Value-Based Reimbursement: Models and Programs that Deliver the Value You Need

National Accountable Care Congress

Presented by:

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The Heart Hospital at Baylor Plano, TX
Patient Protection and Affordable Care Act (PPACA) / Health Care Reform

- Hospital Value-Based Purchasing (Physician VBP coming!)
- CMS’ Bundled Payment for Care Improvement
- Medicare Shared-Savings Program/Accountable Care Organizations
- Hospital Readmission Reduction Program

*Developing the competencies required to be successful in each of these initiatives contributes to achieving the goals of healthcare reform, and prepares providers to maximize performance-based reimbursement.*
Agenda / Learning Objectives

- Developing/implementing performance-based programs in Orthopedics and Heart Failure
- Focus on the essential elements of performance-based program development
- Learn the requirements for developing a foundation for a performance-based payment program, including financial alignment tactics with physicians
- Learn methods of gain-sharing and development of quality bonuses for high-performing providers
- Understand how new medical technologies can be ACO-friendly and mitigate risk for certain patient cohorts
Bundled Payment Programs: A Step Toward Population Health?

• Promoted by healthcare reform
  – To improve the delivery of care
  – To enhance efficiency
  – To manage/reduce costs

• Bundled payment programs
  – Acute Care Episode (ACE) Demonstration
  – CMS Bundled Payment for Care Improvement Initiative
  – National Pilot Program
Development of a “Value Proposition”
for Bundled EOC Payment Programs

- Business strategy – one fee for an episode-of-care (EOC)
- The “value” of the bundled payment program must be established
  - Quality of care
  - Cost management/reduction
  - Coordination of delivery of care/care management
  - Which providers benefit and by how much?
- Differentiates provider’s program in the marketplace
- Provides customer satisfaction
- Can easily be rolled into an ACO model
The Future of Performance-Based Reimbursement

- No longer a trend
- Implemented by government payers; private payers adopting similar models
- Rewards providers for quality of care improvements/health outcomes
- Requires providers to work collaboratively to coordinate care, manage costs and produce quality outcomes
- Payment for value rather than volume
- Initial models are “no risk” – providers shared in upside savings only
- Newer models require providers to share losses over target
Case Study: Health System’s Bundled EOC Payment Program

- Selection of orthopedics/joint replacement (DRGs 466-470)
  - Patient demand
  - Competitive advantage/protection of market share
  - “Bundling” and EOC
    - Single fee for an EOC, e.g., joint replacement includes pre-admission through 90 days post-discharge; readmission/revisions, as necessary
  - Hospital and orthopedic surgeons experience in joint replacement
  - Cost/value management
    - Medical devices/implants
    - Addresses complications
    - Supports readmission and revision reduction program
## Target DRG Performance

<table>
<thead>
<tr>
<th>Provnun</th>
<th>Provider</th>
<th>V29DRG</th>
<th>Cases</th>
<th>Avg LOS</th>
<th>Avg Cost</th>
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Bundled EOC Payment Program

- Providers to be included in the single payment
  - Hospital
  - Orthopedic surgeons
  - Physician assistants / Surgical PAs
  - Anesthesiologists
  - Hospitalists
  - Physical therapists
  - Pathologists
The Bundled EOC Payment Program: Development of a Clinical and Financial Alignment Strategy

• Clinical alignment/collaboration
  – Coordination along the continuum of care
  – Use of best practices/evidence-based medicine
  – Focus on quality issues (i.e., HAIs, complications, revisions, readmissions) thereby improving outcomes
  – Management of resources/elimination of unnecessary use of resources
  – Enhancement of patients’ experiences of care
• Mapping of the current continuum and flow of resources for improvement opportunities is a must

- Financial alignment
  - Identification of resources and costs
  - Planning for cost reduction and cost management
  - Hospital and surgeons collaboration in developing a more economical program for implant acquisition, using one to two vendors (i.e., basis for internal gain-sharing)
  - Arrangements with health plans (commercial, government payers) and direct contracting with large/local self-funded employers; opportunities to generate incremental revenue for the hospital and physicians

Provider collaboration is essential to succeed in reimbursement methodologies based on performance.
Budget / Budget Structure

