3. “No” Risk => Home vs Observe (OU)?**

  **STEP 4. “Low / Moderate” Risk => Observe (OU) vs Admit?**

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# For More Information

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E-QUAL Email: equal@acep.org

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