Driving Value Through Clinical Practice Variation Reduction

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Ochsner Health System (Greater New Orleans Area)

Footprint
- 8 hospitals
- 38 Health Centers
- 900 group practice physicians in over 80 subspecialties
- 1,600 Community Physicians
- 13,000 employees
- #1 fitness chain with 20,000-member, state-of-the-art wellness facility
- 142 room Brent House Hotel
- 11 specialties in US News and World Report top 50

Annual Patient Activity
- More than 56,000 discharges
- More than 1.4 Million clinic visits
- More than 250,000 ED visits
- More than 72,000 surgeries
- More than 6,600 Deliveries

Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,371</td>
</tr>
<tr>
<td>2009</td>
<td>1,419</td>
</tr>
<tr>
<td>2010</td>
<td>1,698</td>
</tr>
<tr>
<td>2011</td>
<td>1,796</td>
</tr>
</tbody>
</table>
Agenda

1. Introduction and Kickoff
2. Orthopedics Case Analysis
3. Key Lessons Learned
4. Questions and Answers
A sustainability gap is forming where rising costs are outpacing declining reimbursements.
How do we drive toward a sustainable future?

Pursuit of Value Proposition: Integrating cost and quality improvements hand-in-hand to drive sustainable results for the Ochsner system.

We must meet (or exceed) the patients expectations at a cost that is affordable to the patient and the healthcare system.
**Mission:** *Reengineer Cost* structure to *Reduce Practice Variation* that allows the *System* to provide the highest quality care at an affordable cost.
Case Analysis:

Orthopedics Pursuit of Value
Mission: **Reengineer Cost** structure to **Reduce Practice Variation** that allows the **System** to provide the highest quality care at an affordable cost

**Integrated Team Effort**

- Physician
- Analytics
- Project Mgmt.

**Focus Areas**

- Examine value stream of care across Orthopedics Service Line

**Our Target**

- Our goal was to minimize Orthopedics cost per case by $2,400 by minimizing practice variation and improving the quality of care

<table>
<thead>
<tr>
<th>Current Cost per Case</th>
<th>Target Cost per Case</th>
<th>Reduction Target per Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>$12,200</td>
<td>$9,800</td>
<td>$2,400</td>
</tr>
</tbody>
</table>

**Goal:** “Best patient outcomes at the lowest cost”
**Optimizing Value: Reverse Cost Engineering**

**Our Strategy:** Identify highest cost Diagnosis Relationship Group (DRG) areas, determine cost drivers, and develop strategies to minimize cost impact.

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**Orthopedics Example**

**Step 1: Determine Reduction Target Per Case**

<table>
<thead>
<tr>
<th>Example: DRG 470 (Total Joint Replacement - Lower Extremity) 2010 Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Avg. Direct Cost per Case</strong></td>
</tr>
<tr>
<td><strong>Desired Savings</strong></td>
</tr>
<tr>
<td><strong>Target Cost per Case</strong></td>
</tr>
<tr>
<td><strong>Reduction Target (%) /4</strong></td>
</tr>
</tbody>
</table>

**Step 2: Reverse Engineer Reduction Target**

2011 Implant Pricing Savings $700

- LOS Management (.5 Day) /1 $324
- OR Time (15 mins) /2 $420
- Implant Pricing / Utilization $956

**Step 3: Develop Cost Reduction Strategies**

<table>
<thead>
<tr>
<th>2011 Implant Pricing Savings</th>
<th>$700</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectation Setting of 2-3 Days</td>
<td>$65</td>
</tr>
<tr>
<td>Patient Care Map Implementation</td>
<td>$65</td>
</tr>
<tr>
<td>Pre-Op Patient Education</td>
<td>$65</td>
</tr>
<tr>
<td>Increased PT (7 days a week)</td>
<td>$65</td>
</tr>
<tr>
<td>Day of the Week for Surgery</td>
<td>$65</td>
</tr>
<tr>
<td>LOS Reduction target</td>
<td>$325</td>
</tr>
<tr>
<td>OR Time Savings</td>
<td>$420</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implant Avg. Cost Per Case</th>
<th>$4,832</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone Cement Utilization</td>
<td>$229</td>
</tr>
<tr>
<td>New Pricing</td>
<td>$300</td>
</tr>
<tr>
<td>Non-Chargeables (OR)</td>
<td>$250</td>
</tr>
<tr>
<td>Other Utilization</td>
<td>$177</td>
</tr>
<tr>
<td>Implant / utilization target</td>
<td>$956</td>
</tr>
</tbody>
</table>
Optimizing Value: Evidence Based Medicine


