Incentives for Hospital Performance:

The Leapfrog Hospital Rewards Program™

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Presentation Topics

- Emergence of Value-Based Purchasing (VBP)
- Opportunity for Hospital Quality & Value Improvements
- Aligning Incentives Works
- Tools for VBP:
  - Performance Measures: Leapfrog Hospital Insights
  - Rewards: Leapfrog Hospital Rewards Program™

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Current Landscape

- Well-documented cost and quality problems (IOM, RAND, Commonwealth Fund, etc.)
- Poor quality care costs a typical employer between $1,900 and $2,250 per covered employee year.[1]
  - For a 150 employee company – loss of $200,000/year
  - For a 30,000 employee company – loss of $40 MM/year

[1]Midwest Business Group on Health/Juran Institute 2003

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Current Landscape

- Increasing focus on fixing the "toxic payment system" (high quality ➜ lower cost)

- Numerous private sector initiatives (269 listed in Leapfrog Compendium)

- President's Executive Order, August 2006

- Secretary Leavitt's Value-Driven Health Care Initiative
  – Launched November 2006
  – 150 companies have already pledged their support

- Deficit Reduction Act – VBP in Medicare

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Pillars of Value-Based Purchasing

Standard Measures and Practices

Transparency

Incentives and Rewards

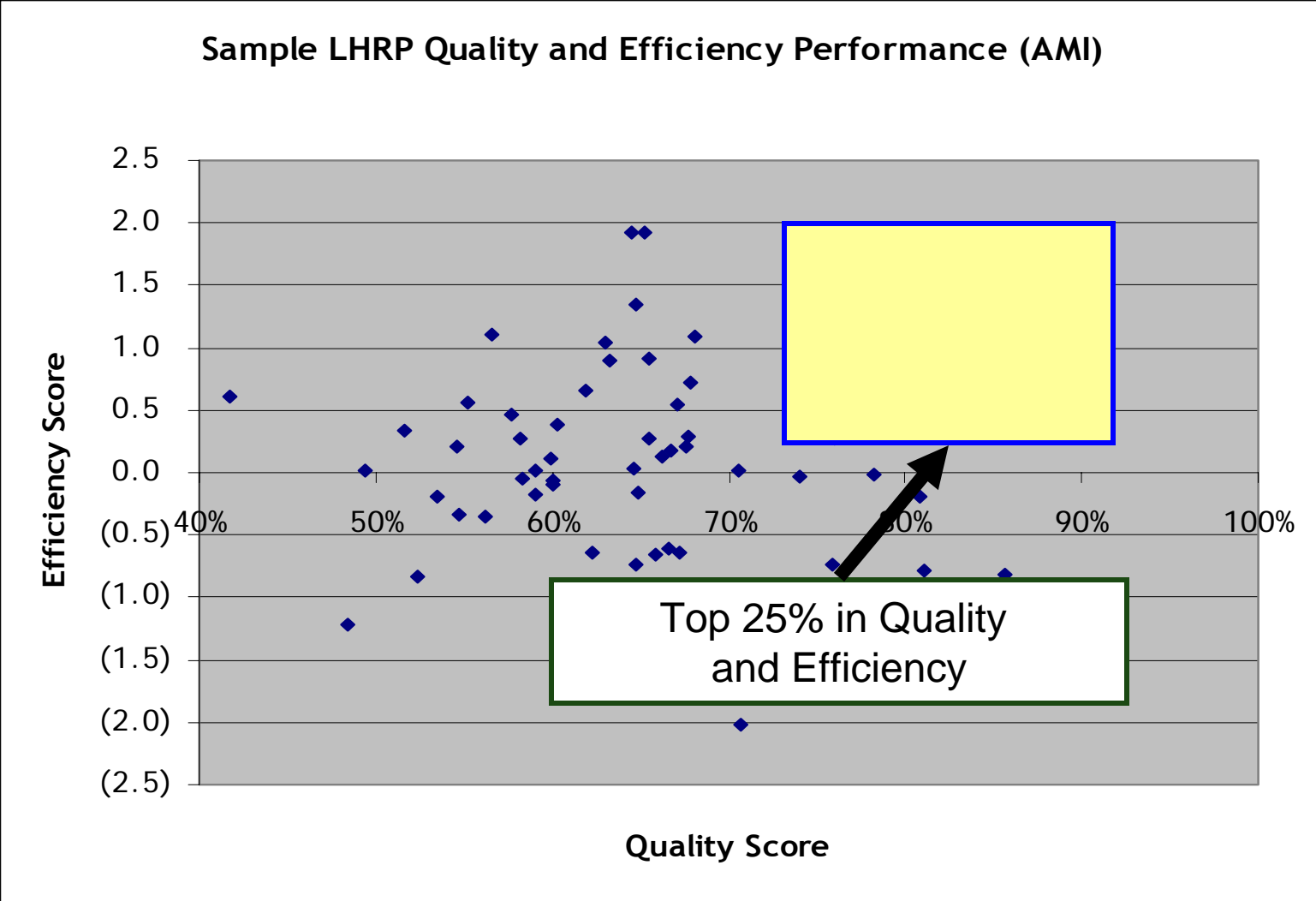e Leapfrog Group

The Opportunity for Improvement

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There Is Significant Variance in Hospital Performance

Sample LHRP Quality and Efficiency Performance (AMI)

The Top Performing Hospitals
Show What is Achievable

Sample LHRP Quality and Efficiency Performance (AMI)

Top 25% in Quality
and Efficiency

Efficiency Score

Quality Score

What If All Hospitals Improved?

