

Reducing variation in hospital spending

Scaling up collaborative quality improvement

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TRENDWATCH

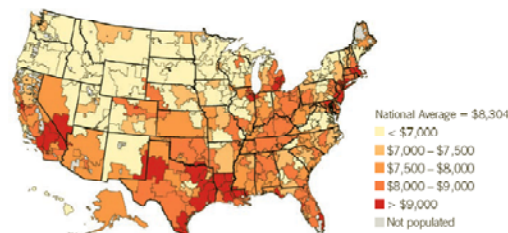
Geographic Variation in Health Care Spending: A Closer Look

Researchers have long documented variation in health care spending. Variation occurs across geographic areas and among providers, and even populations within a geographic area. Focus on geographic variation has intensified as policymakers struggle to identify strategies to contain costs. While the U.S. has regions with relatively high spending, there also are pockets of very low spending. Legislators and administration officials assert that reducing Medicare spending in high-spending areas of the U.S. to the rates observed in the lowest spending regions could generate significant savings for the health care system without harming quality of care.¹

There is less research exploring the underlying factors that drive variation or identifying effective strategies to optimize

Research shows significant variation in health care spending.

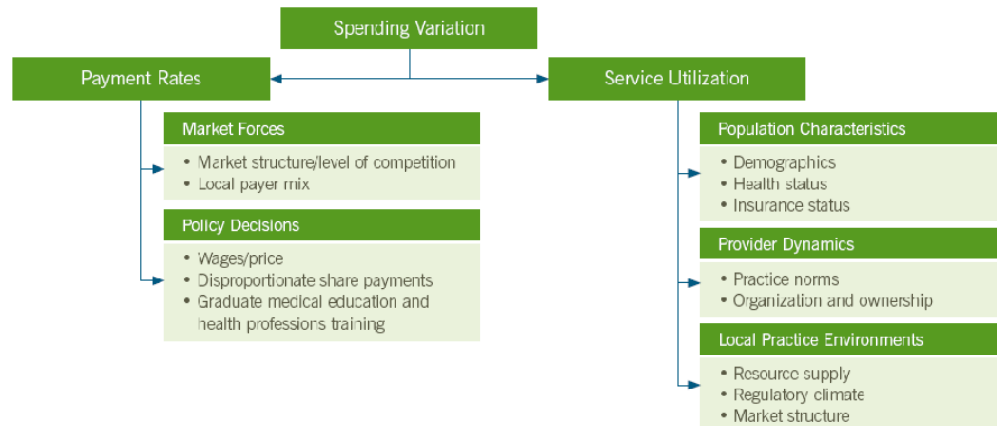
Chart 1: Medicare Spending per Beneficiary, by Hospital Referral Region, 2006



Source: The Dartmouth Atlas of Health Care. (2009). *The Policy Implications of Variations in Medicare Spending Growth*.
Link: http://www.dartmouthatlas.org/atlas/Policy_Implications_Brief_022709.pdf.
Note: Data adjusted for age, race, and sex but not price. Category definitions as in source document.

Spending variation is influenced by many complex factors.

Chart 2: Drivers of Spending Variation



Hospital spending = N episodes x \$\$ per episode



Number of admissions,
operations, etc.

