

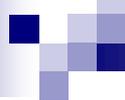


From Hospital Performance to Reward

- Results for Maryland
Hospitals, April 2007

Model to Link Performance with Payment (Overview)

- For each quality measure, performance is scored (0 to 10) for both attainment and improvement
- For each quality measure, the hospital receives the greater of the attainment and the improvement score
- Hospital quality measure scores are summarized into a single aggregate score



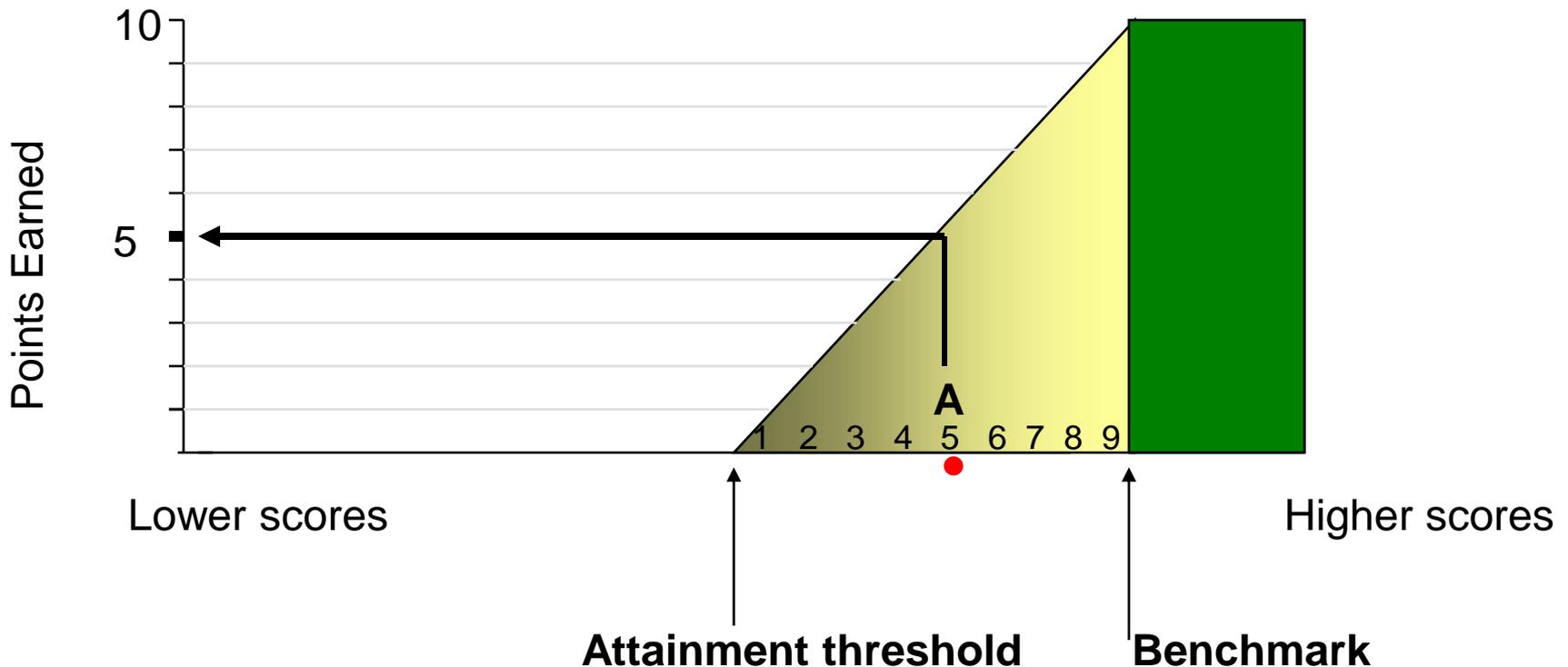
Explanation of Terms

- **Benchmark** - a “realistic standard of excellence”.
- **Threshold for Attainment** - the level at which attainment points start to be awarded.
- **Improvement** - the hospital obtains a higher quality measure in the assessment year than it had in the base (prior) year.

