

# Quality Measurement and Pitfalls in Data Interpretation

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# Disclosures

- None

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  - > SHM Annual Meeting
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# SHM'S HOSPITAL QUALITY & PATIENT SAFETY ONLINE ACADEMY

**A Series of Comprehensive Modules to Enhance your Institution's Knowledge in HQPS**

## About the HQPS Online Academy

Quality improvement is a core feature of hospital medicine. Currently, hospitalized patients do not consistently receive recommended care and are at risk for experiencing preventable harm. In an effort to stimulate improvement, stakeholders have called for increased accountability, including enhanced transparency and differential payment based on performance.

Many hospitalists and other hospital-based professionals feel inadequately prepared to engage in efforts to improve quality because training programs have not traditionally included healthcare quality and patient safety in their curricula. The Society of Hospital Medicine's Quality Improvement Education subcommittee developed the *Hospital Quality and Patient Safety Online Academy* to help meet this need. The HQPS Online Academy consists of internet-based modules that emphasize high-yield learning points presented in an efficient manner. Module topics and learning objectives are based on the HQPS Competencies. Three (3) AMA PRA Category 1 Credits are offered for each module.

Our hope is that the participants in the HQPS Online Academy will apply the knowledge and skills obtained to help transform healthcare and improve patient outcomes.

SHM members who are insured with The Doctors Company can earn a 5 percent risk management credit by completing the first five HQPS online modules. Eligible members also enjoy premium savings through a 5 percent program discount and a claims-free credit of up to 25 percent. To learn more about The Doctors Company, the exclusively endorsed medical malpractice carrier for SHM, and to get a quote, visit [www.thedoctors.com/SHM](http://www.thedoctors.com/SHM).

We welcome your comments and questions.  
[Meetings@HospitalMedicine.org](mailto:Meetings@HospitalMedicine.org)

### Available Modules

Upon ordering an individual module, you will receive access information via email within 72 business hours of your purchase.

Upon purchasing a subscription to the series, you will receive access information to the active modules within 72 business hours of your purchase, and will be notified immediately upon the release of subsequent modules.

- QUALITY MEASUREMENT AND STAKEHOLDER INTERESTS
- TEAMWORK AND COMMUNICATION
- ORGANIZATIONAL KNOWLEDGE AND LEADERSHIP SKILLS
- PATIENT SAFETY PRINCIPLES
- PATIENT SAFETY TOOLS: RCA AND FMEA
- COGNITIVE BIAS AND DIAGNOSTIC ERRORS
- PATIENT-CENTERED CARE
- HOSPITAL INFORMATION

SHM is committed to a culture of transparency with its industry partners.



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# Objectives

- At the end of this session, you will be able to teach your learners how to:
  - Compare/contrast structure, process, outcome, and balancing measures
  - Describe interests and measures used by internal and external stakeholders
  - Explain/display quality measure data effectively

Does our hospital deliver high quality care?

Do our doctors deliver high quality care?

How would you know?

Make quality measurement relevant!

# Why do they care about Quality?

- Patients
- Providers
- Payers

$$\text{Value} = \frac{\text{Quality}}{\text{Cost}}$$

# Donabedian's Topology of Quality Measures

- Structure
  - How was care delivered to the patient
- Process
  - What was done to the patient
- Outcome
  - What happened to the patient
- Balancing
  - Unintended, undesirable consequences

# IOM Elements of Quality

- Safe
- Effective
- Patient Centered
- Timely
- Efficient
- Equitable

# Structure, Process, or Outcome?

1. 30-day mortality after CABG
2. Bone density ordered in women over age 65
3. Computerized provider order entry for inpatients
4. Number of days until 3<sup>rd</sup> return appointment can be scheduled
5. Last blood pressure <140/90 in patients with hypertension
6. Physician boarded in emergency medicine on premises at all times
7. Patient satisfaction (e.g., HCAHPS)
8. ACE-I or ARB for CHF patients with low EF

	<b>Structure</b>	<b>Process</b>	<b>Outcome</b>
<b>Example</b>	ICU supervision by intensivist	Beta-blocker after heart attack	Risk-adjusted mortality rates for CABG
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Easy to measure</li> <li>• One measure relates to multiple outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Reflect care that patients receive</li> <li>• Directly actionable</li> <li>• Don't need risk adjustment</li> </ul>	<ul style="list-style-type: none"> <li>• Face validity high</li> <li>• Understandable by most users</li> <li>• Reflect ultimate goals of treatment</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>• Not easily actionable</li> <li>• May not be tightly linked with outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• May or may not be tightly linked outcomes</li> <li>• Data collection may be difficult</li> </ul>	<ul style="list-style-type: none"> <li>• May be rare (sample size)</li> <li>• Requires risk adjustment</li> <li>• May be difficult to influence</li> </ul>

