DOD VA Sharing / Successes
DATA Synchronization

Federal / Industry Collaboration

Power of VA DOD Sharing Conference
St. Pete Beach, Florida
June 3, 2009

Kathleen Garvin  Program Manager, DoD/VA Data Synchronization Program
Michelle Whitehead  VISN 5 Chief Logistics Officer Veterans Administration
Agenda

• Problem – Bad Data - $$$ wasted in Supply Chain

• Healthcare Costs – Growing Concern

• Industry/Federal Collaboration/Progress Pilots/Programs

• DoD/VA Product Data Bank

• **Way Ahead – GDSN** – Venue to Patient Safety & more efficient hospital performance
Need for Federal / Industry Collaboration

- DOD/VA Medical relies on commercially based supply chain
  - Commercial products & product ID vs. NSN
  - Close synergy & reliance on commercial supply channels
- No standard item identification in the med/surg industry
- Billions $$ lost
- DOD/VA data sync team working with the industry
  - Data Sync selected & funded as a Joint Incentive Fund (JIF) DoD/VA Sharing Project
  - Development & implementation of standardized, synchronized product data
  - Establishment of a Product Data Utility (PDU)
- RFID, FDA device identification, Electronic Health Record implementation require data solution

Right data is the link to Readiness & Patient Health / Safety!
Signs of Bad Data & Results

Multiple DoD/VA Customer Dilemmas

- Multiple Manufacturer Names
- Multiple Product Numbers
- Inconsistent Item Descriptions
- Packaging Issues
- Old product data

Boxed – In by Bad Data

Who has it?
What is it?
How many do I get?
Is it obsolete?
Need for Clean Standardized Data

In Federal supply chain, bad data is causing:

- Dirty item masters
- Accounts Payable mismatches
- EDI kick outs and rejections
- Non-contract pricing
- Returns & credits for wrong items
- Inefficient use of resources

Translates to Wrong Item - Time & Place for our Service Members & Veterans
Big Picture Environment

Rapid Growth in Healthcare Costs

U.S. National Healthcare Expenditures

By 2010:

- $2.9 Trillion = Overall Healthcare Expenditures
- 18% of GDP = Healthcare Expense
- 24% U.S. Population: Age 60 & Above

CAGR - Compound Annual Growth Rate

Source: Center for Medicare & Medicaid Services; industry reporting; Pipal Research

Copyright Owens & Minor Inc July 2008
2008 Healthcare Executive Survey on Supply Chain Management
Healthcare Supply Chain

Where can Quality Data help reduce costs?

Total Supply Chain Expense as a Percentage of Total Hospital Expense

Other Hospital Operating Expense 55% to 65%

Supply Chain Management Expense 35% to 45%

Hospital’s Pain
William Beaumont Hospitals Mich
- To stem projected $22 M loss in 2008
- Lay off 165 workers
- Doctors 10% pay cut
- Wringing $10 million out of its supply chain

Crain’s Detroit Business Nov 17 2008
$16 Billion (or 48%) of supply chain costs are avoidable process costs in the existing healthcare products supply chain."

Improve the Efficiency of the Healthcare Supply Chain
EHCR November 1996

Updated 2006: Department of Supply Chain Management, Arizona State University
Data Synchronization

Goals / Strategy

GOALS

• Facilitate patient safety
• Reduce costs
• Eliminate manual work
• Reduce clinical frustration
• Improve speed of delivery
• Improve analysis
• Improve recall
• Reduce operational expense
• Increase collaboration
• Improve business intelligence
• Improve back office productivity
• Full partnership w/VA
  – Create single “Universal” Med Surg Prod Fed Catalog
  • Spend Analysis Capability
  • Improve Readiness Product Visibility
• Cleanse our Data Internally & Promote Data Sync w/Supply Chain Partners
• Pilot a “proof of principle” PDU for Industry
• Partner with Industry Stakeholders
• Move to Industry Sponsored PDU
• Capitalize on Proven Existing System/Technologies