Hospital spending = N episodes x \$\$ per episode

Payment
rates

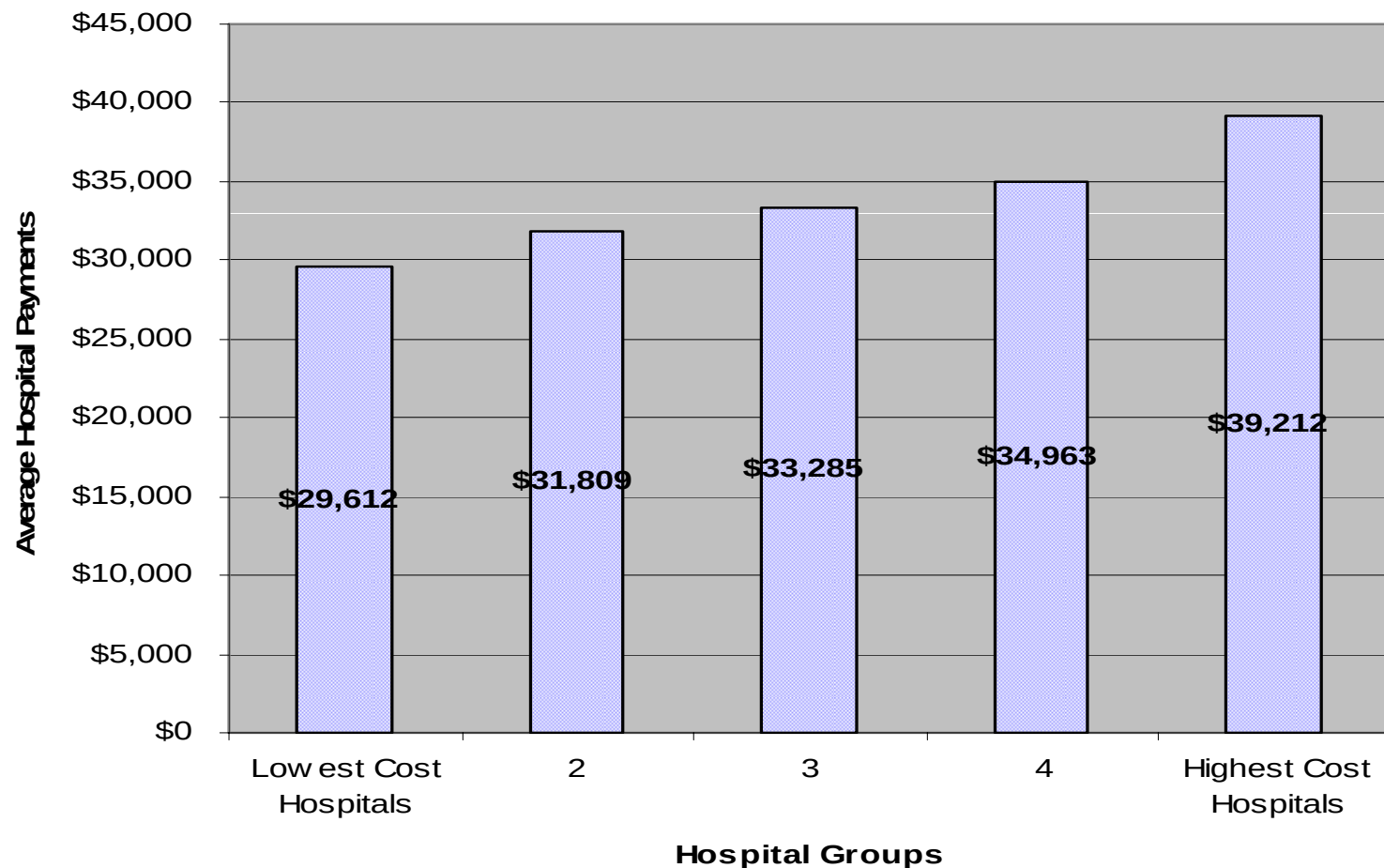
Case mix

Efficiency

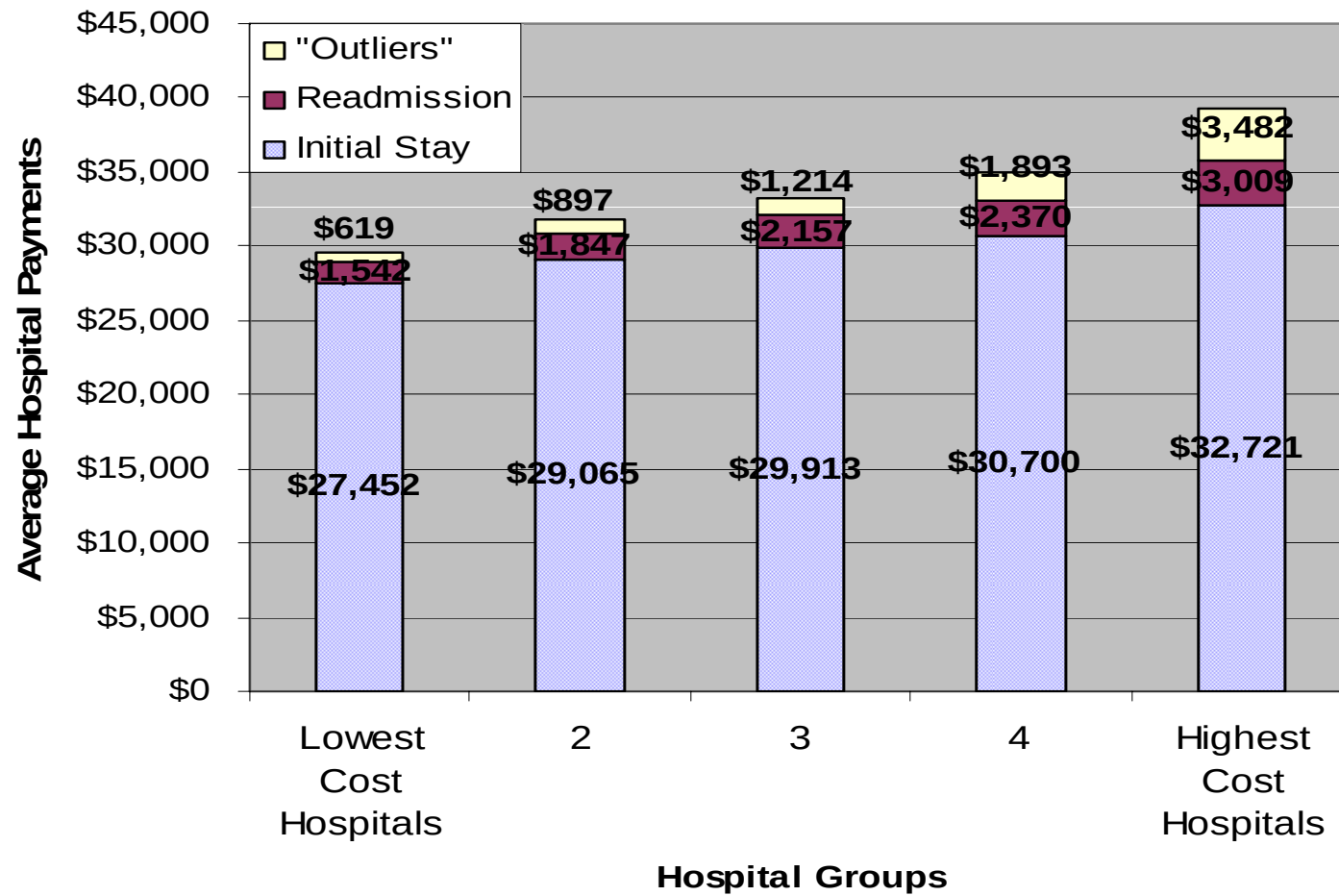
Quality

Practice
style

Price-adjusted hospital payments for CABG (2006 Medicare data)



Price-adjusted hospital payments for CABG (2006 Medicare data)



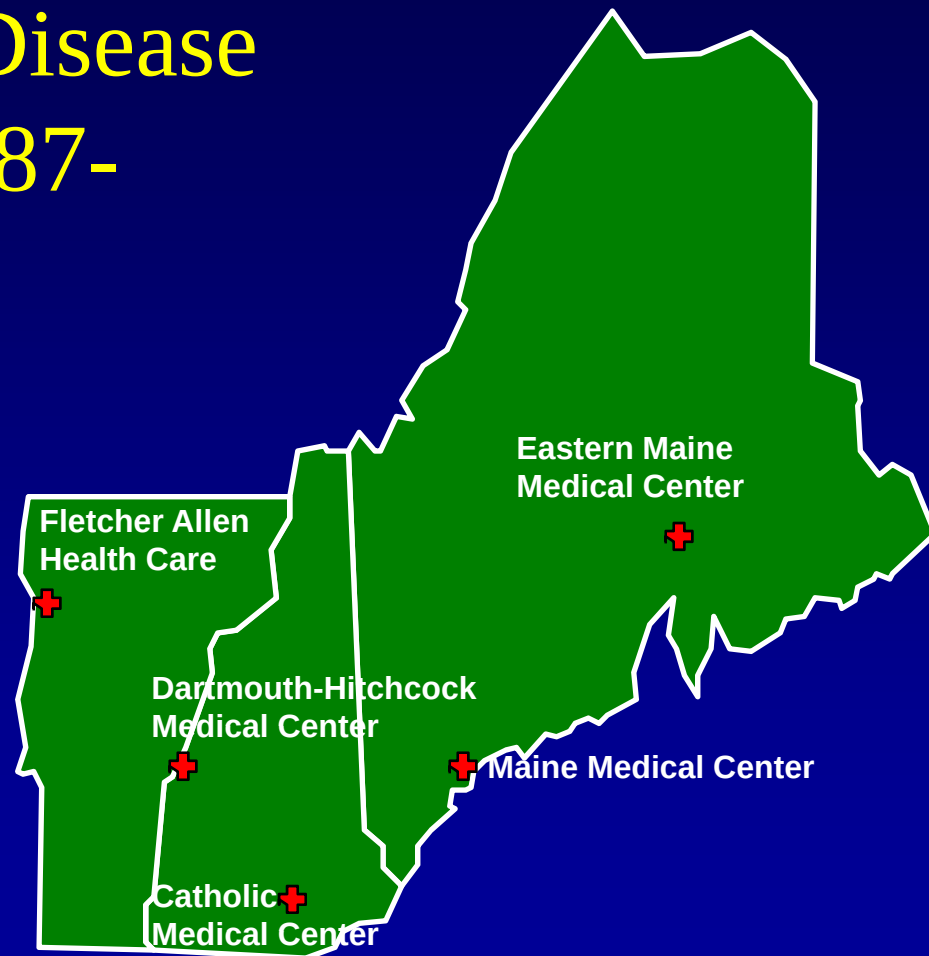
Strategies for improving hospital quality

- Selective contracting / COE programs
 - E.g., Leapfrog Group
 - Practical barriers, weak measures for identifying “excellent” hospitals
- Compliance with selected process measures
 - E.g., P4P based on SCIP measures
 - Little impact to date on outcomes
- Outcomes measurement & feedback
 - E.g., NSQIP, STS/ACC registry participation
 - Hospitals/physicians don’t learn how to improve