Sample LHRP Quality and Efficiency Performance (AMI)

Aligning Incentives Works

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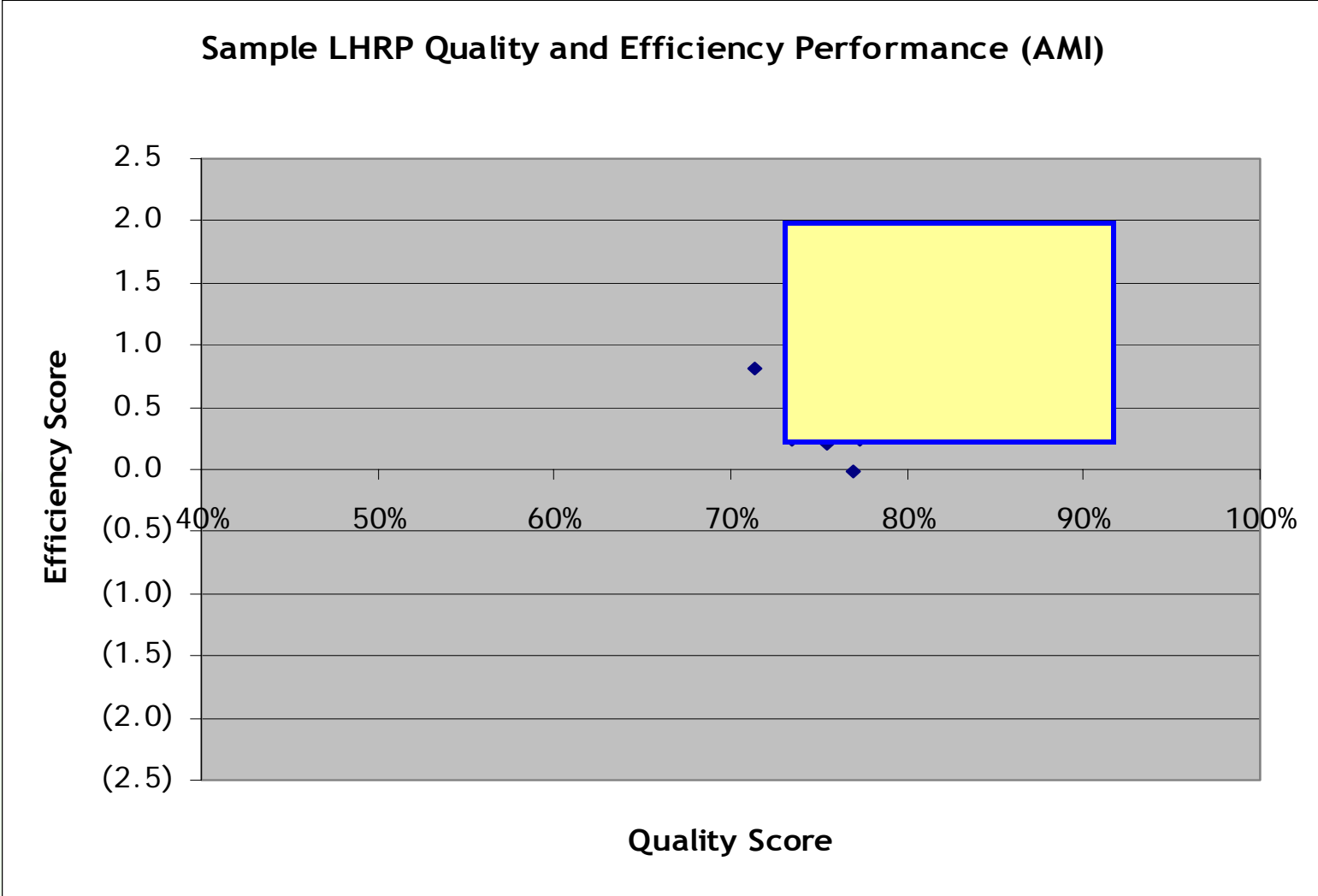
Aligning Incentives:
CMS-Premier Hospital Quality Incentive Demonstration

- Three year initiative linking hospital payment to measured performance
- \> 260 Premier hospitals participating
- Five clinical areas
  - Acute Myocardial Infarction*
  - Congestive Heart Failure*
  - Coronary Artery Bypass Graft*
  - Hip and Knee Replacement
  - Community Acquired Pneumonia*
- Hospitals in top two deciles of performance for each clinical area earn additional payments

** Clinical area included in the Leapfrog Hospital Rewards Program.*

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Early Evidence: Aligning Incentives Works

- Quality improvement across all hospitals and clinical areas
- AMI alone – 235 "lives saved"
  - Based on evidence-based analysis
- Top performers represented large and small facilities across the country.
  - 10% of top performers in AMI, 29% within CAP, and 17% within HF had < 100 beds. No hospital with less than 100 beds performed CABG procedures but 26% of CABG top performers were in the next bedsize grouping of between 100 to 200 beds.

