

Pay for Performance in Blood and Marrow Transplant

C. Fred LeMaistre, MD
Vice President, Physician in Chief Hematology

June 26, 2014

PAY FOR PERFORMANCE IN HEALTH CARE

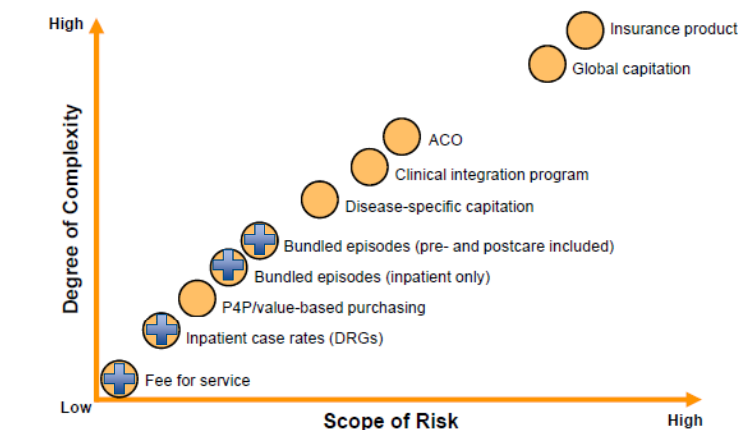
If a physician make a large incision with an operating knife and cure it, or if he open a tumor (over the eye) with an operating knife, and saves the eye, he shall receive ten shekels in money.

If a physician make a large incision with the operating knife, and kill him, or open a tumor with the operating knife, and cut out the eye, his hands shall be cut off.

~ Code of Hammurabi, c.1750BC



EMERGING PAYMENT MODELS WILL TAKE VARIOUS FORMS



ACO = accountable care organization; P4P = pay for performance; DRG = diagnosis-related group.

Confidential and Proprietary © March 2012 Sg2

4



SARAH CANNON

3

PAY FOR PERFORMANCE

• Background

- Arrangement where a portion of payment is based on performance of a defined measure
- Typically another component of remuneration independent of amount at risk
- Most current discussions address quality or performance objectives but could also target profitability, volume or patient satisfaction

• Goals

- Improve quality of care
- Control rate of growth in health care costs
- Adoption of health information technology and EMR
- Promote development of preventive services

*Pay for Performance in Health Care
CRS Report for Congress
Updated December 12, 2006*

SARAH CANNON

4

FOUR TYPES OF PERFORMANCE MEASURES

- **Clinical Outcomes (SCTOD)**
 - Preferred standard
 - Often difficult to collect
- **Process Measures (FACT)**
 - Address proper delivery of healthcare services and practice patterns
 - Easier to collect but may not be consistent with outcomes
 - Often focus on underuse of services and may be cost-increasing
- **Structural Measures**
 - Health information technology
- **Patient Satisfaction Measures**
 - Can be controversial
 - Easy to collect and may enhance compliance
 - No clear link to satisfaction and technical quality



Pay for Performance in Health Care
CRS Report for Congress
Updated December 12, 2006

SARAH CANNON

5

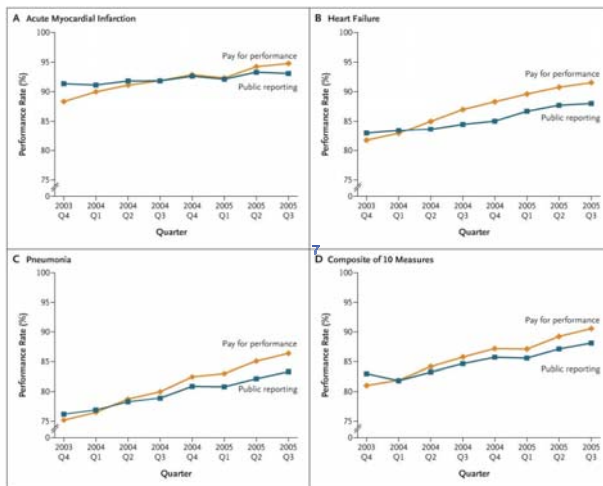
PERFORMANCE UNIT FOR MEASUREMENT AND REWARD

- Should reward the agent or decision maker directly for changes in the standard being measured
- Accountability without responsibility is inappropriate and can be counter-productive
- Does it work?:
 - Attributing cause and effect with regard to improvements in health can be difficult because improvements may result from multiple factors
 - Health care interventions are often collaborative and may not be attributable to a single individual or provider
 - Who should be rewarded?
 - Top-performers
 - Performers with greatest improvement?
 - All who meet a threshold?

