Improving Value for Medical Devices

HASC / April 17, 2009
OVERVIEW

- The National Context
- Orange County Value Purchasing Initiative
  - Data: implantable cardiac defibrillator
  - Data: total knee replacement
- Statewide Value Purchasing Project
  - Benchmarks and best performance
  - Episode of care payment method
Promoting Value in Health Care

- Sophisticated purchasers reward innovative producers
- The biomedical industries have long enjoyed unsophisticated purchasers (hospitals and insurers) and cost-unconscious demand (patients and physicians)
- This has permitted extensive innovation but also consistently high prices, inefficiency, and unjustified variation in use
- Remember: value=quality/cost
- There is an important role for physician organizations, hospitals, and health plans in evaluating performance, aligning incentives, and supporting coordination among participants in the delivery of care
Challenges to Surgeons

- Downward pressure on surgical fees
  - Medicare RBRVS and SGR, commercial insurers
- Rising chorus of adverse publicity
  - Device consulting: conflicts of interest
  - Specialty hospitals and ASC: cream skimming
- Concerns over quality and appropriateness
  - Unexplained geographic variation in procedure rates
  - Hospital readmissions and ‘never events’
Challenges to Hospitals

- Surgical procedures are core
  - Volume of procedures, revenue per procedure
  - Margins, especially from private insurers
  - Visibility: high tech and hopefully high touch
    - Center of excellence branding

- Essential that hospitals overcome challenges
  - Cost management
  - Revenues and pricing
  - Physician relationships
IHA Orange County Pilot Project 2006-08

- Develop complete and comparable data sets
  - Focus on Orange County/Long Beach
  - 11 hospitals, 20,000 patients
  - Comparable data on device costs, total procedure costs, case mix, reimbursements
  - Feedback to hospitals: performance relative to local and national benchmarks
  - Hospitals share data with their physicians

- Highlight best practice strategies in managing the cost of medical devices and fostering hospital-physician collaboration
  - Collaboration with CA Hosp Assoc (CHA)
  - Statewide survey of best practices
Value Assessment and Purchasing for Medical Devices

Cardiac Defibrillator Implant w/o Cardiac Cath (DRG 515)
Cardiac Defibrillator (DRG 515)
Procedure Volume by Type of Implant

- Hospital 43: 2 CRT Defibrillators, 27 Dual Chamber Defibrillators, 1 Single Chamber Defibrillators
- Hospital 55: 18 CRT Defibrillators, 20 Dual Chamber Defibrillators
- Hospital 31: 3 CRT Defibrillators, 9 Dual Chamber Defibrillators, 1 Single Chamber Defibrillators
- Hospital 6: 6 CRT Defibrillators, 16 Dual Chamber Defibrillators
- Hospital 7: 17 CRT Defibrillators, 18 Dual Chamber Defibrillators, 1 Single Chamber Defibrillators
- Hospital 98: 7 CRT Defibrillators, 36 Dual Chamber Defibrillators, 1 Single Chamber Defibrillators
Cardiac Defibrillator (DRG 515)
CRT Defibrillators
Implant Cost per Case, by Vendor

![Graph showing implant costs per case by hospital and vendor.](image-url)
Cardiac Defibrillator (DRG 515)
Single Chamber Implant Cost per Case, by Vendor

$30,000
$27,000
$24,000
$21,000
$18,000
$15,000

Hospital 43    Hospital 55    Hospital 31    Hospital 6    Hospital 7    Hospital 98

Vendor A ▲ Vendor C ● Vendor L ● Vendor J
Cardiac Defibrillator (DRG 515)
Dual Chamber Implant Cost per Case, by Vendor
Cardiac Defibrillator (DRG 515)
Average Length of Stay

Number of Days

- National Benchmark
- Hospital 43
- Hospital 55
- Hospital 31
- Hospital 6
- Hospital 7
- Hospital 98

- Average Length of Stay
- Medicare ALOS

- Medicare GMLOS (National)
Cardiac Defibrillator (DRG 515)
Complication rate across hospitals

