Perfect Order and Beyond

Global GS1 Healthcare Conference
3/22/12

Dennis Black, Director, e-Business
BD is a leading global medical technology company that develops, manufactures and sells medical devices, instrument systems and reagents. The Company is dedicated to improving people's health throughout the world. BD is focused on improving drug delivery, enhancing the quality and speed of diagnosing infectious diseases and cancers, and advancing research, discovery and production of new drugs and vaccines. BD's capabilities are instrumental in combating many of the world's most pressing diseases. Founded in 1897 and headquartered in Franklin Lakes, New Jersey, BD employs approximately 29,000 associates in more than 50 countries throughout the world. The Company serves healthcare institutions, life science researchers, clinical laboratories, the pharmaceutical industry and the general public. For more information, please visit www.bd.com.
Mercy
Perfect Order and Beyond

26 ACUTE CARE HOSPITALS
3 HEART HOSPITALS
4,367 LICENSED BEDS
35,580 CO-WORKERS
385 PHYSICIAN PRACTICE LOCATIONS
4,626 MEDICAL STAFF MEMBERS
1,245 INTEGRATED PHYSICIANS
$4.05 Operating Revenue (Billions)
MISSION:
_to improve clinical, operational and financial performance of our customers through a clinically integrated supply chain._

FOCUS & DIRECTION:
▶ Leverage Infrastructure – Reduce Costs, Increase Service
▶ Reduce Variation – Product Selection/Use and Process
▶ Improve Value – Improve Revenue and Reduce Cost
2010 GLN Sunrise

“Adoption of GLN in Healthcare by 2010***”

Global Location Numbers (GLNs)**

- GLNs are assigned by location owners
- GLNs are used in appropriate business transactions and processes between trading partners
- GLN hierarchy is defined and maintained by location owners
- GLN Registry for Healthcare® is used to facilitate correct location identification

*December 2010
**Unique Location Identifiers
2012 GTIN Sunrise

“Adoption of GTIN in Healthcare by 2012*”
Global Trade Item Numbers (GTINs)**

- GTINs are assigned to healthcare products
- GTINs are used in business transactions
- GTINs are marked on appropriate packaging levels
- GTINs are scanned at points-of-delivery to enhance clinical process
- GTINs are used in product returns and recalls
- GTINs are registered in a GS1 GDSN-certified Data Pool

*December 2012
**Unique Product Identifiers
Perfect Order Definition
Perfect Order and Beyond

What is a Perfect Order?

**Perfect Order**: A purchase order processed electronically (from order to payment) without human intervention, which is delivered to the correct location, on time, undamaged, at the right price, with the desired quantity, on the first attempt.

- **Phase I** – Establish the technology infrastructure and processes to achieve Perfect Order
- **Phase II** – Implement GS1 data standards to make the process more efficient and sustainable. Include clinical processes.
### Data Challenges are a Barrier

**Perfect Order and Beyond**

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#### Many Proprietary Numbers for Each Customer

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#### Many Product Numbers for Each Product

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<th>Product</th>
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#### 350+ Ways to Spell BD (1 Customer)

- B D VACUTAINER DIV
- B-D DIAGNOSTICS
- B-D SUP CHAIN SVCS
- BD / ELASTIC HEALTH SUPPORT
- BD BLOODCOLLECTION
- B D ACUTECARE
- B-D LABWARE
- B-D VASCULAR ACCESS
- BD ACUTECARE
- BD CONVENTION NEEDLES
- B D DIAGNOSTIC
- B-D MICROBIOLOGY
- BD ACUTECARE DIV
- B-D MICROBIOLOGY
- BD CRITICAL CARE
- B D DIAGNOSTIC
- B-D PRIMARY CARE
- BD PRIMARY CARE DIAG
Sunrise Dates Achieved - February 2011

Perfect Order and Beyond

- End-to-End Integration of GLN/GTIN Achieved February, 2011
- Additional Implementation Steps Continue
• GTINs created for each product and package level

• Product data defined, created and managed

• BD GLNs assigned and managed

• Validated customer GLNs collected and stored

• Synchronization of EDI Processes

• Order Management

• Data stored in ERP system
Use of GTINs

Perfect Order and Beyond

Challenges Included:

• Reconciling Data

• Using BD’s GTIN Data in Mercy/ROi IT Systems

• Mutually Learning to Transact w/GTINs
**BD Factory**

Perfect Order and Beyond

- Production order and GTINs pulled from ERP
- GTINs and production data (Lot/Expiry, etc.) printed on products (barcode and human readable)
- GTINs used to track products during manufacturing
- GTINs used to track contents of shipments
- Manufacturing data stored in ERP system
• GTINs and ASN used for receipt verification

• GTIN used to assure accuracy of picked products

• GTIN and barcoded production data used to create and track shipping unit

• Shipping unit content barcoded and tracked with pallet license plate (SSCC)

• ASN containing GTIN, SSCC numbers and GLNs sent to customers

• Inventory and delivery information stored in ERP system
ROi Distribution Center

Perfect Order and Beyond

- GTINs used at the point of receipt to validate delivery accuracy
- GTINs used to put products into inventory
- GTINs used to pick products and create shipments
- Manufacturer assigned barcoded production data used to rotate inventory and for quality control processes
- GLNs assigned to ROi distribution center and Mercy facilities to improve shipping and pricing accuracy
Mercy Hospital Receiving
Perfect Order and Beyond

- Advance Ship Notice (ASN) received from ROi
- No additional receipt activity required due to the high quality of pick using GTIN to validate item and quantity
- Chain of custody maintained through automated processes
Mercy Store Rooms
Perfect Order and Beyond

• GTINs scanned to help search for products in Mercy’s MMIS system

• GTINs used to order and track medical devices for use in labs, pharmacy, storage locations and in patient care areas

• Receiving and Delivery program used to scan and pick products for various departments throughout the hospital system

• GTINs used to drive inventory replenishment
Mercy Hospital – Patient Room

- Patient arm band is scanned identifying location and patient in point of care system

- GTINs on product packages are scanned at the point of care capturing critical information to drive:
  - Product consumption
  - Inventory replenishment
  - Patient charging
  - Cost accounting

Mercy Hospital – Operating Room

- Products used during the procedure documented on the patient chart

- GTIN data tracked all the way from the point of order to the near exact time the product was applied to a specific patient

- In time, industry supported recall notifications for specific GTINs could trigger automatic reports alerting administrators of potential issues
Mercy/ROi Data
Perfect Order and Beyond

Inventory Management & Replenishment
Patient Charge
Electronic Health Record (EHR)
Reduced Error Rate
Perfect Order and Beyond

Part # & UOM Discrepancy Rate

Pre Perfect Order Discrepancy Rate

Post Perfect Order Discrepancy Rate

Post GTIN Discrepancy Rate
Many Benefits Achieved

Perfect Order and Beyond

- Achievement of Perfect Order
- More accurate purchase orders, invoicing and payment
- Clean data on delivery locations and account information
- Up-to-date item master and vendor master
- Real-time product usage and consumption
- Better product and lot number tracking
- Improved infrastructure and data accuracy for future patient care initiatives and the recall process

The full case study can be found at: [www.gs1us.org/BDMercystudy](http://www.gs1us.org/BDMercystudy)