Innovations in Supply Chain
Intermountain Healthcare – Brent Johnson

March 14, 2013

Discussion Agenda

1. Intermountain Healthcare Supply Chain Organization Story
2. Evidence Based Waste in the Healthcare Industry Supply Chain – Six Observations
3. Opportunities to Connect Supply Chain to Clinical
Future of Healthcare has been compared to a demolition derby – competing incentives

Intermountain Healthcare
Supply Chain Organization

- Ranked #4 by Gartner in 2012 for all of healthcare
- Passionately finds and adopts best practices
- Actively involved in the best industry organizations – SMI, HTG, AHRMM
- New Intermountain Supply Chain Center
  Opened in mid-2012
- Investing into Supplier Relationship Management
- Integrating Supply Chain with Clinical
### 2012 Gartner Top-Ten Healthcare Supply Chains

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cardinal Health</td>
</tr>
<tr>
<td>2</td>
<td>Mayo Clinic</td>
</tr>
<tr>
<td>3</td>
<td>BD</td>
</tr>
<tr>
<td>4</td>
<td>Intermountain Healthcare</td>
</tr>
<tr>
<td>5</td>
<td>Owens &amp; Minor</td>
</tr>
<tr>
<td>6</td>
<td>Abbott</td>
</tr>
<tr>
<td>7</td>
<td>Johnson &amp; Johnson</td>
</tr>
<tr>
<td>8</td>
<td>Novartis</td>
</tr>
<tr>
<td>9</td>
<td>Sisters of Mercy (Roi)</td>
</tr>
<tr>
<td>10</td>
<td>Geisinger Health System</td>
</tr>
</tbody>
</table>

### Critical Success Factors

- **Supply chain became a strategic focus by senior leadership**
  - $3 Million initially investment and 25 new FTEs – skilled & talented
  - Centralized buyers and reporting relationships of the warehouse
  - Added couriers, travel services, publishing and central laundry
  - Ongoing investments in our people
  - Earned trust of stakeholders – management, clinicians & physicians
  - Implemented effective strategies
  - Deliver on commitments

### Gartner rankings provide validation that we are focused on the right things

**Intermountain Supply Chain Center - 2012**
Everything Supply Chain

Sourcing, Contracting, Analytics, Systems, Purchasing, Accounts Payable,
Couriers, Logistics, Warehousing, Distribution plus 12-15 programs

Supply Chain Center Objectives

Lower Cost
- Lower Unit Costs
- Lower Transportation Costs
- Streamlined Processes
- Productivity Gains
- Better Use of Hospital Space
- New Revenue from Third Parties
- Enables Product Standardization
- Enables Sustainability

Improve Service
- Enhanced Responsiveness
- Improved Fill Rates
- Value-Added Ancillary Services
- Supports Standardization
- Deliver in Right Unit of Measure
- Single Shipment to Each Location
- One-Stop-Shop Customer Service

Reduce Risk
- Emergency Preparedness
- Reduce Product Variation
- Expiration Date Mgmt
- Improved Traceability
- Recall Management
- Enhanced Controls
- Mitigate Product Shortages
Healthcare Non-Labor Spend Summary

13 Categories – Should be managed as a system

<table>
<thead>
<tr>
<th>Clinical Commodities</th>
<th>Medical Equipment</th>
<th>Pharmaceuticals</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical supplies</td>
<td>Gen Med equip, parts &amp; service</td>
<td>Pharmacy</td>
</tr>
<tr>
<td></td>
<td>Lease/rental</td>
<td>Therapeutics</td>
</tr>
<tr>
<td></td>
<td>Imaging, Lab, Oncology, Surgical, Mobility</td>
<td></td>
</tr>
<tr>
<td>Clinical Services</td>
<td>Medical Supplies</td>
<td>Implants</td>
</tr>
<tr>
<td></td>
<td>Imaging, Lab, Pharmacy</td>
<td>Orthopedic</td>
</tr>
<tr>
<td></td>
<td>Medical gases</td>
<td>Spinal</td>
</tr>
<tr>
<td></td>
<td>Respiratory</td>
<td>CRM</td>
</tr>
<tr>
<td></td>
<td>Surgical</td>
<td>Other</td>
</tr>
<tr>
<td>Non-Medical Equipment</td>
<td>Real Estate</td>
<td>IT Products &amp; Services</td>
</tr>
<tr>
<td>Non-medical equipment</td>
<td>Construction services</td>
<td>Computer hardware</td>
</tr>
<tr>
<td>Parts/service</td>
<td>Facilities services</td>
<td>Output hardware</td>
</tr>
<tr>
<td>Vehicles</td>
<td>Energy services/utilities</td>
<td>Software</td>
</tr>
<tr>
<td></td>
<td>MRO</td>
<td>Telecommunications</td>
</tr>
<tr>
<td>Food</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Food</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nutrition</td>
<td></td>
</tr>
</tbody>
</table>

There is room for improvement!

