

Perfect Order and Beyond

Global GS1 Healthcare Conference
3/22/12

Dennis Black, Director, e-Business



BD

Perfect Order and Beyond



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.



BD Nexiva™ Closed IV Catheter System



BD Viper™ System with XTR Technology



BD Influx™ Flow Cytometry System



BD SurePath™ PAP Collection System



BD Vacutainer® Push Button Blood Collection Set



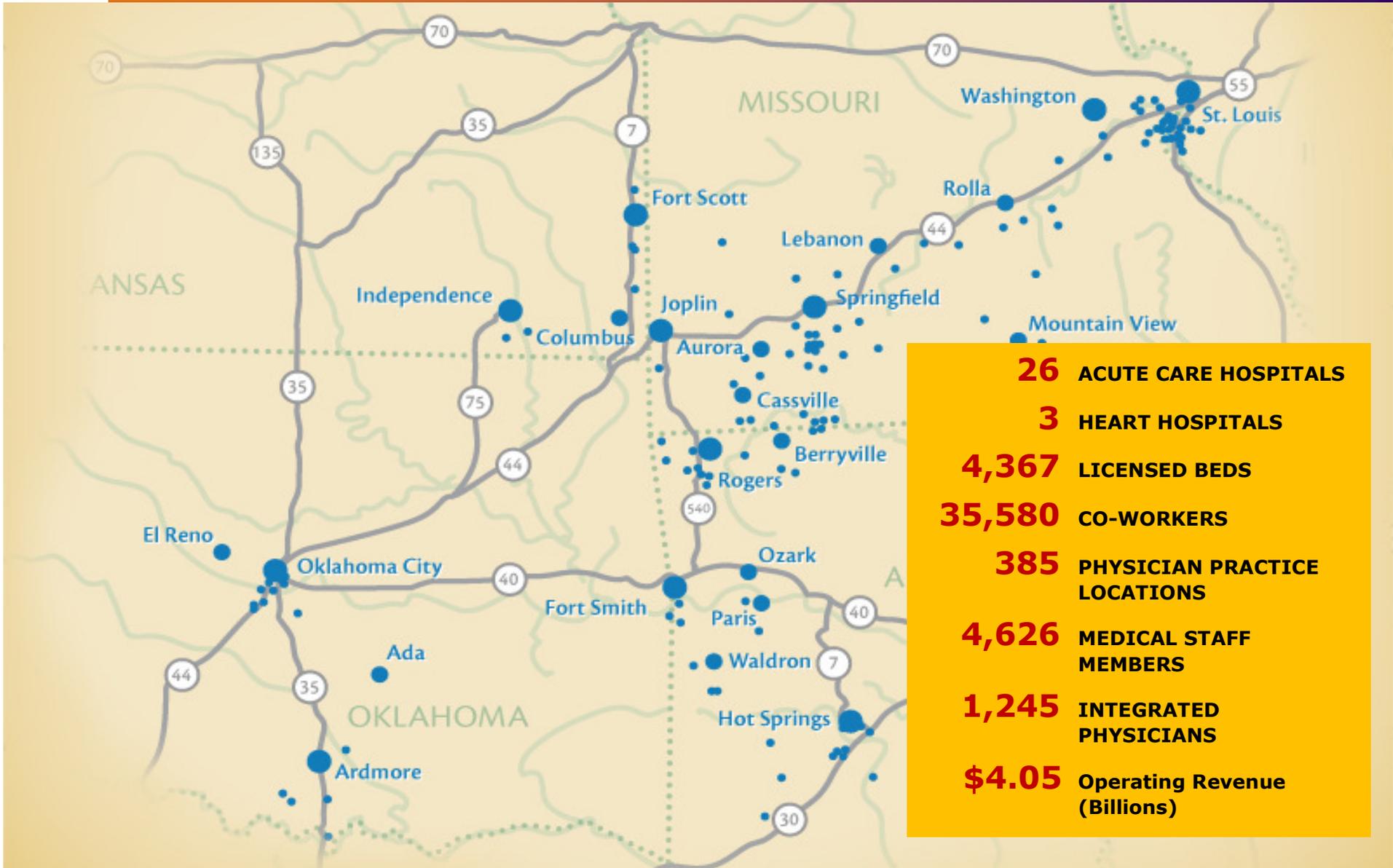
BD PosiFlush™ Flush Syringe



BD™ Insulin Syringes

Mercy

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ROi

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Performance Consulting

- ▼ Clinical Support Service
- ▼ Patient Care Services
- ▼ Operational Support Services

Group Purchasing

- ▼ Supply and Pharmaceutical Contracting
- ▼ Capital Equipment Contracting
- ▼ Contract Compliance Monitoring
- ▼ Rebate Management
- ▼ Pricing Administration
- ▼ Member Services

Supply Chain Management

- ▼ Consolidated Services Center
- ▼ Inventory Management
- ▼ Pharmaceutical Repackaging
- ▼ Custom Procedure Tray Manufacturing
- ▼ Purchasing
- ▼ Customer Service
- ▼ Transportation Management
- ▼ Print Operations

ROi

Facilities •Corporate Office – St. Louis

•Consolidated Services Center –
Springfield, MO

Co-workers 300 FTEs from varied clinical and
business disciplines

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?