Earning Quality Points

Attainment of score beyond threshold

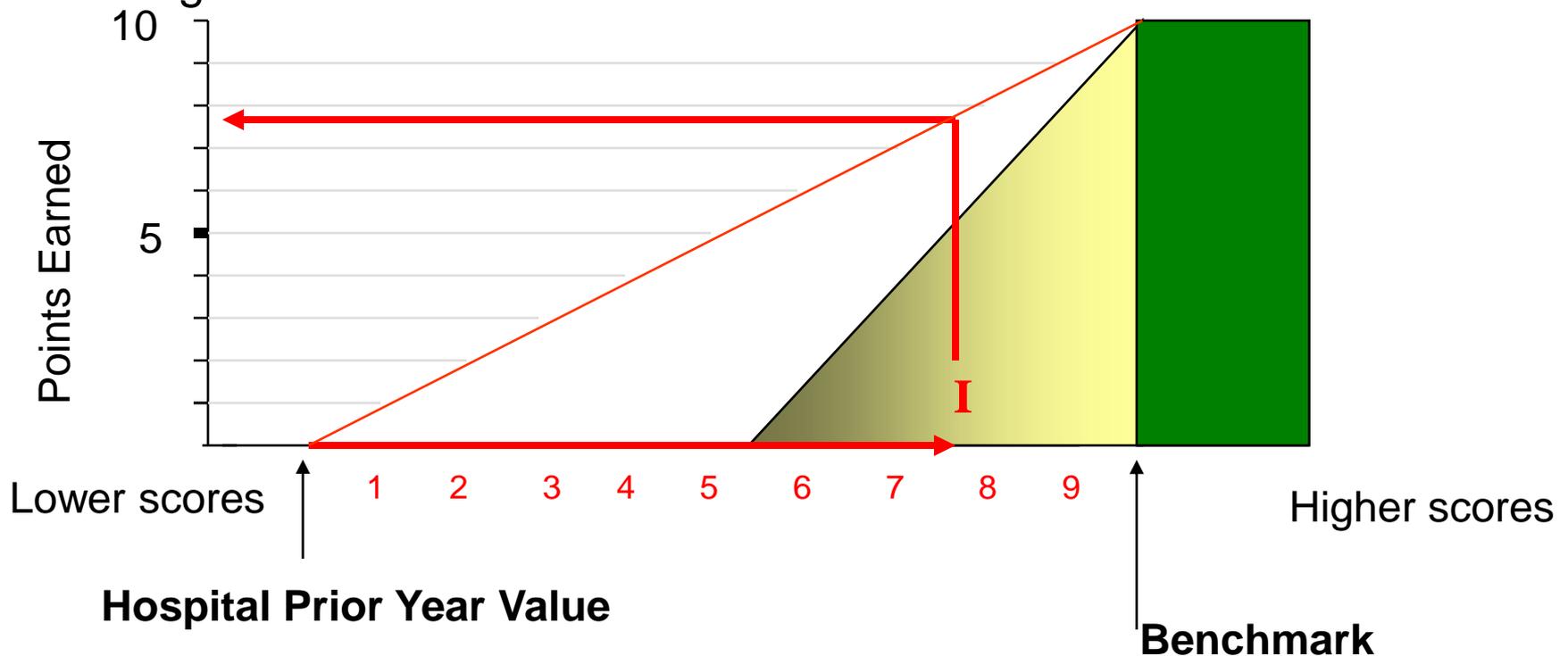
- Hospital earns 5 points due to attainment

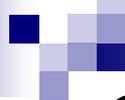


Earning Quality Points

The Greater of Attainment or Improvement

- Hospital earns 5 points due to attainment or 8 points due to improvement. Hospital receives credit for 8 points - the larger of the two values.





Quality Measures are summarized to create the Hospital's Score

- A hospital might report some or all of the individual measures
- Each hospital has a corresponding maximum possible points (measures reported x 10)
- Score for each hospital is the number of earned points as a percentage of its maximum possible.