- Identify the cost of services within the defined EOC (use historical data)
- Set a target price (e.g., total price, total cost plus)
- Establish agreement between Health System (HS) and payers, and underlying agreement between HS and participating provider entity (i.e., provide single signatory authority, allocation of payments to providers)
- Specify and develop process to manage the flow of funds from payers to HS to participating providers
- Establish a contingency fund for unexpected costs/expenses
- Define measures that tie performance to payment
Business Considerations

• Program administration – Health System
  – Negotiation with payers/local employers
  – Program reimbursement and payment to providers (within 45 days of receipt of payment)
  – Case management coordination and resource deployment
  – Performance improvement reporting

Note: Percentage of program’s administrative cost may be allocated proportionally to participating providers as an offset to program reimbursement.
Hospital and Physician: Financial and Payment Models

- Development of internal hospital and physician financial and payment models and arrangements for allocating payments
- Determine negotiated payment for providers participating in the EOC
- Development of payment reconciliation procedures and structures to distribute payment to providers
• Incentives for quality improvement/outcomes and efficiency
  – Development of quality bonuses for high-performing providers
  – Administration of payer-specified metrics (e.g., reductions in HAIs, HACs, LOS) for incremental reimbursement

• Mechanisms for shared-savings
  – Reconciliation of quality metrics to determine incremental reimbursement
  – Development of internal gain-sharing to allocate savings and/or incremental reimbursement from payers
Gain-Sharing Program

• Sharing of cost savings (“gain-sharing”) to recognize cost efficiencies, quality improvements and distribute margin

• Primary bonus pool funding sources:
  – Hospital cost savings (e.g., reduced OR time, LOS, rehab, pain management)
  – Health plan incentive payments
Administrative Issues / Solutions

- Identification of participating patients during pre-authorization of services
- Recording hospital and physician encounter data
- Reconciliation of retrospective adjustments
- Developing a “warranty” for inpatient services (i.e., defining preventable readmissions)
- Management of unrelated healthcare issues during the global episode
- Administration of billing and payment by both providers and health plans (including member responsibilities)
Lessons Learned / Recommendations

**Goal:** The right services at the appropriate level of care, delivered cost efficiently, with targeted outcomes

- Physician engagement and financial alignment
- Timely communication and feedback
- Provider accountability
- Monitoring and control mechanisms
  - Documentation
  - Case management
  - Proactive responses to budget exceptions
  - Program administration
- Maintain and expand market share

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Accountable Care Structures
Baylor’s Accountable Care Organization

• In April 2011, Baylor formed Baylor Quality Alliance (BQA) as a limited liability corporation wholly owned by BCHS hospitals
• Physicians are “participation members” rather than owners
• Most of the 600 physicians in Baylor’s employed-physician group participate along with approximately 1,000 voluntary medical staff members
• 19-person board of managers that includes 14 physicians, three Baylor executives, a community representative and a system board member
Baylor Quality Alliance

- Baylor Health employees and dependents were first contract (approximately 35,000 members)
- 80/20 rule applies to this population relating to resource consumption
- Order sets are central to care coordination
  - Generated by Best Care Committees
- Optimizes existing wellness program (Thrive)
Baylor Quality Alliance, Cont.

- Baylor’s best-practice order sets are part of BQA’s quality standards are created by the system’s Best Care Committee
- The group acts a sort of clinical legislature to align and drive quality initiatives; the group has more than 100 voting members
- The group has established more than 100 best-care protocols that, once established, are spread quickly across the system
Baylor Quality Alliance, Cont.

• Three current projects include prevention of unnecessary/avoidable hospital readmissions, use of generic medicines whenever available, and appropriate care and workup on lower back pain patients.

• BQA requires its physicians to log onto a members-only website to review their comparative performance metrics on quality, cost, patient satisfaction and clinical integration.
Case Study:
Percutaneous ventricular assist devices can assist delivery systems to more effectively manage high-risk heart failure patients
Percutaneous Cardiac Assist Devices

• pVAD is a minimally invasive percutaneous catheter-based device that is powered and controlled by its console and is designed to provide partial circulatory support.

• The Impella pump pulls 2.5 L/min of blood from the left ventricle through an inlet area near the tip and expels blood from the catheter into the ascending aorta; TandemHeart is another pVAD option that requires a transseptal puncture.