SARAH CANNON

6

IMPROVEMENT IN COMPOSITE PROCESS MEASURES AMONG HOSPITALS ENGAGED IN BOTH PAY FOR PERFORMANCE AND PUBLIC REPORTING AND THOSE ENGAGED ONLY IN PUBLIC REPORTING



THE NEW ENGLAND
JOURNAL of MEDICINE

Lindenauer PK et al. *N Engl J Med* 2007;356:486-496.

SARAH CANNON

7

ESTIMATES OF INCREMENTAL EFFECT OF PAY FOR PERFORMANCE.

Table 5. Estimates of Incremental Effect of Pay for Performance.*

Analytic Approach	Incremental Effect of Pay for Performance			
	Acute Myocardial Infarction	Heart Failure	Pneumonia	Composite of 10 Measures
Matched for hospital characteristics	4.3 (2.5–6.1)	5.2 (2.8–7.7)	4.1 (2.3–5.9)	4.3 (3.0–5.7)
Matched for hospital characteristics and adjusted for baseline performance and condition-specific volume†	2.6 (1.3–3.9)	4.1 (2.6–5.5)	3.4 (1.9–4.9)	2.9 (1.9–3.9)
Unmatched and adjusted for baseline performance, condition-specific volume, and all hospital characteristics‡	1.9 (0.8–3.1)§	3.8 (2.1–5.5)	3.5 (2.3–4.7)	3.4 (2.3–4.5)
Unmatched and adjusted for baseline performance, condition-specific volume, and all hospital characteristics; hospitals that declined participation in pay for performance included and grouped with those that agreed to participate¶	1.8 (0.9–2.8)	2.8 (1.4–4.2)	2.7 (1.7–3.6)	2.8 (1.9–3.6)

* P<0.001 for all categories, unless otherwise noted.

† Multiple linear regression of matched pairs was adjusted for baseline performance and condition-specific hospital volume.

‡ Multiple linear regression of data for 2490 hospitals that engaged in pay for performance and public reporting was adjusted for hospital size, teaching status, region, location, ownership status, baseline performance, and condition-specific volume.

§ P=0.002.

¶ Multiple linear regression of data for 2490 hospitals that engaged in pay for performance and public reporting was adjusted for hospital size, teaching status, region, location, ownership status, baseline performance, and condition-specific volume; hospitals that declined to participate or withdrew from the Hospital Quality Incentive Demonstration were added to the pay-for-performance group to attempt to account for a volunteer effect.

THE NEW ENGLAND
JOURNAL of MEDICINE

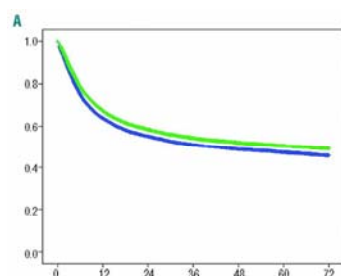
Lindenauer PK et al. *N Engl J Med* 2007;356:486-496.

SARAH CANNON

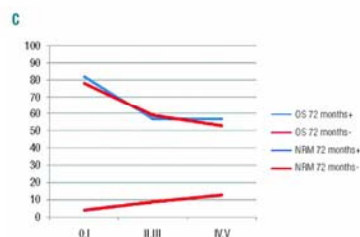
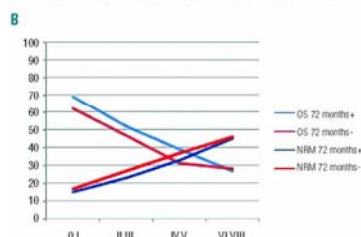
8

POSSIBLE MEASURES FOR PAY FOR PERFORMANCE

	Meaningful	Measureable	Actionable
1 Yr. OS	+	+	+
FACT	+	+	+
100 day OS	+	-	+
Readmission	+	-	-
HAC	+	-	+
cGVHD	+	-	-
Pt. Reported Outcomes	+	-	+
Marrow vs PBSC	+	+	+
G-csf post allo	+	+	+
Survivorship Measures	+	-	-
Data Management	+	+	+

