From Hospital Performance to Reward

- A potential model for determining rewards and incentives for a hospital P4P program, Brandeis University, March 2007

Prototypical Model (Overview)
From Performance to Payment…

- Determine individual quality measures
  - Require measures for two consecutive years
  - Performance in assessment year (year 2) is judged against measure in base year (year 1)
- 19 individual measures
  - Maximum of 20, measure for oxygen assessment retired as topped out
- Summarize performance for each hospital by means of a single aggregate score

Prototypical Model
The scoring

- Each of the 19 individual measures is worth a maximum of 100 points
- Points can be earned in two ways:
  - Attainment
    - More points for better scores above the attainment threshold, up to a maximum of 100 points for achieving a benchmark score
  - Improvement
    - More points for greater improvement between hospital-specific baseline score and benchmark score in assessment year
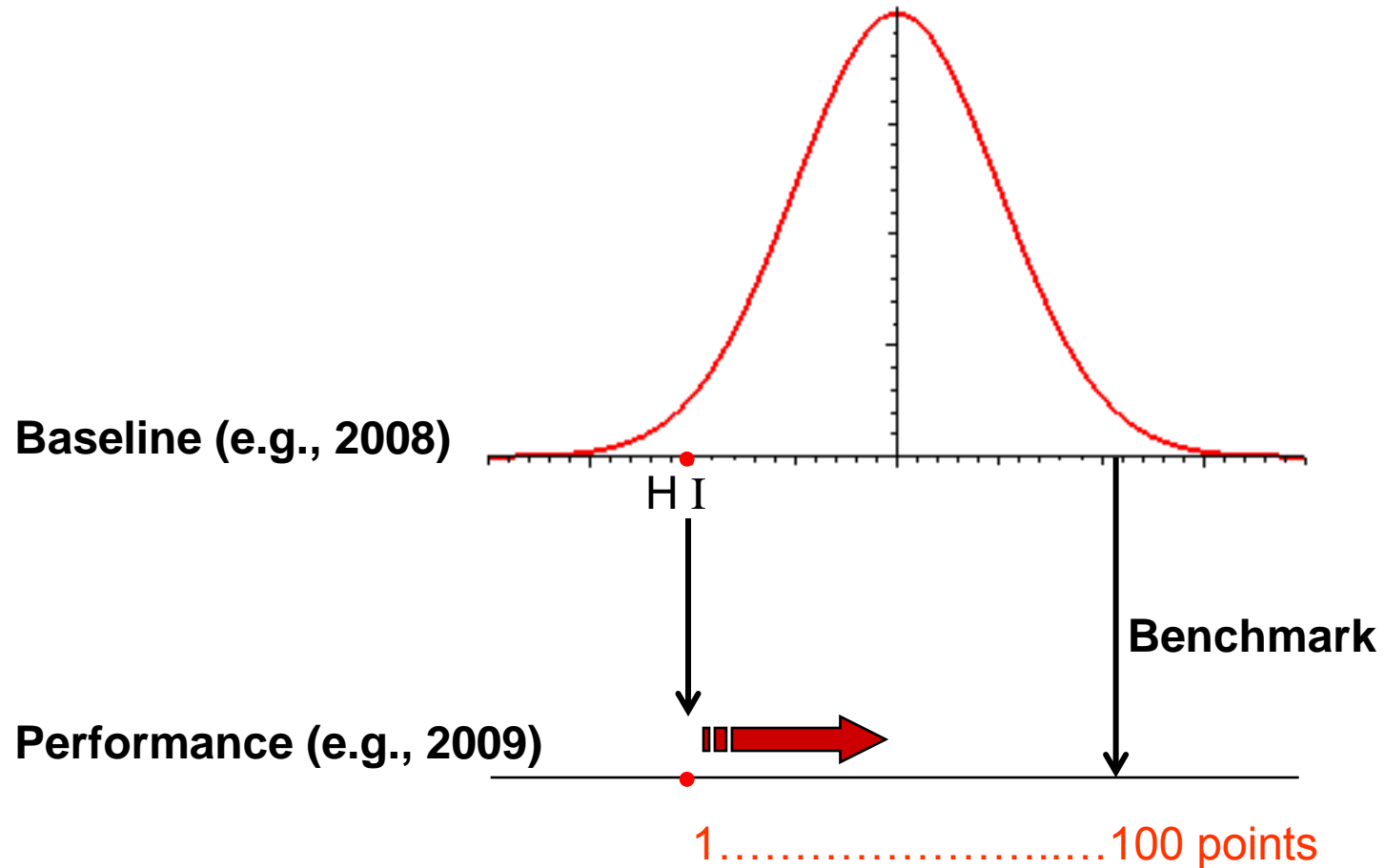
Definition of Terms