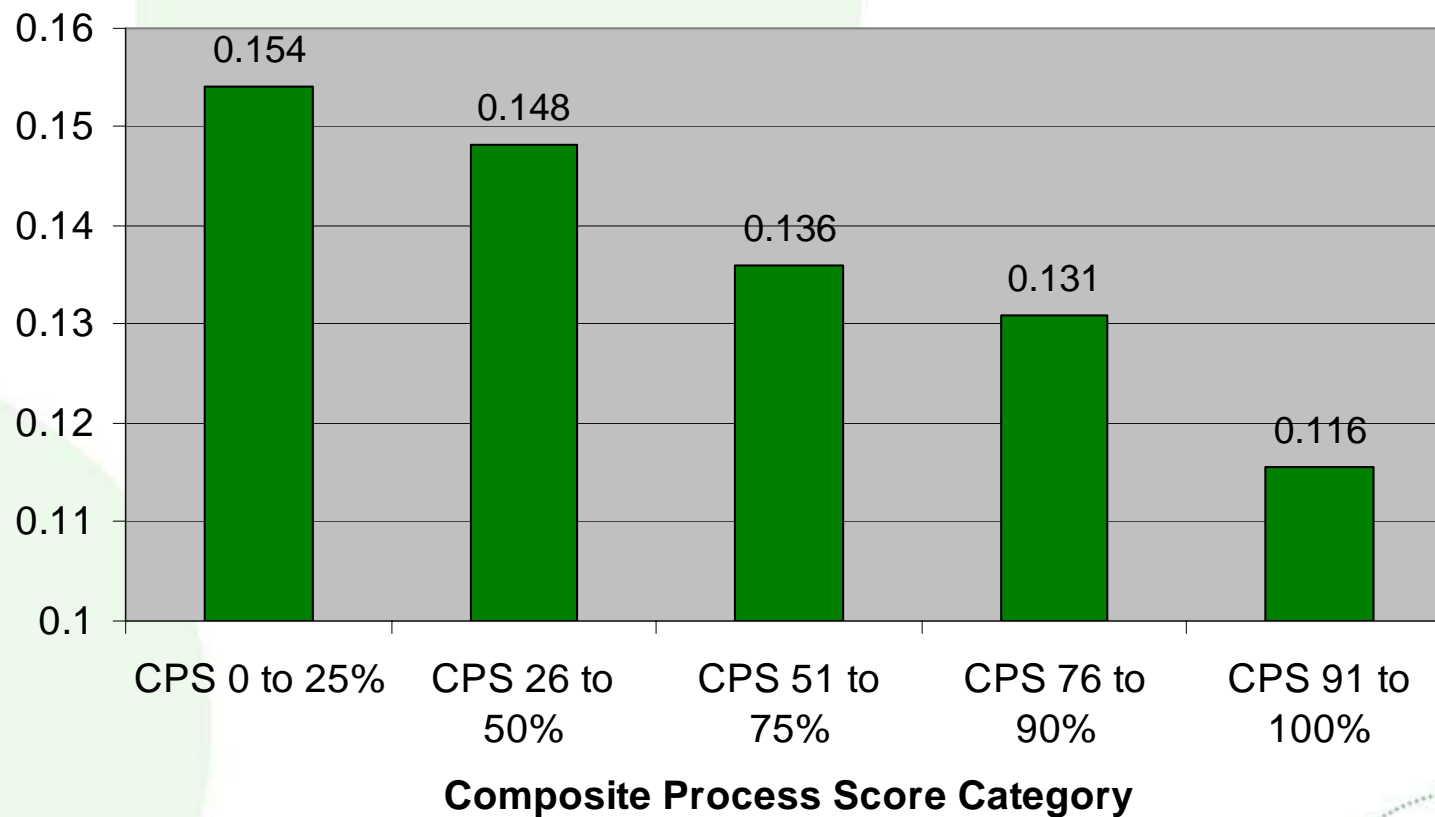# Quality Improvements: Year 1

HQID Year 1: Improvement in Composite Quality Score
by Clinical Area

First Data Quarter to Fourth Data Quarter - Final Data

