Leapfrog Hospital Rewards Program™

Selecting and Reporting Measures

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February 7, 2006

LHRP Conference Sessions

- Leapfrog Hospital Rewards Program (LHRP) Overview (Session 2.07)
- Program Design (Session 2.07)
  - Clinical areas & performance measures
  - Data collection & scoring methodology
- Program Implementation (Session 3.07)
  - Licensing options
  - Calculating savings & rewards
  - Lessons Learned to date
  - Case Study I: Memphis Business Group on Health
  - Case Study II: GE/Verizon/Hannaford Bros.

Leapfrog's Mission

Trigger Giant Leaps Forward in the Safety, Quality and Affordability of Healthcare By:

- Supporting Informed Health Care Decisions by Those Who Use and Pay for Health Care
- Promoting High-Value Health Care Through Incentives and Rewards

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Leapfrog Hospital Rewards Program: Background

- Why develop a national program?
  - Answer Leapfrog Member needs
  - Add commercial payer leverage to existing public payer initiatives (CMS-Premier)
  - Reduce noise in the system – move toward national standard
  - Catalyze implementation of inpatient pay-for-performance

Leapfrog Hospital Rewards Program: A National Program
(But, isn't health care local?)

- LHRP provides a standardized rating system for hospitals
  - addressing quality and efficiency across and in markets
  - focused on specific clinical conditions (of interest to commercial payers) that offer opportunities for improvement in care and efficiency
- LHRP offers local customization of rewards for hospitals
  - local pricing can be included
  - local payment options

Leapfrog Hospital Rewards Program: Design

- Adapts the CMS-Premier Hospital Quality Incentive Demonstration program for the commercial sector
- Measures hospital quality along two dimensions of care important to value based purchasing: quality & efficiency
- Designed to have most of the financial rewards pay for themselves from the savings that accrue due to hospital performance improvement
- Designed to be revised & refined over time – feedback always welcome
- Designed to balance needs of purchasers, plans, and providers (see next slide)

The Balancing Act

Purchasers & Plans

- Meaningful measures
- Hospital performance data publicly available
- Actuarial case for financial rewards
- Easy to implement

Providers

- Meaningful measures
- Data feedback on performance
- Potential for rewards (financial & non-financial)
- Easy to participate

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The LHRP "Buddy List": Development & Vetting Help

- Aetna
- Catholic Health Partners
- CIGNA
- General Electric
- HCA
- Leapfrog's Incentive & Reward Lily Pad
- Leapfrog's Health Plan Lily Pad
- Leapfrog membership
- Leapfrog's Leaps & Measures Expert Panelists
- Maryland QI Project
- MIDAS+
- Premier, Inc
- Tenet
- Thomson-Medstat
- Tufts

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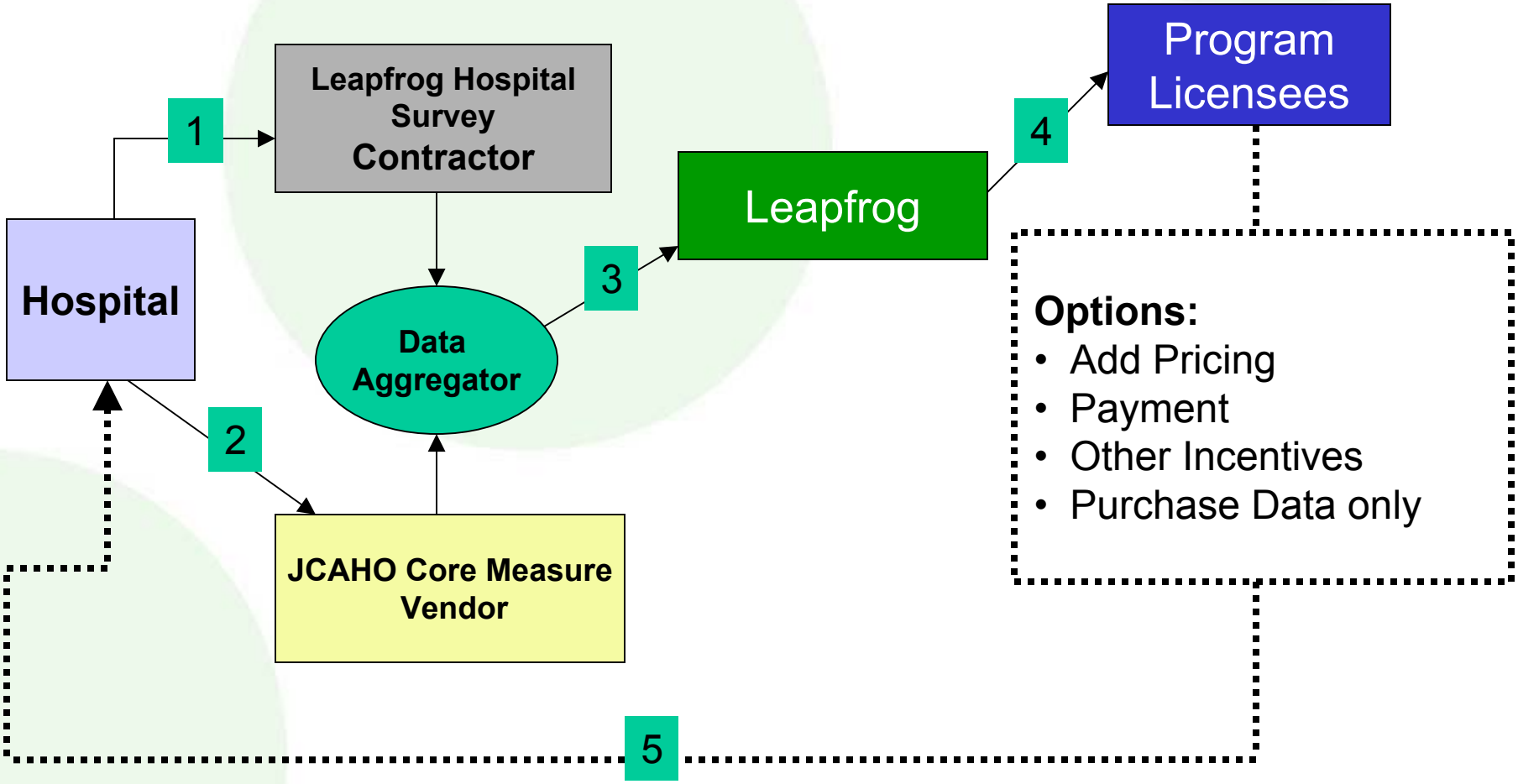
Overview of Process Relationships: LHRP



