Evaluating Pay-for-Performance and Other Payment Methodology Conversions

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Daniel M. Grauman

DGA PARTNERS
Who We Are

- Health Care Strategy, Finance, and Data
- Strategic Planning
- Contracting & Pay-4-Performance
- Clinical Integration
- Analysis and reporting on large datasets

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Session Objective

- Overview of Pay-For-Performance programs
- Discuss general approaches to evaluating alternative payment methodologies
- Show examples of analysis

Pay for Performance

- Premise: Improving quality creates cost savings; therefore…
  Aligning payments with quality will reduce cost
- Supported by Medicare, Leapfrog, California Health Care Foundation, etc.
- Major efforts focus on physician groups
- In early stages of development

Incentives for various payment methods

	Quality	Cost Savings
FFS	↑	↓
Capitation	↓	↑
P4P	↑	↑

Pay for Performance - Implications

- IT systems often inadequate – manual collection
  - EMR should help somewhat
- Metrics used for measurement are not standardized
  - Efforts underway to standardize measures
- Possible short-term opportunity for providers
- Cost savings for payer may be costly for provider
- Possible component of IPA/PHO contracting under clinical integration or risk sharing

CMS Quality Initiatives

- Nursing Home Quality Initiative (2002)
- Home Health Quality Initiative (2003)
- Hospital Quality Initiative (2003)
- Physician Focused Quality Initiative (2004)

Hospital Quality Initiative (HQI)

- Initial aim of initiative to refine and standardize hospital data and construct standard quality measure set for hospitals
- The National Voluntary Hospital Reporting Initiative
  - 10 initial quality measures
- Data first collected in 2002

10 Initial Quality Measures

Heart Attack

- Aspirin at arrival
- Aspirin at discharge
- ACE Inhibitor for left ventricular systolic dysfunction
- Beta Blocker at arrival
- Beta Blocker at discharge

Heart Failure

- Assessment of left ventricular function
- ACE Inhibitor for left ventricular systolic dysfunction

Pneumonia

- Oxygenation assessment
- Initial antibiotic timing
- Pneumococcal vaccination

HQI After Medicare Modernization Act of 2003

- National Voluntary Hospital Reporting Initiative now referred to as the Health Quality Alliance
- Addition of hospital patient perspectives on care measures (HCAHPS)
- Hospitals that do not report now receive 0.4% reduction in market basket update for 2005 Medicare payments
  - Nearly 98.3% of eligible hospitals now participating, up 26.5% from 2003
- Introduced the Premier Hospital Quality Incentive Demonstration

CMS Premier Hospital Quality Incentive Demonstration

- CMS and Premier Inc. collecting data at almost 300 hospitals on 34 quality measures related to 5 clinical conditions
- Hospitals can receive up to 2% bonus on top of DRG payment, but may also see reduction in payments if below predetermined threshold

CMS Physician-Focused Quality Initiative

- Doctor's Office Quality Project
  - Patient satisfaction, clinical & technology measures to test comprehensive & integrated approach to chronic conditions
- Doctor's Office Quality – Information Technology
- Other Demonstration Projects
  - Focused on specific diseases (I.e. influenza, cancer, etc.) and coordinated care

CMS Physician Group Practice Demonstration

- Coordination of care for chronically ill & high cost beneficiaries by 10 large physician groups
- Performance payments based on actual claims experience compared to growth rate of Medicare spending on "non-assigned" beneficiaries
- Performance payment limited to 5% of performance target

CMS is NOT Alone

- California Integrated Healthcare Assoc.
  - Coordination between healthcare stakeholders
  - 231 physician organizations voluntarily submitting clinical data, patient experience, and IT investment
  - Estimated $50 million bonus payout after first year
  - Population Affected: 8 million California commercial HMO enrollees