- **Benchmark** is the mean value of top decile in the prior year; a "realistic standard of excellence"
- **Threshold for Attainment** is also derived from distribution in the prior year. Alternatives include:
  - 50th percentile (median) from prior year
  - 75th percentile from prior year
  - 80th percentile from prior year
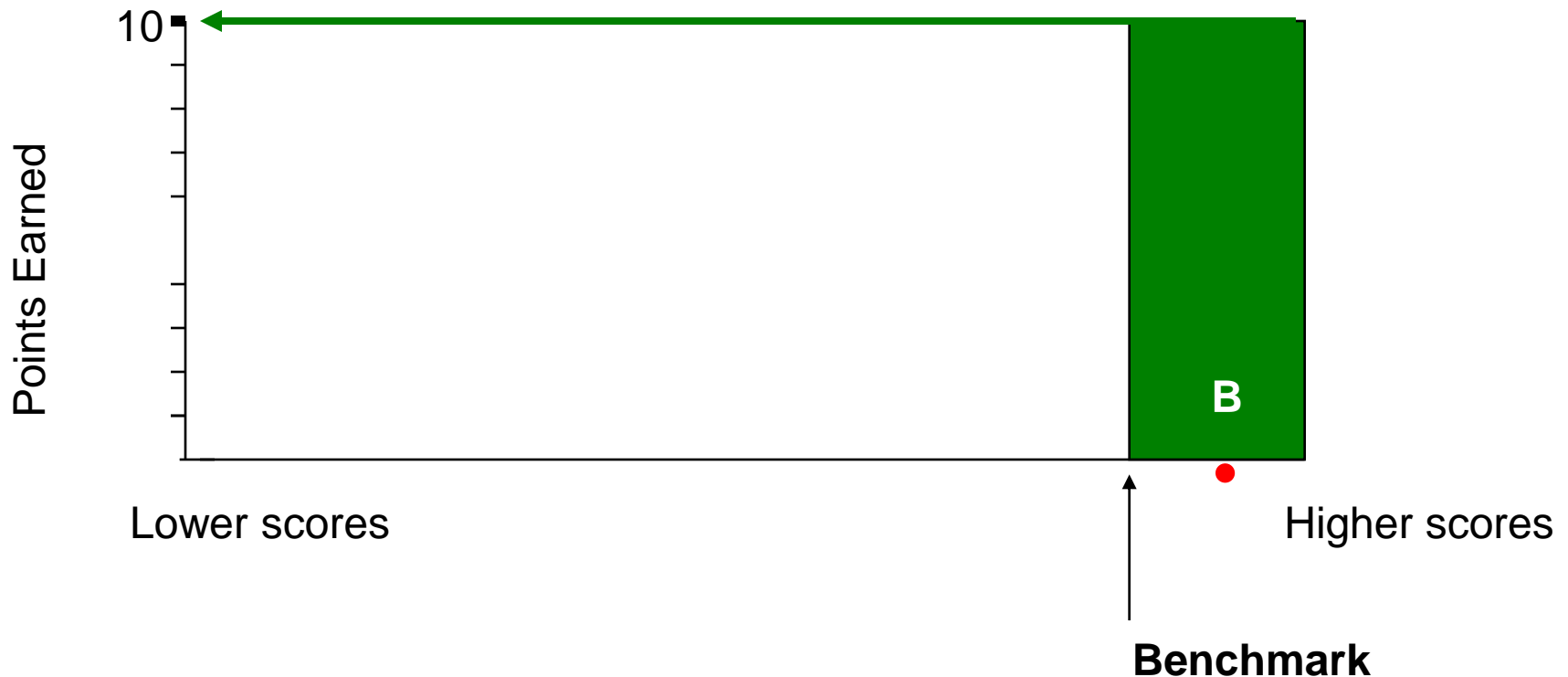
Criteria for Attainment

Baseline (e.g., 2008)