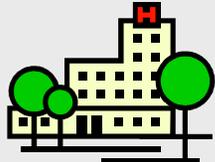
Perfect Order: A purchase order processed electronically (from order to payment) without human intervention, which is delivered to the correct location, on time, undamaged, at the right price, with the desired quantity, on the first attempt.

www.smi.supplychain.com

- **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

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Just 1 Hospital

Many Proprietary Numbers for Each Customer

St. Michaels	St Michaels	St. Michael's	Saint Michaels	100084547	CA2053
50003000431	1000014082	1000014769	1000042141	1000118699	50003000306
50003000308	50003000309	50003000312	50003000313	50003000314	50003000315
50003000316	50003000330	50003000366	50003000406	50003000422	50003000426
50003000431	50003000432	50003000433	50003000440	50003000442	50003000453
50003000456	50003000468	50003000472	50003000473	50003000476	50003000477
50003000480	2104372	2104379	2108919	JGGG	(178 Total)



Many Product Numbers for Each Product

BD	329461
BD	00382903294619
CARDINAL HEALTH	BF329461
OWENS & MINOR	0722329461
OWENS & MINOR	0723329461
AMERICAN MEDICAL DEPOT	777127217
AMERICAN MEDICAL DEPOT	777127218
GOVERNMENT SCI SOURCE	FSC1482679CS
GOVERNMENT SCI SOURCE	FSC1482679PK
ALLIANCE JOINT VENTURE	888021932
THOMAS SCIENTIFIC	8938M25
THOMAS SCIENTIFIC	8938M28
VWR INTERNATIONAL	BD329461

350+ Ways to Spell BD (1 Customer)