IHA Measures

- Clinical (40% Weight)
  - Cervical cancer screening
  - Breast cancer screening
  - HbA1c Screening & Control
  - LDL Screening & Control
  - Asthma Management
  - Childhood immunizations
- Patient Experience (40% Weight)
  - Specialty care
  - Timely access to care
  - Doctor-Patient communication
  - Overall rating of care

IHA Measures

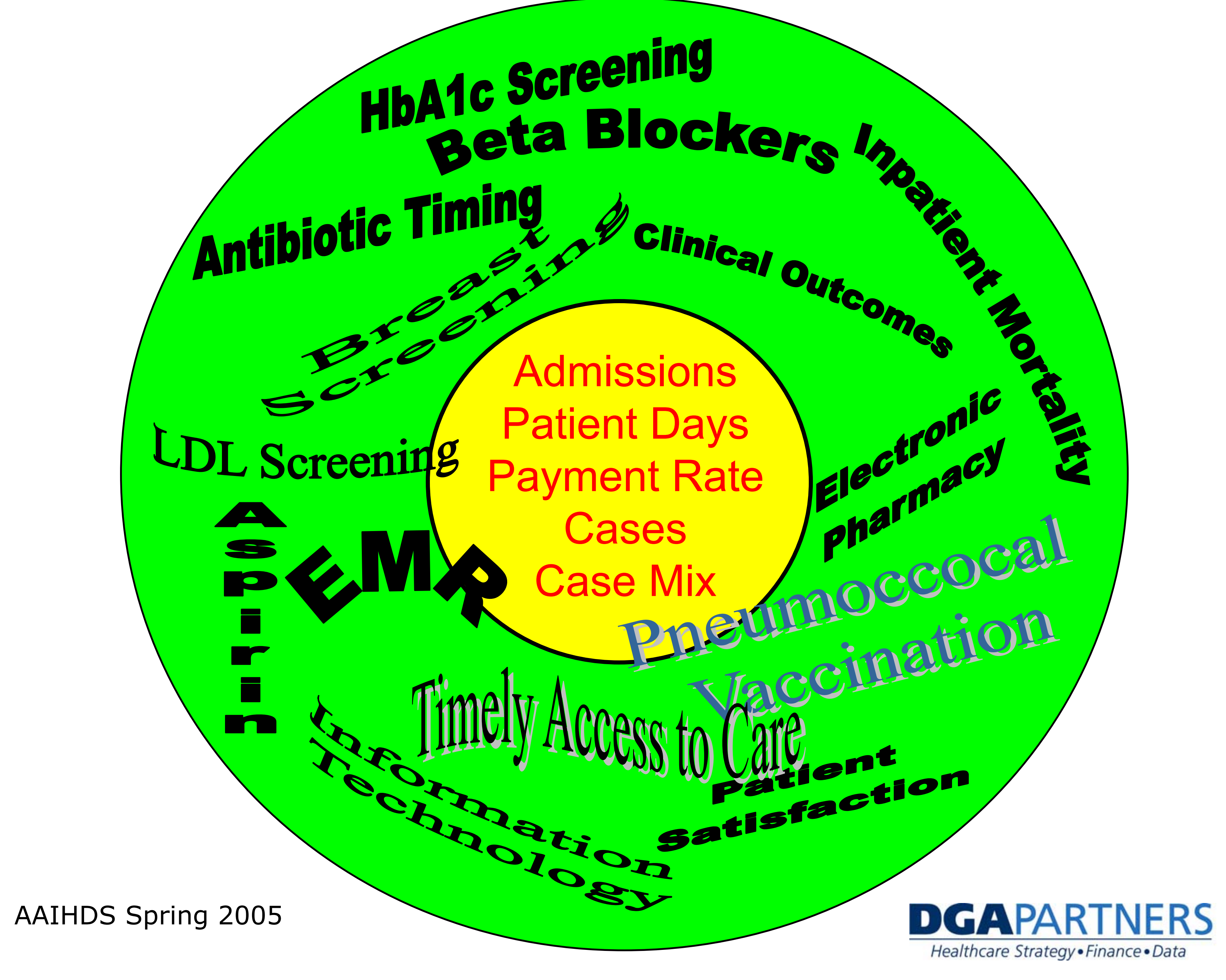
- IT Investment (20% Weight)
  - Integrate clinical electronic data sets at group level for pop. Management
  - Support of clinical decision making through electronic tools
- Physician incentive bonus
  - Incorporates regular measurements & feedback on clinical metrics and patient experience