# Quality Measurement: Payers Demanding Increased Accountability

- Voluntary reporting to payer



- Pay for reporting to payer



- Public reporting



- Pay for performance

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# Medicare.gov

The Official U.S. Government Site for Medicare

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Hospital Compare Home

## Hospital Compare

- About Hospital Compare
- About the Data
- Resources
- Help

### Find a Hospital

#### Required Search:

Location - ZIP Code or City, State or State  
Example: 21244 or Baltimore, MD or Maryland

#### Optional Search:

Hospital Name - Full or Partial

Search Hospitals

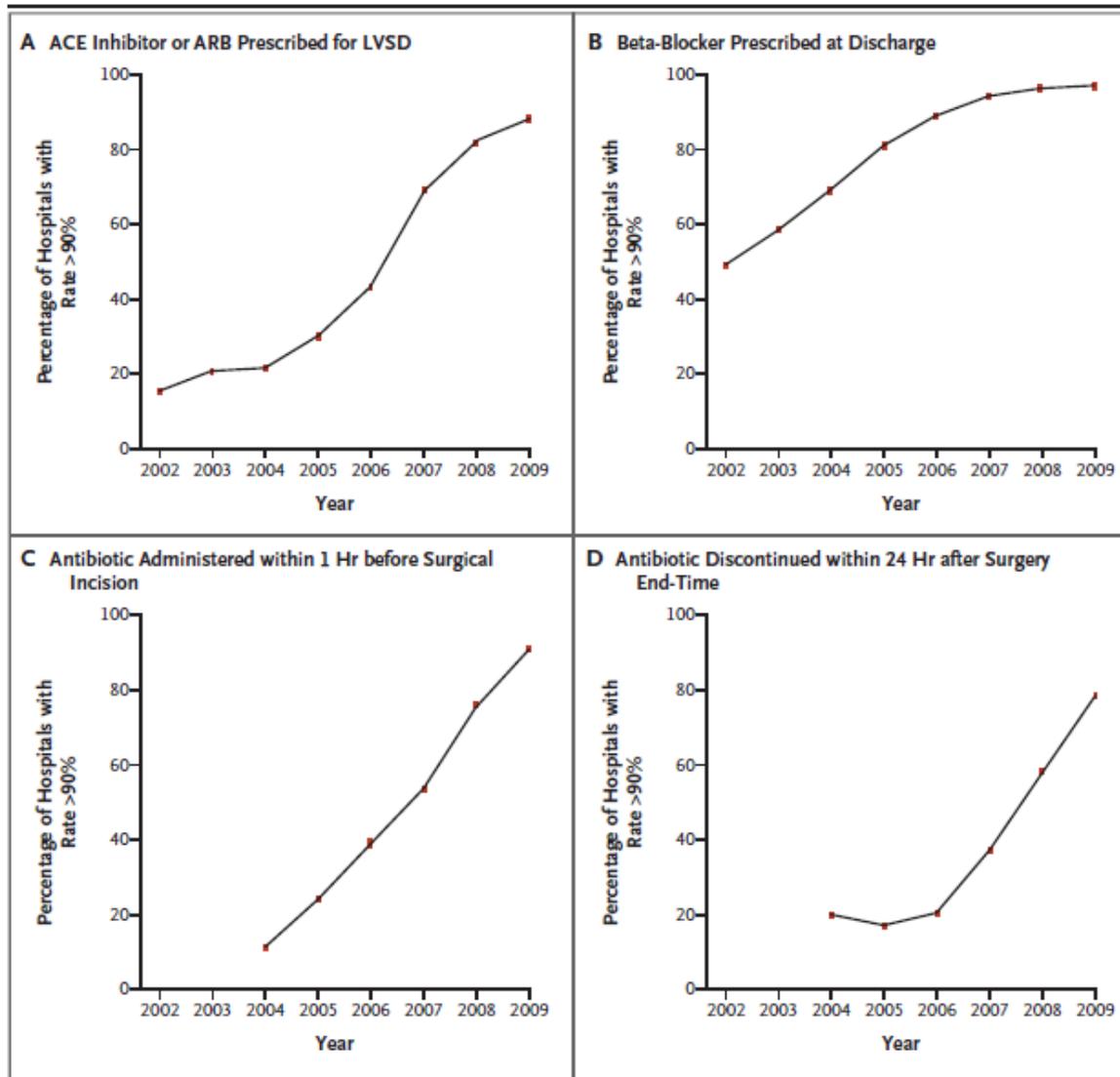


Compare Other Providers and Plans

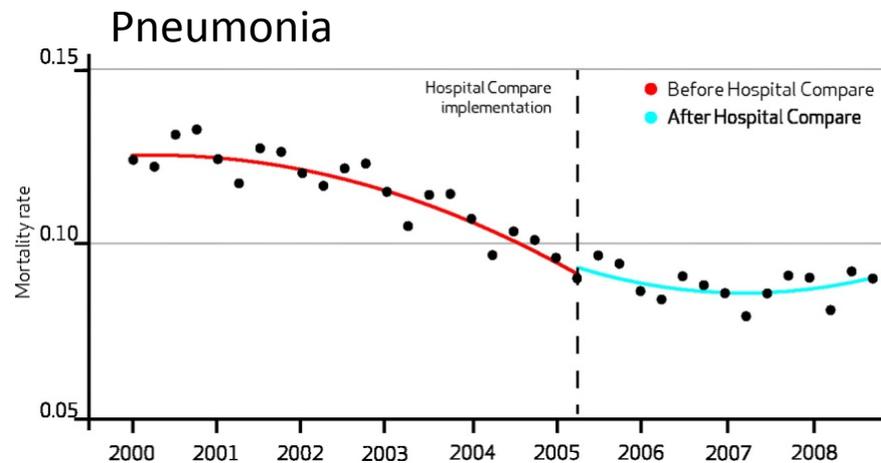
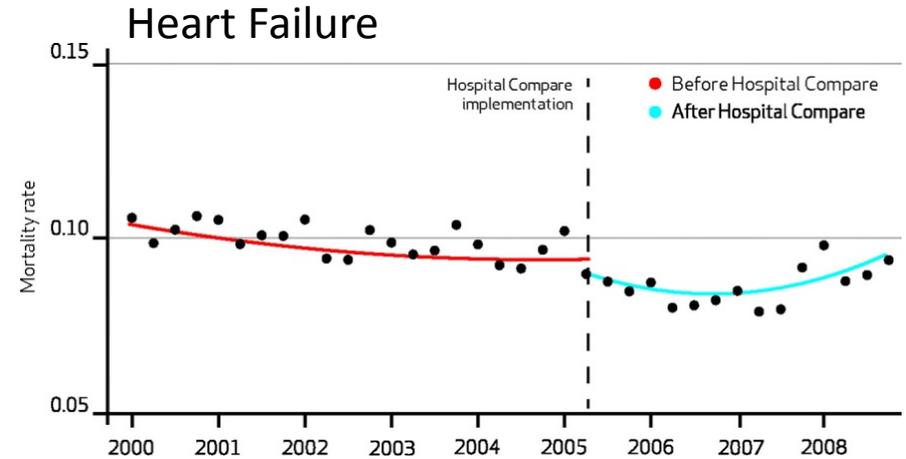
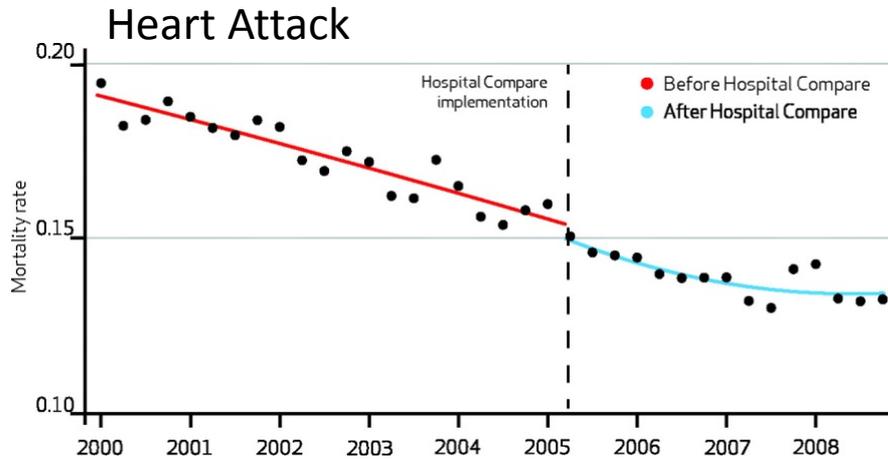
### Hospital Spotlight

- Hospital Compare has new measures related to:
  - Emergency Department Timing
  - Outpatient Health Information Technology
  - Surgical Site Infections
- Linking Quality To Payment - Get data on the Hospital Readmissions Reduction Program.
- American College of Surgeons (ACS) Surgical Outcomes Measures. These measures are submitted on a voluntary basis by hospitals participating in the