Attainment Threshold **Benchmark**

Target

Performance (e.g., 2009)
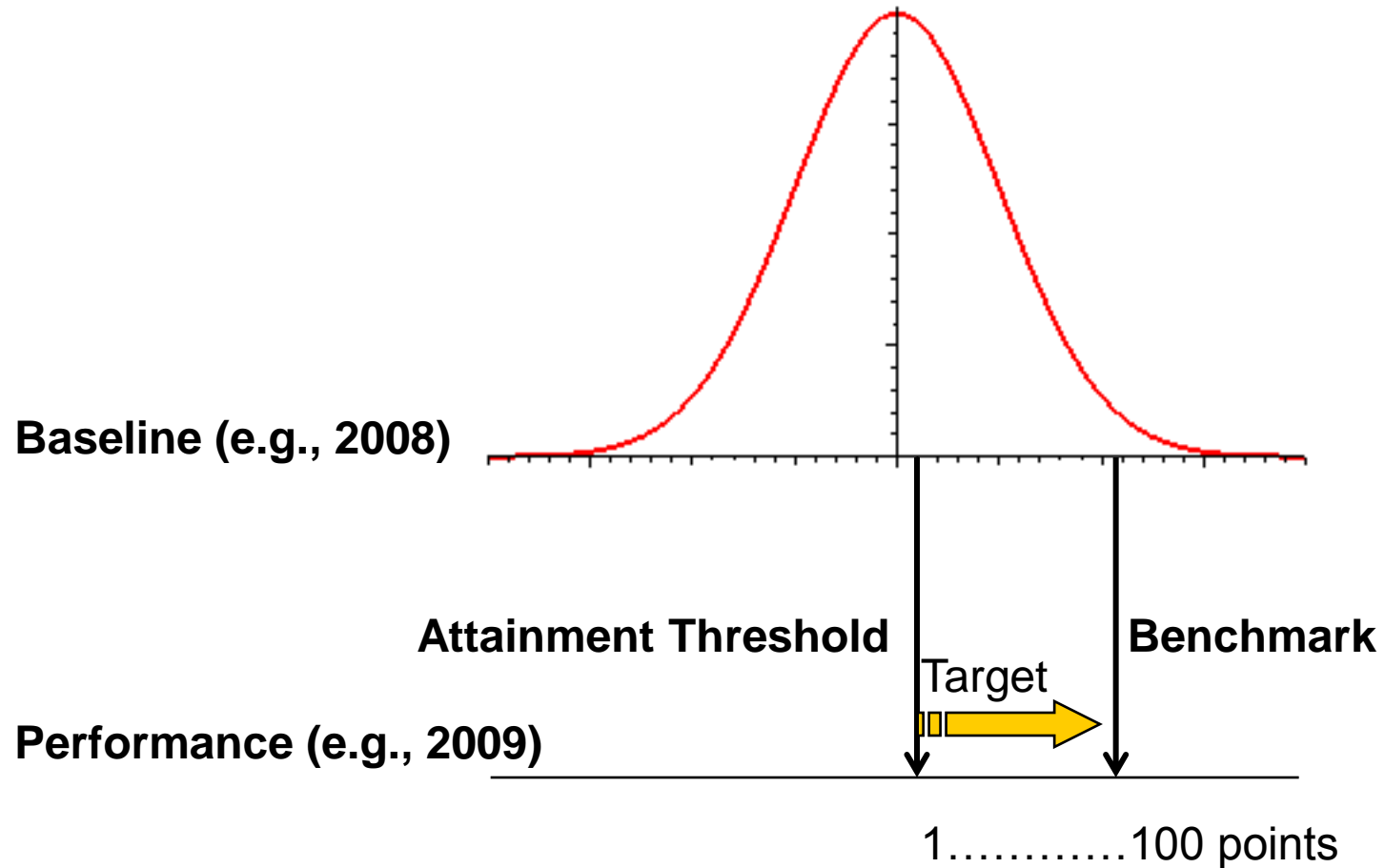
1…………100 points

Criteria for Improvement

Baseline (e.g., 2008)

H I

Benchmark

Performance (e.g., 2009)