Individual Health Plans embracing P4P

- Independence Blue Cross (PA) – P4P in some hospital contracts & QIPS
- Health Partners (MN)– Outcomes Recognition Program
- Pacificare – Quality Index Profiles
- Aetna – Bridges to Excellence
- And at least 30 others

P4P Data Collection Issues

- Processes to collect data may not be in place
  - No existing processes
  - No existing systems
  - No trained staff
- Data may reside in handwritten notes in patient charts
- Historical data may not be available
- Many new metrics to be evaluated and forecasted


HbA1c Screening
Beta Blockers
Inpatient Mortality
Antibiotic Timing
Breast Screening
Clinical Outcomes
Admissions
Patient Days
Payment Rate
Cases
Case Mix
LDL Screening
Electronic Pharmacy
Aspirin
EMR
Pneumoccocal Vaccination
Timely Access to Care
Information Technology
Patient Satisfaction
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Different payment methods require varying analytical approaches

- <u>Deterministic approach</u> – values are known; forecasting change in payment under new method
- <u>Simulation approach</u> – values are not known; evaluating various scenarios and performing sensitivity analyses

Deterministic approach – oversimplified example

- Proposed payment change: case rates replace per diems
  - Current per diem = $1000
  - Proposed case rate = $4500

Average length of stay = 3.8 days

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Deterministic approach – more complex method

Average per diem = $1000				
Proposed per case payment = $4500				
	DRG A	DRG B	DRG C	
Patient Days	500	600	450	
Admissions	125	80	90	

Deterministic approach – more complex method

Average per diem = $1000					
Proposed per case payment = $4500					
	DRG A	DRG B	DRG C	Total	Pmt
Patient Days	500	600	450	1550	$1,550k
Admissions	125	80	90	295	$1,327k

Three Types of P4P Models

- Threshold scoring (Absolute): What percent of patients received a specific therapy?
- Incremental scoring: How has performance improved over time?
- Relative rank scoring: How did your hospital rank compared to peers?

How should you evaluate P4P contracts

- Model the payment methodology
- Estimate/sample to get values of metrics
- Simulate payment at various metric values
- Estimate unknown factors (averages of groups)

How Are Hospitals Rated by CMS Under Premier Demonstration?

- CMS calculates the Composite Quality Score (CQS) for each of the 5 conditions

- The CQS is made up of the
  - Composite Process Score
  - Composite Outcome Score

The AMI Example

- Each of the indicators within a condition are categorized as “Process” or “Outcome”
- For each condition, a weight is placed on outcome and process indicators

AMI Indicators

Indicator	Indicator Type
Aspirin @ arrival	Process
Aspirin prescribed at discharge	Process
ACEI for LVSD	Process
Smoking cessation advice	Process
Beta blocker prescribed @ discharge	Process
Beta blocker @ arrival	Process
Thrombolytic received w/in 30 minutes of arrival	Process
PCI received w/in 120 minutes of arrival	Process
Inpatient Mortality	Outcome

Weight Factors

- 8 of 9 are “Process” indicators

8/9 = .89 (Process Indicator Weight Factor)

- 1 of 9 is a “Outcome” indicator

1/9 = .11 (Outcome Indicator Weight Factor)

Composite Outcome Score

1. Risk adjusted mortality rate from JCAHO to calculate expected mortality rate
2. Calculate actual mortality rate
3. Calculate Survival Index (Actual/Expected) (e.g. 1.0775)