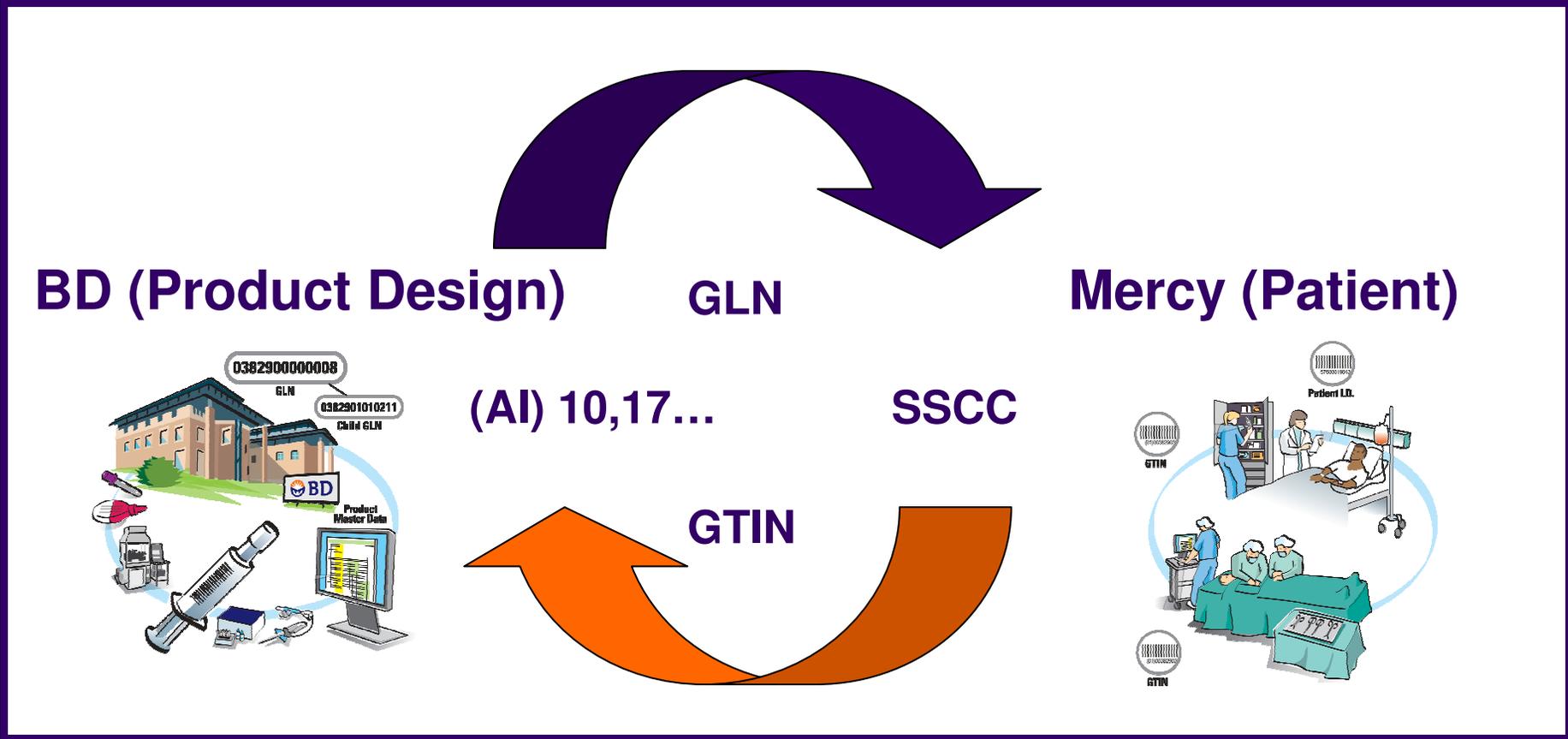
B D VACUTAINER DIV	B-D DIAGNOSTICS
B-D SUP CHAIN SVCS	BD / ELASTIC HEALTH SUPPORT
BD BLOODCOLLECTION	B D ACUTECARE
B-D LABWARE	B-D VASCULAR ACCESS
BD ACUTECARE	BD CONVENTION NEEDLES
B D DIAGNOSTIC	B-D MICRO BIOLOGY SYSTEMS
B.D. MICROBIOLOGY	BD ACUTECARE DIV
BD CRITICAL CARE	B DICKINSON
B-D MICROBIOLOGY	BARD PARKER
BD ACUTECARE DIV.	BD DBA BECTON DICKINSON AND CO
B&D	B-D MICROBIOLOGY SYSTEMS
BARD-PARKER	BD BIO SCIENCE
BD DIAGNOSTIC	B-D
B-D PRIMARY CARE	BARD-PARKER RESPIRATORY
BD BIO SCIENCES	BD DIAGNOSTIC INSTRUMENT SYST
B-D / VISITEC	B-D PRIMARY CARE DIAG

Sunrise Dates Achieved - February 2011

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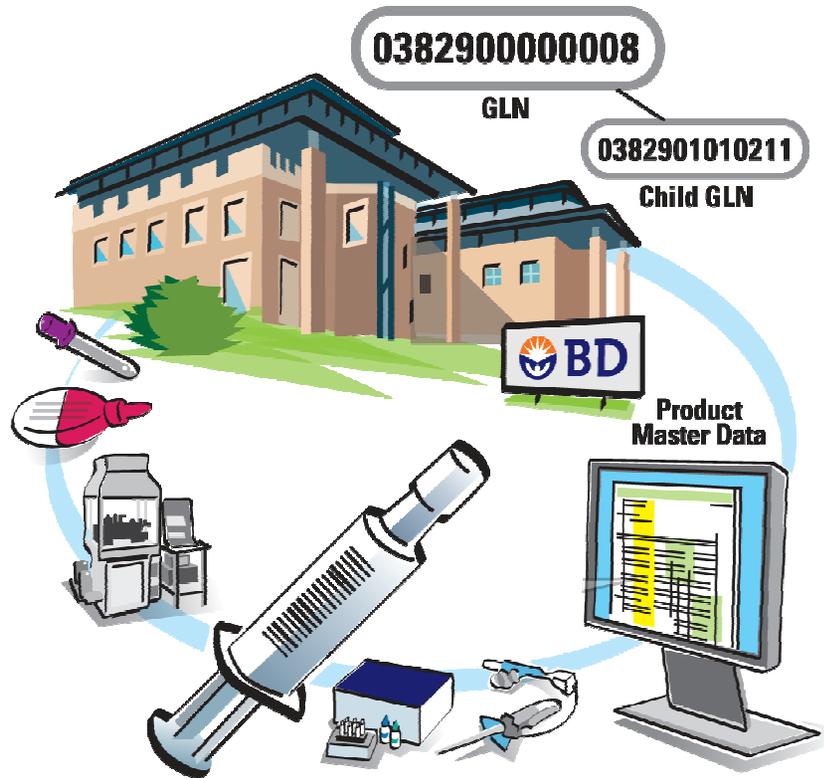