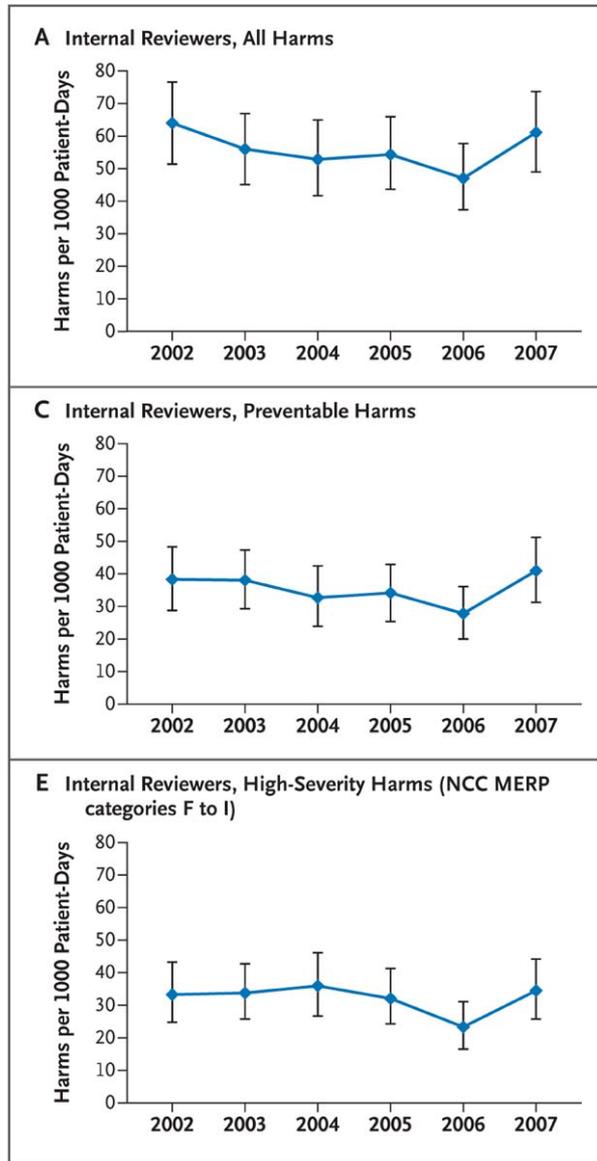
# Improvement in Process of Care Measures



# Little to No Incremental Improvement in Mortality in Era of Public Reporting



# Rates of All Harms, Preventable Harms, and High-Severity Harms per 1000 Patient-Days



▶ 10 Hospitals in NC

▶ No reduction in harm (AEs) over 5 yr period

# Increasing Pressure to Improve Quality (and reduce cost)

- Hospital Acquired Conditions
- Hospital Value Based Purchasing
  - Process measures & HCAHPS for FY13
  - AMI, HF, PN mortality proposed for FY14
- Readmissions Reduction Program
- HITECH and Meaningful Use
- PQRS / physician compare

# Medicare.gov

The Official U.S. Government Site for Medicare

▶ Sign In to MyMedicare.gov

Search

FAQ

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- Home
- Manage Your Health
- Medicare Basics
- Resource Locator
- Help & Support

Physician Compare Home

- 📖 Help
- 📖 About Physician Compare
- 📖 About the Data
- 📖 Provider Resources
- 📖 Consumer Resources

## Physician Compare

Physician Compare has information about Medicare-enrolled Physicians and Healthcare Professionals.

Persons using assistive technology may not be able to fully access information on these pages. For assistance, please contact [CMS Web Team](#).

### Search Information

Fields marked with a red asterisk (\*) are required

\*First enter a **Location** - Zip Code **or** City, State:

 Example: 21244 **or** Baltimore, MD

\*Then select **Physician, Other Healthcare Professional, or Group Practice**:

Physician [?]

OR

Other Healthcare Professional [?]



# **Measurement for Improvement:** **Obtaining, analyzing, and displaying data**

# Key Questions for Measurement for Improvement

- Which patients are included / excluded?
- Does the data already exist? Or do you need to collect data?
- What additional data will help you analyze drivers of the problem?
- Process or outcome or both? Discrete, ordinal, or continuous?
- What is the control for your intervention?
- What confounders might be present?
- How will you summarize your results?