Implementation Status

- Early Implementers & Users
  - *Memphis Business Group on Health, FedEx* (Memphis, TN)
  - *CIGNA* (Memphis, TN)
  - *GE, Verizon, Hannaford Brothers* (Upstate NY)
  - *Horizon Blue Cross Blue Shield of New Jersey* (NJ, statewide)
  - *CIGNA* (Hospital Value Profile, nationwide)
  - Others on the horizon …
- Call for 2006 Markets underway
- Building the hospital database
  - Next data submission deadline: May 15th, 2006

Clinical Areas and Performance Measures

Selecting Clinical Areas: Criteria

- Relevance to commercial population
- Opportunity for quality improvement
- Potential dollar savings as quality improves
- Availability of nationally endorsed and collected performance measures

Actuarial Analysis

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	
PREGNANCY 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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Measure Selection Criteria

- Capacity for rapid adoption
- Nationally endorsed
- Leverages actuarial/clinical research
  - Actuarial impact for commercial market sufficient to exceed cost of implementation
  - Consistent with clinical research findings
- Available data collection mechanism
- Consistent with current Leapfrog patient safety measures
- Meaningful to purchasers

Quality Measures Consistent with Current Leapfrog Hospital Measures

- Leapfrog Hospital Quality and Safety Survey data must contribute to the program
- When available, use Leapfrog process measures versus JCAHO measures
  - Some LF measures had a higher standard; and,
  - Ongoing process of alignment between Leapfrog measures and the NQF endorsed measure sets, CMS and JCAHO measures

CABG measures by source

Metric	*Source*
Prophylactic antibiotic received within 1 hour prior to surgical incision	JCAHO (3Q04 SIP)
Prophylactic antibiotics discontinued within 24 hours after surgery end time	JCAHO (3Q04 SIP)
CABG mortality	Leapfrog Survey
CABG volume	Leapfrog Survey
Prophylactic antibiotic selection for surgical patients	JCAHO (3Q04)
Computer Physician Order Entry	Leapfrog Survey
ICU Physician Staffing (IPS)	Leapfrog Survey
Leapfrog Safety Index (NQF Safe Practices)	Leapfrog Survey
CABG using internal mammary artery	Leapfrog Survey
Use of beta-blockers within 24 hours after surgery	Leapfrog Survey
Beta-blockers prescribed at discharge	Leapfrog Survey
Lipid lowering therapy at discharge	Leapfrog Survey
Aspirin prescribed at discharge	Leapfrog Survey
Early extubation for certain populations	Leapfrog Survey