Strategy

Promote Fed Needs Into Industry Solution
Future Healthcare Data Vision

“Data Connected Supply Chain”

**MANUFACTURERS**
- MFG “true” data passed thru supply chain
- Single Source of data
- Standards perpetuated

**DISTRIBUTORS**
- Access to “true” data standards
- Limited need to build item masters / modify data

**USERS**
- Clean/vetted data standards
- No need to re-create data or item masters
- DoD/ VA benefits

**INDUSTRY STANDARDS PDU**

Shared/Standardized Up-to-date Clean Data in Supply Chain

ALL PLUGGED INTO SAME STANDARDS & DATA SOURCE
## Data Sync History – How We Got Here – Where We’re Going

<table>
<thead>
<tr>
<th>1990s</th>
<th>2002</th>
<th>2003</th>
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<th>2005</th>
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<th>2008</th>
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<tbody>
<tr>
<td>DoD / VA MOU</td>
<td>PDU FEASIBILITY STUDY ARMY EZSAVE</td>
<td>JOINT FED WORK GROUP</td>
<td>DoD PDU PILOT EZSAVE TO SVCs DEVELOP PDB</td>
<td>DoD/VA JIF CATALOG</td>
<td>DoD VA JIF Program</td>
<td>DoD GDSN PILOT</td>
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**Data Sync Tools**

- **Pilot PDU**
  - "Build Own"

**ON-GOING EFFORTS**

- GLNs by 2010
- GTINs by 2012
DoD Data Synchronization
PDU Pilot Program Phase I

PDU Proof of Principle for Industry
Manufacturer as source of data

“Build Own” PDU

Foundation block for Federal and Industry Data Collaboration / Partnership
DoD Pilot Shows Results
Example of BD & DoD Before & After

<table>
<thead>
<tr>
<th>Issue</th>
<th>Becton Dickinson Before / After</th>
<th>DoD Before / After</th>
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</thead>
<tbody>
<tr>
<td>Missing Middle Levels of Pkging</td>
<td>2% &lt;1%</td>
<td>20-25% 2-5%</td>
</tr>
<tr>
<td>Hard “Packaging Quantity” Errors</td>
<td>&lt;1% 0</td>
<td>2% &lt;1%</td>
</tr>
<tr>
<td>Unit of Measure Confusion/Misuse</td>
<td>2% 1%</td>
<td>2-5% 1-2%</td>
</tr>
<tr>
<td>Missing Packaging—not Middle Level</td>
<td>1% &lt;1%</td>
<td>3-7% 1-3%</td>
</tr>
<tr>
<td>Manufacturer Name Problems</td>
<td>NA</td>
<td>1-4% &lt;1%</td>
</tr>
<tr>
<td>Obsolete Products</td>
<td>0%</td>
<td>1-8% &lt;1%</td>
</tr>
<tr>
<td>Missing Product Brand Names</td>
<td>0%</td>
<td>5-10% 1-3%</td>
</tr>
<tr>
<td>Incomplete Item Descriptions</td>
<td>0%</td>
<td>5-15% 3-5%</td>
</tr>
</tbody>
</table>
DoD - Lessons Learned

• DoD’s UPN Initiative 1993
  – Assignment of numbers without a process in place to certify and distribute does not work

• Cleaning and standardizing in-house data is not enough.
  – Very expensive resource intensive to constantly cleanse data – plus efforts multiplied across supply chain
  – Adopt standards
  – Adoption of a central industry-wide PDU is the way to achieve consistent, clean, standard medical product data for the entire healthcare supply chain

• Created a pilot data utility resulting in a PDB of million + records with improved robust data

Synchronizing and accessing data from central utility:
  – Reduces bad data and costs (real savings of $36M+ to date)
  – Increases operational efficiencies
eZ SAVe/MEDPDB

Michelle Whitehead
Main Topics

- Capabilities
- Reducing Healthcare Costs
- Patient Safety (Recalls)
- Out of Stock and Backorder Alternatives
- Federal Level Contract Tools
Various Capabilities Available in MEDPDB