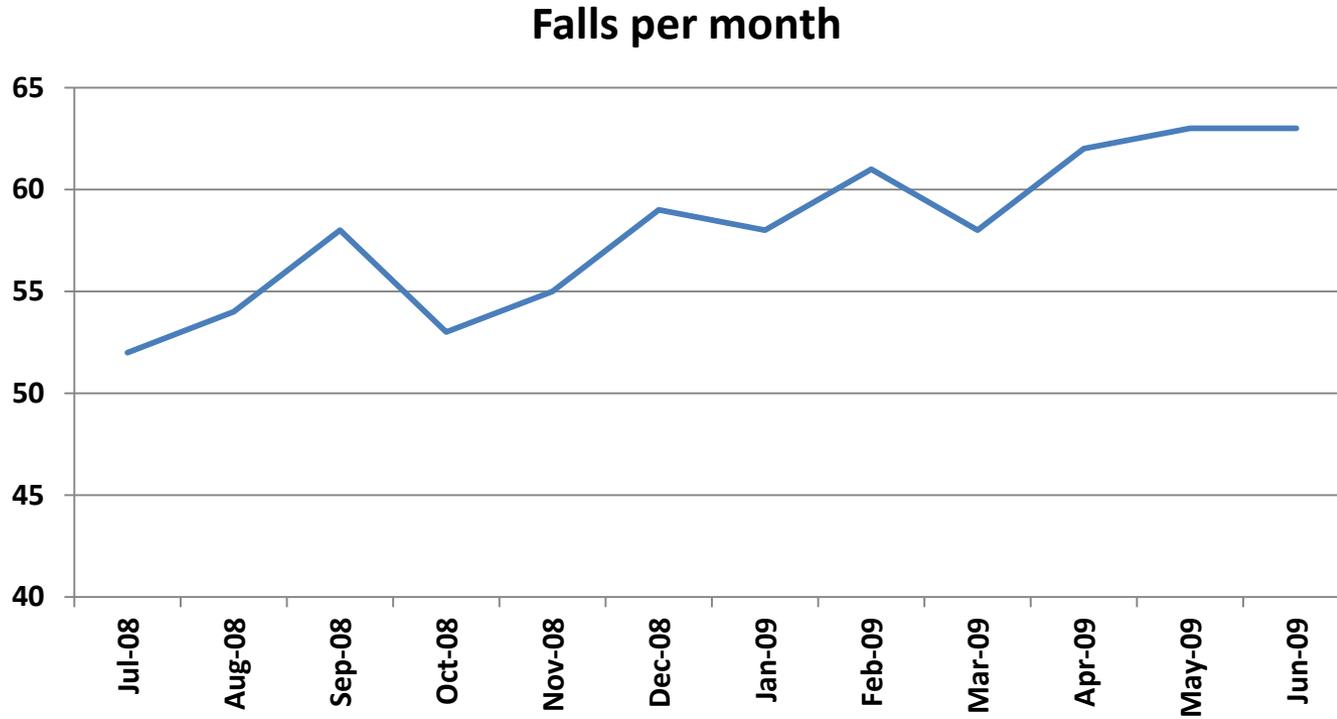
# Falls version 3.0

- ▶ Data obtained from incident reporting system

Number of Falls each month											
Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09
52	54	58	53	55	59	58	61	58	62	63	63

- ▶ Falls are getting worse!
- ▶ What did we do in the fall that worked so well?
- ▶ Why are some cells red and some green?
- ▶ Can we see this on a run chart?