Maryland Hospitals' Distribution of Scores

- Based on data reported for 2004 and 2005 Hospital Compare
- Opportunity Model Scores
 - When 50th percentile threshold option used:
 - Three quarters of hospitals earned 46% or more points
 - Half of all hospitals earned 58% or more points
 - One quarter of hospitals earned 67% or more points

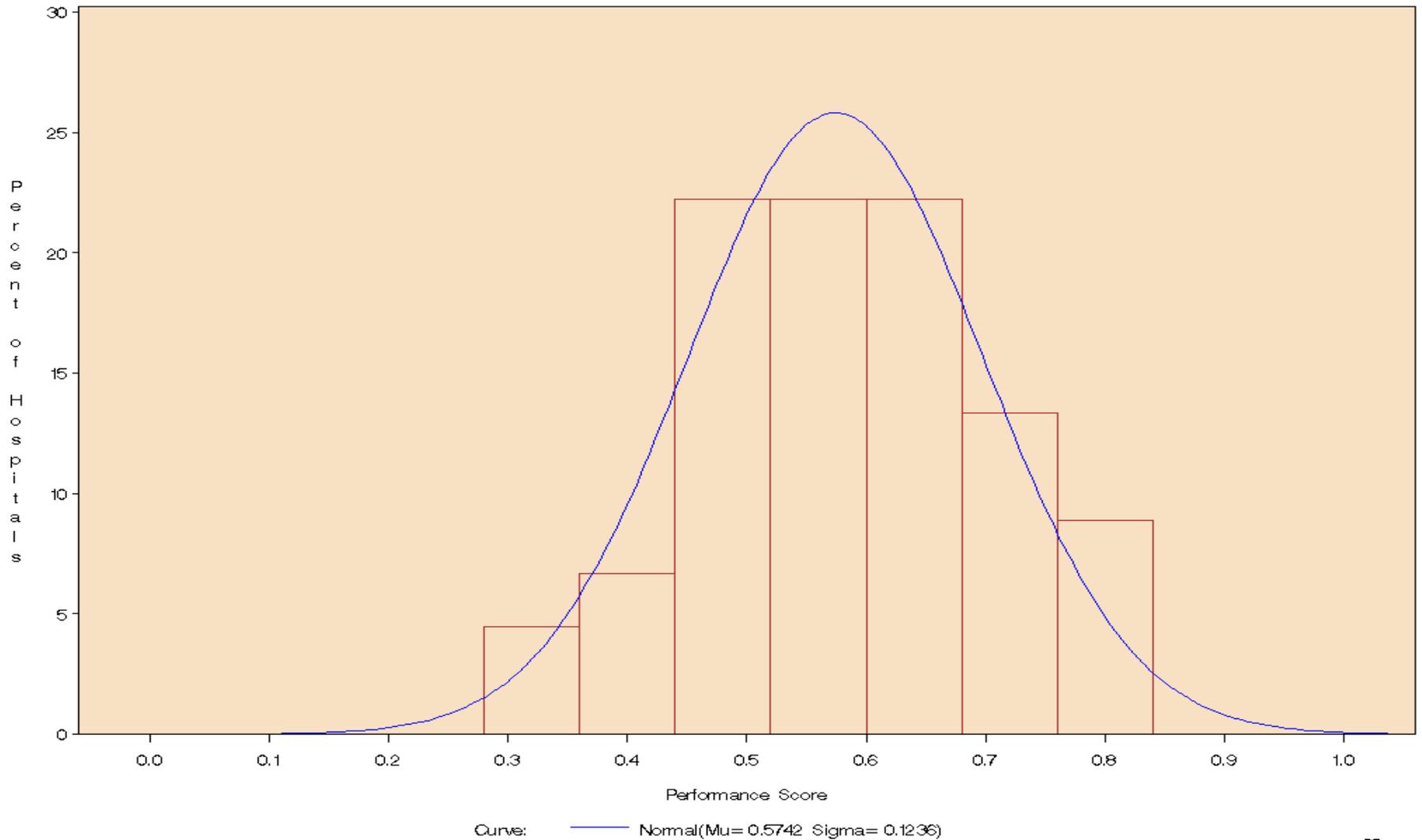
Threshold at 50 th Pct	1 st Qrtl	Median	3 rd Qrtl
Maryland	46%	58%	67%
National	29%	41%	53%