1……………….…100 points
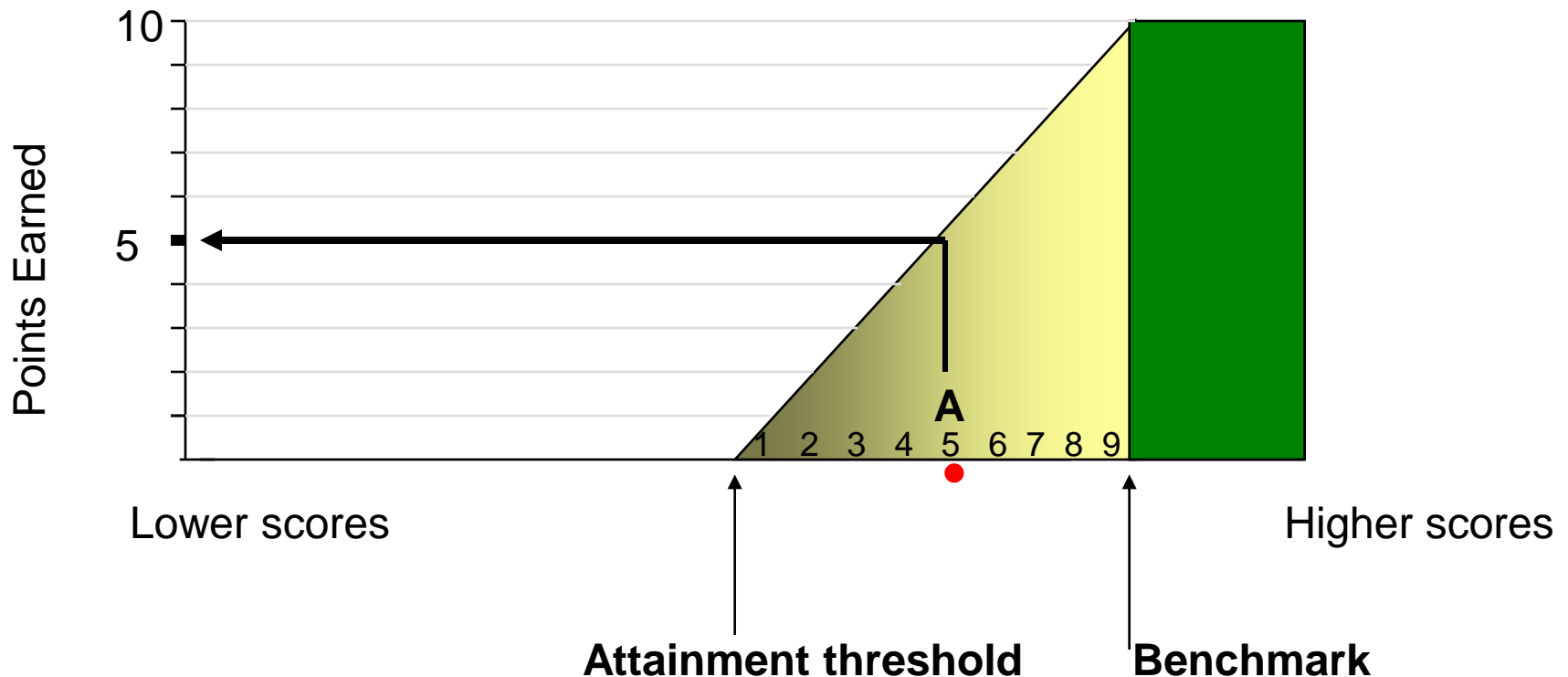
Earning Quality Points
Benchmark