• The motor pump can be inserted via a standard catheterization procedure through the femoral artery, into the ascending aorta, across the valve, and into the left ventricle.

• Key to pVAD is its ability to directly unload the left ventricle, thereby augmenting coronary flow and providing better hemodynamic support compared with the traditional IABP.

pVADs (Impella and TandemHeart)
Current Clinical Guidelines

- **2011 ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention. JACC 2011**
  - High-risk patients (section 5.6) Class IIb
  - PCI and Cardiogenic Shock (section 5.2.3) Class I

  - STEMI and Cardiogenic Shock Class IIb
  - STEMI and urgent CABG Class IIa

  - Acutely decompensated heart failure patients: Class IIa

- **2013 International Society for Heart and Lung Transplantation Guidelines for Mechanical Circulatory Support. The Journal of Heart and Lung Transplantation, 2013**
  - Temporary mechanical support for patients with multi-organ failure: Class I
PROTECT II Trial Design

Patients **Requiring** Prophylactic Hemodynamic Support During **Non-Emergent** High-Risk PCI on Unprotected LM/Last Patent Conduit and LVEF ≤35% OR 3 Vessel Disease and LVEF ≤30%

**Primary Endpoint** = 30-day Composite MAE* rate

Follow-up of the Composite MAE* rate at 90 days

*MAE= Major Adverse Event Rate

### PROTECT II Key Clinical Findings

#### 30-Day Intent to Treat Analysis

<table>
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<tr>
<th>Adverse Event</th>
<th>IABP (n=222)</th>
<th>pVAD (n=225)</th>
<th>P value</th>
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</thead>
<tbody>
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<td>Repeat Revascularization</td>
<td>4.1%</td>
<td>1.3%</td>
<td>0.075</td>
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<tr>
<td>MAE Rate</td>
<td>40.1%</td>
<td>35.1%</td>
<td>0.277</td>
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<td>MAE Rate Post Hospital Discharge</td>
<td>18.3%</td>
<td>9.8%</td>
<td>0.01</td>
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<tr>
<td>MACCE</td>
<td>12.8%</td>
<td>7.1%</td>
<td>0.047</td>
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</tbody>
</table>

Abbreviations: MACCE: Major adverse cardiac and cerebrovascular event; MAE: Major adverse event.

**PROTECT II Key Clinical Findings**

90-Day Per Protocol Analysis

Abbreviations: MACCE: Major adverse cardiac and cerebrovascular event; MAE: Major adverse event.

<table>
<thead>
<tr>
<th>Adverse Event</th>
<th>IABP (n=211)</th>
<th>pVAD (n=216)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeat Revascularization</td>
<td>12.4%</td>
<td>6.0%</td>
<td>0.024</td>
</tr>
<tr>
<td>MAE Rate</td>
<td>51.0%</td>
<td>40.0%</td>
<td>0.023</td>
</tr>
<tr>
<td>MAE Rate Post Hospital Discharge</td>
<td>18.1%</td>
<td>7.9%</td>
<td>0.002</td>
</tr>
<tr>
<td>MACCE</td>
<td>31.0%</td>
<td>21.9%</td>
<td>0.033</td>
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Impella has 56% fewer Out-of-Hospital MAEs (p=0.002)

New York Heart Association Functional Class Changes

- **Baseline**: 17% Class IV, 45% Class III, 31% Class II, 7% Class I

- **90 days**: 8% Class IV, 18% Class III, 30% Class II, 44% Class I

58% reduction in Class III, IV

*p < 0.001


N = 223 patients with NYHA assessment available at baseline and 90 days
Impella Reduces Readmissions for Repeat Revascularizations: PROTECT II

Repeat Revascularization At 90 days

↓52% reduction
p=0.024

IABP  pVAD

Impella 2.5 Real World Registry: USpella

USpella Registry: High-Risk PCI

- Retrospective multicenter study includes 175 patients supported with the Impella 2.5 at 18 centers in the U.S. and Canada
- Independent CEC for MAE adjudication (2 Cardiologists + 1 CT Surgeon)
- CEC adjudicated events per FDA Impella 2.5 trial definitions
- CoreLab for the Angiographic success and Syntax Score


