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Pursuing Value for Medical Devices: Hospitals and Manufacturers
OVERVIEW

- Challenges to Hospitals and Device Firms
- Imperatives: Hospitals
- Imperatives: Device Firms
- Opportunities for Collaboration
Challenges: Cost

- Cost pressures are growing for all
  - Federal budget deficit
  - Medicare and Medicaid: CBO, GAO
  - Employers: eroding commitment to coverage
    (especially for retirees and dependents)
  - Health plans: affordability is the imperative
  - Individuals: rising copayments and deductibles

- The BLAME GAME is in full swing.
Challenges: Quality

- **Are we getting our money’s worth?**
  - Utilization: unjustified geographic variations
  - Appropriateness: over-use and under-use
  - Safety risks and product recalls
  - Poor coordination along continuum of care
    - Hospital, ASC, clinic, rehab, home care

- **Demands for comparative effectiveness studies**
  - Registries, observational studies
  - Coverage with evidence development
  - Phase IV post-market studies
Challenges: Demonization

- The medical device sector and associated procedures and providers are in the limelight
  - Physician “bribes” from manufacturers
  - Price non-transparency for hospitals, manufacturers
  - Rising costs: insured, uninsured, under-insured
    - Medicine the leading cause of bankruptcy
    - Sicko: the worst health care in the world?

- Litigation and regulation follow demonization as the day follows the night
Challenges: The Zero Sum Game?

➢ Do hospitals and device firms have opposing interests? Is conflict inevitable?
   • Unit prices and price “transparency”
   • Adoption of new “off-contract” devices
   • Physician loyalty: hospital or device firm?

➢ Or do they (also) have common interests?
   • Are there meaningful opportunities for collaboration?
Opportunities: Common Interests

- Prices and revenues
  - From products to services
  - Episode-of-care pricing

- Cost management
  - Integrated data systems
  - Service line organization

- Physician relationships
Hospitals: Challenges and Opportunities

- **Device-intensive 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
Hospitals: Cost Management in the Short Term

- In the short term, costs are managed by reducing input prices, including devices
  - Volume discounts; limits on off-contract use

- It is imperative that hospitals manage device costs, as these are a high percent of revenues for high-margin procedures

- Supply chain principles: obtain the best price for inputs and use only those inputs that are necessary (match device level to patient need)
Average device cost as a % of DRG revenue for cardiac procedures

Average device cost as a % of DRG revenue for orthopedic procedures

In the long term, costs are managed by restructuring along services lines in order to analyze and improve processes of care

- Data systems that capture full performance
  - Complications, LOS, outcome, cost, price
  - Preadmission tests, inpatient, post-discharge
- Physician collaboration is essential
- Device firms have much experience in TQM

Toyota, Virginia-Mason, Intermountain, Kaiser
Hospitals: Revenues and Margins

- Device-intensive procedures are growing in volume and usually are profitable

- Service lines as marketing mechanisms
  - Better performance, better perception

- Contracting strategies with private health plans
  - Carve-outs in commercial contracts have been successful in offsetting the effects of Medicare DRGs on margins
Average contribution margin for lumbar fusion procedures by payer (DRG 498)

<table>
<thead>
<tr>
<th>Payer</th>
<th>Contribution Margin</th>
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<tbody>
<tr>
<td>Medicare FFS</td>
<td>$(1,727)</td>
</tr>
<tr>
<td>Medicare HMO</td>
<td>$(1,118)</td>
</tr>
<tr>
<td>HMO/PPO</td>
<td>$19,414</td>
</tr>
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</table>

Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.
Average contribution margin for total hip replacement procedures by payer (DRG 544)

Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.
Average contribution margin for cardiac defibrillator implant procedures by payer (DRG 515)

Source: IHA Value-based Assessment and Purchasing Device Project, Jan 2008.
Hospitals: Physician Relationships

- Top strategic imperative
  - Supply chain management
  - Technology assessment and adoption
  - Cooperation rather than competition:
    - Ambulatory surgery and diagnostic clinics
    - Short-stay orthopedic and cardiac hospitals
  - Cooperation and leadership with service lines
### Response from CA hospitals:
Which best practice strategies are being used today?

