Clinical Supply Chain Management Optimization

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Presented by
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The Perfect Storm
Declining Reimbursement • Rising Expenses • Proliferation of New Technology • Demand
“Even small healthcare institutions are complex, barely manageable places. . . Large healthcare institutions may be the most complex organizations in human history.”

Peter Drucker
Futurescan: A Summary of Trends

- Continuing Problems With Access to Care
- Payments Increasingly Linked to Performance
- Transparency of Costs, Quality and Service
- Technology Transforming Healthcare Delivery
- Patient Safety Gains
Futurescan: A Summary of Trends

• Physicians as Collaborators and Competitors

• Nurses as Integral to Safe, Effective and Efficient Care; in short supply

• Consumers
  - More Diverse
  - More Informed
  - More Demanding
Healthcare Expenditures Growing Rapidly

By 2010 …

Age 60+ population 23.8%

Healthcare Expense as % of GDP 18%

Overall healthcare expenditures $2.9 Trillion

Source: Center for Medicare and Medicaid Services; industry reporting; Pipal Research analysis
“Supplies”*—The Fastest Growing Expense Category

Expense Growth Rates
2002–2004

Total Operating Cost
Benefits Expense
Salary Expense
Consumable Supply Expense

Supply expense increasing 64% faster than all other categories

Source: The Advisory Board Company, 2005

*Supplies defined as total expense for all consumable products
The Required Focus—The Supply Chain, from Origin to Point-of-Use

Evaluate, Select  Contract  Order  Pick  Ship  Receive and Pay  Inventory and Store  Pick  Deliver to Point of Use  Use Charge

Customer/GPO  Manufacturer/Distribution  Customer
The Other Supply Chains

- Pharmacy
- Engineering
- Surgery
- Cath Lab
- Physical Medicine
- IT
Clinical Supply Chain
The Problem … (or Challenge)

• Who is Managing? How Well?
• High dollar item spend and use
• A typical 400+ bed hospital can spend in excess of $50M annually on clinical preference products
• On average, 10–20% could be saved
Clinical Supply Chain Represents Untapped Opportunity; Biggest Piece of Pie

Direct Commodity Products: 35%
Direct PPI Products: 45%
Distributed Products: 20%
Medical Devices/Implant Market Trends: Fastest Growing Expense Category

- Disposable Surgical: $2.6B (20%)
- Cardiovascular: $14.9B (16%)
- Wound Closure: $3.9B (4-6%)
- Orthopedic: $12.5B (13%)
# Cardiovascular and Orthopedic Supplies Driving the Spend Growth

<table>
<thead>
<tr>
<th>Category</th>
<th>2006</th>
<th>% of Spend</th>
<th>2011</th>
<th>% of Spend</th>
<th>Annual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular</strong></td>
<td>$22.8</td>
<td>28%</td>
<td>$42.1</td>
<td>30%</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Orthopedic</strong></td>
<td>$15.2</td>
<td>19%</td>
<td>$31.0</td>
<td>22%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Disposable Surgical</strong></td>
<td>$3.8</td>
<td>5%</td>
<td>$12.1</td>
<td>9%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Wound Care &amp; Endoscopy</strong></td>
<td>$4.3</td>
<td>5%</td>
<td>$5.7</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total Spend</strong></td>
<td>$80.0</td>
<td>100%</td>
<td>$139.8</td>
<td>100%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: Frost & Sullivan – U.S. Medical Device Outlook A662-54
Supply Chain Expenses Reaching, Exceeding 50% of Total Hospital Expenses

Total Cost Incurred by Hospitals

- **Supplies**: 45%
- **Logistics & Distribution**: 15%
- **Others**: 15%
- **Clinical & General Labor, Other**: 25%

*Figures based on HFMA estimates. Labor cost includes salaries, wages and benefits based on average of leading hospitals in the U.S. and Others is inclusive of profits to the hospitals. Source: S&P Industry Surveys: Healthcare Facilities; HFMA; industry reporting; Pipal Research analysis.*
Clinical Supply Chain Performance