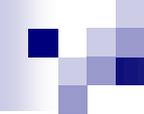
Maryland Hospitals' Distribution of 2005 Scores – by Type of Hospital

- Attainment Threshold = 50th percentile

Hospital Characteristic	Reporting	1st Qrtl*	Median	3rd Qrtl
Urban Status				
Rural	5	58%	59%	62%
Urban	40	45%	57%	67%
Teaching Status				
No Teaching Program	14	46%	62%	69%
Teaching Program	31	45%	52%	63%
Number of Beds				
Urban 1-99 beds	3	62%	69%	69%
Urban 100-199 beds	12	45%	59%	67%
Urban 200-499 beds	23	45%	54%	63%
Urban 500+ beds	2	58%	63%	67%
Rural 1-99	4	52%	60%	65%
Rural 100-199	1	58%	58%	58%
% Medicare Days				
25%-50% Medicare Patient Days	20	47%	60%	67%
50%-65% Medicare Patient Days	23	45%	56%	69%
Over 65% Medicare Patient Days	2	46%	54%	63%

Density of Performance Scores (Benchmark = top decile mean, Threshold = median)
Topped Off Measures (Benchmark = 0.9 and Threshold = 0.6)
16 Measures



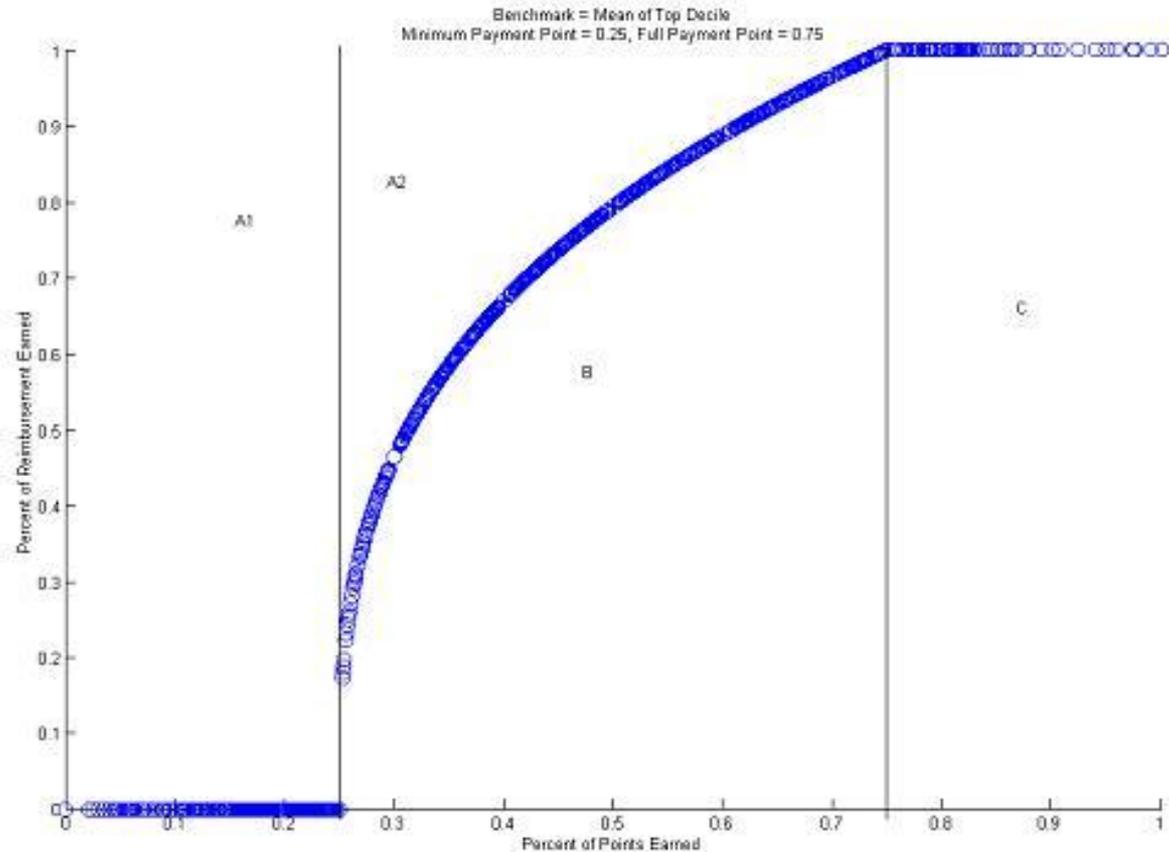


Issues to be resolved

- A. How aggressive should the reward system be? A straight line “Exchange rate” represents an aggressive program.
- B. What should be done about measures based on small samples?
- C. Should measures that are close to “topped out” be treated differently?

Translating Performance into Financial Incentives: Concaved Reward Curve

E) Max
Reward



A) Upda
Factor
Level

B) Minimum Performance

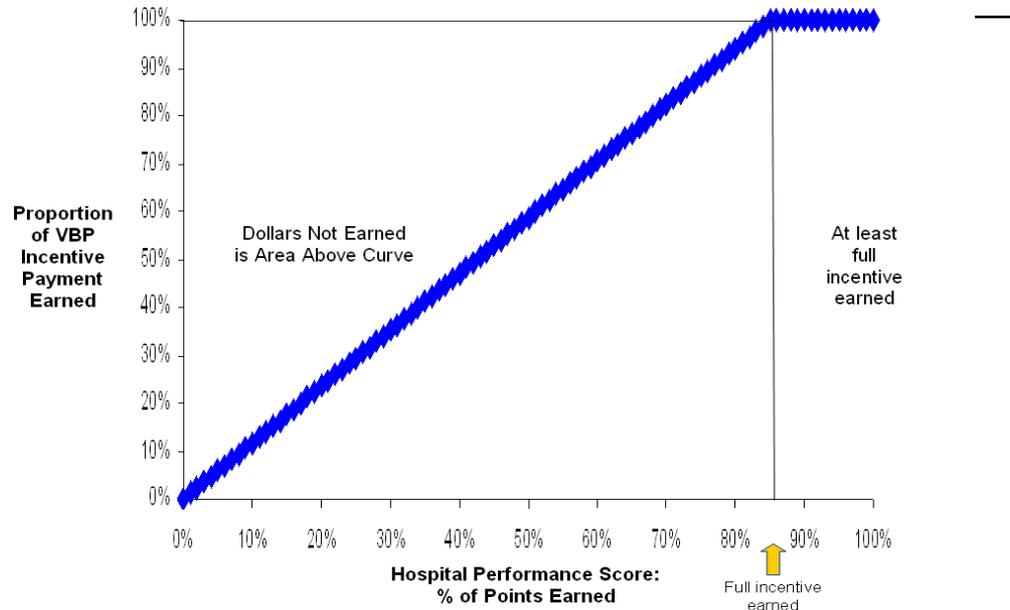
D) Percentage of
hospitals receiving
Max Reward