<table>
<thead>
<tr>
<th>Current Hospital Medical Device Strategy</th>
<th>% of CA Hospitals Using Strategy [N=83]</th>
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<tbody>
<tr>
<td>Technology assessment committee</td>
<td>55%</td>
</tr>
<tr>
<td>Pre-approval needed before vendor receives payment</td>
<td>36%</td>
</tr>
<tr>
<td>Share device prices with MDs</td>
<td>84%</td>
</tr>
<tr>
<td>Invest savings (from lower costs) in OR</td>
<td>36%</td>
</tr>
<tr>
<td>Disclose MD conflicts of interest</td>
<td>47%</td>
</tr>
<tr>
<td>Limit MD conflicts of interest</td>
<td>20%</td>
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# Response from CA hospitals:
Current purchasing strategies for orthopedic, cardiac and spine implants

<table>
<thead>
<tr>
<th></th>
<th>Total Joint Replacement</th>
<th>Cardiac</th>
<th>Spine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit # of Vendors</td>
<td>69%</td>
<td>74%</td>
<td>65%</td>
</tr>
<tr>
<td>Set a price-cap on devices</td>
<td>45%</td>
<td>45%</td>
<td>43%</td>
</tr>
<tr>
<td>Kit pricing</td>
<td>44%</td>
<td>36%</td>
<td>33%</td>
</tr>
<tr>
<td>Premium use rebates</td>
<td>44%</td>
<td>5%</td>
<td>8%</td>
</tr>
</tbody>
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Device Firms: Challenges and Opportunities

- Hospitals are core to device firms
- Device firms have viewed surgeons (and patients) as their customers, not hospitals (or insurers)
- But hospitals, not physicians, actually purchase devices
  - High-revenue devices still largely are used inpatient
  - Hospital share of outpatient sector is growing
- Quality problems at the hospital feed patient fears and adversity to surgery; these fears are major reason for under-utilization of appropriate procedures and devices
Device Firms: Core Needs

- Pipeline of new products
- Adoption of new products
  - Overcoming under-utilization of effective and cost-effective devices
- Reimbursement and revenues
- All these require good relationships with physicians and hospitals
Device Firms: New Physician Relationships

- Firms have legitimate needs for physician cooperation in R&D, training, education
  - The current climate is increasingly difficult
    - Payments to physicians seen as “bribes”
  - Orthopedics DOJ settlement
  - Hospitals installing COI disclosure policies
  - Continual adverse publicity

- Need physician strategy that does not pit the device firm against the hospital
Device Firms: New Revenue Model

- Currently, firms are paid for products (devices) but not for related services
  - Free is not cheap enough (physician honoraria)
  - Focuses attention on unit price, not total cost
  - Continual pressure to up-sell “off-contract”
- But what really matters to payers is total cost
- Hardware firms in other sectors couple services with products, enhancing revenues
  - Sell “solutions” not products
  - This puts buyer and seller on the same side
Collaboration: Better Data Systems

- The hospital and medical device sectors are **data rich** but **information poor**
- **Need data on total costs and total outcomes**
  - Not just unit prices and silo-specific outcomes
  - The entire continuum of care
  - All contributors and participants

- **Need benchmarks and best practices for improvement**
- **Need transparency among partners**
Collaboration: 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
  - Version 2.0 includes P4P bonus for total quality

- Episode pricing is well adapted to device-intensive procedures (clear beginning & end to episode)

- This gives incentive for end-to-end performance analysis and continuous improvement

- Hospital, surgeon, and device firm must collaborate or all suffer (total gain-sharing)
Collaboration: Service Line Organization

- Health care is both fragmented and hypertrophic
- Hospitals need to focus data and incentives for each major clinical and business line
  - Accounting, quality reporting, managerial responsibility, consumer branding
  - Service lines are particularly well suited for device-intensive acute procedures
  - Physicians need to lead service lines
- Most services lines today are still rudimentary
- Device firms have expertise in product lines
Conclusion

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

- This is an arena for either conflict or cooperation between hospitals and medical device firms
  - Both seek better relationships with physicians
  - Both seek improved performance for patients

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