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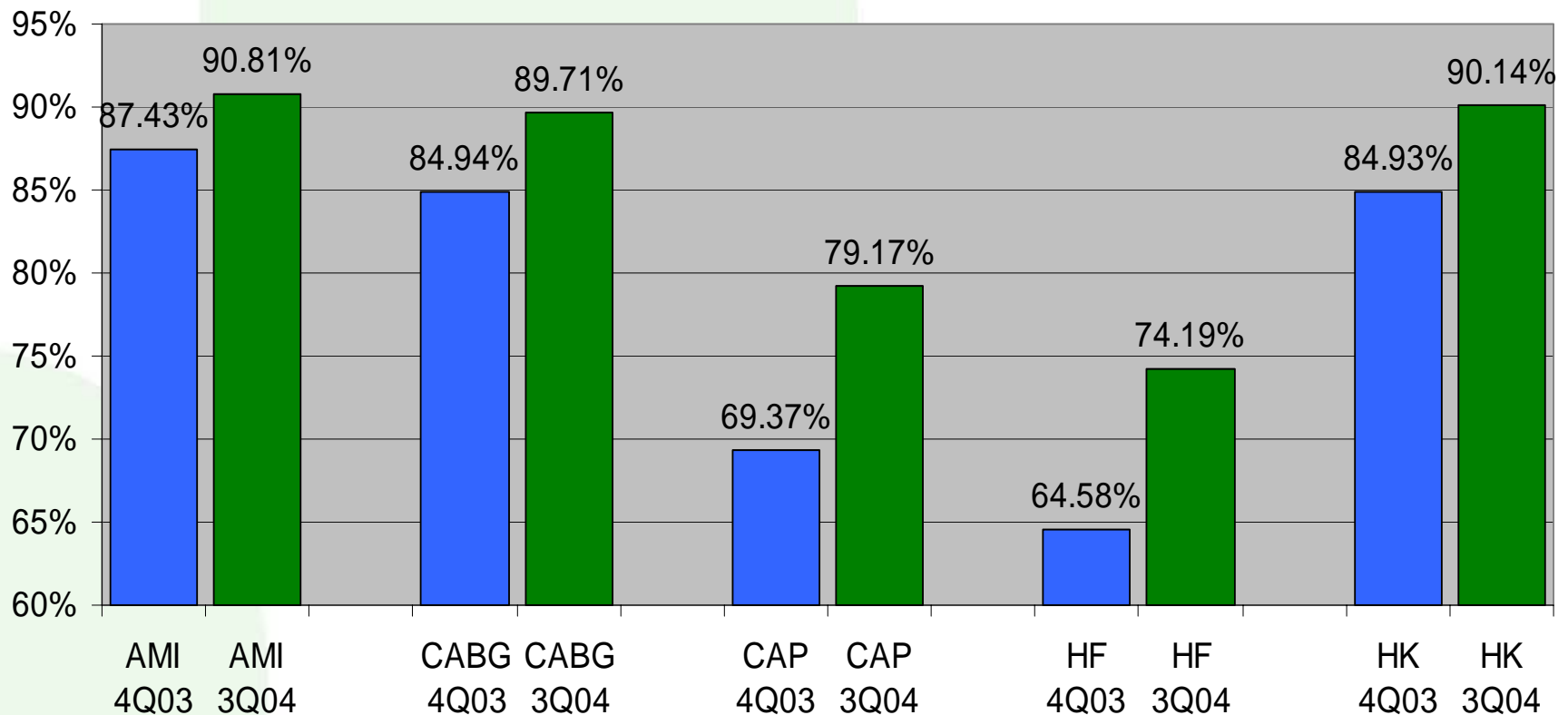
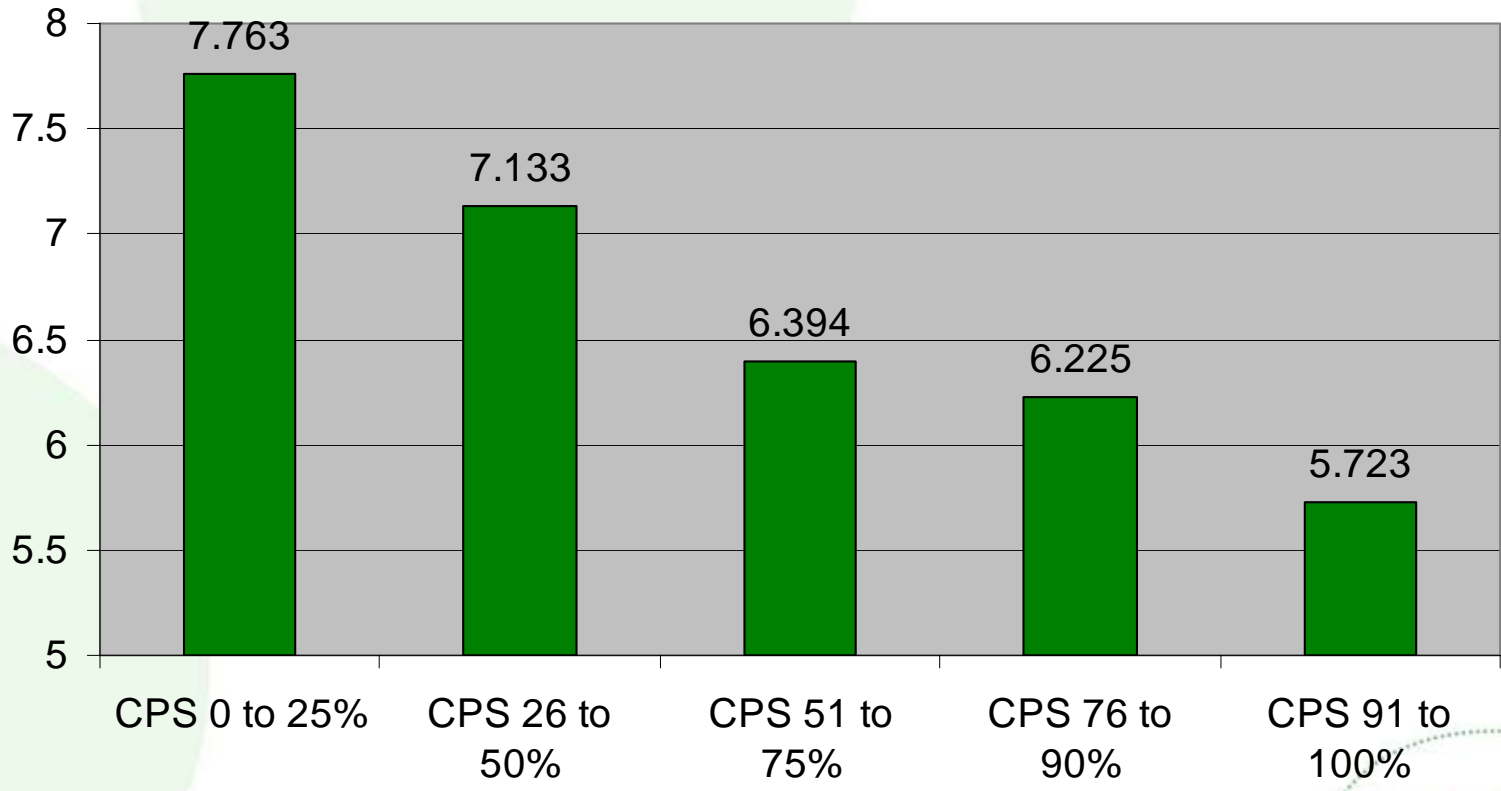# Why it matters:
Higher quality can yield fewer readmissions