- End-to-End Integration of GLN/GTIN Achieved February, 2011
- Additional Implementation Steps Continue



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- 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

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Each Level GTIN in a
GS1-128 barcode



00382903065073

Shelf Pack Level GTIN and
Production Data in GS1-128
barcodes



30382903065074

Case Level GTIN and Production
Data in GS1-128 barcodes



50382903065078

Pallet License Plate — Serial
Shipping Container Code (SSCC)



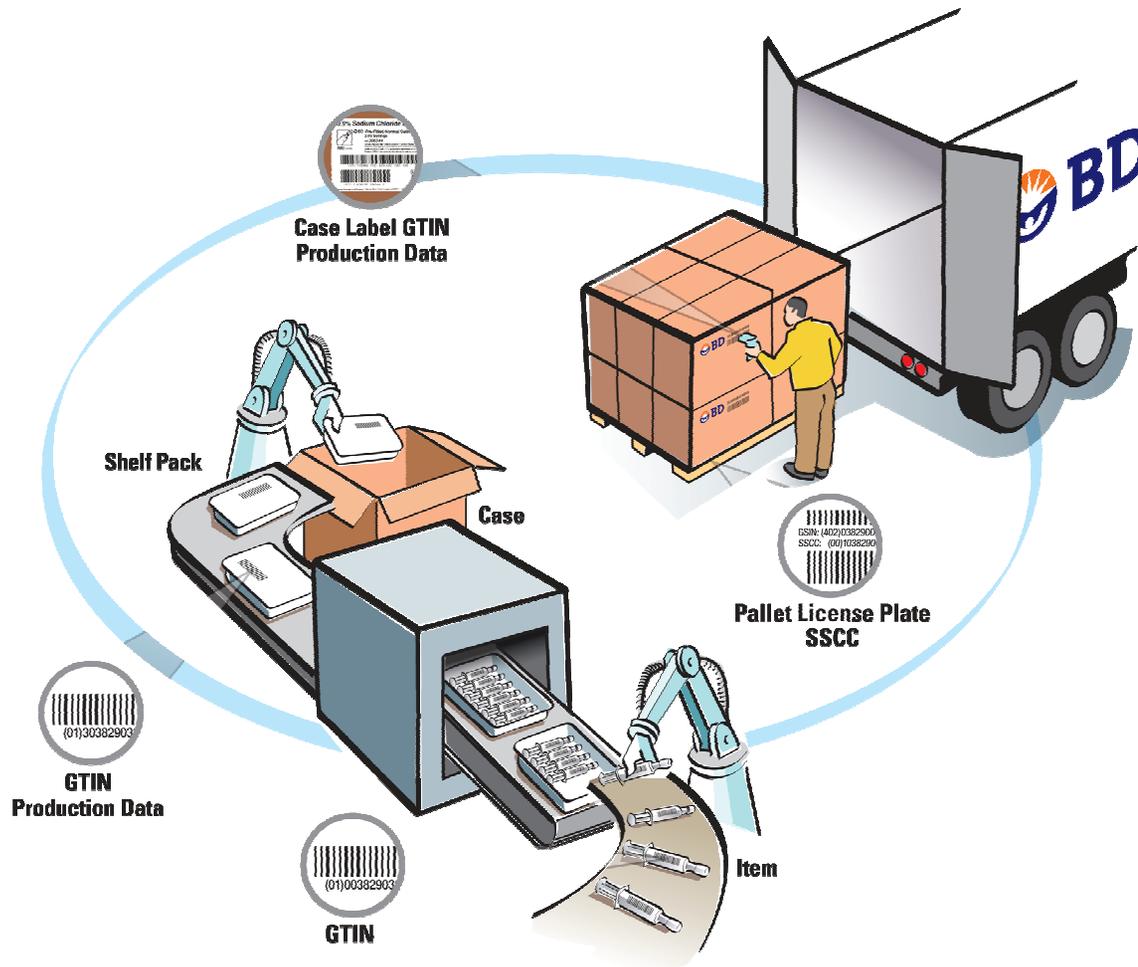
Challenges Included:

- Reconciling Data
- Using BD's GTIN Data in Mercy/ROi IT Systems
- Mutually Learning to Transact w/GTINs

The illustrations above are provided as examples and are not exact replicas of actual labels.