- National Benchmark: 6%
- Hospital 43: 9%
- Hospital 55: 4%
- Hospital 31: 5%
- Hospital 6: 14%
- Hospital 7: 0%
- Hospital 98: 8%
Cardiac Defibrillator (DRG 515)
Payer Mix Across Hospitals

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Medicare FFS</th>
<th>Medicare HMO</th>
<th>HMO/PPO</th>
<th>Other</th>
</tr>
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<tbody>
<tr>
<td>National Benchmark</td>
<td>78%</td>
<td>19%</td>
<td>18%</td>
<td>11%</td>
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<tr>
<td>Hospital 43</td>
<td>48%</td>
<td>10%</td>
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<td>Hospital 55</td>
<td>80%</td>
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<td>Hospital 7</td>
<td>48%</td>
<td>10%</td>
<td>10%</td>
<td>37%</td>
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<tr>
<td>Hospital 98</td>
<td>35%</td>
<td>15%</td>
<td>13%</td>
<td>17%</td>
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</tbody>
</table>
Cardiac Defibrillator (DRG 515)
Average Implant Cost per Case

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Volume</th>
<th>Cost</th>
<th>National Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>117</td>
<td>$29,496</td>
<td>$25,000</td>
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<tr>
<td>55</td>
<td>45</td>
<td>$19,229</td>
<td>$22,793</td>
</tr>
<tr>
<td>31</td>
<td>22</td>
<td>$22,793</td>
<td>$26,937</td>
</tr>
<tr>
<td>6</td>
<td>57</td>
<td>$26,937</td>
<td>$27,009</td>
</tr>
<tr>
<td>7</td>
<td>78</td>
<td>$27,009</td>
<td>$22,610</td>
</tr>
<tr>
<td>98</td>
<td>40</td>
<td>$22,610</td>
<td>$27,000</td>
</tr>
</tbody>
</table>
Cardiac Defibrillator (DRG 515)
Implant cost as % of average reimbursement

- National Benchmark: 77%
- Hospital 43: 70%
- Hospital 55: 57%
- Hospital 31: 85%
- Hospital 6: 94%
- Hospital 7: 85%
- Hospital 98: 63%
Value Assessment and Purchasing for Medical Devices

Total Knee Replacement
(DRG 544, ICD-9-CM 81.21)
Total Knee Replacement
(DRG 544, ICD-9-CM 81.51)
Implant Cost per Case, by Vendor

![Chart showing implant cost per case by vendor for different hospitals.]
Total Knee Replacement (DRG 544, ICD-9-CM 81.51)

Average Length of Stay

Number of Days

National Benchmark  Hospital 11  Hospital 43  Hospital 55  Hospital 31  Hospital 16  Hospital 6  Hospital 44  Hospital 17  Hospital 26  Hospital 58  Hospital 15

Average Length of Stay  Medicare ALOS

Medicare GMLOS (National)
Total Knee Replacement
(DRG 544, ICD-9-CM 81.21)
Complication rate across hospitals

- National Benchmark: 5%
- Hospital 11: 5%
- Hospital 43: 8%
- Hospital 55: 6%
- Hospital 31: 9%
- Hospital 16: 2%
- Hospital 6: 6%
- Hospital 44: 14%
- Hospital 7: 8%
- Hospital 26: 8%
- Hospital 98: 4%
- Hospital 45: 0%
Total Knee Replacement (DRG 544, ICD-9-CM 81.51)
Payer Mix Across Hospitals

- Medicare FFS
- Medicare HMO
- HMO/PPO
- Other
Total Knee Replacement
(DRG 544, ICD-9-CM 81.51)
Average implant cost per case

# Hospital Volume
- Hospital 11: 163
- Hospital 43: 311
- Hospital 55: 130
- Hospital 31: 92
- Hospital 16: 42
- Hospital 44: 306
- Hospital 6: 306
- Hospital 7: 90
- Hospital 26: 232
- Hospital 98: 60
- Hospital 15: 492
- Hospital 106: 106