 SARAH CANNON

**“JACIE” accreditation status
of the transplant team by
November 2012 and outcome
of patients transplanted
between 1999 and 2006.**

Gratwohl A et al. *Haematologica* 2014;99:908-915 SARAH CANNON

10

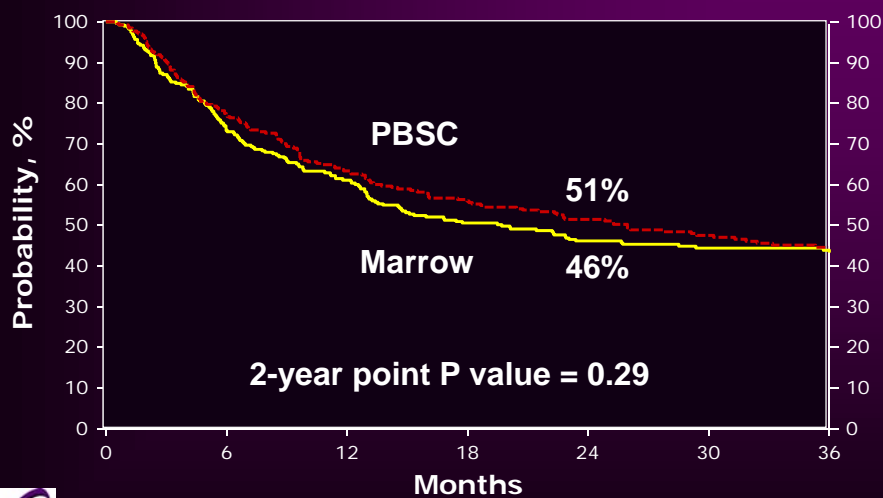
POSSIBLE MEASURES FOR PAY FOR PERFORMANCE

	Meaningful	Measurable	Actionable
1 Yr. OS	+	+	+
FACT	+	+	+
100 day OS	+	-	+
Readmission	+	-	-
HAC	+	-	+
cGVHD	+	-	-
Pt. Reported Outcomes	+	-	+
Marrow vs PBSC	+	+	+
G-CSF post allo	+	+	+
Survivorship Measures	+	-	-
Data Management	+	+	+