- Hospital B exceeds benchmark and earns 100 points

Earning Quality Points
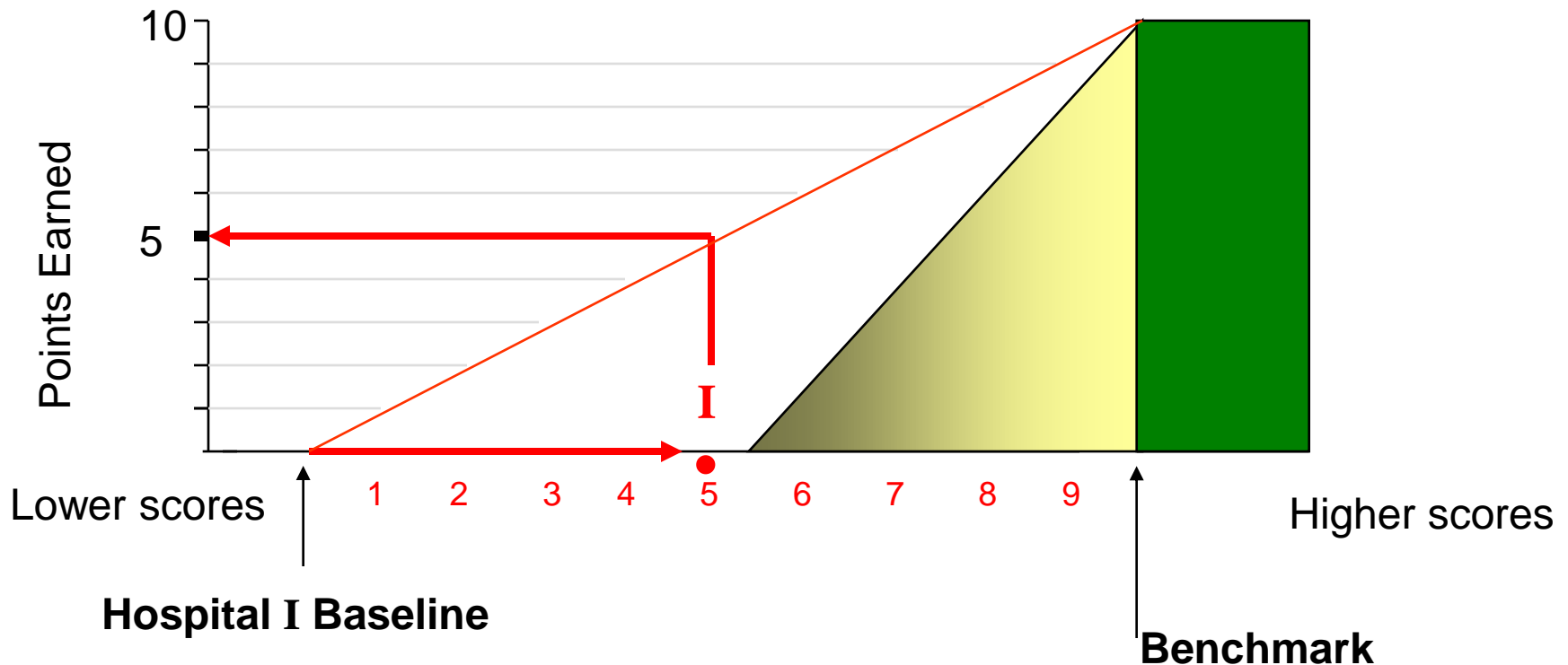## Attainment of score beyond threshold