Collaborative quality improvement

- Basic idea: Physicians/hospitals collaborate with and learn from each other in improving outcomes
- Detailed clinical data re both process and outcomes
- Confidential feedback on risk-adjusted performance
- Empirical and non-empirical identification of best practices
- Continuous planning, development, implementation and evaluation of QI interventions

The Northern New England Cardiovascular Disease Study Group, 1987-



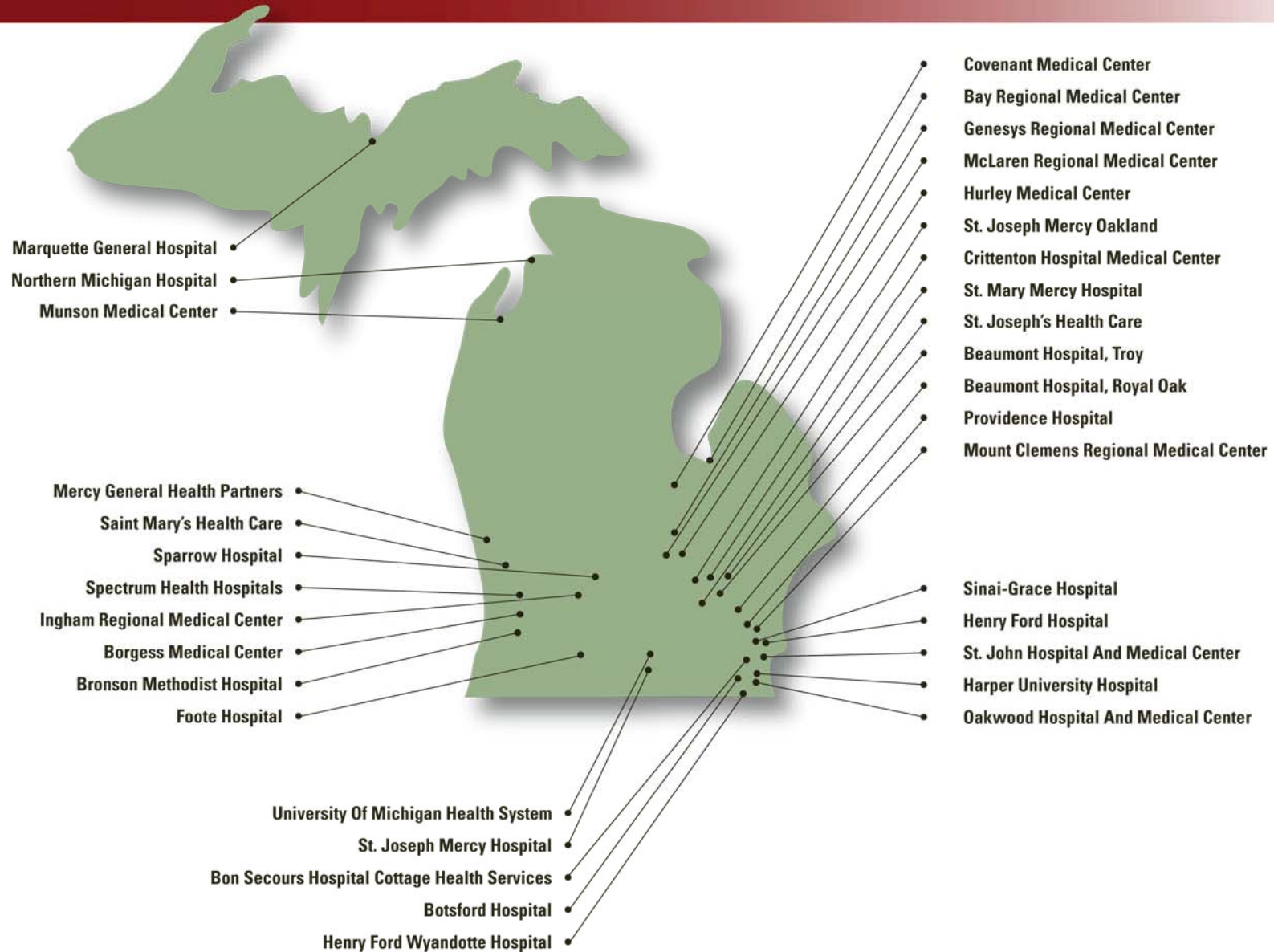
Scaling up collaborative QI in Michigan

- Partnership between BCBSM, Michigan hospitals, and clinician scientists
 - Pilot test with PCI in 1998, broad implementation 2005-6
- \$20+ million annual investment from BCBSM
- 7 collaborative quality improvement programs
 - PCI /PVI, Cardiac, NSQIP, bariatrics, breast cancer, cardiac CT (trauma, joint replacement, and medical admissions to start 2010)
 - 50+ hospitals
 - 100,000+ pts / year

Basic features

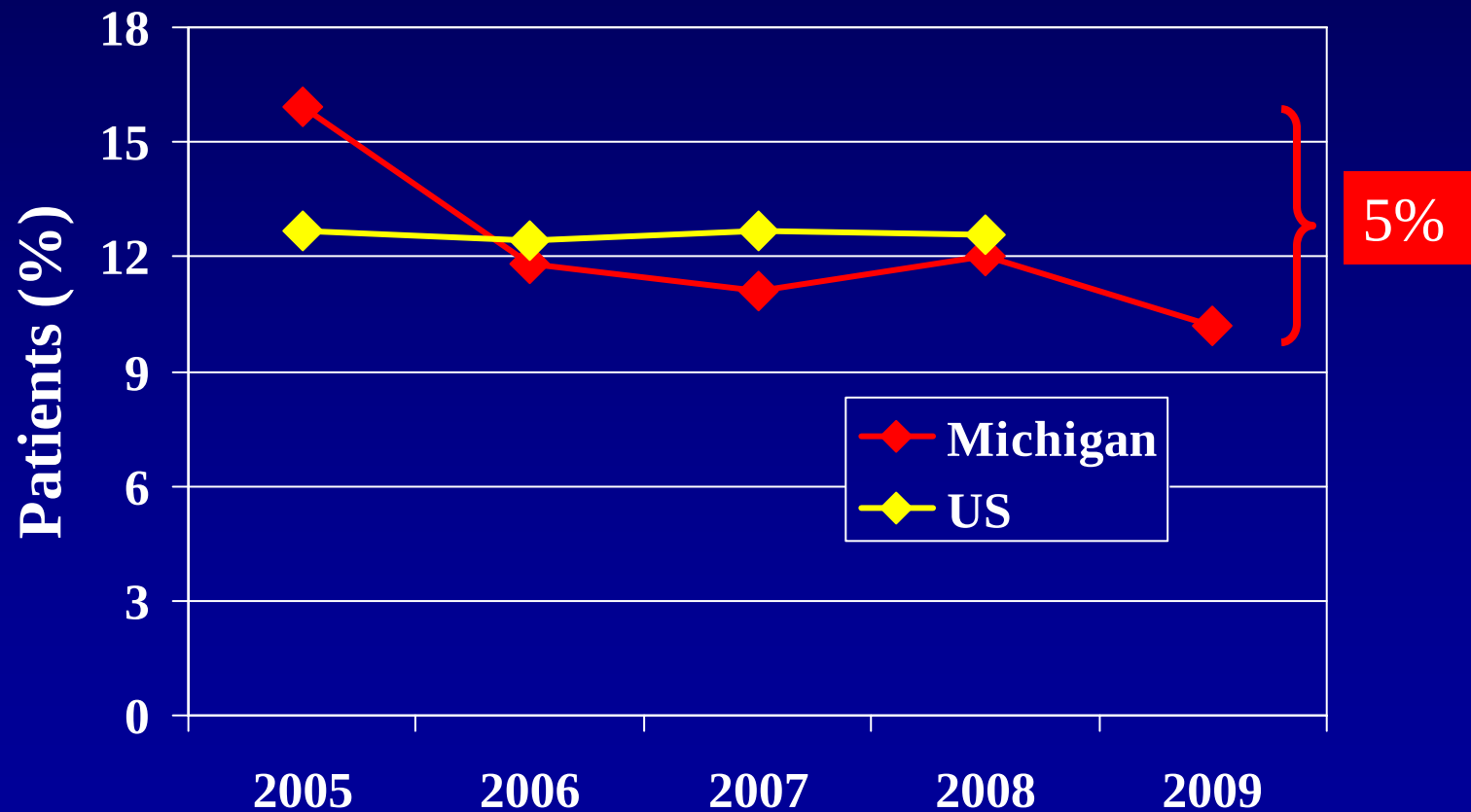
- Hospitals paid for participating, not their results
 - % total BCBSM revenue
 - Payments exceed participation costs for most hospitals
- Expectations
 - Gather / submit data in timely fashion
 - Attend quarterly QI meetings
 - Implementation of QI interventions, site visits, etc.
- Performance data kept confidential
- Distinct from MHA/Keystone initiative

