

Medical Device Supply Chain

A View from Owens & Minor



“ A \$100,000 dollar reduction in expense is equivalent to an \$11,000,000 revenue increase for my system”

Large health care system supply chain VP - 2011





Themes

- Commodity Medical Supplies issues:
 - Supply chain is fairly efficient due to focus over the years
 - However, the lack of supply chain visibility still causes low forecast accuracy, increasing required working capital and/or lower fill rates for all players
- Physician Preference Item (PPI) issues:
 - Customer behavior force PPI manufacturers into sub-optimal supply chain strategies
 - PPI manufacturers have even less visibility and control over their supply chain post shipment
 - Some PPI manufacturers are expressing concern over supply chain integrity with truck stock and consignment



Themes

- Additional PPI expressed concerns:
 - Cash to cash cycle
 - Manual process slows issuance of POs
 - Accounts receivable 2 to 4 times that for commodities
 - Margin shrinkage and mitigation strategies
 - Sales rep time spent on supply chain issues
 - Inventory or asset coverage to support given sales level
 - Track and trace
 - Reverse logistics associated with orthopedic sets or cosmetic implants



Themes

- Healthcare systems are becoming extremely active trying to improve the supply chain in the PPI space to reduce total delivered cost:
 - Contracting
 - Consolidating vendors
 - Controlling sales reps access
 - Investments in technology and data analytics
 - New supply chain strategies such
 - Self-distribution
 - Centralized sterile process and/or case cart picking
 - Third party logistics arrangements

Applying Leverage to the Supply Chain

Optimizing Logistics & Sales Operations for Direct Suppliers





Why O&M Distribution & Logistics?

Full portfolio of traditional and advanced logistics services and solutions

- Nationwide presence – warehouses, people, vehicles
- Ability to tailor programs specifically to client needs—inventory counting, product movement, documentation, etc.
- Leading technology platforms to improve efficiency, accuracy, and timeliness of sales channel activities
- National footprint coupled with deep understanding of the needs of our mutual customers at the local level



Offering a more comprehensive approach to distribution that allows for greater customization for individual customers



PPI Logistics Pilots

- Forward deployment
 - Trunk stock, instrument set or consignment replenishment aggregated and located near major markets
- “Clinical Logistics Center”
 - Point of use control and visibility creates ability to....
 - Reduce point of use inventories....
 - Remove excess inventories from clinical areas and....
 - Centralize support inventory with daily replenishment which creates ability to....
 - Perform aggregated forecasting and replenishment...
 - Reducing total system inventory
- Key Point – almost no capital investment required by hospital or vendor



Visibility & Supply Chain Integrity



CLINICAL SYSTEM

- Procedure Schedule
- Preference Cards
- Implant Records



ORDERS/ADT SYSTEM

- Patient ID
- Order Number
- Patient Demographics



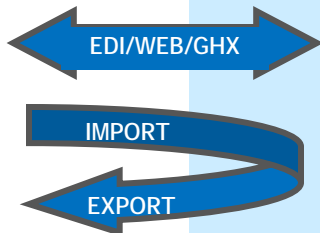
BILLING SYSTEM

- Patient ID
- Products
- Procedures
- Physician
- Date
- Dept. ID



PURCHASING

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



Clinical Logistics Center

- Usage Tracking
- Consignment
- CLC Visibility
- POU Visibility
- Consol. Orders
- Market Share
- Order to cash
- Cust. Support



SUPPLIER



REP CONSIGNMENT



Comprehensive Solutions From O&M

- 54 distribution facilities, most with a “clean” room for product “kitting”
- Leading, web-based clinical inventory & transaction management applications
 - Over 8 years of experience managing high cost PPI in more than 400 hospitals via a web-based platform (SAAS)
 - Bar-code centric solutions capturing key data attributes – physician, procedure, product, serial number, expiration date, etc.
- Hundreds of field-based inventory management staff in hospitals daily
- On-demand, short suspense, per procedure delivery of key supplies (trays, implants, etc.)
- Modality specific solutions



Bill-Only Transaction Management (IPM)

Overview

- Vendor-centric bill-only PO transaction automation in such as ortho, spine, cardiology (CRM), aesthetics, neuro
- Single log-in across multiple hospitals

Vendor Benefits

- Improves requisition documentation, ensures PO is issued within hours of procedure
- Reduces invoice discrepancies speeding payment
- Increases control & visibility with customized, web-based dashboards by product, procedure, MD, etc.
- Provides audit control and transaction visibility

Proven Success

- 9,358 transactions, \$40.5M spend under management in 2011
- Over 200 sales representatives from 30+ vendors using IPM application daily
- 100% vendor rep/CSR originated transactions
- Vendors have constant visibility on all records