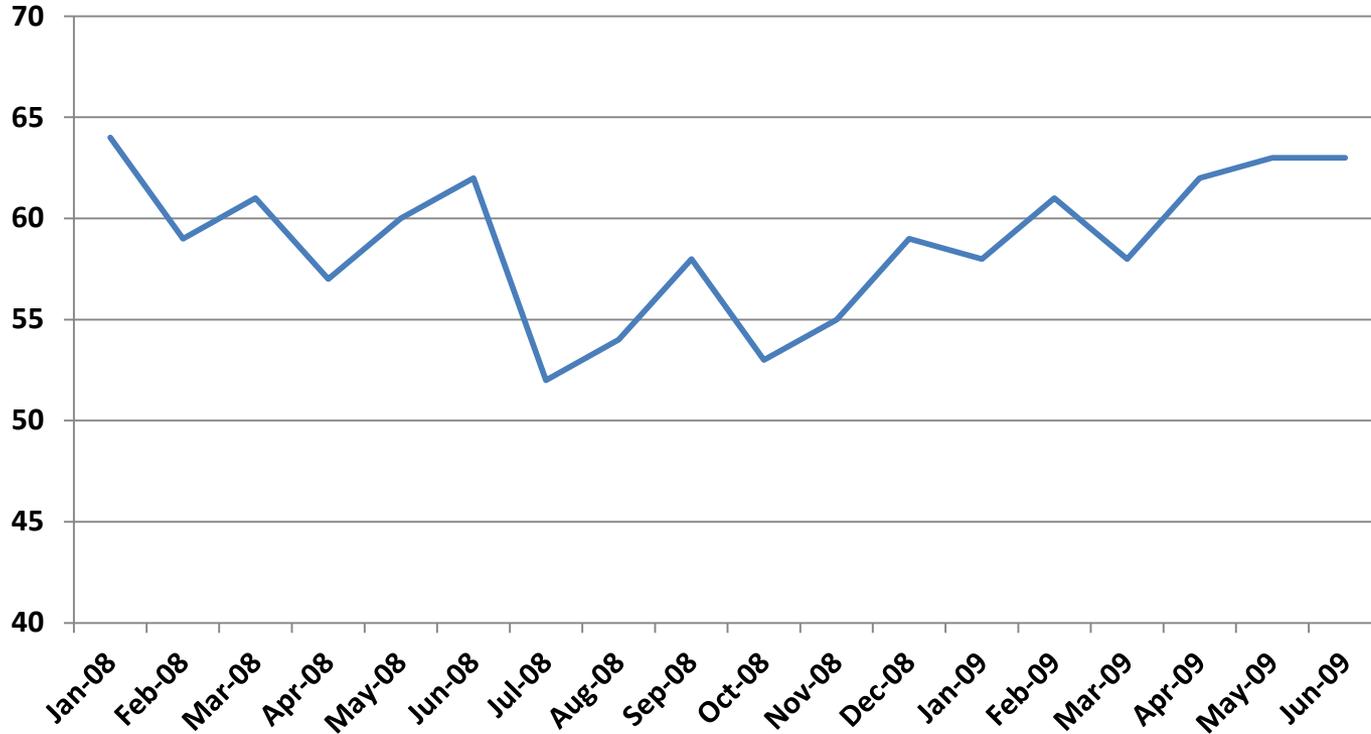
# Falls Run Chart



- Can we go back a bit further?
- And account for changes in volume?