Michigan Surgical Quality Collaborative (MSQC)

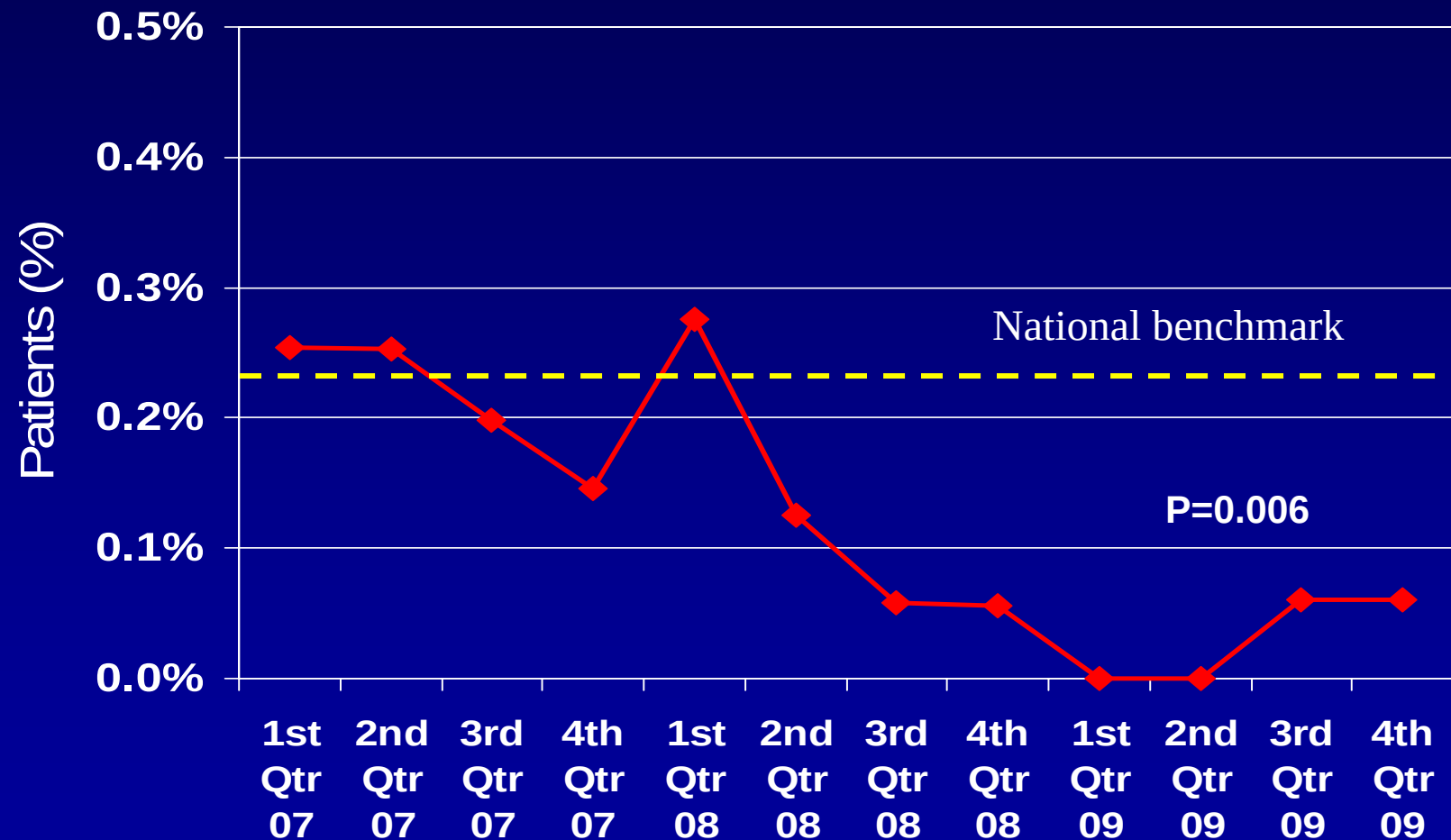


Complications after gen/vasc surgery

Based on NSQIP measures



Deaths after bariatric surgery in Michigan



Other results

- Cardiac surgery
 - Michigan as a whole receives highest rating (3-star) from STS (implies top 10th of US hospitals)
- Interventional cardiology
 - Michigan consistently outperforms national ACC benchmarks on major outcomes
- Breast cancer, PVI, cardiac CT scanning
 - Too soon to judge

How does improvement occur?

- “Hawthorne effect” stuff inspired by performance feedback alone
 - Learning / reflection by physicians
 - Internal QI activities of hospitals
- Explicit QI activities of the coordinating centers
 - Dissemination of proven best practices
 - Identification of new ones
 - Empirical analysis
 - Benchmarking hospitals with superior outcomes
 - Non-punitive help for struggling hospitals