Orthopedics Example

**Patient Education Before Hip or Knee Arthroplasty Lowers Length of Stay**

*Richard S. Yoon, BS, Kane W. Nollans, MD, MPH, Jeffrey A. Geller, MD, Abrahim D. Kim, BA, Makken R. Jacobs, MA, OTR/L, and William Macaulay, MD*

Abstract: Recent data show that patients undergoing total joint arthroplasty were more likely to receive evidence-based care if they underwent a preoperative education program. The aim of this study was to determine if a preoperative education program can improve patient outcomes and length of stay (LOS). A retrospective review of patients undergoing total hip and knee arthroplasty was performed. Patients who underwent a preoperative education program were compared to a control group. The preoperative education program included a comprehensive patient education program, including a digital component, and a clinician-led educational session. The results showed that patients who received the preoperative education program had a 26% reduction in LOS for total hip arthroplasty and a 32% reduction in LOS for total knee arthroplasty. The results suggest that preoperative education programs can improve patient outcomes and reduce hospital stay.

**Journal of Anthroplasty Study on Impact of Education on Quality of Care and LOS**

- **26% Reduction in LOS for Total Hip**
- **32% Reduction in LOS for Total Knee**

**Queen of Elizabeth Study on the Impact of Pre-Operative Exercises**

Pre-operative exercises group subjects demonstrated greater stride length and gait velocity at 3 wk postsurgery. At 12 and 24 wk postsurgery, gait velocity was greater, and the 6-min walking distance was significantly greater than the control group.
Optimizing Value: *Supply Chain Standardization*

**Our Strategy:** Engaged physicians to examine current product utilization and implant costs. Determined core vendors to move forward with and went after best in class pricing.

**Orthopedics Example**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Target Savings</th>
<th>Response from Vendor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vendor 1</td>
<td>6%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Vendor 2</td>
<td>6%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Vendor 3</td>
<td>6%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Vendor 4</td>
<td>6%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Vendor 5</td>
<td>6%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Vendor 6</td>
<td>6%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Vendor 7</td>
<td>6%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Vendor 8</td>
<td>6%</td>
<td>21.9%</td>
</tr>
</tbody>
</table>

1. Benchmarked Current Implant Vendors and Determined Achievable Pricing
2. Set Price Targets and Tracked Vendor Responses
3. Partnered with our Supply Chain Department to Negotiate Best Pricing
**Optimizing Value: Process Engineering**

**Our Strategy:** Deployed process engineering rigor to standardize care throughout the system via robust patient care maps, discharge planning, and transitions of care management.

### Orthopedics Example

<table>
<thead>
<tr>
<th>Date of Surgery</th>
<th>Ochsner WB Patient Care Map for Total Joint Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Care</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Nutrition &amp; Elimination</strong></td>
<td></td>
</tr>
<tr>
<td>Clear Fluids (Food and Drink)</td>
<td><strong>Post Op Day 1</strong></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Food and drink as tolerated</td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Food and Drink</td>
</tr>
<tr>
<td>Activity</td>
<td></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td><strong>Post Op Day 2</strong></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Normal Diet</td>
</tr>
<tr>
<td>Medication</td>
<td></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td><strong>Post Op Day 2</strong></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Normal Diet</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td><strong>Post Op Day 2</strong></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Normal Diet</td>
</tr>
<tr>
<td>Discharge Planning</td>
<td></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td><strong>Post Op Day 2</strong></td>
</tr>
<tr>
<td>IV fluids &amp; Medications</td>
<td>Normal Diet</td>
</tr>
</tbody>
</table>

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*Note: The table above illustrates a patient care map for total joint replacement surgery at Ochsner WB, detailing the care process from day of surgery to discharge, including nutrition, activity, medication, treatment, and discharge planning.*
Optimizing Value: Patient Focused Care Standards

Our Strategy: Developed standards across the continuum of care that optimized patient outcomes and reduced costs.

Orthopedics Example

- **Proposed Future State LOS Communication**: 2-3 days
- **Trainers**: PT, OT, OR Nurse, Social Worker and/or Dietician
- **Topics to be covered**:
  - Total Hip & Knee Education
  - Day of Surgery and Post Surgery Recovery Processes and Procedures
  - Pain Management
  - PT / OT Self-Care Education
  - Discharge Planning
  - Home Recovery and Exercise
  - Family Involvement in Recovery
  - Nutrition / Diet

**5 Antibiotic Bone Cements, 9 Non-Antibiotic**

**1 Antibiotic Bone Cement, 2 Non-Antibiotic**

- **Pre-Operatively (Bootcamp)**
- **Intra-Operatively (Bone Cement Utilization)**
- **Post-Operatively (Transitions Standards)**
Optimizing Value: Variation Reduction

Our Strategy: Foundational to our strategy was examining variation, and standardizing clinical practices around best practice which not only improved the quality of care but also reduced costs.