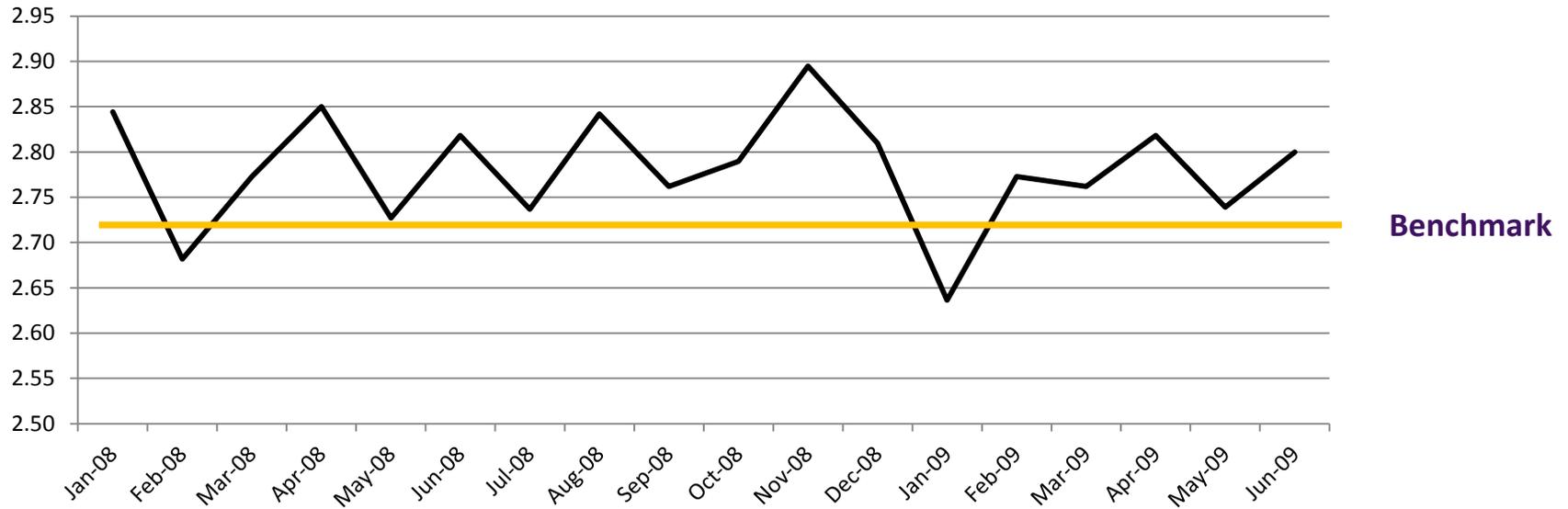
# Falls: not a new problem

Falls per month



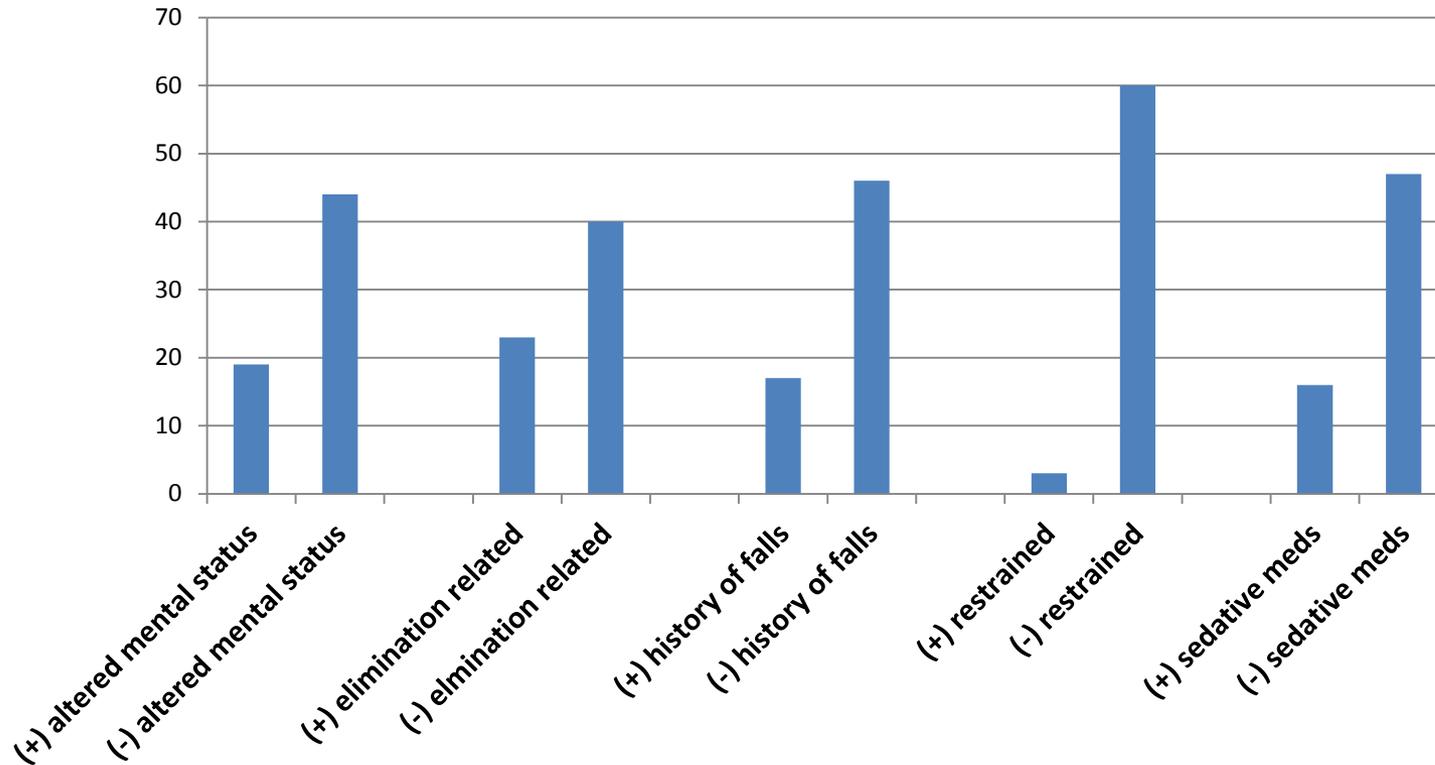