BD Factory

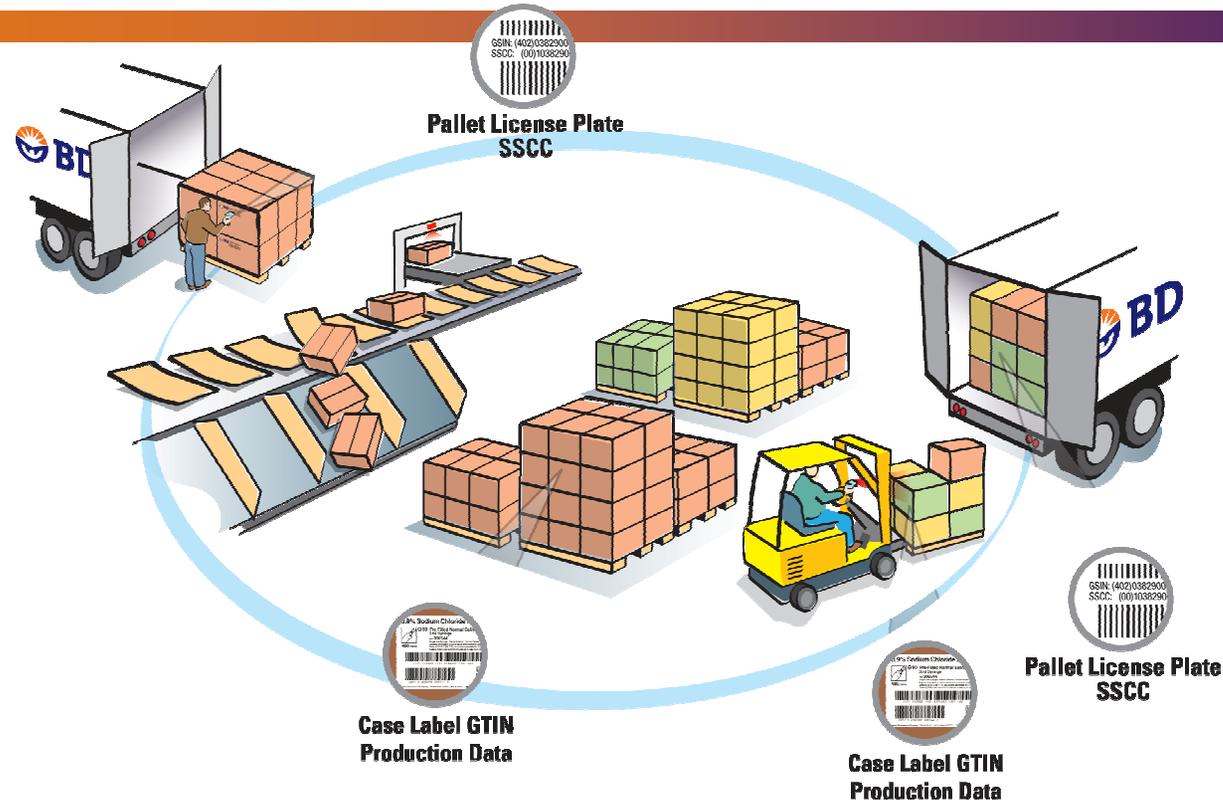
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- Production order and GTINs pulled from ERP
- GTINs and production data (Lot/Expiry, etc.) printed on products (barcode and human readable)
- GTINs used to track products during manufacturing
- GTINs used to track contents of shipments
- Manufacturing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