Back to hospital spending

Hospital spending = N episodes x \$\$ per episode

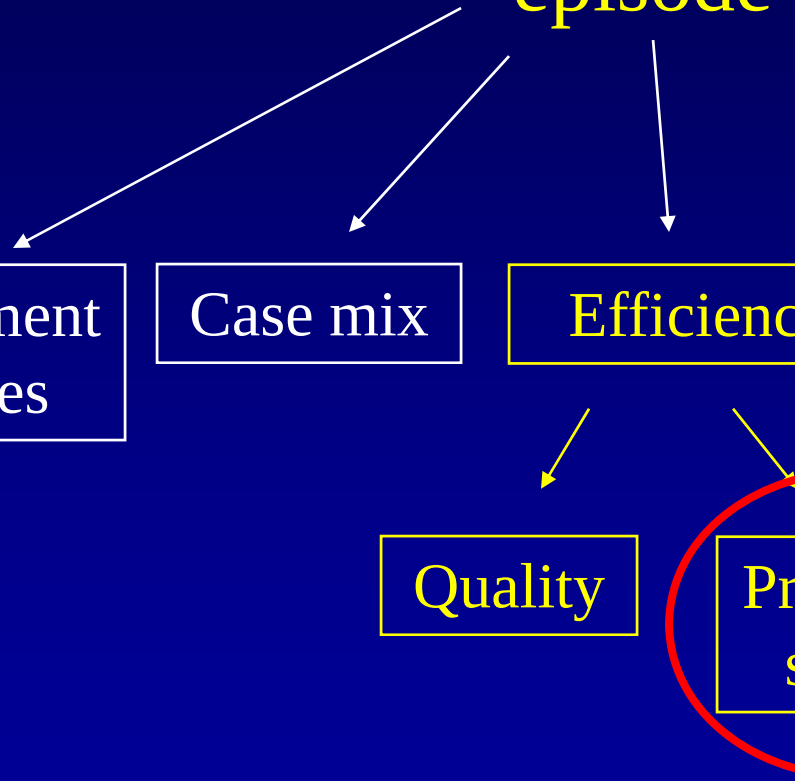
Payment rates

Case mix

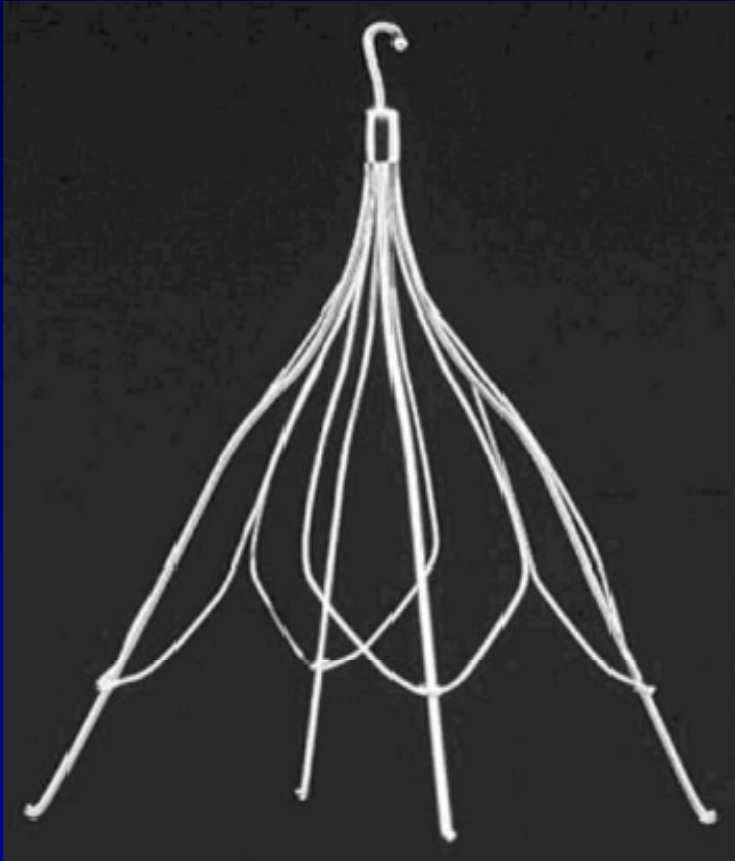
Efficiency

Quality

Practice style

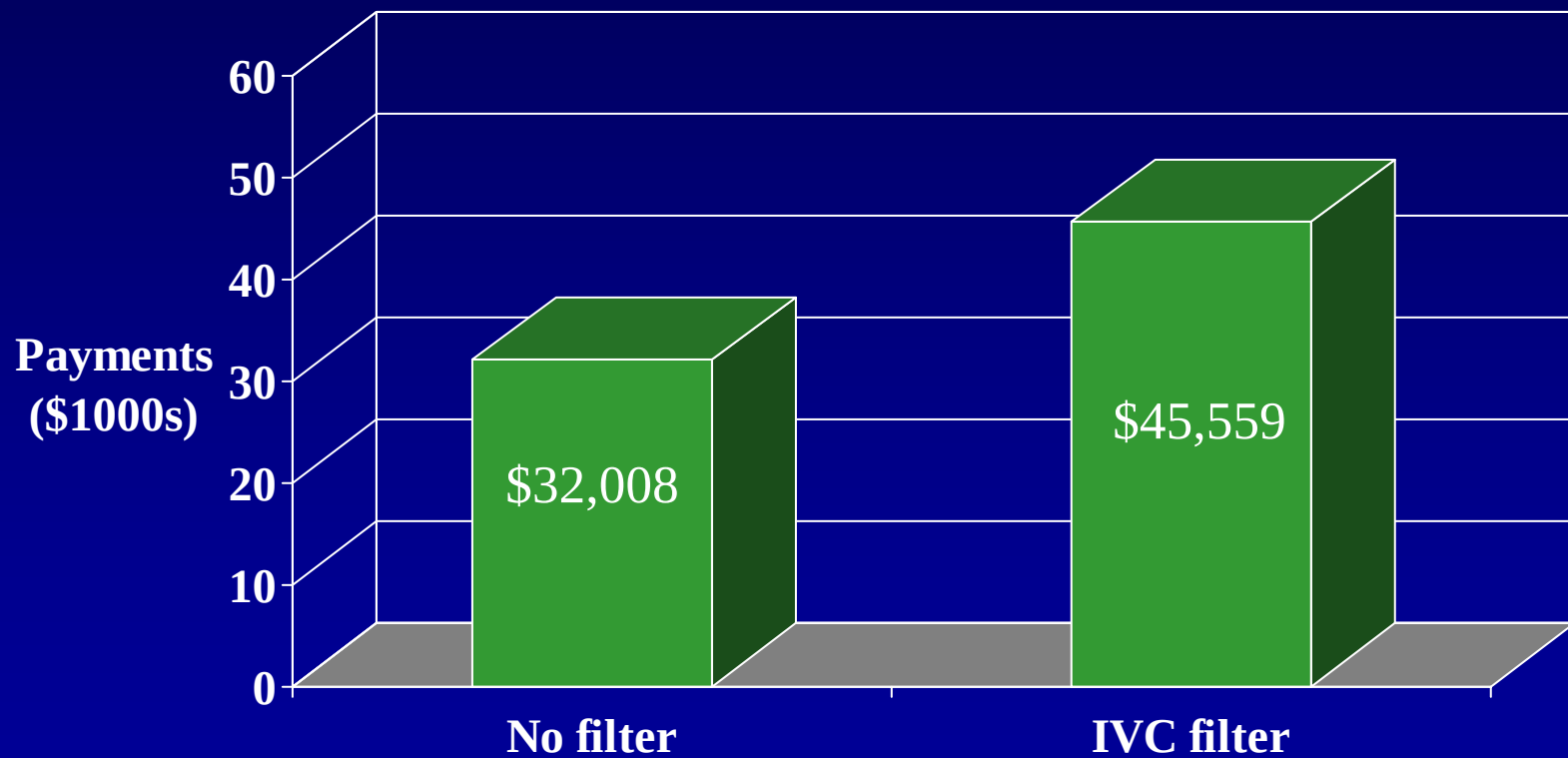