Evidence based waste in supply chain in healthcare

Six observations
Evidence based waste in supply chain in healthcare

Why?

<table>
<thead>
<tr>
<th>Costly</th>
<th>Inconsistent Best Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inefficient</td>
<td>No Bar Codes</td>
</tr>
<tr>
<td>Preference Based Decisions</td>
<td>Non Standardization</td>
</tr>
</tbody>
</table>

1. Not-for-profit presence
2. Focus on clinical quality at all costs
3. Industry dependence upon GPOs
4. Lack of supply chain talent – pay & strategy
5. Hospital executives haven't viewed traditional Materials Management as strategic – left in basement

There is a wide gap in cost performance between the best and the worst!

Supply Expense as % of Total Operating Expenses

- High-Performance Quartile: 14.1%
- Median: 17.0%
- Low-Performance Quartile: 20.0%

Supply Expense per Adjusted Discharge

- High-Performance Quartile: $1,249
- Median: $2,250
- Low-Performance Quartile: $2,306

Inefficiency of healthcare supply chain

National GPO Contracting

Manufacturer

Distributor

Provider

Tracing Fees (3-4%)
Channel Fees (4-6%)
Payment Term Discount (2%)

Admin Fee (1-4%)

Distribution (4-12%)
Additional Markup (4-8%)

Volume Rebates (1-2%)

Complex Costly Data Chaos

40,000 SKUs
10,000 Suppliers

Two

Two

Transparency Through the Entire Supply Chain is Critical
SG&A costs are significantly more for suppliers in healthcare than retail.

**HEALTHCARE**

- Medtronic
- Kimberly-Clark
- Covidien
- Johnson & Johnson
- Merck

**RETAIL**

- Microsoft
- HP
- Apple
- Dell
- ExxonMobil
- Cooper Tires
- Goodyear
- Tyson
- Kellogg’s
- Kraft
- Anheuser-Busch

**Source:** Average of group as per public company financials

**Opportunity (13.5%)**

Supply chain distribution is inefficient.

- Direct Suppliers
- Med/Surg Supplier
- Med/Surg Fmg.
- Lab Mfg.
- Lab Dist.
- Lab Mfg.
- Lab Dist.
- Dietary Mfg.
- Dietary Dist.
- Dietary Dist.
- Linen Mfg.
- Linen Service
- EVS Mfg.
- EVS Dist.
- EVS Mfg.
- EVS Dist.
- MRO Mfg.
- MRO Dist.
- MRO Mfg.
- MRO Dist.

- Member Hospital
- Member Clinics
- Other Hospitals
- Other Clinics
- Retail Pharmacy
- Home Health
- Retail
- Mass Merc.
- Other???
Simplicity is Better: Why Intermountain opened Supply Chain Center (SCC)

Logistic Cost
Per Industry Segment

You pay for every truck that backs up to your hospital's dock.

*SOURCE - EHCR STUDY
Lack of data synchronization
We can’t use barcodes!

Get on-board with Industry recommended GS1 standards!
The Healthcare industry does not have synchronized, secure and consistent product and organization identification as products pass from manufacturers to distributors to hospitals. This limits the ability to track products efficiently from cradle to grave.

For Cost, Efficiency and Patient Safety benefits
- **Patient Safety benefits**
  - Management of medical errors, product recalls, adverse event reports
  - Identification of counterfeit devices and FDA approved devices
  - Avoids product shortages knowing equivalent devices
- **Cost & Efficiency**
  - Data accuracy for spend analysis & maintaining master files
  - Decreases errors – ordering, shipping, handling
  - Eliminates data and process “chaos” throughout the entire supply chain

Physician/personal preference impedes best practice

“The relationship between suppliers and purchasing is different in healthcare than in most other industries. Suppliers are much closer to the end user. In some cases (like most physicians) the end-user is not even part of the organization. Add to that the “patient care” aspect and you have a situation where purchasing may have little true authority.”