- Hospital A earns 50 points due to attainment

Earning Quality Points
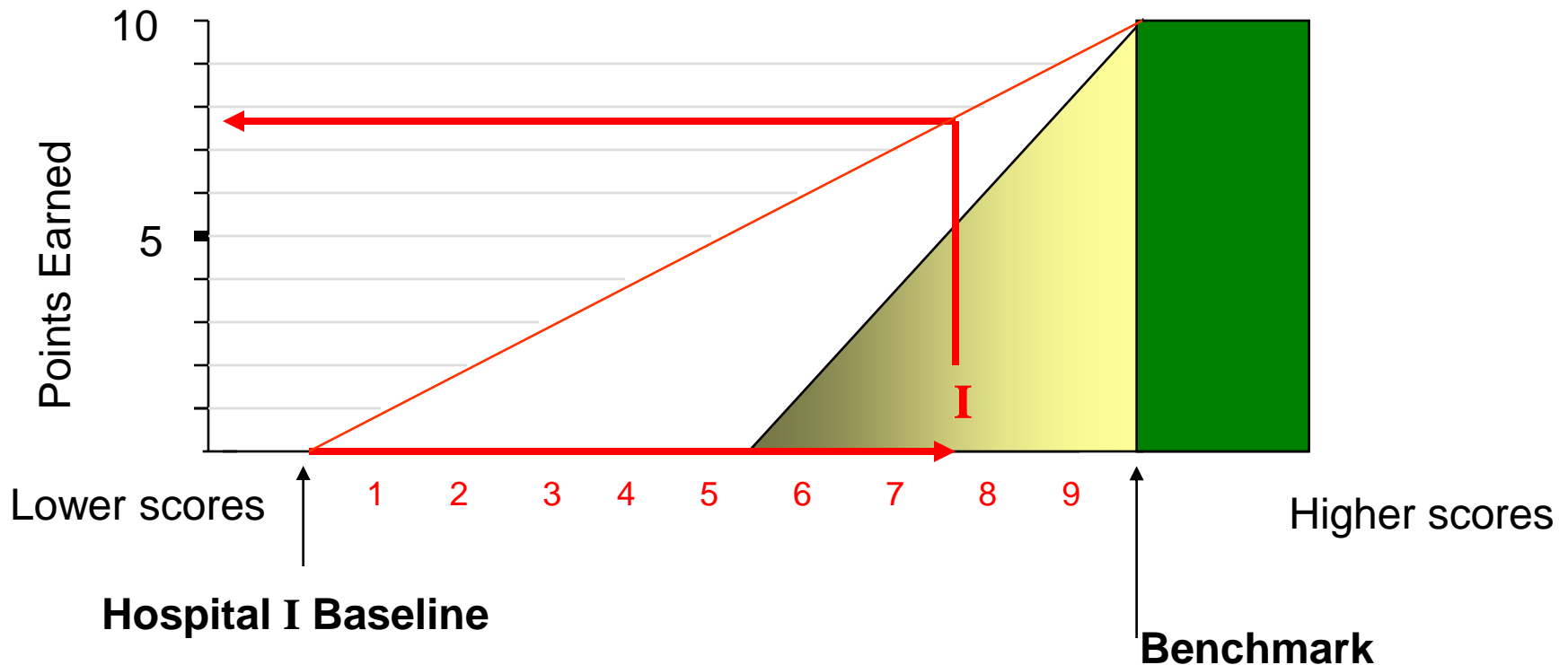
Improvement

- Hospital I earns 50 points due to improvement

Earning Quality Points

The Greater of Attainment or Improvement

- Hospital J <u>attains</u> the same level as Hospital A (50 points)

- But, Hospital J earns about 80 points due to <u>improvement</u>

Points Earned

10

5

Lower scores   Higher scores

1   2   3   4   5   6   7   8   9

I

Hospital I Baseline

Benchmark

Aggregation of Individual Measures to create single Hospital Score

- Any given hospital might report some or all of the individual measures

- Each hospital has a corresponding universe of possible points (measures reported x 100)

- Aggregate score for each hospital is the number of earned points as a percentage of its universe

Distribution of Points "Earned" (%)

- Based on Hospital Compare 2005 Opportunity Model Scores

  - When 75th percentile threshold option used:
    - ☐ Three quarters of hospitals earned 24% or more points
    - ☐ Half of all hospitals earned 46% or more points
   - ☐ One quarter of hospitals earned 53% or more points

Threshold Option	1st Qrtl	Median	3rd Qrtl
80th	23%	33%	45%
75th	24%	34%	46%
50th	29%	41%	53%

Breakdown of Points Earned (%) Attainment Threshold = 75th percentile

Hospital Characteristic	Reporting	1st Qrtl*	Median	3rd Qrtl
Urban Status				
Rural	988	24%	34%	46%
Urban	2,361	23%	33%	46%
Teaching Status				
No Teaching Program	2,299	24%	34%	46%
Teaching Program	1,050	23%	33%	44%
Number of Beds				
Urban/Rural 1-99 beds	465	26%	37%	51%
Urban/Rural 100-199 beds	821	23%	33%	45%
Urban 200-499 beds	906	22%	31%	43%
Urban 500+ beds	169	23%	32%	44%
Rural 1-99	702	25%	35%	48%
Rural 100-199	242	23%	31%	42%
Rural 200+	44	23%	33%	44%
% Medicare Days				
0%-25% Medicare Patient Days	179	23%	33%	46%
25%-50% Medicare Patient Days	1,245	23%	32%	44%
50%-65% Medicare Patient Days	1,454	24%	34%	46%
Over 65% Medicare Patient Days	427	24%	34%	47%