 SARAH CANNON

Overall Survival from Randomization

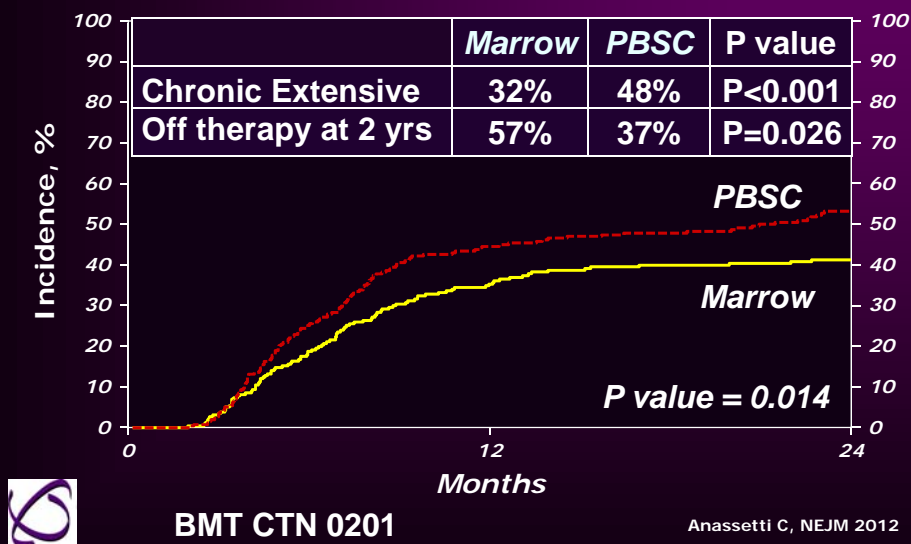
Intent-to-treat analysis



BMT CTN 0201

Anasetti C, NEJM 2012

Overall Chronic GVHD



FILGRASTIM IN ALLOGENEIC TRANSPLANT

Study-author	Transplant population	Stem cell source	N	Comparison	Primary conclusion
CIBMTR-Khoury et al. ⁴³	AML, CML	BM=2110 PBSC=609	2719	Patients who received G-CSF in first 7 days post HSCT versus others	G-CSF shortened time to ANC recovery; no change in D30 or D100 TRM. No changes in GVHD, LFS or OS
EBMT-Ringden et al. ⁴¹	AML	BM=1789 PBSC=434	2223	Patients who received G-CSF in first 14 days post HSCT versus others	G-CSF worsened acute and chronic GVHD, TRM, OS and DFS in BM but not in PBSC transplants
CIBMTR-Eapen et al. ⁴²	Pediatric and adolescent	BM=630 PBSC=143	773	Children who received G or GM-CSF in first 7 days post HSCT versus others	G-CSF worsened TRM, treatment failure and OS
Meta-analysis-Ho et al. ⁴⁶	9 prospective randomized trials, 8 retrospective cohort comparisons, 1 case-controlled study	BM=1056 PBSC=142	1198	Patients who received G or GM-CSF post HSCT versus others	No difference in TRM, GVHD, or 100 day survival
Meta-analysis-Dekker et al. ⁴⁴	34 randomized controlled trials	BM and PBSC		Patients who received G- or GM-CSF post auto or allo HSCT prior to neutrophil engraftment versus others	Growth factors reduced documented infections but did not impact acute GVHD or TRM

RECOMMENDED SCREENING AND PREVENTIVE PRACTICES

Recommended screening/prevention	6 Months	1 Year	Annually
Immunity			
Encapsulated organism prophylaxis	2	2	2
PCP prophylaxis	1	2	2
CMV testing	2	2	2
Immunizations	1	1	1
Ocular			
Ocular clinical symptom evaluation	1	1	1
Ocular fundus exam	+	1	+
Oral complications			
Clinical assessment	1	1	1
Dental assessment	+	1	1
Respiratory			
Clinical pulmonary assessment	1	1	1
Smoking tobacco avoidance	1	1	1
Pulmonary function testing	+	+	+
Chest radiography	+	+	+
Cardiac and vascular			
Cardiovascular risk-factor assessment	+	1	1
Liver			
Liver function testing	1	1	+
Serum ferritin testing		1	+
Kidney			
Blood pressure screening	1	1	1
Urine protein screening	1	1	1
BUN/creatinine testing	1	1	1

Recommended screening/prevention	6 Months	1 Year	Annually
Skeletal			
Bone density testing (adult women, all allogeneic transplant recipients and patients at high risk for bone loss)		1	+
Nervous system			
Neurologic clinical evaluation	+	1	1
Evaluate for cognitive development		1	1
Endocrine			
Thyroid function testing		1	1
Growth velocity in children		1	1
Gonadal function assessment (prepubertal men and women)	1	1	1
Gonadal function assessment (postpubertal women)		1	+
Gonadal function assessment (postpubertal men)		+	+
Muco-cutaneous			
Skin self-examination and sun exposure counseling	1	1	1
Gynecological examination in women	+	1	1
Second cancers			
Second cancer vigilance counseling		1	1
Screening for second cancers		1	1
Psychosocial			
Psychosocial/QOL clinical assessment	1	1	1
Sexual function assessment	1	1	1

POSSIBLE MEASURES FOR PAY FOR PERFORMANCE

	Meaningful	Measureable	Actionable
1 Yr. OS	+	+	+
FACT	+	+	+
100 day OS	+	-	+
Readmission	+	-	-
HAC	+	-	+
cGVHD	+	-	-
Pt. Reported Outcomes	+	-	+
Marrow vs PBSC	+	+	+
G-CSF post allo	+	+	+
Survivorship Measures	+	-	-
Data Management	+	+	+

CONCLUSIONS

- Pay for Performance may not make currently make sense for HSCT.
 - FACT/SCTOD
 - Case Rates
 - Narrow networks
- Goals for Pay for Performance programs need to be clearly defined.
 - Quality/Outcomes
 - Financial Alignment
- Careful consideration must be given to metrics:
 - Meaningful, measurable, actionable
 - Metrics that leverage CIBMTR data sets preferable
 - Partnership with payers in determining comparative effectiveness and value going forward
- Incentives need to be aligned with responsible parties.