# Falls: not a new problem

Fall rate  
(# falls/1000 pt-days)



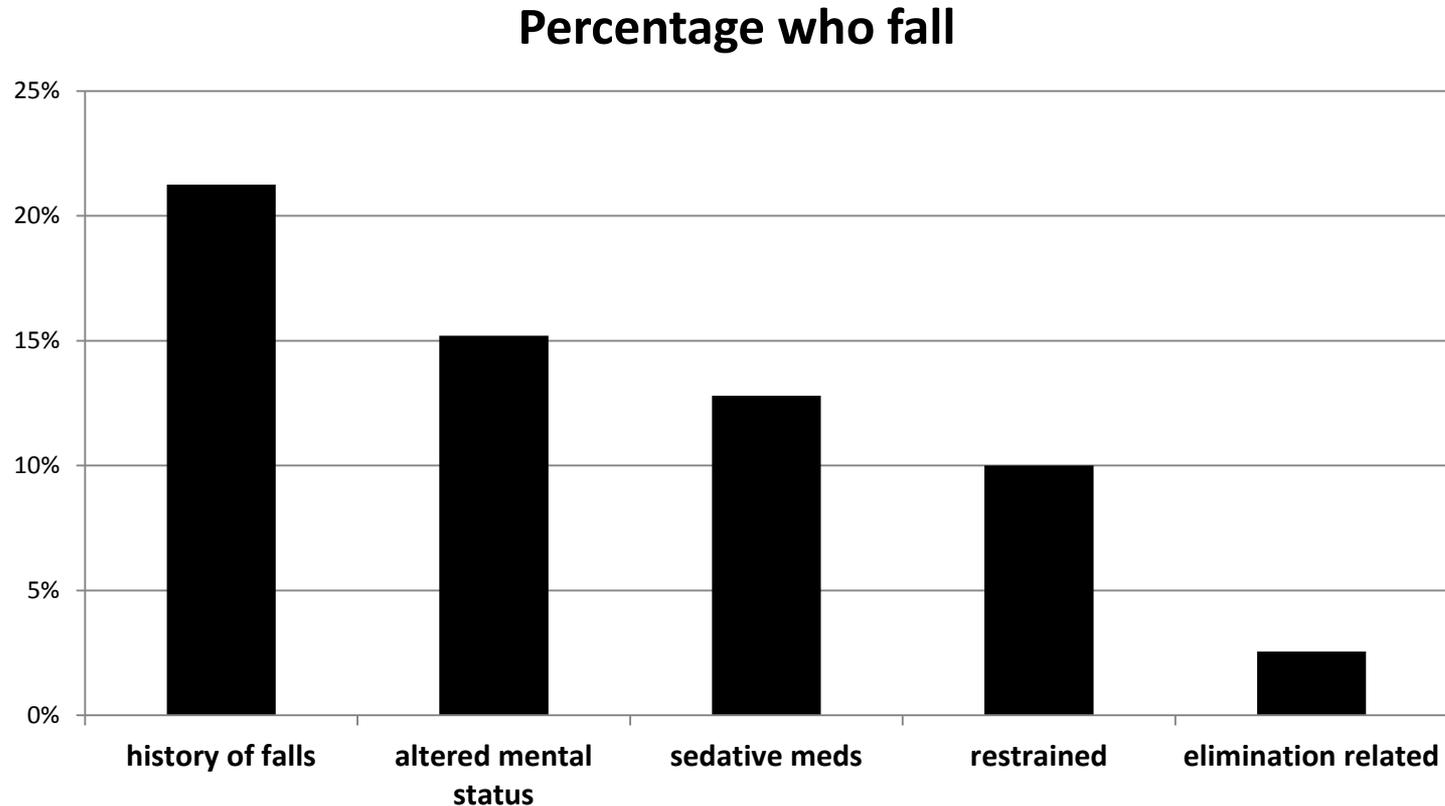
# How can we identify pts at risk?