Inferior vena cava (IVC) Filters

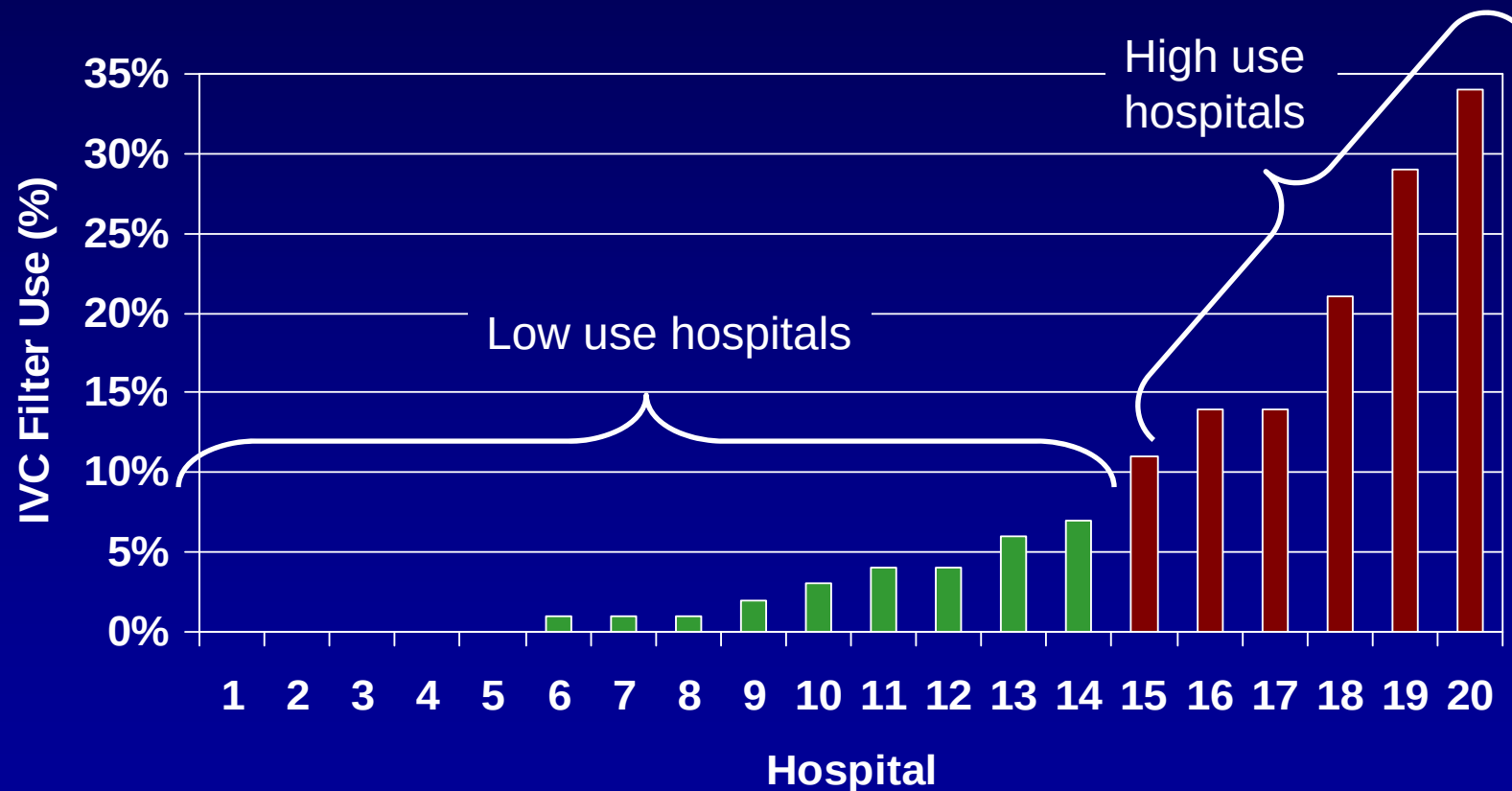


- Aim to prevent fatal pulmonary embolism after surgery
- Used commonly in bariatric surgery
- Effectiveness unclear

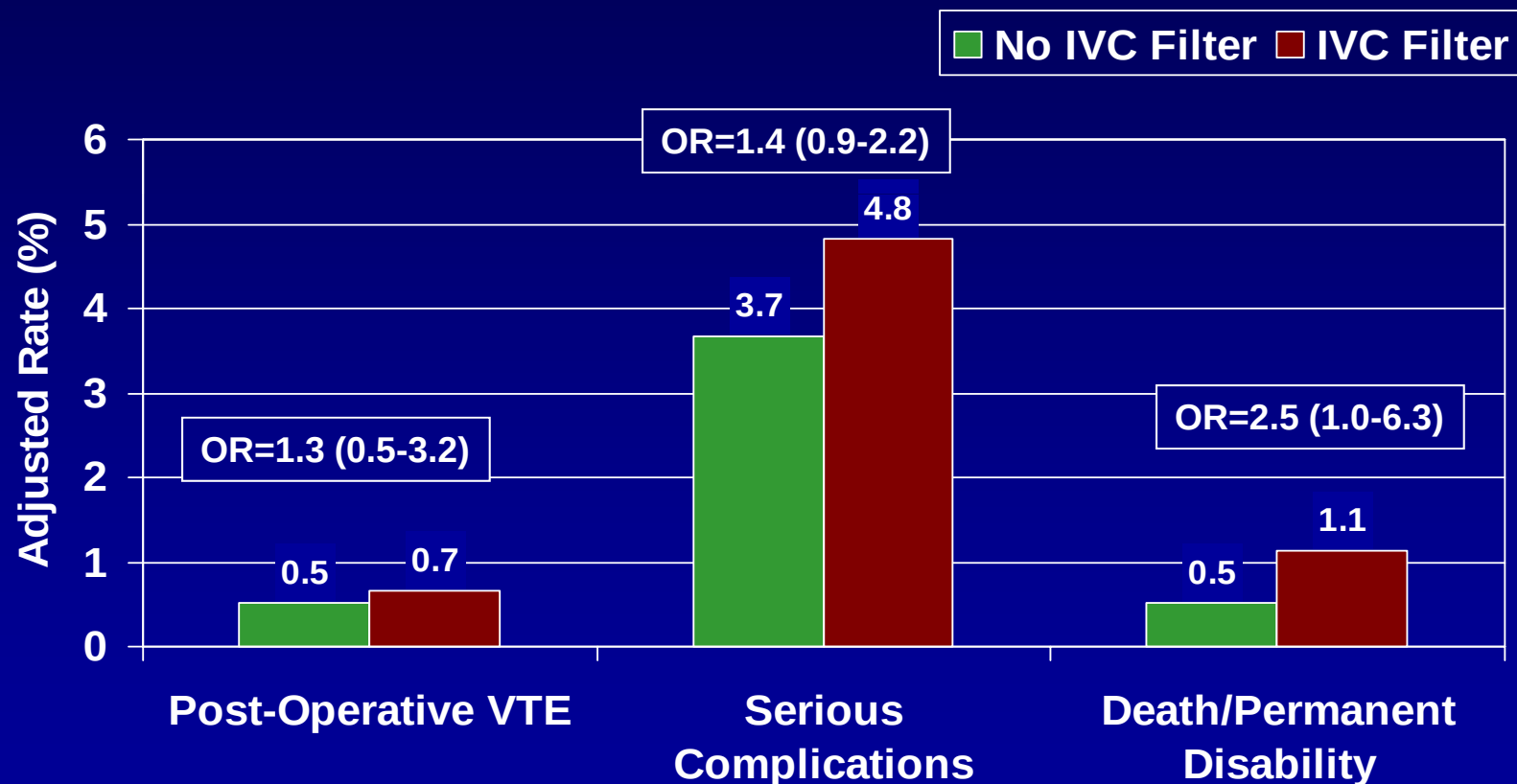
Total BCBSM payments with gastric bypass (2006)