Composite Outcome Score =

(Survival Index **X**

Outcome Indicator Weight Factor) **X** 100

(1.0775 **X** .11) **X** 100 = 11.85

Composite Process Score

Indicator	Numerator	Denominator
Aspirin @ arrival	60	60
Aspirin prescribed at discharge	55	58
ACEI for LVSD	53	56
Smoking cessation advice	55	61
Beta blocker prescribed @ discharge	63	63
Beta blocker @ arrival	59	61
Thrombolytic received w/in 30 minutes of arrival	35	48
PCI received w/in 120 minutes of arrival	27	31
Total	407	438

Composite Process Score

1. Calculate Composite Process Rate = Numerator/Denominator

   407/438 = 92.92%

Composite Process Score =
(Composite Process Rate **X**
Process Indicator Weight Factor) **X** 100

(.9292 **X** .89) **X** 100 = 82.69

Composite Quality Score

Composite Quality Score =

Composite Outcome Score

+

Composite Process Score

11.85 + 82.69 = **94.54**

Payment Methodology

- CMS uses a relative rankings system
  - If a hospital's CQS for a condition is in the top 10%, a 2% bonus to the DRG payment
  - If a hospital's CQS is in the second decile, 1% bonus for that DRG
  - After three years, if a hospital's CQS is in the bottom two deciles, DRG payment is reduced
- Other payers may
  - Use absolute or incremental improvement scoring
  - Scale for bonus payments may be more generous

P4P Calculation Example

	Patients meeting criterion	Patients available to meet criterion	%
Aspirin @ arrival	60	60	100%
Aspirin prescribed at discharge	55	58	95%
ACEI for LVSD	53	56	95%
Smoking cessation advice	55	61	90%
Beta blocker prescribed @ discharge	63	63	100%
Beta blocker @ arrival	59	61	97%
Thrombolytic received w/in 30 minutes of arriva	35	48	73%
PCI received w/in 120 minutes of arrival	27	31	87%
Total	407	438	0.89
Composite process score			**82.7**
Composite outcome score			**13.8**
Total composite score			**96.5**

YOU WIN!
$200,000

		Bonus at $10m DRG payments	
Expected top decile		95	$ 200,000
Expected second decile		90	$ 100,000

P4P Calculation Example

	Patients meeting criterion	Patients available to meet criterion	%
Aspirin @ arrival	59	60	98%
Aspirin prescribed at discharge	54	58	93%
ACEI for LVSD	52	56	93%
Smoking cessation advice	54	61	89%
Beta blocker prescribed @ discharge	62	63	98%
Beta blocker @ arrival	58	61	95%
Thrombolytic received w/in 30 minutes of arriva	34	48	71%
PCI received w/in 120 minutes of arrival	26	31	84%
Total	399	438	0.89
Composite process score			**81.1**
Composite outcome score			**13.8**
Total composite score			**94.8**

		Bonus at $10m DRG payments	
Expected top decile		95	$ 200,000
Expected second decile		90	$ 100,000

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Real-World Deterministic Example

- Proposed fee schedule for hospital outpatient services replaces charge-based payment
- Fee schedule will be neutral to current charge-based payment
- Fee schedule will be subject to “lower of charges or fee amount” limit for all services
- Emergency Department and Ambulatory Surgery will be paid on episodes of care
- Objective: determine “neutrality” of fee schedule

Obtain historical data

- Individual charge items for all outpatient services
- Needed to identify and separate ER and ASC patients
- Needed surgical and ER CPT codes

Planned Process

- Compute discounted charges for each CPT code/patient
- Compute fee amount
- Compare fee amount with charge
- Simple, eh?