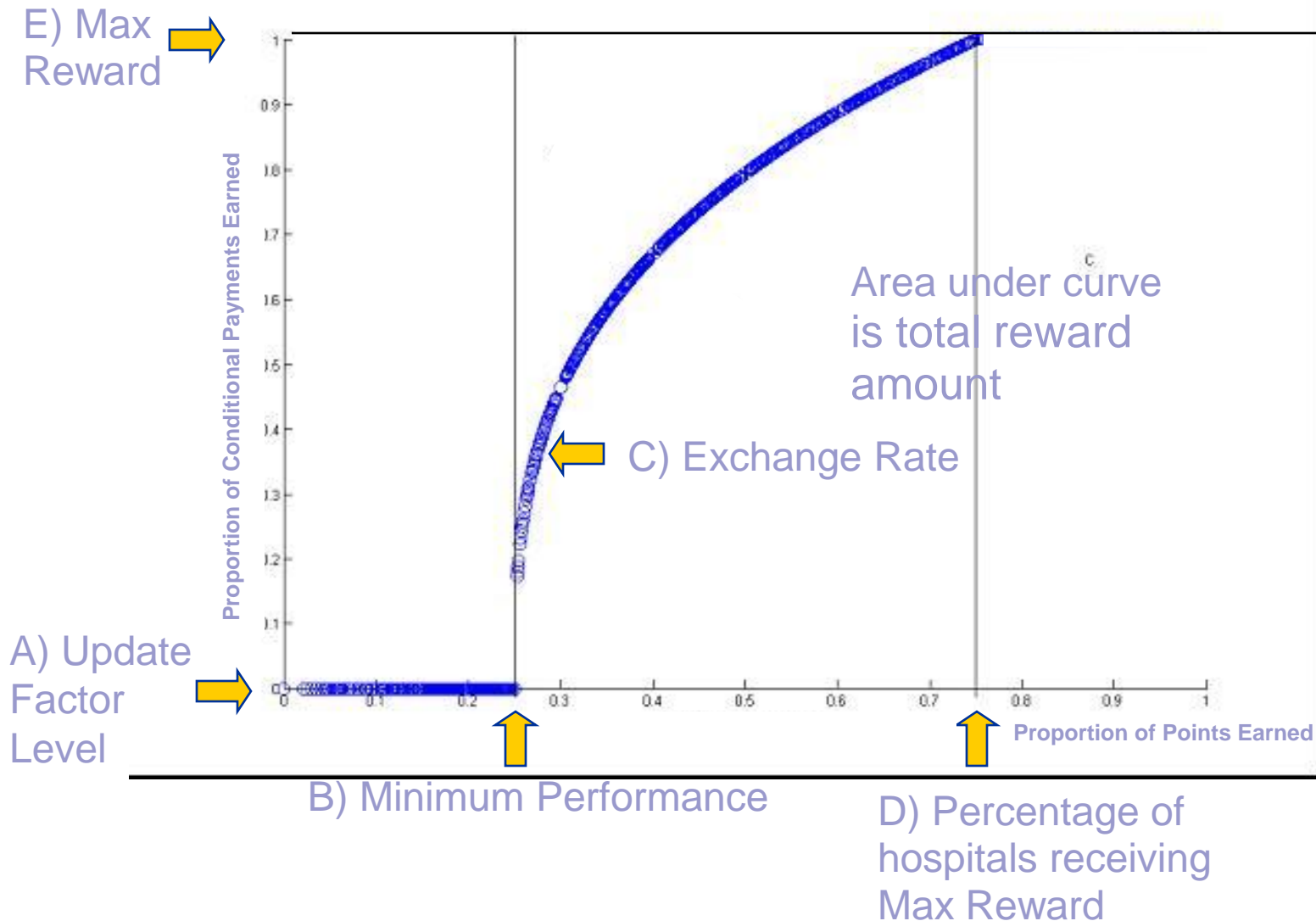Distribution of Percent of Points Acquired (Benchmark = top decile mean, Target = 75th percentile)
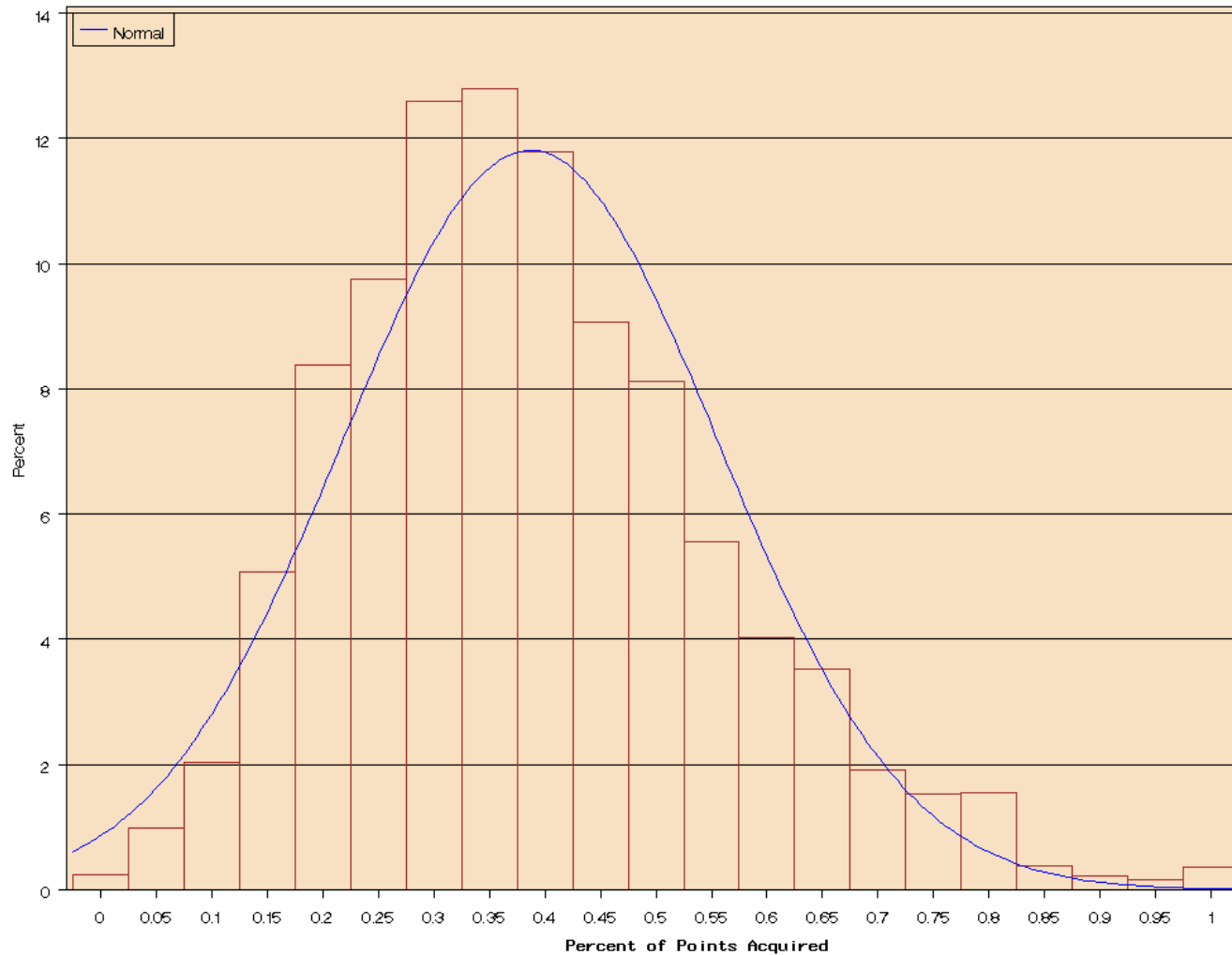
# Translating Performance into Financial Incentives – Parameters and Issues