Orthopedics Example

“Variation is a thief. It robs from processes, products and services the qualities they are intended to have...”

D. Berwick
**Reduced Cost Per Case**

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>YTD</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$12.2K</td>
<td>$10.75K</td>
<td>$9.80K</td>
</tr>
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</table>

*Baseline Q2 Actual Goal*

**Reduced LOS**

<table>
<thead>
<tr>
<th></th>
<th>Base</th>
<th>YTD</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALOS</td>
<td>3.79</td>
<td>3.52</td>
<td>3.29</td>
</tr>
</tbody>
</table>

**Key Learnings**

- Variation in Cost can be reduced while improving patient care.
- Achieving excellence in quality and cost is a never ending journey requiring iterative monitoring, planning, and executing of opportunities.
- Physician engagement is critical to the success of the pursuit of value effort.

**Overall Results**

- $1.45K avg. cost per case reduction YTD!
- Annualized Savings = $1M
Key Lessons from our Journey
**Key Lesson 1: This is an Effort in Physician Change Management**

- **Understand the Data:** Review reports, dashboards, and scorecards for variation reduction opportunities.
- **Educate Physicians:** Highlight areas of cost / quality variation. Focus on avoidable practice expenses. Standardize best practice.
- **Engage Physicians:** Physician Champion to speak with other Service Line Physicians about variation reduction opportunities.
- **Hold Physicians Accountable:** Continue to provide transparency around the data so physicians have an understanding of key drivers.
- **Drive Sustainability:** Track results and refine approach if necessary.

**Do's**
- Lead discussions with data.
- Continue to provide transparency around data.
- Engage physician champion to help lead discussions.
- Discuss best practices with other sites.
- Celebrate service line successes.
- Ensure discussion is value based (components of cost / quality).

**Don’ts**
- Accept status quo.
- Abuse physicians’ time. Make sure you are prepared for meetings and discussions.
- Assume data is the 100% answer. There may be a good clinical reason for poor cost / quality performance that needs to be discussed with the physicians.
Key Lesson 2: This is a Never Ending Journey

The PDCA cycle was repeated multiple times in order to achieve the financial and quality opportunities.

- Iterating through the PDCA Cycle:
  - **Plan** for changes to bring about improvement
  - **Do** changes via pilots / trials
  - **Check** to see if changes are working and investigate
  - **Act** to get the greatest benefit from the change

- **Repeat PDCA Cycle**
Questions?

Contact Information

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Backup
**Variation**

**Appropriate (Expected)**

- Population based: Age, Gender
- Individual patient based
- Provider based (mission, rural vs. urban)

**Unwarranted**

- Care unsupported by reasonable factors
- Dartmouth Atlas: 30% of Health Care Spending

### Estimates of Annual US Health Care Waste ($ in Billions)

<table>
<thead>
<tr>
<th>Category</th>
<th>Low</th>
<th>Mid</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failures of care delivery</td>
<td>102</td>
<td>128</td>
<td>154</td>
</tr>
<tr>
<td>Failures of care coordination</td>
<td>25</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>Overtreatment</td>
<td>158</td>
<td>192</td>
<td>226</td>
</tr>
<tr>
<td>Administrative complexity</td>
<td>107</td>
<td>248</td>
<td>389</td>
</tr>
<tr>
<td>Pricing failures</td>
<td>84</td>
<td>131</td>
<td>178</td>
</tr>
<tr>
<td>Fraud and abuse</td>
<td>82</td>
<td>177</td>
<td>272</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>558</strong></td>
<td><strong>910</strong></td>
<td><strong>1263</strong></td>
</tr>
</tbody>
</table>

| % of Total Spending                    | 21  | 34  | 47   |
Why is unwarranted clinical variation bad?

- Sub-optimal clinical outcomes
- Higher costs making care unaffordable to patients
- Omissions in procedure, treatment intervention
- Unnecessary, potentially harmful care provided to patients
- Testing / Treatment overutilization that costs the system but does not benefit the patient

How can we minimize unwarranted variation?

- Draw Insight
  - Create a shared baseline to drive prioritization of opportunities
  - Variance Analysis
  - Opportunity Quantification
  - Visualization

- Connect Data
  - Harvest the relevant care process data
  - Data Requirements
  - Aggregation & Mapping
  - Quality testing

- Redesign Care
  - Design clinical processes to advance evidence-based care
  - Governance Structure
  - Care Process Modeling
  - Process Validation

- Embed Change
  - Embed clinical processes to avoid unintended variance
  - Clinical Integration
  - Decision Support
  - Benefits Realization