Impella 2.5 used for high-risk PCI:
- Functional or Anatomical risk
- PCI = Elective (stable angina, silent ischemia)
- PCI = Urgent (unstable angina, NSTEMI)

Primary Endpoint MACE at 30 days

Follow-up to 1 year (longest available)
PCI Provided Significant Functional Status Improvement for Patients: USpella

New York Heart Association Functional Class Changes

- **Class IV**: Baseline 30%, Discharge 12%
- **Class III**: Baseline 33%, Discharge 18%
- **Class II**: Baseline 24%, Discharge 33%
- **Class I**: Baseline 7%, Discharge 44%

52% reduction in Class III, IV

*p<0.0001*


*76 patients with NYHA assessment available at baseline and Hospital discharge*
Value/Economic Impact of pVADs on High-Cost EOCs
Key Economic Findings from EOC Studies

**Impella® pVAD** was cost-effective \(^1,3\)

**Impella® pVAD** reduced length of stay \(^1, 2, 3\)

**Impella® pVAD** reduced expensive readmission costs \(^1, 2\)

Adoption of pVAD had a minimal impact on a payer’s budget \(^2\)

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Impella® is Cost-Effective in High-Risk PCI Patients

ICER $39,389/QALY

Quality Adjusted Life Years

Impella® is Cost-Effective

Incremental cost per life year or QALY
($thousands)

<$100,000 Threshold

$0 $25 $50 $75 $100 $125 $150 $175

Aspirin

$199k

CRT-P

$274k

C-reactive Protein

Impella

<protect II

CRT-D

TAVI

AF ablation

Dialysis

MR v. Mammo

LVAD 1 DT(LYG)

LVAD 2 DT(LYG)


Elective HR-PCI – Reduced Hospital Days for Impella® Patients

Total Days in Hospital
Index plus 90 Days post discharge*

↓ 2 days or 22%
p=0.008

No Impella  Impella

* Median days in hospital; index stay through 90 days, N=427, Readmissions N=208

Payer Budget Impact Model – LOS

**Non-Emergent Care Model**

- IABP Support: 11.9 days (N=700)
- pVAD Support: 9.8 days (N=76)

\[ \downarrow 2.1 \text{ days or } 18\% \]
\[ p=0.001 \]

**Emergent Care Model**

- Surgical Hemodynamic Support: 30.9 days (N=70)
- pVAD Support: 20.4 days (N=56)

\[ \downarrow 10.5 \text{ days or } 34\% \]
\[ p=0.05 \]

Mean days, Index Stay
2009-2011 OptumInsight Commercial Database


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ParenteBeard

Confidence through clarity

Baker Tilly International
Payer Impact: Minimal Per Member Per Month Outlays

Non-Emergent Care Model
Mean cost per case for 12-month EOC

- IABP
  - $112,982
  - $0.14 PMPM
  - N=700

- pVAD Support
  - $121,602
  - $0.02 PMPM
  - N=76

Emergent Care Model
Mean cost per case for 12-month EOC

- Surgical Hemodynamic Support
  - $533,285
  - $0.07 PMPM
  - N=70

- pVAD Support
  - $341,040
  - $0.03 PMPM
  - N=56

The difference in mean index cost was not statistically significant. P-value=0.218

The difference in mean index cost was statistically significant. P-value=0.006


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Emergent Care LOS Impact

Mean days, Index Stay

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↓4.7 days or 26%
p=0.055

Mean days, Index Stay

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<td>N=30</td>
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↓11.9 days or 66%
p=0.003

2010-2011 Med PAR data for surgical alternatives and pVAD treatment for patients

PinnacleHealth 2009-2011 data compared to national MedPAR data for surgical alternatives


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pVAD is Dominant in Emergent Setting

Emergent
ICER -$134,932/LYG
DOMINANT

Protect II
ICER $39,389/QALY

$100,000 per QALY
$50,000 per QALY

Conclusions

• Developing or participating in performance-based programs are no longer an option
• Incentive alignment is everything
• Program volume and financial must be enough to move the dial on behavior changes
• New technologies can deliver value when the full continuum of an episode is assessed
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