Translating Performance into Financial Incentives: Straight Line Reward Curve

E) Max
Reward



Proportion of Conditional Payments Earned



A) Update
Factor
Level



Proportion of Points Earned



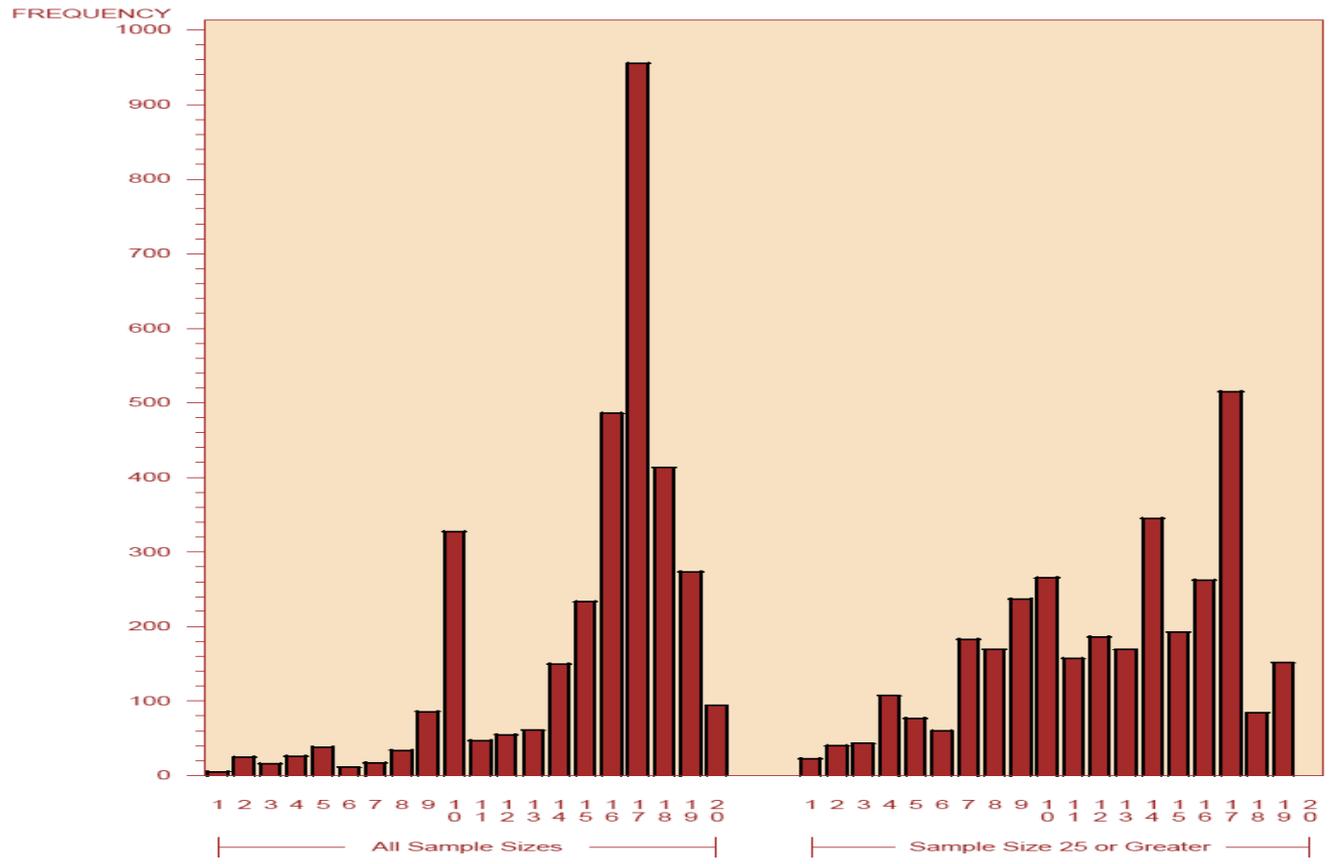
B) Minimum Performance

D) Percentage of
hospitals receiving
Max Reward

Options for what to do with quality measures based on small samples of patients?

- a. Do nothing - allow summarization to average out small sample effects (for reward model only)
- b. Use quality measure only if hospital had at least a set number of patients during the year (e.g. 25)
- c. Use longer time period (CMS did not favor)
- d. Use Bayesian approach which averages hospital's own experience with experience of the the hospital's peer group

Number of Measures Reported by Hospital Characteristic All Hospitals



What to do about almost topped out Quality Measures?

- Quality measure is considered almost topped out, if 25% percentile is within 2 standard deviations of 100%.
- Use of usual attainment/improvement score method would be 'splitting hairs'
- Instead, attainment score based on 90% benchmark and 60% percentile attainment threshold (shifting partial score curve left)