BD Distribution Center

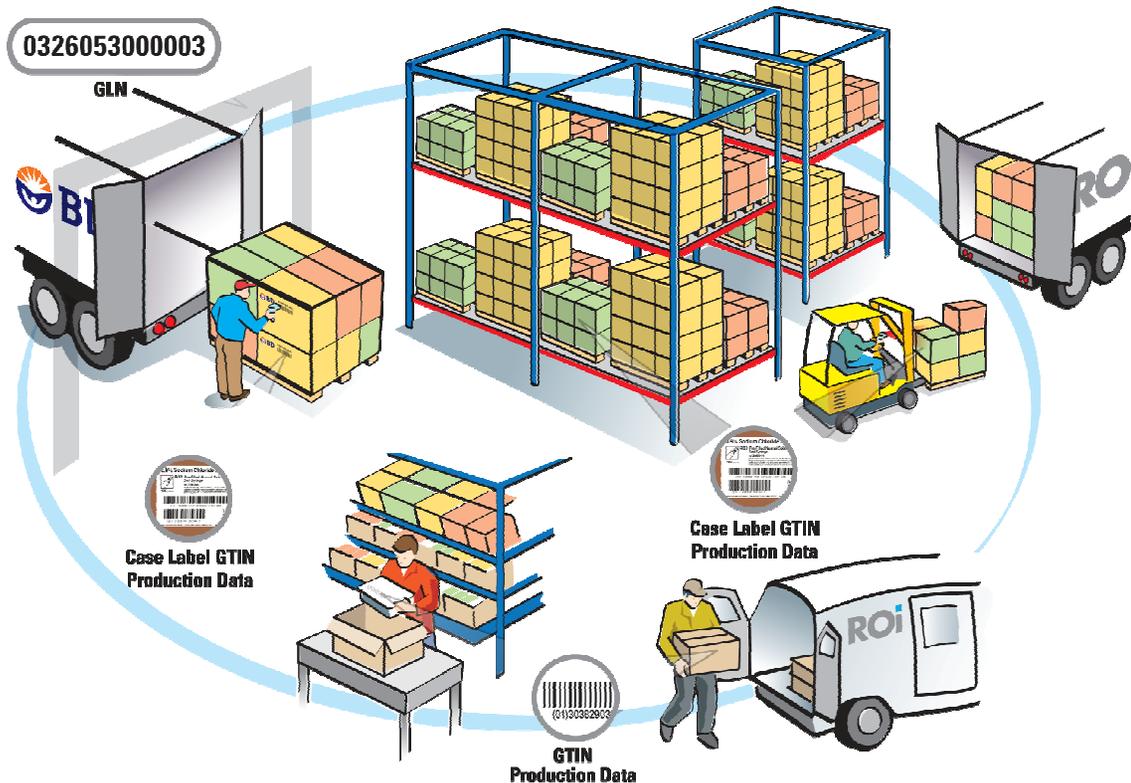
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- GTINs and ASNs used for receipt verification
- GTINs used to assure accuracy of picked products
- GTIN and barcoded production data used to create and track shipping unit
- Shipping unit content barcoded and tracked with pallet license plate (SSCC)
- ASNs containing GTINs, SSCC numbers and GLNs sent to customers
- Inventory and delivery information stored in ERP system

ROi Distribution Center

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- 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

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1100003057397

GLN

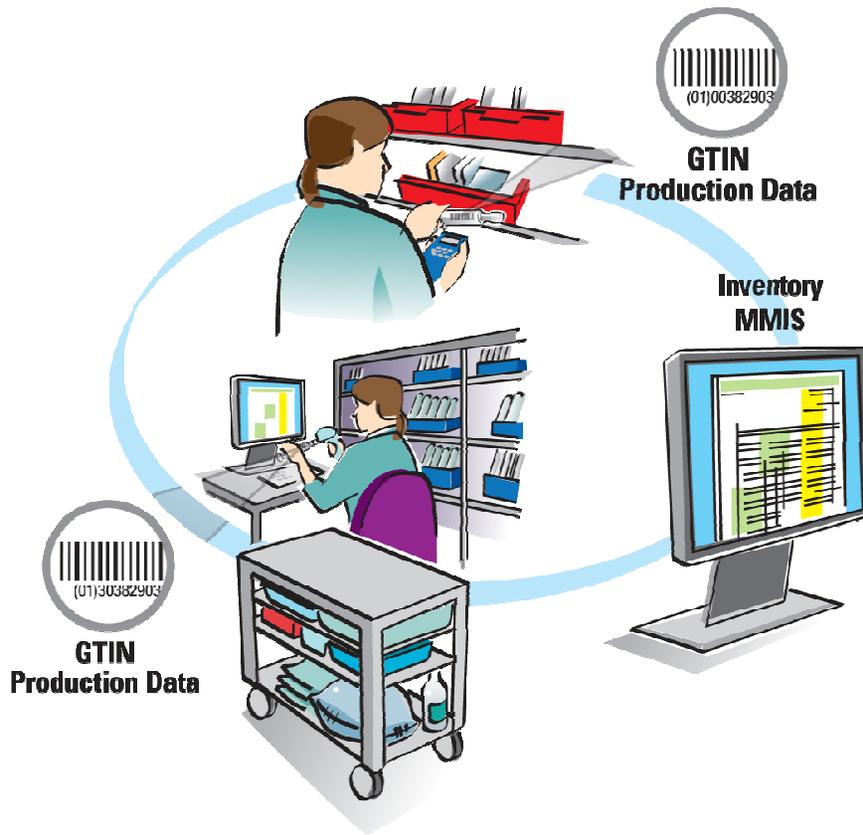
Mercy+



- 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

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- **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**