MEDPDB:
- eZ SAVe price reduction tool
- Best Price Analysis
- Spend Analysis
- Contracts and Pricing for DoD and VA
- Commercial Benchmark Pricing
- Site purchase history (300+ DoD & VA sites)
- Terminal items & likely to go terminal

Readiness capabilities:
- Theater-centric views
- Site-specific sourcing
- Top medical readiness items with no contract coverage
- Commercial item sourcing info for National Stock Numbers
- Comparisons of medical assemblages for “like” items
The “Magic” behind pricing transparency

- Every vendor puts their own number on an Original Manufacturer’s product
- Makes product price comparisons difficult
What about FDA Recalls and Patient Safety?

- Hospitals do not always use the manufacturer name and number in their stock room
  - Military MTFs might use the NSN
    - If using an NSN, then there are multiple commercial items that are suitable for that NSN
    - How do you know if you are stocking the “recalled” item
  - What if you are stocking it by the vendor number?
    - The FDA does not issue recall notices for all known vendors and vendor part numbers—it is the hospitals responsibility to know what items they are actually stocking

***Item searches available in MEDPDB for all known part numbers—return you to the OEM MFG and PART NUMBER***
Class 1 Recall: Teleflex Medical, Arrow International Inc. 30, 40, and 50 cc Intra-Aortic Balloons

Date Recall Initiated: February 2, 2009
Product: Arrow International 30, 40, and 50 cc Intra-Aortic Balloons

The recalled model:
8 Fr 30cc Narrow Flex IAB Catheter Kit, Product Number: IAB-04830-U

**Item could be in your inventory system under any of these 4 numbers or even an NSN which would not match the FDA info given**
Finding Alternative Items
Stock outages, recalls and backorders

• Cardinal 72023e is #1 IV administration set in DoD and VA
  – What if this item went on backorder or was recalled?
    • Need source of data to find equivalent and similar items
    • Supplyline taxonomy provides that solution in MEDPDB
Spend Analysis by manufacturer or product category is available. In addition, Best Price Analysis useful for potential contracting opportunities.
PDB – What’s Next?

- Integrate emerging industry global data standards in DoD Medical Logistics Systems

- VA Strategic Asset Management (SAM) Integration

- Create VISN/TRBO views utilizing best price opportunities to identify contracting opportunities

- Extend eZ SAVe and MEDPDB to all VA and DoD sites
Global Data Synchronization Network (GDSN)

The Way Ahead

- GS1 growing at Federal level
- AAFES/DeCA/IDTS

- Top GPOs Promoting GS1 Standards

- Hospitals Demanding GS1 Standards

- GHX Certified GS1 data pool

- FDA Working with GS1

- DoD/VA Data Sync Computerworld Laureate Award

- Global pilot GS1 Success
Global model where manufacturers store standardized attributes about the items they own and publish item information to authorized trading partners in a secure data transaction. Standardized messaging within the system allows trading partners to reconcile differences electronically. As mistakes are recognized and corrected, all subscribers receive the corrected information electronically.

All participants are welcome to participate in the development of the standards.

*Healthcare Community – Moving to Adoption*
GS1 Worldwide – System of Standards

GS1 Global Healthcare

GS1 has formed a Healthcare Users Group that is a voluntary, global user group bringing together all healthcare stakeholders.

- Global Trading Partner Identification - GLN
- Global Product Identification - GTIN
- Global Product Data Management GDSN (Product Data Utility- PDU)
Global Supply Chain Identification

Global Location Number (GLN)

Healthcare Adopts the GLN Registry for Healthcare®

1100004570208 SAINT JOHN'S QUEENS HOSPITAL

Internal locations (Parent Child)
1100004570209 – OR
1100004570210 – Pediatrics
1100004570211 – Eye Clinic

One standard locator GLN
One address rationalized through for each location
Global Trade Item Number (GTIN)