Variation in the use of IVC filters before gastric bypass



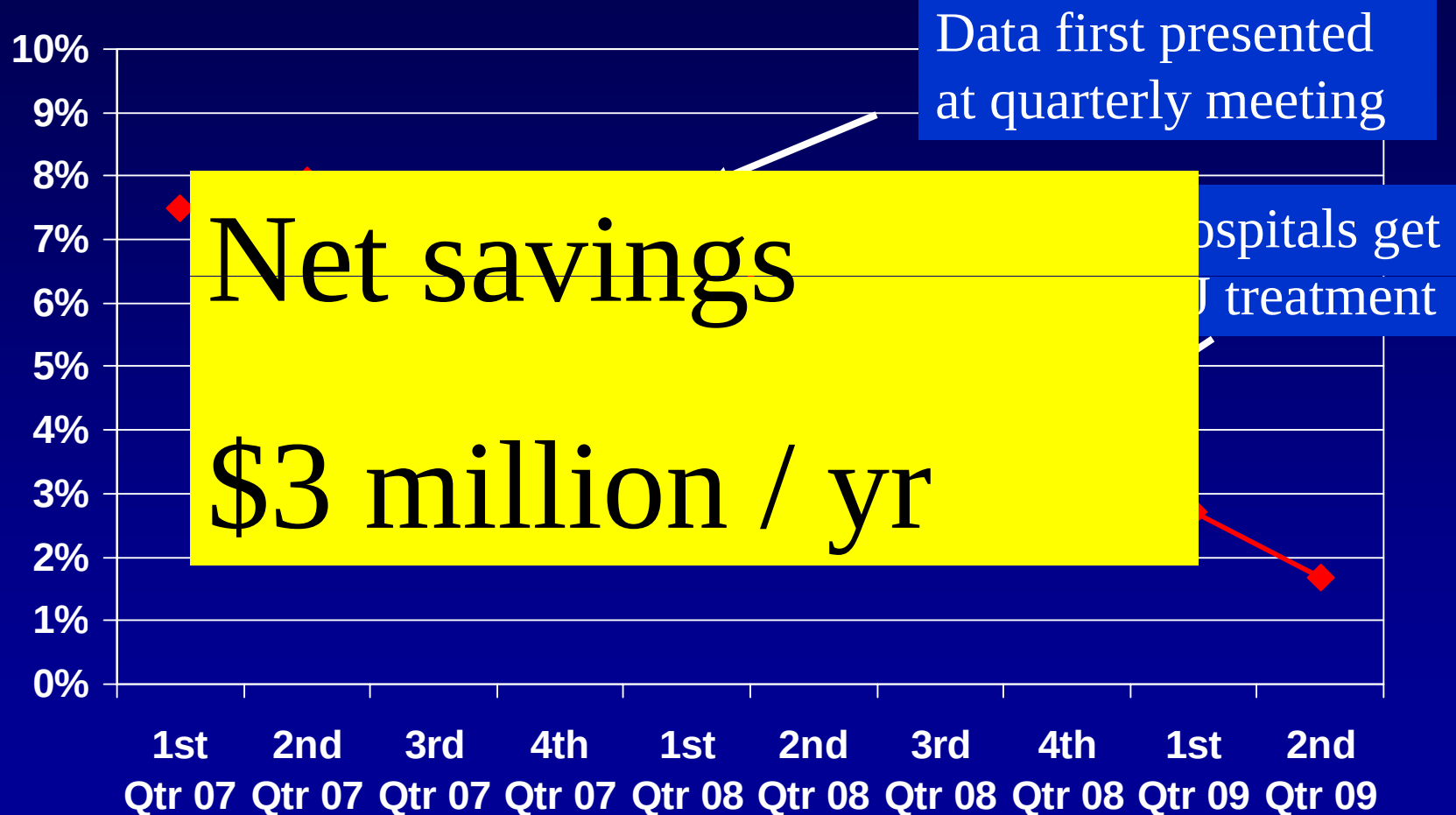
Complications in gastric bypass patients with and without IVC filters



Over half of deaths and permanent disability directly attributable to the filter itself

- Fatal pulmonary embolism despite filter
- IVC thrombosis and cardiovascular collapse
- Filter migration to the heart