Falls by presence of Risk Factor



- Doesn't address background rate of exposure to potential risk factors

# Falls in patients exposed to risk

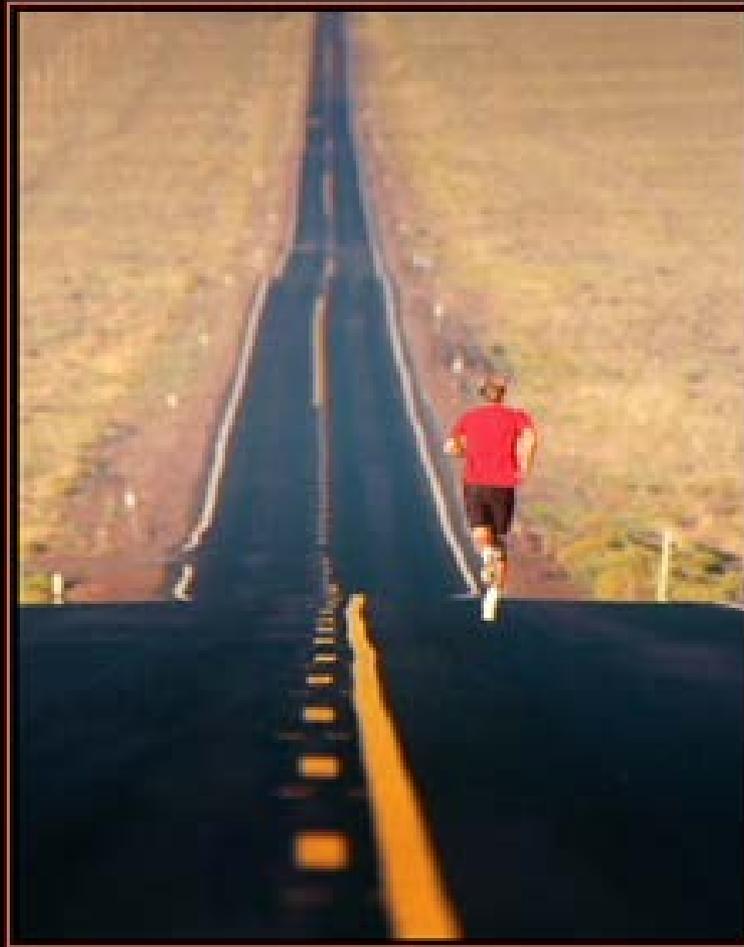


Order Results to Emphasize Key Points!

# Exercise

# Conclusions

- Discussion of assumptions and stakeholder interests bring relevance to measurement
- Use SPO framework and highlight pros/cons of measures (existing and potential)
- Introduce issues related to obtaining, analyzing, & displaying data with examples
- Dedicate time to mentor learners as they define measures and interpret data



# QUALITY

THE RACE FOR QUALITY HAS NO FINISH LINE-  
SO TECHNICALLY IT'S MORE LIKE A DEATH MARCH.