Implant Suppliers Under Management

ORTHOPEDICS

Arthrex
BioMet
Depuy
Depuy - Mitek
Smith & Nephew
Synthes Trauma
Stryker Ortho
Stryker (Craniomax)
Zimmer

SPINE/NEURO

Aesculap
Alphatec
Depuy
Lanx
I-Spine
Integra
Medtronic SD
Nuvasive
NuTech Spine
Osteomed
Orthofix
Paradigm Bio
Pioneer
Spine Matrix
Stryker
Synthes Spine
Zimmer

CARDIOLOGY / EP / IR

Medtronic
St. Jude
Boston Scientific
Abbott
Cordis
Cook
Bio Sense Webster
Gore
Arrow



O&M's Web-based Logistics

- Hospital-based Par Inventory Management for Consignment
 - Cycle counting & replenishment services (suture, endo-mechanical, grafts, etc.)
- Procedure Specific Tote Delivery
 - Hospital & ASC case schedule signal; product tote assemble per physician/procedure, shipped to surgery location, labeled for specific surgery, returns & credits handled automatically for unused items
- Clinical Inventory Management
 - Department level, perpetual inventory management
 - Lot/serial # tracking, expiration date, patient charge codes, contract price, case/MD details
 - Cardiology, interventional radiology, nuclear med., endoscopy, etc.
- Implant Purchase Management
 - Modality specific, vendor self-serve solution for bill-only, bill & replace implant transactions - orthopedics, spine, aesthetics, grafts, CRM, etc.
 - Address on-site consignment and trunk stock management
 - Vendor-oriented solution for per implant supply capture, contract price management, approval routing, etc.

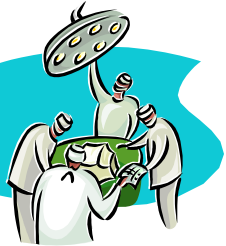


Example: Aesthetic Implant Market



Hospitals ...

- Press Aesthetic implant supplier's for consignment agreements to avoid expensing unpredictable inventory
- Create forms for physician offices to confirm scheduled procedures, request specific implants
- Manage local stock but order extras from manufacturer on a per case basis
- Prepare requisitions, issue POs, receive product, document usage, prepare return goods documentation, document credit, etc.
- Struggle to aggregate implant usage and cost data with MD, procedure, contract, payer, etc.



Surgeons...

- Dictate manufacturer & catalog number/size selection
- Prepare per-procedure documentation on each hospital's form; fax same
- Order multiple sizes for each implant
- Maintain separate references for serial number records



Manufacturers...

- Continuously strive to reduce SG&A
- Resist consignment as it requires excessive working inventory; difficult to account for and control implants (nearly 3,000 consignment locations in US, \$14,000-\$75,000 ea.)
- Have to respond to short suspense orders; use reps to operate nearly "retail" like LUM warehouse operations covering vast geographies
- Receive per procedure POs; handle per procedure picking, shipping - outbound
- Repeat same process for returns
- Manage a large number of customer credits
- Spend significant sums to collect surgeon (and potentially patient) feedback, pre & post market data



A New Model: Aesthetic Implant Management

Process Step	Detail
Client Set Up	Vendor loads & manages client profiles in existing CSR application; daily ftp transmission move/update appropriate client/price information into O&M's web-based application
Forward Deployment	Vendor implants are consigned (or sold) to O&M DC locations; serial number & exp. dates are tracked; Vendor maintains complete real time visibility across all 52 DC locations
Orders	MD office or hospital enters patient, procedure and product details via O&M web application; Vendor reps may request "will call" orders via similar process
Pick, Pack, Ship	O&M DC clean rooms assemble procedure specific totes (license plate identifies facility, case ID, MD & patient info); O&M delivers tote to procedure location
Returns	Unused implants are left in the tote; O&M picks up tote, inspects and returns unused inventory to DC
Invoice / Payment	O&M generates requisition notice to client (MD, ASC or Hospital); transmits PO to Vendor - includes product utilization information (serial #, etc.)
Utilization Data	Vendor maintains continuous visibility, aggregates utilization information



Collaboration Ideas

- Bring O&M your hard to manage items
 - High cost, slow movers, many SKUs, unpredictable, “coated”
- Integrate O&M into your proposals, customer offering, contracts
 - Uncomplicated - “Halo Effect” - offer/underwrite customer’s access to O&M technology
 - Example - Detroit Medical Center & leading spine vendor; UNC & leading total joint vendor
 - Coordinate “kits” with non-competitors for specific procedures (e.g., vein ablation) ; surgeon specific trays to reduce capital any ensure market share
- Forecast 0-24 month orphan product lines/divisions, planned divestitures
 - O&M Health Care Logistics can assume 100% of order to cash processes
 - Broadens field of potential acquirers to deal firms, equity houses who lack infrastructure
- Challenge O&M to custom develop, host your IT concept
 - Novel truck stock solution, post market data collection platform, etc.