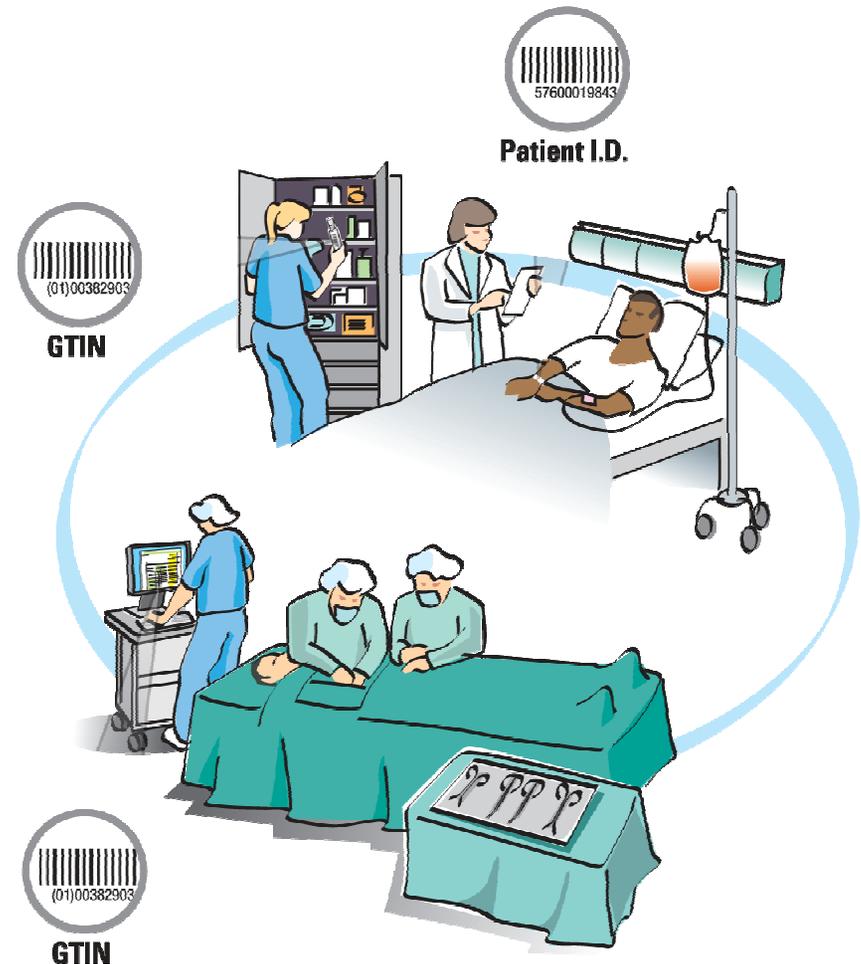
Patient Room/Operating Room

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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

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**Inventory
Management &
Replenishment**

Patient Charge

**Electronic
Health Record
(EHR)**

Healthcare Data

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1a Analysis

Edit Query Edit Report

View Structure Drill

Arial 9 B I U

Data Templates Map Properties fx [NameOf([Part Nbr])]