Gaps; Metrics, Visibility Not Available

Commodity Supply Chain Performance

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Time Order Accuracy</td>
<td>98%</td>
</tr>
<tr>
<td>Lines/Order</td>
<td>10</td>
</tr>
<tr>
<td>Turns</td>
<td>10</td>
</tr>
<tr>
<td>Expiration</td>
<td>0.02%</td>
</tr>
<tr>
<td>EDI%</td>
<td>95%</td>
</tr>
<tr>
<td>Charge Capture</td>
<td>100%</td>
</tr>
</tbody>
</table>

Clinical Supply Chain Performance

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Time Order Accuracy</td>
<td>78.8%</td>
</tr>
<tr>
<td>Lines/Order</td>
<td>1.5</td>
</tr>
<tr>
<td>Turns</td>
<td>2.1x</td>
</tr>
<tr>
<td>Expiration</td>
<td>5%</td>
</tr>
<tr>
<td>EDI%</td>
<td>25%</td>
</tr>
<tr>
<td>Charge Capture</td>
<td>75%</td>
</tr>
</tbody>
</table>

Source: Sample of O&M customers

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Clinical Supply Chain Expense
Drivers; Impact, Manageability

- Patient acuity
- Procedure volume
- Patient care protocols/clinical paths
- Technology
- Product quality
- Product brand
- Price inflation
- Procurement proficiency
Aggregate Annual Spend

- Surgery $11,276,531
- Pharmacy $6,910,140
- Cardiac Cath Lab $3,748,911
- Laboratory $2,205,541
- Radiology $661,727
- Emergency $420,581
Current State of Clinical Supply Chain

Key issues:
• Abdication of responsibility
• No strategy/vision for improvement
• Lack of visibility
• Intensive resource need

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Most Technology Tools Not Integrated, Gaps, Lack Analytics

- Isolated systems lack integration
- Overlapping functionality
- Classification inconsistencies
- Clinical staff left to manage expensive, liable supplies
- No vendor visibility
- Little, if any, spend analytics or contract monitoring
What Operators Need

• Clinicians
• Supply Chain
• Patient Accounting
• Accounts Payable
• Suppliers
Focus on Opportunities with Biggest Return

<table>
<thead>
<tr>
<th>Requires:</th>
<th>Annual Spend ($M)</th>
<th>Savings %</th>
<th>Savings ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributed Med/ Surgical</td>
<td>$ 52</td>
<td>1%</td>
<td>$0.52</td>
</tr>
<tr>
<td>Total Med/ Surgical</td>
<td>$337</td>
<td>1%</td>
<td>$3.37</td>
</tr>
</tbody>
</table>

Requires:
- Focus
- Process Improvement
Clinical Supply Chain Optimization Objectives

• **Reduce Expense:** Right Product, Price, Usage

• **Increase Revenues:** Know Cost; Right Cost; Right Charge; Capture Charge

• **Enhance Clinical Staff Satisfaction:** Time on Nursing; Supply Chain Works

• **Improve Patient Care and Safety:** RN Time and Focus
Begin With Strategic Plan

• Current State: Organization, Processes
• Opportunities
• Performance
• Customer Service
• Technology
• Other Investments
(5) KEY ELEMENTS OF A WELL PERFORMING SUPPLY CHAIN
Optimum Performance = Lower Non-salary Cost, Dependable Service Delivery and Improved Productivity

SUPPLY EXPENSE MANAGEMENT
VALUE ANALYSIS
(Optimizing Value in Selection, Specification & Utilization, Including Clinically Sensitive Products)

SOURCING
CONTRACTING
Vendor Relationship Management

INVENTORY MANAGEMENT and REPLENISHMENT
Forecasting Demand; Requisitioning & Replenishment; Managing Supply Availability and Inventory

TRANSPORTATION & LOGISTICS
External Logistics, Receiving, Internal Distribution

PURCHASING & PAYMENT CYCLE
Order Placement, Three-way Match Accuracy, Timely Payment

TECHNOLOGY DRIVERS
(Contract Management, Cost Control, Asset Management, Performance Mng, Revenue Performance)

ORGANIZATIONAL ENABLERS / ADMINISTRATIVE SPONSORSHIP
(Change Management/Communication/Performance Management/Commitment)
Clinical Departments Need Technology Driven Solution - Not Software