Readmissions by Composite
Process Score - Pneumonia

Composite Process Score Category

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Why it matters:
Higher quality can yield lower length of stay

Length of Stay by Composite
Process Score - Pneumonia

CPS 0 to 25%	CPS 26 to 50%	CPS 51 to 75%	CPS 76 to 90%	CPS 91 to 100%
7.763	7.133	6.394	6.225	5.723

Composite Process Score

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Why it matters:
Higher quality can yield lower cost

Total Cost by Composite
Process Score - Pneumonia

Composite Process Score

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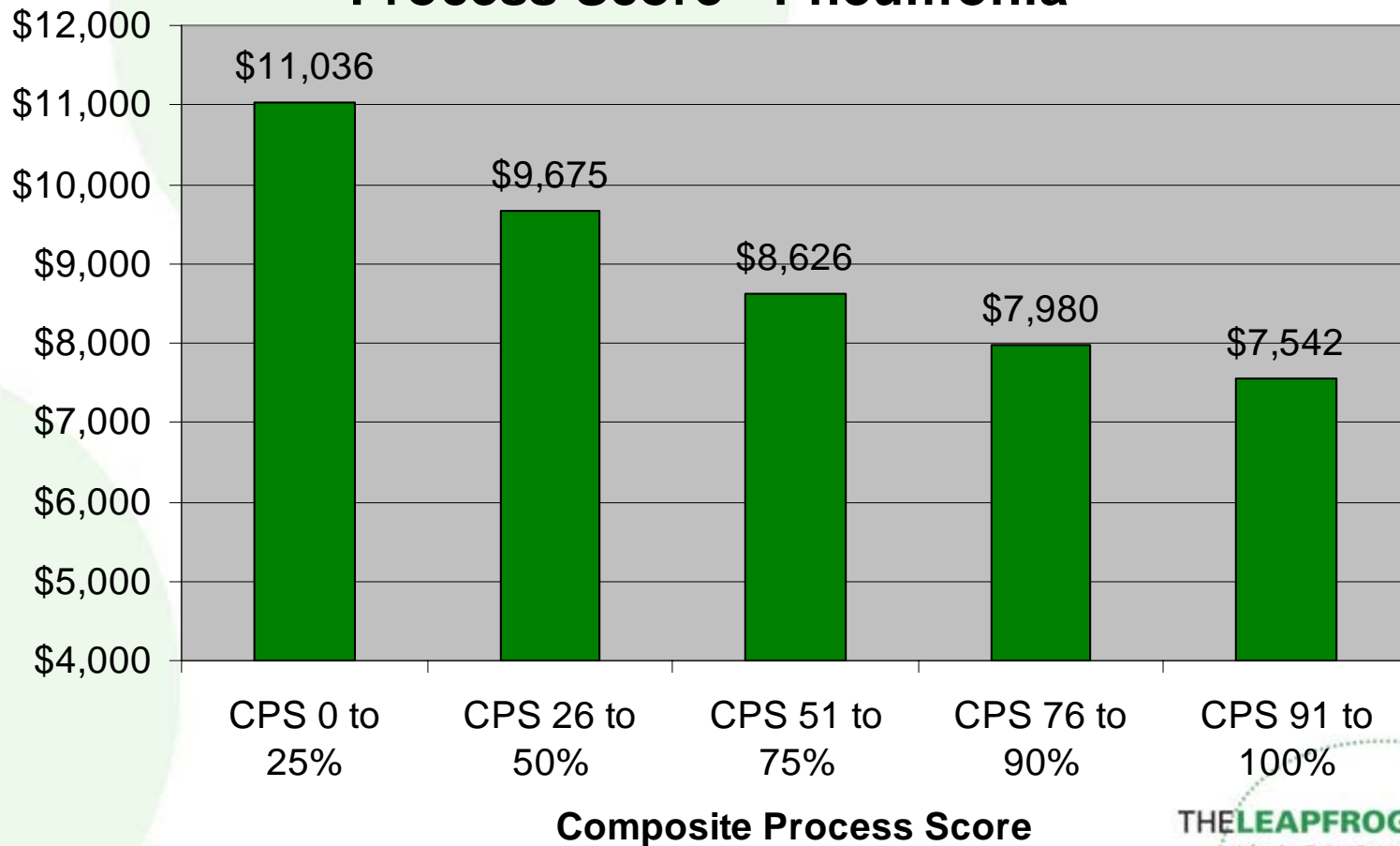
Leapfrog Hospital Rewards Program Mission