David Kaczmarek, VP, The McFaul & Lyons Group
Healthcare Purchasing News
Supply chain not viewed as “strategic” by C-suite

- Traditional Materials Management is usually viewed as being merely mechanical / functional to perform role tasks to support the hospitals – “deliver the products, efficiently that I need to where I need them.”
- Compared to other industries where supply chain is at the C-suite level in every major company
- Healthcare is behind in applying rigorous strategies, technology and best practices
- Industry’s dependence upon GPOs & distributors for contract and supply chain management has limited development and recruitment of talent

Hospitals often negotiate with a “re-tooled” Central Supply employee who competes against a Yale MBA who has 10 Harvard MBA’s back at the main office to provide support

Non-clinical Spend is Also Very Big and Often Untouched

Often the “forgotten” categories (in healthcare) but with just as much opportunity for financial, quality and service benefits

Intermountain spends over $500 million annually on these categories
Patient

- Lack of standardization
- Preference based decisions
- Inefficient processes
- Lot's of waste

Opportunities to Connect
Supply Chain to Clinical
**Intermountain Bone Marrow Transplant Unit**

A Patient Story: Reducing Clinical Product Variation

- Catheter related blood stream infections impact patient recovery & are non-reimbursable
- Upon research it was noted that a significant number of our system’s catheter related blood stream infections occurred in our Bone Marrow Transplant Unit
- A committee was formed of clinicians and supply chain to research the practices and products that had best outcomes
- Resulted in a significant reduction in catheter related blood stream infections.

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Connecting Intermountain’s CPGs (Collaborative Practice Guidelines) to Supply Chain

*Opportunity to link products to care processes*

- Protocols
- Risk for Problems
- Problems
- Practice Guideline
- Basic Cares
Product Standardization Strategy

1. **Categorize Products**
   - Red Items
   - Yellow Items
   - Green Items

2. **Define Ownership**
   - Red Items
   - Yellow Items
   - Green Items

3. **Declare Standard**
   - Committees

4. **Implement Standard**
   - Materials and Clinical Coordination
   - Facility Product Teams
   - Newsletter

5. **Monitor Compliance**
   - Reports
   - Follow-Up
   - Issues “Hot-Line”

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Product Standardization = Improved Patient Quality at Decreased Cost
Prepare for the Cost & Quality Pressures of Healthcare Reform

Leaders need to be optimists. Their vision is beyond the present. - Rudy Giuliani
The Supply Chain Organization required to support Healthcare in a “Fee for Service” environment today is dramatically different than that required to support an “Accountable Care Organization” environment in the future.

The Evolution of Healthcare Supply Chain

Cost-Quality-Outcomes

Utilization & Standardization

Price Controls
Supply chain is perfectly positioned at the intersection of cost, quality, and outcomes to take the lead on responding to the demands of healthcare reform.

Supply chain must adjust and change the way it has traditionally approached its work (primarily focused on costs) to accommodate this broader focus.

Supply Chain Strategies in Healthcare Reform…
Will Require Much More than Price Management

Three-Phase Roadmap

<table>
<thead>
<tr>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Focus</td>
<td>Price Management</td>
<td>Utilization Management</td>
</tr>
<tr>
<td>What We Need</td>
<td>Buy Preferred Items</td>
<td>Use Fewer Suppliers and Fewer</td>
</tr>
<tr>
<td>from Our</td>
<td>from a Contracted Supplier</td>
<td>Products</td>
</tr>
<tr>
<td>Physicians/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinicians</td>
<td></td>
<td>Utilize Right Product for Right</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purpose in Right Quantity</td>
</tr>
<tr>
<td>What it Means to</td>
<td>Improved Contract Compliance</td>
<td>Significantly More Business</td>
</tr>
<tr>
<td>Suppliers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benefit Potential</td>
<td>5 – 10%</td>
<td>10 – 20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70 – 85%</td>
</tr>
</tbody>
</table>

What it Means to Suppliers

Improved Contract Compliance

Significantly More Business

Aligned Incentives

Benefit Potential

5 – 10%

10 – 20%

70 – 85%
Why “Price Savings” Alone are NOT Sufficient

Price

Total Cost of Ownership

- Process Cost
- Sourcing Cost
- Order Mgmt
- Returns Mgmt
- Logistics Mgmt
- DPO / DSO
- Supplier Mgmt
- Recall Mgmt
- Compliance Mgmt
- Training
- Payment Mgmt
- Inspection

Utilization Cost
- Standardization
- Demand Mgmt
- Conversion
- Labor Productivity
- Maintenance
- Shrinkage
- Damages
- Waste
- Disposition
- Recall Mgmt
- Revision Procedures
- Infection Rates

Patient Outcomes

Readmissions

Teamwork – Clinicians & Supply Chain

Sure Glad There’s No Hole In This End!
There is Power and Huge Benefit in Supply Chain Management in Healthcare

- A penny saved is a penny invested somewhere else in healthcare
- When we allow personal preference guide decisions we pay more
- When we don’t have standards we pay more
- When we don’t leverage our company we pay more
- Personal preference shouldn’t be confused with clinical excellence
- Non-profit should not mean not-as-efficient
- Quality does not mean “spare no expense”
- Product variation is not clinical excellence

Thanks

Q & A