A. Degree to which rewards derive from existing versus new funding

B. Should there be a "minimum performance" for receipt of some conditional payment

C. "Exchange rate" between quality rating and payments – shape of the reward curve

D. Structure and limits for payments to individual hospitals – should there be a maximum reward?

E. Percentage of hospitals qualifying for maximum reward

Translating Performance into Financial Incentives: Graphical Representation of Reward
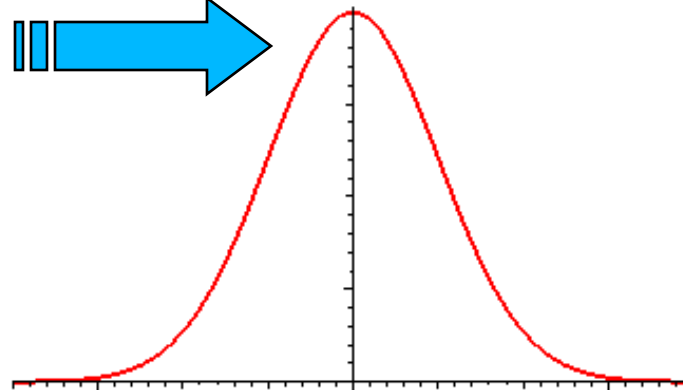
E) Max Reward

Proportion of Conditional Payments Earned

Area under curve is total reward amount

C) Exchange Rate

A) Update Factor Level

B) Minimum Performance

D) Percentage of hospitals receiving Max Reward

Proportion of Points Earned

Incentives for All Hospitals to Improve and Attain Excellence

Baseline (e.g., 2008)
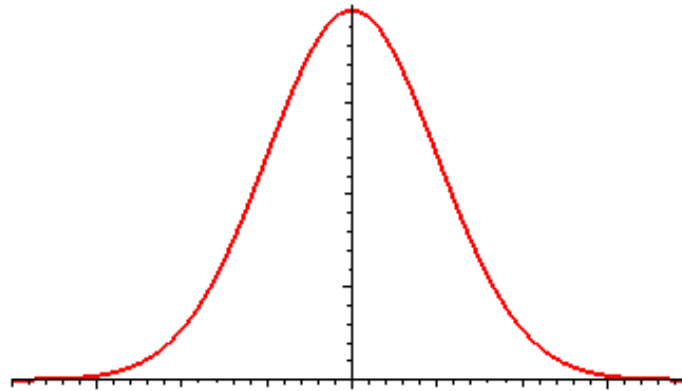
Performance (e.g., 2009)

Targets   Benchmark (excellence)

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?

Number of Measures Reported by Hospital Characteristic
All Hospitals