- The CMS/Premier demonstration shows that hospitals respond to performance incentives
- Make it easy for the private sector to engage in value-based purchasing
- Focus on clinical areas relevant to the working age population
- Win-win for hospitals, payers, and patients.
  - Financial bonuses based on shared savings
  - Advance purchasers' and consumers' ability to make informed health care decisions

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Tools for VBP: Measurement & Rewards

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Leapfrog Hospital Insights:
Hospital Performance Measurement for LHRP

- Focuses on five clinical areas:
  - 33% of commercial inpatient admissions
  - 20% of commercial inpatient spend
- Opportunity for quality improvement
- Actuarial work shows potential dollar savings as quality improves

Top 10 Clinical Focus Groups Ranked by Potential Opportunity for Savings	Total Potential Opportunity [1]	Total Payments [2]	NQF-approved measures?
CORONARY ARTERY BYPASS GRAFT	**$62,666,869**	**$691,772,784**	**Yes**
PERCUTANEOUS CORONARY INTERVENTION	**$58,157,873**	**$717,954,275**	**Yes**
ACUTE MYOCARDIAL INFARCTION	**$53,616,015**	**$607,227,166**	**Yes**
COLON SURGERY	$38,389,673	$396,004,245	
HEART FAILURE	$34,983,226	$224,919,006	
COMMUNITY ACQUIRED PNEUMONIA	**$29,536,322**	**$355,686,956**	**Yes**
OTHER CARDIAC SURGERY	$25,767,191	$211,578,764	
DELIVERY AND NEWBORNS	**$23,368,721**	**$1,781,273,763**	**Yes**
VASCULAR SURGERY	$16,412,194	$133,287,531	
SPINE - OTHER	$12,925,843	$422,595,301	

[1] Total Payments x Readmission Rate
[2] Premier Commercial Payment data (10/2001 - 9/2002)

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What is Leapfrog Hospital Insights?

- Leapfrog Hospital Insights is The Leapfrog Group's new, most comprehensive voluntary hospital public reporting initiative

- Expands health care transparency by gathering hospital quality & efficiency information

- Provides hospitals with data feedback that enables hospital performance comparisons & guides future improvement efforts

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Leapfrog Hospital Insights:
Quality & Efficiency Measures

- Helps to determine hospital value by measuring hospital performance on two areas: quality and efficiency

- Uses nationally accepted and standardized measures:
  - JCAHO, Leapfrog Survey, National Quality Forum
  - Efficiency: first nationally collected/calculated efficiency measure

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Leapfrog Hospital Insights Measures

Quality Measures:

– Leapfrog Survey + JCAHO core measures
– Weighted & Rolled-up in an overall quality score, by clinical area

Resource-Based Measure of Efficiency:

– Average actual LOS / case, broken down by routine care days and specialty care days
– Severity adjusted based on risk factors
– Re-admission rate to same hospital, by clinical condition, within 14 days

Overall Performance

– Nexus of Quality & Efficiency

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Hospital Ranking

- Leapfrog places hospitals into quality and efficiency tiers, with the best hospitals in Tier 1.
  - Tier 1: The top 25% of hospitals
  - Tier 2: Hospitals below the top 25%, but with low confidence that the difference from Tier 1 is significant
  - Tier 3: Hospitals below the top 25%, and with some confidence that the difference from Tier 1 is significant
  - Tier 4: Hospitals below the top 25%, and with high confidence that the difference from Tier 1 is significant
- Once a hospital is put into tiers for quality and efficiency, the performance group is determined by the lower of the two tiers. For example, a hospital that is Tier 2 for quality and Tier 3 for efficiency is a Performance Group 3 hospital.

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Hospitals Arrayed in Four Groups
Example: Pneumonia

Resource-Based Efficiency vs Quality

Cohort 1
Cohort 2
Average
Cohort 3
Cohort 4

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Leapfrog Hospital Insights:
What if All Hospitals Improved?