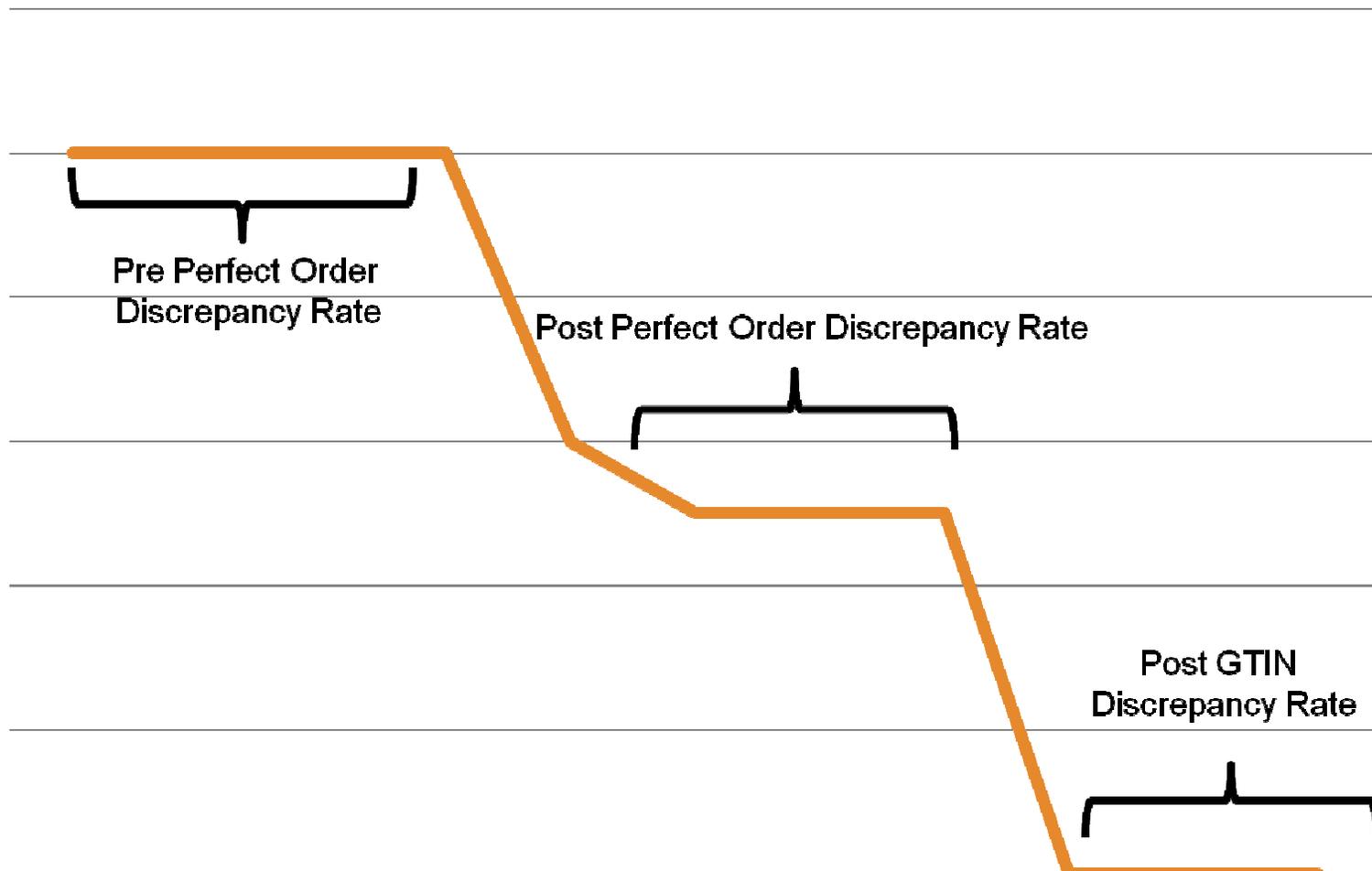
Patient MRN Id	OR Procedure Name	Supply Item Type	EPIC Supply Item Name	Manuf Cd	Item Nbr	Part Nbr
E1402260637	APPENDECTOMY	Basin	BASIN SURGI-START SGL 31144333	TYCI	120234	31144333
E1402260637	APPENDECTOMY	Catheter	CATH FOLEY 16FR TRAY 900016A	CRBA	77894	900016A
E1402260637	APPENDECTOMY	Cautery	CAUT PENCIL HND_CNTL WHLSTR E2	TYCI	328	E2515H
E1402260637	APPENDECTOMY	Cautery	ELCTRD CAUTERY 4IN 0014A	MDYN	120194	0014A
E1402260637	APPENDECTOMY	Cautery	PAD GROUNDING E7507	TYCI	43204	E7507
E1402260637	APPENDECTOMY	Cautery	TIP CAUTERY TEFLON SHORT 0012	MDYN	24918	0012
E1402260637	APPENDECTOMY	Clip	APPLIER ENDO CLIP II 1-USE W/MED-L	TYCI	266114	176657
E1402260637	APPENDECTOMY	Dressing	DRSG BANDAID 0.75X3" 3065LF	TYCI	42376	3065LF
E1402260637	APPENDECTOMY	Dressing	DRSG GZE 4X4IN 10/PK 2539	TYCI	182350	2539
E1402260637	APPENDECTOMY	Glove	GLV SURG BIOGEL 6.5 30465	MOLN	13319	30465
E1402260637	APPENDECTOMY	Glove	GLV SURG BIOGEL 8.0 30480	MOLN	9928	30480
E1402260637	APPENDECTOMY	Gown	GOWN SURG ULTRA XLG 95121	KIMB	4140	95121
E1402260637	APPENDECTOMY	Lab	BACTISWAB AEROBIC C/S R723115	ATC	181335	R723115
E1402260637	APPENDECTOMY	Lab	CULTURETTE SPECIMEN ANAEROBIC	BECT	129066	00382902365006
E1402260637	APPENDECTOMY	Laparoscopic	ENDO CATCH 10MM 173050G	TYCI	259427	173050G
E1402260637	APPENDECTOMY	Laparoscopic	SPNG ENDO KITTNER 13300	VICN	207726	13300

Reduced Error Rate

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Part # & UOM Discrepancy Rate



Many Benefits Achieved

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- 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 cased study can be found at: www.gs1us.org/BDMercystudy