- Inventory Management (Expiration, Obsolesce and product recalls)
- Contract Management (Tier Maximization, Digitize Contracts)
- Revenue Management (100% charge capture)
- Resources (Normalize Data, and Analyze Spend Data)
- Collaboration (Business Reviews)
Clinical Supply Chain Management; Comprehensive Technology Tools

- Integrated, proactive service that enables process standardization
  - Technology platform
  - Resources (on/off site)

- Deliverables
  - Clinical utilization data
  - Contract management
  - Spend analytics
  - Revenue enhancement
  - Inventory management
  - Benchmarking
Technology Platform - Optimum Integration, Interfaces to Other Systems

- Usage Tracking
  - Reports
  - Orders

- Complications
  - Encounters
  - Contracts
  - Sedation
  - QA

Import
- Schedule
- P-Cards
- Implant Rec.

Export
- Product ID
- Date
- Quantity
- Department ID*
- Contracts

Import
- Patient ID
- Order No.
- Patient Demo.

Export
- Patient ID
- Products
- Procedures
- Physician
- Date
- Dept. ID
Illustration: $8M Cath Lab Savings Opportunity

- Reduce/eliminate expired product
- Manage/monitor par levels
- Reduce overstocks
- Manage freight & contracts

$2,478,703

$Priceless

$175,953
Optimization Starts at the Beginning; Point of Use; Charge

- Clinical staff simply waves the product at the Point of Service (POS) reader when used.
- Product info is simultaneously entered into Technology Platform and clinical documentation system for proper tracking and billing.

POS can be placed in Control Room (left) or in procedure room (right)
Value Analysis Structure

Steering Committee

CMO
CFO
COO
CNO
CEO?

Project Sponsor

Internal or External Consulting Team

Physician Leadership

General VAT

Pharmacy

Non Clinical

Clinical

Dietary Agency...

Focus Teams

Surgical Services, Cardiac Cath Lab, Women/Child Services

Specialty Services VAT

Hospital & Physician Participation

Technology Enablement
GL Mapping

- Pharmacy: $122,557,506
- Lab: $53,818,876
- Surgery: $72,919,250
- Card/Rad: $24,454,260
- HR/FIN/MM: $19,742,866
- Patient Care: $11,528,000
- Support Services: $4,092,886
Physician Engagement Required

- Executive Process
- Education
- Communication
- Data & Information
- Persuasion
- Negotiation
- Motivation (Aligned Incentives)
- Participation (Value Analysis)
Utilization Management

• Activity Based Costs; Procedure
• Cost Comparison between Physicians
• Connection with outcomes: LOS, readmits
Contract Management

• Contract Coverage

• Contract Compliance

• Contract / Transaction Accuracy
Sourcing and Contracting

- Value Analysis Driven
- GPO or Self Contract
- Supplier Relationship Management
Optimization—Key Performance Indicators/Metrics

- Monthly KPIs report on the following by department
  - Owned & consigned inventory
  - Inventory turns
  - Cost per procedure
  - Purchase vs. Usage vs. Case Load
  - Charge capture
  - Savings
Technology Enables Strategic Plan, Performance Optimization

- Capture and Display Metrics: Consistent, Accurate, Timely
- Recognize Trends
- Stratify in Variety of Ways
- Avoid “One Indicator” Syndrome
- Don’t Measure it, Can’t Manage it
- Understand, Communicate, Educate, Motivate
- Take action, reward
Case Study—University Hospital Optimizes Clinical Supply Chain to Support Strategic Financial Plan

**Challenge**
- Construction of new hospital
- New of Clinical Information System
- Major investments in facilities upgrades

**Solution**
- Implement a hospital wide Value Analysis Program
- Provide training and knowledge transfer to support sustainable process

**Results**
- $9.2 million in savings implemented in first 4 months of FY08

**Financial Implications**
- $3.7 Billion required to support Strategic Plan
- $2 billion required from operations
- Supply Chain Savings Target identified at $14.2 Million for FY 08

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Executive Sponsor

VASC Chair

Physician Preference Teams

Value Analysis Steering Committee

SUPPORT FOUNDATION
Materials Management and Process Excellence
Discussion, Adjourn

Thank You!
Selection and Spend Management

• Value Analysis
• Usage Management
• Spend Visibility — How can this be stratified, analyzed?
• Reduce Product Pricing
• Increase budgetary accountability at user level
• Supplier Standardization