- For key Leapfrog Hospital Insights measures, compare the average performance of all hospitals to the average performance of top performing hospitals

- Look at differences in mortality and readmission rates, and costs

- Estimate national impact if all hospitals performed at the average level of the top performance group

National Admissions for Leapfrog Hospital Insights Conditions

Condition	# of Admissions
acute myocardial infarction (AMI)	775,000
coronary artery bypass graft (CABG)	394,000
percutaneous coronary intervention (PCI)	678,000
community acquired pneumonia (CAP)	1,300,000
newborn deliveries/care	3,976,000

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Lives Saved

Condition	Lives Saved
AMI	33,832
CABG	4,089
PCI	2,800
CAP	2,673
Delivery	12,749
ICU Staffing	9,596
TOTAL	**65,738**

Readmissions Avoided

	Avg Readmission Rate – All Hospitals	Avg Readmission Rate – Top Quartile	Readmissions Avoided if All Hospitals Perform at Top Quartile Rate
AMI	9.2%	6.0%	24,838
CABG	7.5%	5.1%	9,246
PCI	7.2%	5.0%	15,203
CAP	8.4%	4.7%	48,962
Delivery	2.1%	0.9%	46,674
TOTAL			**144,923**

Dollars Saved

Condition	$$ Saved per Admission	Total $$ Saved (billions)
AMI	$7,221	$5.596
CABG	$10,052	$3.962
PCI	$4,120	$2.795
CAP	$1,569	$2.039
Delivery	$1,042	$4.142
TOTAL		**$18.536**

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Leapfrog Hospital Rewards Program™:
A Tool for Aligning Incentives

Savings Analysis - Results

	AMI				CABG				CAP			
	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean
Cohort 1	9	8.2%	$13,631	65%	8	7.5%	$24,685	71%	9	4.4%	$4,851	76%
Cohort 2	56	50.9%	$18,699	90%	55	51.9%	$31,626	91%	115	56.1%	$5,809	90%
Cohort 3	14	12.7%	$23,372	112%	10	9.4%	$39,145	113%	31	15.1%	$6,723	105%
Cohort 4	31	28.2%	$25,700	123%	33	31.1%	$41,025	118%	50	24.4%	$7,918	123%
Grand Mean	110	100.0%	$20,852	100%	106	100.0%	$34,737	100%	205	100.0%	$6,420	100%

	PCI				Deliveries / Newborn			
	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean
Cohort 1	3	2.7%	$11,050	73%	17	6.9%	$3,071	75%
Cohort 2	72	64.9%	$12,438	82%	137	55.7%	$3,708	90%
Cohort 3	9	8.1%	$17,641	116%	28	11.4%	$4,082	99%
Cohort 4	27	24.3%	$20,190	133%	64	26.0%	$5,048	123%
Grand Mean	111	100.0%	$15,170	100%	246	100.0%	$4,113	100%

[1] Cohort 1 "Top Performance" Hospitals are Top Quadrant in Efficiency and Effectiveness

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Savings Analysis - Results

	AMI				CABG				CAP			
	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean	# hospitals	% of Total Hospitals	Avg Payment	% of Grand Mean
Cohort 1	9											6%
Cohort 2	56											0%
Cohort 3	14											05%
Cohort 4	31											23%
Grand Mean	110											00%
Cohort 4	27	24.3%	$20,190	133%	64	26.0%	$5,048	123%				
Grand Mean	111	100.0%	$15,170	100%	246	100.0%	$4,113	100%				

AMI

	% of hospitals	Average Payment	% of Average
Perf. Group 1	8.2%	$13,631	65%
Perf. Group 2	50.9%	$18,699	90%
Perf. Group 3	12.7%	$23,372	112%
Perf. Group 4	28.2%	$25,700	123%
Average	100%	$20,852	100%

[1] Cohort 1 "Top Performance" Hospitals are Top Quadrant in Efficiency and Effectiveness

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National Program Rewards Principles

Principle 1: Bonuses to hospitals must be based on shared savings that accrue to the purchaser/payer

Principle 2: All top LHRP Performance Group hospitals should receive bonus payments

Principle 3: Hospitals demonstrating sustained improvement should receive bonus payments

Principle 4: Patients should be encouraged to go to Performance Group 1 & Performance Group 2 hospitals through benefit design

Principle 5: Performance Group 1 hospitals and hospitals showing sustained improvement should be publicly recognized as well as financially rewarded

Principle 6: Rewards should be calculated every 6 months

Specific rewards methodologies can be tailored to local market needs.

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LHRP Rewards Structure

- Direct financial rewards based on shared savings model — "rewards pool"

- Program sponsors may contribute additional dollars to rewards pool

- Bonus payments are derived from a percentage of savings accrued (50% recommended)

- Savings are calculated by comparing hospital performance from one period to the next (6 month cycle) (weighted for volume)

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LHRP Rewards Structure (cont'd)

- Savings calculated separately for each clinical area
- Savings calculated separately for each payer, using payer-specific cost data
- Different hospital LHRP savings calculations and rewards methodologies
  - Per diem reimbursement
 - Case rate/DRG payments (under development)

Savings Calculation – Per Diem

- Focus on efficiency and quality

- Calculated by comparing hospitals' efficiency (independent variable) to average costs per case (dependent variable)