- National Benchmark
  - $6,720
  - $4,585
  - $3,611
  - $3,321
  - $3,839
  - $3,403
  - $4,310
  - $8,987
  - $7,060
Total Knee Replacement (DRG 544, ICD-9-CM 81.51)
Implant cost as % of reimbursement
1. Integrated data systems that measure performance across the care continuum

2. Payment methods that align incentives among all contributors and reduce conflicts of interest

3. Organizational structures that support coordination and foster a culture of cooperation
IHA Statewide Medical Device Value Purchasing Program

Two-year statewide project (June 2008 - June 2010)

I. Hospital data aggregation, analysis, benchmarking (60+ major hospitals)

III. Identification, dissemination of best practices:
    Device purchasing, price transparency, physician-hospital cooperation

IV. Episode-of-illness payment pilot using insurer claims data
IHA Goals and Principles for Medical Devices

1. Expand P4P principles (quality and efficiency) to high-cost devices in orthopedics and cardiology
2. Foster cooperation between physicians, hospitals
3. Reduce physician conflicts of interest and promote transparency of device prices
4. Pilot a payment method that aligns incentives
5. Improve quality and outcomes for patients
## IHA Medical Device Project

### Procedures/Devices of Interest

Data have been aggregated for the following device-intensive procedures:

<table>
<thead>
<tr>
<th>Interventional Cardiac Procedures</th>
<th>Orthopedic Surgery</th>
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<tbody>
<tr>
<td>PCI (Stents)</td>
<td>Total Knee</td>
</tr>
<tr>
<td></td>
<td>Total Hip</td>
</tr>
<tr>
<td></td>
<td>Hip/Knee Revisions</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Cardiovascular Surgery</th>
<th>Spine Surgery</th>
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<tbody>
<tr>
<td>Cardiac Valves</td>
<td>Spinal Fusion</td>
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<tr>
<td></td>
<td>(Cervical/Lumbar)</td>
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<thead>
<tr>
<th>Cardiac Rhythm Management</th>
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</thead>
<tbody>
<tr>
<td>Pacemakers</td>
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<tr>
<td>Defibrillators/CRTs</td>
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</tbody>
</table>
Best Practices: Physician-Vendor Relationships

- Financial relationships between surgeons and device vendors now are front page news as well as being the source of greater regulation and, ultimately, litigation.
- Conflicted and non-transparent financial relationships, real or merely perceived, undermine relationships:
  - Between physicians and hospitals
  - Between physicians and patients
- They contribute to higher health care costs
- They undermine public trust in the medical profession
  - The first step is greater disclosure
  - The second step is acceptable guidelines
The Way Forward: Transparency in Device Prices

- The US health care system is moving towards greater a role for consumers/patients in choosing and paying for care
- Cost-sharing is rising and will directly impact patient care
- Hospitals want to be able to benchmark the prices they pay against those paid by other hospitals, but are hampered by contract clauses that prevent disclosure to third parties
- Proposed federal legislation would force price disclosure
- This should be an area of collaboration rather than legislation: Physicians need to support hospital efforts to reject confidentiality clauses
The Way Forward: Aligned Payment Incentives

- Episode pricing pays a single bundled fee for the entire episode and all its components
  - Preadmission testing, procedure, rehab
  - Facility, surgeon, device, other inputs

- Orthopedic surgery as main area of focus
  - Medicare demonstration projects
  - IHA and others pursue private sector demonstration projects

- Could be structured as bonus program rather than single payment to both physicians and hospitals
Value-based Purchasing: Summing Up

1. Integrated data systems that measure performance across the care continuum
2. Payment methods that align incentives among all contributors and reduce conflicts of interest
3. Organizational structures that support coordination and foster a culture of cooperation
Conclusion

• When used appropriately, medical devices offer breathtaking value to patients and to society

• This is an arena for either conflict or cooperation between surgeons, hospitals, device firms, payers

• Having tried the alternatives, perhaps there are grounds for collaboration and gain-sharing