- GS1 GTIN is Global Trade Item Number that uniquely identifies products and services
- An unambiguous identifier down to each packaging level
- A global standard for collaborative commerce
- Formerly UCC/EAN-128, ITF-14, GS1 DataBar formerly RSS, GS1 Data Matrix Bar codes, plus Electronic Product Codes (EPCs)
  - 1 digit – Indicator denotes packaging level
  - 12 digits – GS1 Company Prefix + Item Reference assigned by Manufacturer
  - 1 digit – Check Digit
Why GDSN

- Established industry neutral platform with technology inputs from multiple global industries
- Millions invested in the development of the infrastructure insulating healthcare from start up costs
- Proven global capability in standards development and governance
- Mandated by the world’s largest retailers & used by largest global industries – Grocery, Automotive, Retailers
- Millions of items are managed in the system today
Expanding base of Healthcare Organizations That Publicly Announced Support of GS1 Supply Chain Standards

Members of Strategic Marketplace Initiative

| Allina Hospitals & Clinics | Mayo Clinic |
| Atlantic Health | OhioHealth |
| Baptist Health System | Orlando Health |
| BJC HealthCare | OSF Healthcare System |
| Bon Secours Health System, Inc. | Parkland Hospital and Health System |
| Carolinas HealthCare System | Providence Health & Services |
| Catholic Healthcare East | Sentara Healthcare |
| Catholic Healthcare West | Sisters of Mercy ~ ROI |
| Duke University Health System | SSM Health Care |
| Geisinger Health System | SUNY Downstate Medical Center |
| Greenville Hospital System | Texas Health Resources |
| Intermountain Health Care | The Methodist Hospital System |
| Iowa Health System | University Kentucky HealthCare |
| Johns Hopkins Health System | University of Rochester |
| Kettering Health Network | WellSpan Health |
| Loma Linda University Medical Center | Yale New Haven Health System |

• **Sisters of Mercy ROI**
• **Amerinet**
• **CHeS**
• **Healthcare Supply Chain Standards Coalition**
• **GHX**
• **Novation**
• **Georgia Society for Healthcare Materials Management**

**Premier**

| Child Health Corporation of America |
| Banner Health System |
| Bon Secours Health System, Inc. |
| Health Enterprises Cooperative |
| Catholic Healthcare West |
| Prairie Health Ventures |
| Adventist Health |
| Baptist Health South Florida |
| Methodist Healthcare |
| Texas Health Resources |
| Detroit Medical Center |
| Sharp HealthCare |
| Methodist Health System |
| Fairview Health Services |
| Henry Ford Health System |
| PeaceHealth |
| SSM Health Care |
| Resurrection Health Care Corporation |
| University of Texas MD Anderson Cancer Center |
| Greater New York Health System Association |
| Adventist Health System |
| Cleveland Clinic |
| Catholic Healthcare Partners |
| Yankee Alliance, Inc. |
| West Penn Allegheny Health System |
2008 GS1 Healthcare Leadership Team*

• Co-Chairs:
  – **Mark Hoyle**, AIDC Manager, COE Packaging, Covidien
  – **Tim Marsh**, Senior Manager, Pfizer Global Package Technology

<table>
<thead>
<tr>
<th>Company</th>
<th>Representative</th>
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<tbody>
<tr>
<td>Abbott</td>
<td>Mike Wallace</td>
</tr>
<tr>
<td>Alcon Pharma</td>
<td>Grant Hodgkins</td>
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<tr>
<td>B.Braun</td>
<td>Volker Zeinar</td>
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<tr>
<td>CHU Aulnay</td>
<td>Frédérique Fremont</td>
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<tr>
<td>CVS</td>
<td>Ramesh Murthy</td>
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<tr>
<td>GSK</td>
<td>James Hickland</td>
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<td>J&amp;J</td>
<td>Tom Werthwine</td>
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<tr>
<td>McKesson</td>
<td>Ron Bone</td>
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<tr>
<td>Medtronic</td>
<td>Jackie Elkin</td>
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<tr>
<td>Novartis</td>
<td>Scott Cameron</td>
</tr>
<tr>
<td>Premier</td>
<td>Joe Pleasant</td>
</tr>
<tr>
<td>Smiths Medical</td>
<td>Jim Willmott</td>
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</tbody>
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*11 Jul 2008
GS1 Healthcare Newsletter
FDA and Industry Collaboration for Unique Device Identification