- Statistically calculate change in cost due to change in efficiency (regression analysis)
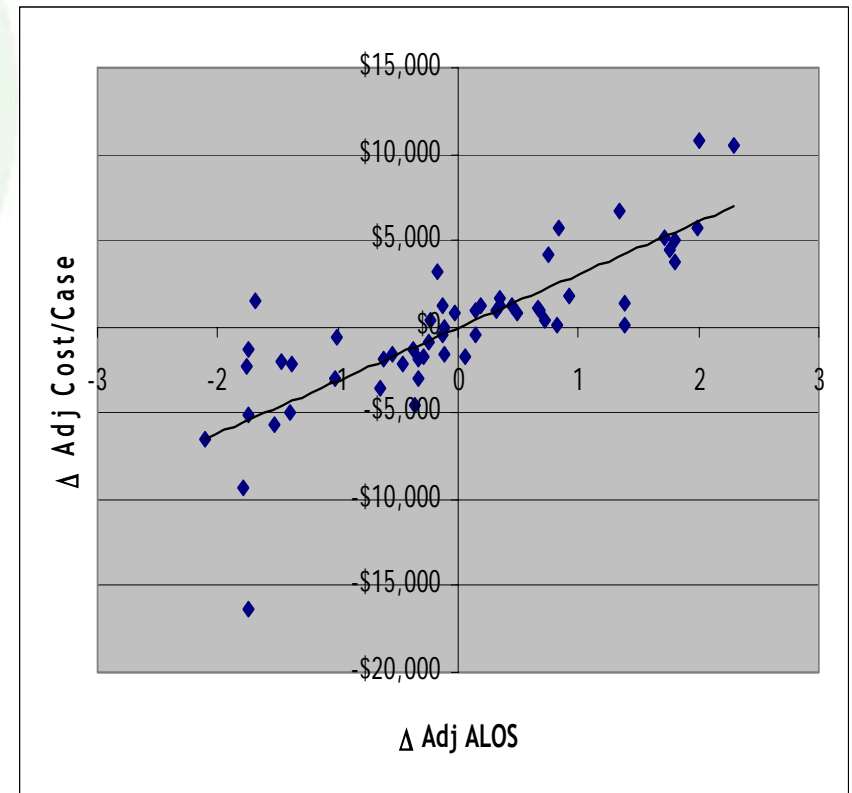
Savings Calculation - DRG

- Focuses on quality
- Improvements in quality will drive savings through the rates of complications, stop-loss, & readmissions
- Calculated by comparing changes in average cost per case (dependent variable) and quality scores (independent variable) over time
- Statistically calculate change in cost due to change in quality (regression analysis)
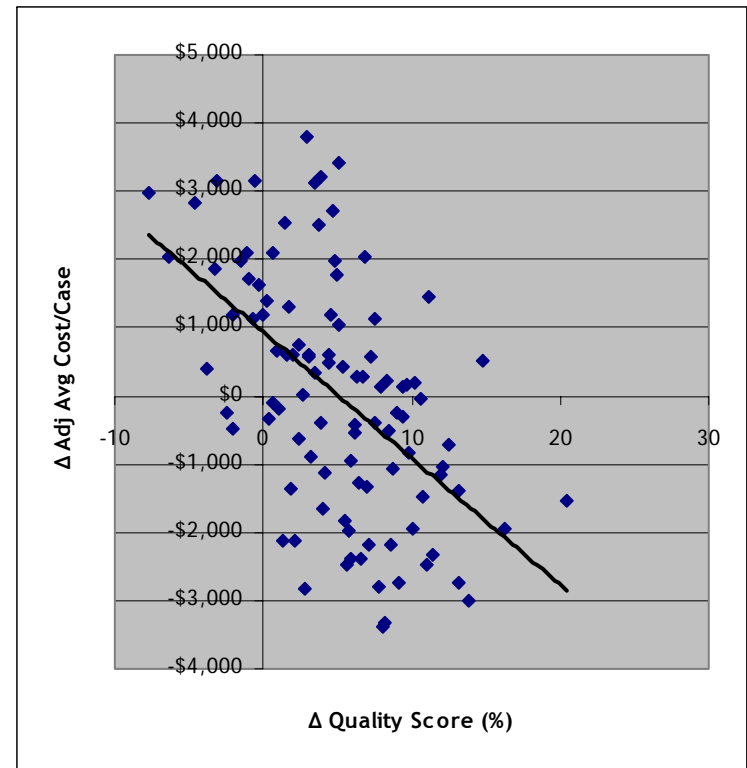
Other Types of Rewards

- Rewards Principles also allow for encourage non-financial and indirect financial rewards for hospital performance

- Examples of non-financial rewards:
  - public recognition in your community (media attention, awarding certificates/plaques, etc.)

- Examples of indirect financial rewards:
  - shifting market share to high performing hospitals; improved efficiency could yield greater profitability over time

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Summary

Admission Type	Potential for Lives Saved	Potential for Avoided Readmissions	Potential for $$ Saved (billions)
AMI	33,832	24,838	$5.596
CABG	4,089	9,246	$3.962
PCI	2,800	15,203	$2.795
CAP	2,673	48,962	$2.039
Newborn Delivery	12,749	46,674	$4.142
TOTAL	**63,953**	**144,923**	**$18.536**

Lives saved total includes 7,810 lives saved from ICU staffing

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Summary

- Growing Importance of Value-Based Purchasing

- Hospital performance improvement can be motivated through VBP

- Design of the Leapfrog Hospital Rewards Program
  - National measure set
  - Methodology customizable to market needs