Use of IVC filter in Michigan



Hospital spending = N episodes x \$\$ per episode

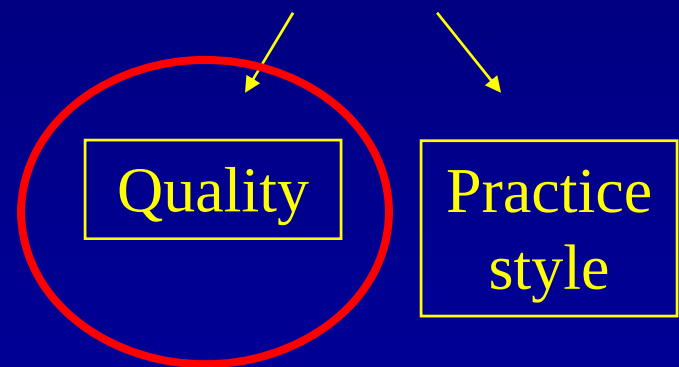
Payment rates

Case mix

Efficiency

Quality

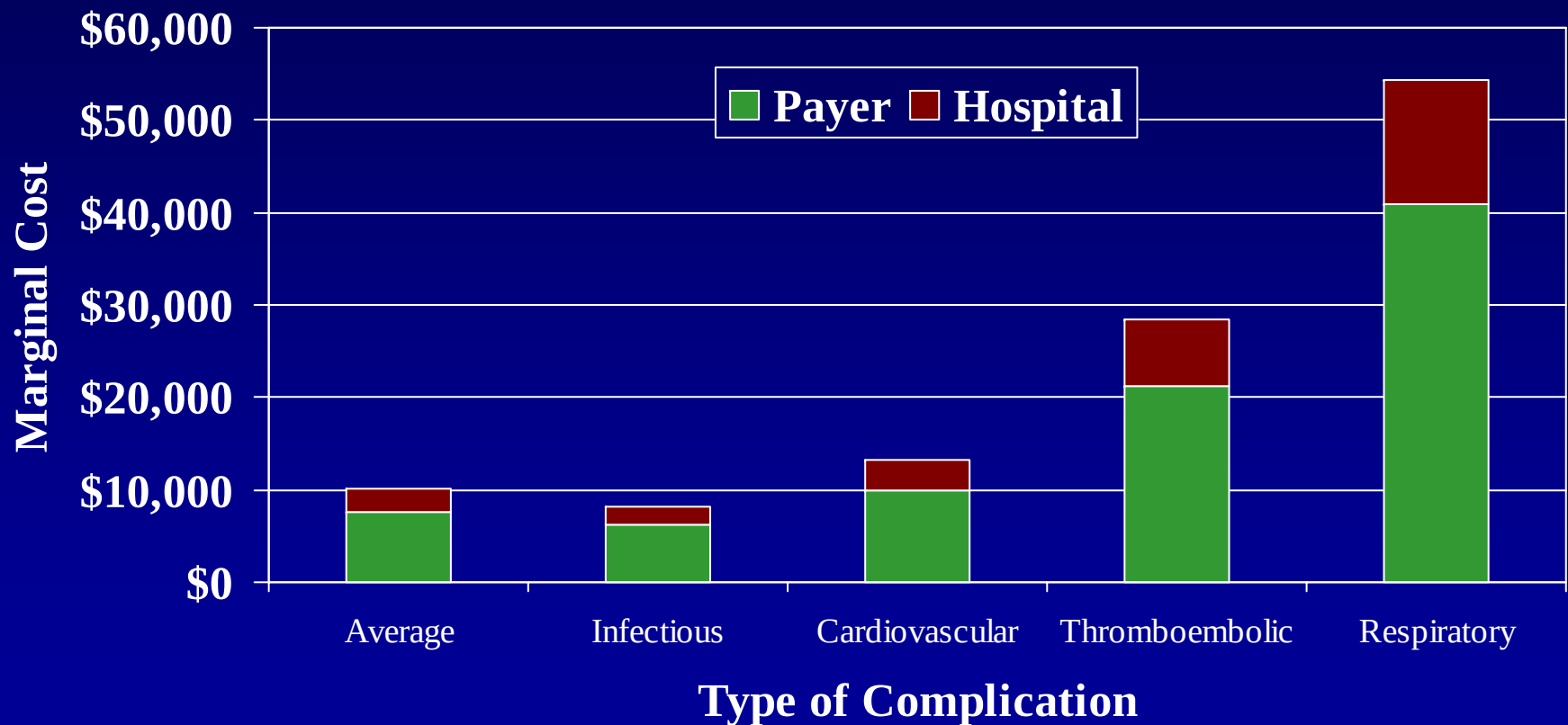
Practice style



Return on investment

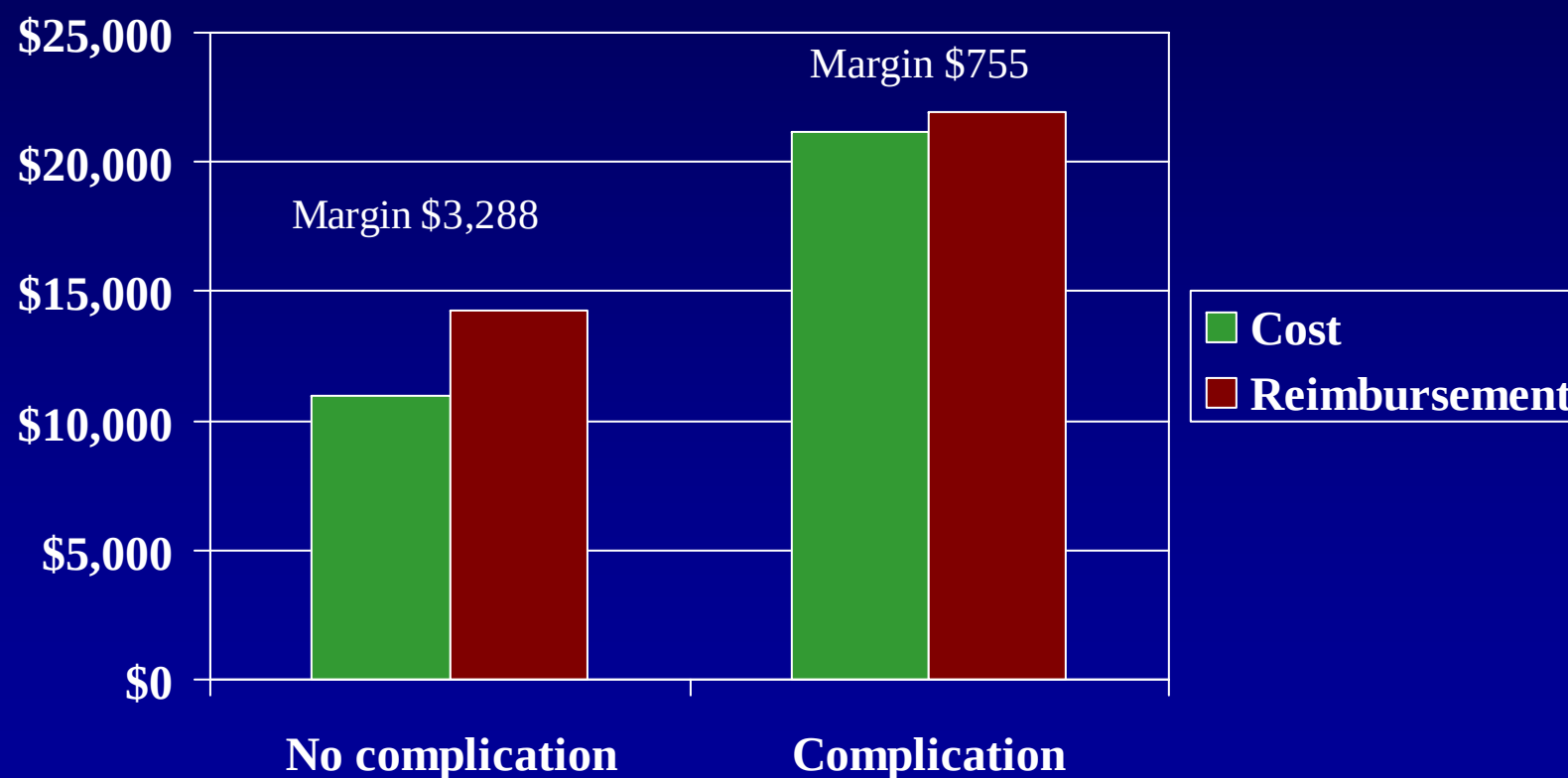
- Payers
- Hospitals (assuming no payer subsidy)
 - Status quo
 - Under bundled payments
- But first some assumptions...

Average Cost of NSQIP Complications



*Dimick et al. JACS 2006; 202(6): 933-937

UMHS margins in patients with and without NSQIP complications



*Dimick et al. JACS 2006; 202(6): 933-937

100,000

Annual number of gen/vasc
surgical patients in Michigan

x 5%

5,000

Number complications averted
each year

X

\$7,500

Payer share of additional cost
of complications

\$37.5 m

Annual savings for Michigan payers

ROI from hospital perspective
(assuming no payer subsidy)

2,000

Annual number of gen/vasc

surgical patients at average Michigan hospital

x 5%

100

Number complications averted
each year

X

\$2,500

Lower margin in patients with complications

\$250,000

Annual savings for hospital

Under episode-based bundled
payments...

2,000

Annual number of gen/vasc

surgical patients at average Michigan hospital

x 5%

100

Number complications averted
each year

X

\$10,000

Average additional cost of patients with
complications

\$1.0 million

Annual savings for hospital

Summary

- Variation in costs / episode an important part of overall variation in hospital spending
 - Directly actionable
- Michigan experiment in collaborative QI suggests
 - Better outcomes for patients
 - Preserved professional autonomy for physicians
 - Strong ROI for hospitals
 - Reduced spending for payers and society