- New York Times article highlighted FDA study. (April 1, 2005)
- Held series of meetings with stakeholders – manufacturers, federal agencies and providers. (Premier attended provider meeting Oct. 2005.)
- White paper developed by ECRI summarizing current available technologies.
- FDA released its report of its Medical Device Postmarket Safety Program -- several references to the need for unique identification of medical devices.
- FDA states: “We will champion the development of a system to provide unique device identification, a standardized and globally accepted nomenclature for devices, and mechanisms and incentives for device users to include this information in healthcare records.”

FDA Unique Device Identification Implementation
- Accommodates use of GS1 GTIN
- Co-sponsoring GS1 HC conf
  Jun 09 in DC

Congress and President sign Act in September 2007
FDA Unique Device Identification Public Workshop

What should be the UDI's components? Could existing standards, such as the standards used by GS1, Health Industry Business Communications Council (HIBCC), or others be used as a model for the UDI system?

Feb 09

FDA Public Responses

**RESPONSE:** There is a clear advantage for using the GS1 system in that it has been in use by other industries for many years, it is recognized globally and it is committed to modifying its standards as needed for healthcare products.

SSM Health Care  St. Louis, MO
Kettering Health Network  Kettering, OH
Regional Health  Rapid City, SD
St. Anthony’s Medical Center  St. Louis MO
Sharp Healthcare
Molnlycke Healthcare
Spearfish Regional Hospital, Spearfish SD
Premier Health Alliance

McLeod Health  Florence, SC
St. Francis Hospital & Medical Center Hartford, CT
Rapid City Regional Hospital  Rapid City, SD
Peninsula Regional Medical Center  Salisbury MD
Greater New York Hospital Association  NY, NY
Avera Queen of Peace Health Services  Mitchell, SD
Advancing Patient Safety Coalition

**Novation** – GTIN  GS1 GDSN meets the UDI criteria

**Yale New Haven Health System** – GTIN will fill the requirements, one standard regardless of Mfg

**ECRI Institute** – Having multiple standards for presenting a UDI will cause significant amount of confusion & potentially dramatically increase the cost of adopting UDI

**Becton Dickinson** – Any change from GTINs as an identifier would require several years & millions of $ virtually all of medical devices BD sells in the US are marked with a GS1 GTIN at shipping unit level.

**AHRMM** – Support use of GS1 standards  **ALCON Labs Inc** – Strongly supports & recommends GS1
RESPONSE: There is a clear advantage for using the GS1 system in that it has been in use by other industries for many years, it is recognized globally and it is committed to modifying its standards as needed for healthcare products.
DoD Healthcare GDSN Pilot

Manufacturers
- BD
- KCI
- GOJO
- COOK
- Kimberly-Clark
- 3M
- Medline
- CardinalHealth
- Propper
- HUNTEIGH

On Boarding
- DATAgility
- ONTUEt

Retail Crosswalk

Data Pool
- GDSN Global Registry

GPO
- PREMIER
- Amerinet
- Novation™

Payer
- CardinalHealth
- OM Owens & Minor
- SutureExpress

Distributors
- GPO

Providers
- Baptist Health South Florida
- ProMedica Health System
- University Health Care System
- Norton Healthcare
- Mercy
- Sisters of Mercy Health System
- Atlantic Health
- Kettering
- St. Alexius PrimeCare
- Johns Hopkins Institutions
- Intermountain Healthcare
- UK HealthCare
- Geisinger
- Allina Health
- Sutter Health
- Catholic Health East
- Lawson MMIS
- McKesson

DoD Healthcare GDSN Pilot
What We Learned in GDSN Pilot

Manufacturer:
- Have data, just not in one place – need an internal product data strategy
- Need for an Industry-wide product data strategy
- Global impact on decisions

GPO:
- Can consume GDSN data with minor changes to current system
- Minor enhancements required to deliver GDSN data using existing delivery system
- Well positioned to provide standards based integration approaches beyond current delivery mechanism

Software Provider:
- Internal business systems have many of the fields, technology and processes to get started with data synchronization
- Long term, they will need to be further adapted for new processes driven by the GDSN

Hospital:
- Can use data for spend analyses
- Project significant savings in reconciliation of GPO and distributor item files
Global leadership team has endorsed 40 attributes for initial implementation based on lessons from pilots.