Reality of the process

- CPT codes of ER and surgical patients are not available from standard data source – need to be obtained from Medical Records
- Unit counts were different for some PT services and drugs
- Services paid as ASC were performed under different revenue codes
- Multiple procedure rules in effect for ASC services
- Some procedures were “incidental” and did not result in a higher fee

Calculations for CPT-based payment

HCPCS/CPT	Quantity	Charge	Charge Factor	Discounted Charges	Fee	Adjustment	Adjusted Fee	Payment	Charge Potential	Neutrality Factor
97001 Pt Evaluation	400	$200,000	55%	$110,000	$25,000	5.35	$133,750	$133,750	$0	122%
97032 Electrical Stimulation	6	$672	55%	$370	$100	5.35	$535	$535	$0	145%
97033 Electric Current Therapy	90	$15,000	55%	$8,250	$1,500	5.35	$8,025	$8,025	$0	97%
97035 Ultrasound Therapy	250	$21,000	55%	$11,550	$4,000	5.35	$21,400	$21,000	$400	182%
97110 Therapeutic Exercises	3,000	$900,000	55%	$495,000	$95,000	5.35	$508,250	$508,250	$0	103%
97140 Manual Therapy	250	$60,000	55%	$33,000	$4,400	5.35	$23,540	$23,540	$0	71%
97150 Group Therapeutic Procedures	250	$30,000	55%	$16,500	$2,000	5.35	$10,700	$10,700	$0	65%
97530 Therapeutic Activities	200	$40,000	55%	$22,000	$3,500	5.35	$18,725	$18,725	$0	85%
97532 Cognitive skills development	150	$60,000	55%	$33,000	$4,000	5.35	$21,400	$21,400	$0	65%
92507 Speech/Hearing Therapy	450	$225,000	55%	$123,750	$20,000	5.35	$107,000	$107,000	$0	86%
92611 Motion fluoroscopy/swallow	25	$20,000	55%	$11,000	$2,000	5.35	$10,700	$10,700	$0	97%
				$864,420			$864,025	$864,025		100%

Calculations for episode-based payment

- Identify each episode
  - Revenue code
  - CPT code
- Identify all related services
  - Episode identifier
  - Member ID/date
- Aggregate charges
- Compute fee
- Compare fee with charge; choose lower
- Aggregate across all cases and compare for neutrality

Episode-Based Calculations

Patient	Charges	Charge Discount	Discounted Charges	Fee	Multiplier	Adjusted Fee	Charge Limit Applies	Fee after charge limit
1	$4,056	55%	$2,231	$ 550	5.20	$ 2,860	FALSE	$ 2,860
2	$596	55%	$328	$ 650	5.20	$ 3,380	TRUE	$ 596
3	$1,145	55%	$630	$ 650	5.20	$ 3,380	TRUE	$ 1,145
4	$3,721	55%	$2,047	$ 650	5.20	$ 3,380	FALSE	$ 3,380
5	$3,721	55%	$2,047	$ 275	5.20	$ 1,430	FALSE	$ 1,430
6	$3,721	55%	$2,047	$ 63	5.20	$ 325	FALSE	$ 325
7	$22,010	55%	$12,106	$ 988	5.20	$ 5,135	FALSE	$ 5,135
29	$423	55%	$233	$ 125	5.20	$ 650	TRUE	$ 423
30	$3,169	55%	$1,743	$ 125	5.20	$ 650	FALSE	$ 650
31	$2,794	55%	$1,537	$ 550	5.20	$ 2,860	TRUE	$ 2,794
32	$3,185	55%	$1,752	$ 550	5.20	$ 2,860	FALSE	$ 2,860
33	$3,689	55%	$2,029	$ 550	5.20	$ 2,860	FALSE	$ 2,860
34	$4,439	55%	$2,441	$ 550	5.20	$ 2,860	FALSE	$ 2,860
Total	$148,823		$81,852			$91,000		$ 77,021
						111%		94%

Summary

- P4P model popularity is growing, but obtaining data for evaluation is difficult
- Evaluating traditional payment methods requires different analytical methodologies
- Evaluating any model requires attention to the details
- Different models require different techniques