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AMI measures by source

Metric	Source
Aspirin at arrival for AMI	**JCAHO**
Aspirin prescribed at discharge for AMI	**JCAHO**
Beta Blocker at arrival for AMI	**JCAHO**
Beta Blocker prescribed at discharge for AMI	**JCAHO**
AMI Inpatient Mortality	**JCAHO**
Angiotensin converting enzyme inhibitor (ACEI) for left ventricular systolic dysfunction	**JCAHO**
Time to Thombolysis	**JCAHO**
First balloon inflation within 90 minutes of hospital arrival	**Leapfrog Survey**
Smoking Cessation Counseling	**JCAHO**
Computerized Physician Order Entry	**Leapfrog Survey**
ICU Physician Staffing (IPS)	**Leapfrog Survey**
Leapfrog Safety Index (NQF Safe Practices)	**Leapfrog Survey**

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PCI measures by source

Metric	*Source*
PCI mortality	**Leapfrog Survey**
PCI volume	**Leapfrog Survey**
Aspirin for PCI patients	**Leapfrog Survey**
First balloon inflation within 90 minutes of hospital arrival	**Leapfrog Survey**
Computer Physician Order Entry	**Leapfrog Survey**
ICU Physician Staffing (IPS)	**Leapfrog Survey**
Leapfrog Safety Index (NQF Safe Practices)	**Leapfrog Survey**

Pneumonia measures by source

Metric	*Source*
Oxygenation assessment	JCAHO
Antibiotic timing	JCAHO
Blood culture collected prior to first antibiotic administration	JCAHO
Influenza screen or vaccination	JCAHO (3Q04)
Pneumonia screen or pneumococcal vaccination	JCAHO
Adult smoking cessation advice/counseling	JCAHO
Computer Physician Order Entry	Leapfrog Survey
ICU Physician Staffing (IPS)	Leapfrog Survey
Leapfrog Safety Index (NQF Safe Practices)	Leapfrog Survey

Deliveries/Complicated Newborns measures by source

Metric	*Source*
Third or fourth degree laceration	**JCAHO**
Neonatal mortality	**JCAHO**
Antenatal steroids for certain high-risk deliveries	**Leapfrog Survey**
NICU daily census	**Leapfrog Survey**
Computer Physician Order Entry	**Leapfrog Survey**
Leapfrog Safety Index (NQF Safe Practices)	**Leapfrog Survey**

Effectiveness Measure Assignment and Weighting within Condition

- First stage of weighting*—outcomes within a condition assigned as follows:

  46% for mortality
  29% for serious morbidity
  25% for complications

- Second stage—measures within an outcome weighted according to impact (when evidence available)

*Pauly, M.V., Brailer, D.J., Kroch, E., and O. Even-Shoshan. "Measuring Hospital Outcomes from a Buyer's Perspective." *American Journal of Medical Quality*, Vol. 11(8):112-122, Fall 1996.

Efficiency Measure

- Average severity-adjusted LOS, by clinical area
  - Average actual LOS / case
    - Commercial health plan enrollees only
    - Latest 6 months experience, updated semi-annually
    - Specify different bed-types (e.g. ICU)
  - Adjustments applied by aggregator:
    - Severity based on risk-adjustment data from vendor
    - Re-admission
      - » For each clinical area: readmission rate within 14 days to same hospital
- Meets guidelines established by “Measuring Provider Longitudinal Efficiency” white paper
- Program Licensees will combine payment information from their experience with the LHRP efficiency measure to determine savings and rewards

Efficiency and Quality Model

- Hospitals will be relatively ranked within condition based on their final weighted score for that condition
- The “bottom performer” in the top 25% on quality and efficiency will be used to determine placement in each of the remaining three cohorts.
- Hospitals in the top cohort are in the top quartile on both quality and efficiency (results in < than 25%)
- Hospitals in the bottom cohort will have efficiency and quality scores that are significantly worse by p=.05 than the bottom performer in the “top performing” cohort

Statistical Model

- Suggested by Tom Cook, Northwestern University
- Uses the bottom performer in the relatively ranked top quartile to serve as the benchmark for the remaining three cohorts
- Provides greater variation than is found in typical hospital public reporting; assures that cost savings will result in order for purchasers to recoup costs
- Assures that payments are made to top performers
  - Method results in 5% to 8% of hospitals in Top Performance cohort (Cohort 1) (see next slide)
    - **average payments 25% to 35% lower than average**
  - 25% to 30% of hospitals fall into **Cohort 4**
    - **average payments 20% to 25% above average**

Model savings across conditions

	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%**

Based on Premier data for AMI, CABG and CAP:

- 5% to 8% of hospitals fall into Top Performance cohort (Cohort 1)
  - **average payments 25% to 35% lower than average**
- 25% to 30% of hospitals fall into **Cohort 4**
  - Efficiency AND Effectiveness scores statistically worse than Cohort 1 bottom performer at p = .05
  - **average payments 20% to 25% above average**

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Summary

- Cost savings related to both conditions selected and statistical approach
- Measures selected and weighted based on evidence of reductions in mortality and morbidity
- Effectiveness and efficiency measured and contribute equally to performance incentive
- Methods vetted with many stakeholders