GDSN Data Field Recommendations for US Medical Products – 1.0

<table>
<thead>
<tr>
<th>Required for each packaging level:</th>
<th>Pack Level Indicator</th>
<th>Manufacturer Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GTIN</strong></td>
<td>14 character unique identifier for the pack level</td>
<td>For reference, to be GTIN to existing master MIB</td>
</tr>
<tr>
<td><strong>Manufacturer Name</strong></td>
<td>Manufacturer of the product</td>
<td>Branding</td>
</tr>
<tr>
<td><strong>Information Provider</strong></td>
<td>Name and GLN of the publisher of the data</td>
<td>Name and GLN of the brand owner and the recognized Brand Name of the product</td>
</tr>
<tr>
<td><strong>Target Market</strong></td>
<td>Country where product is approved for publishing</td>
<td>Package Markings</td>
</tr>
<tr>
<td><strong>GPC Code</strong></td>
<td>Is item a medical product or pharmaceutical</td>
<td>Is the package marked with a batch number?</td>
</tr>
<tr>
<td><strong>Pack Hierarchy Questions</strong></td>
<td>Child GTIN and quantity of next pack level</td>
<td>Descriptions*</td>
</tr>
<tr>
<td><strong>Functional Name</strong></td>
<td>What does this product do? Often populated with a description from manufacturer’s internal code</td>
<td>Multiple titles and lengths are available for manufacturers to publish their best descriptions</td>
</tr>
</tbody>
</table>

**Commodity Codes**
- Manufacturers can publish several commodity codes they may have assigned to their products (UNSPSC, HCPCS)

**Package Markings**
- Does the package display lot markings?
- Is packaging marked with a bar code?
- Is the package marked as sterile? (future)
Summary - Industry
GS1 Standards

• HC Supply Chain will adopt GS1 for MED SURG product data standards and data sharing:
  – DoD GS1 pilot growth in excess of 40 healthcare providers and distributors
  – GS1 Healthcare US selects & recommends GS1 40 attributes key to establishing a healthcare data pool – GS1 Healthcare Global concurs
  – Major healthcare players endorse GS1 data standards (GTINs, GLNs – product & organization IDs) and data sharing network (GDSN)
  – DoD & FDA’s UDI collaboration implementation follow industry’s move to GS1 standards

• DoD/VA consumption must prepare internal systems for GS1 standards (GTIN/GLNs)
DoD/VA Must be prepared…

• Leading GPOs will adopt GS1 standards requiring use of GTINs & GLNs in contracts with their medical device suppliers & manufacturers:

<table>
<thead>
<tr>
<th>Premier (800 suppliers/mfgs)</th>
<th>Amerinet (700 supplier partners)</th>
<th>Novation (500 suppliers)</th>
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</thead>
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- **2010 GLN Sunrise**
  Adoption of GLN in Healthcare by 2010
  Global Location Numbers (GLNs)

  The goal of the 2010 GLN Sunrise is to use standardized location identification (GLNs) by December 2010

- **2012 GTIN Sunrise**
  Adoption of GTIN in Healthcare by 2012
  Global Trade Item Numbers (GTINs)

  The goal of the 2012 GTIN Sunrise is to use standardized product identification (GTINs) by December 2012
Where Are We Going?

- Continue partnership with VA & other Federal partners
- Collaboration with Healthcare Supply Chain to GS1 Standards Implementation
- *Prepare Federal systems to accommodate GS1 standards*
- Collaboration to implement FDA’s UDI
- Integrate MEDPDB into legacy systems

Need your help to extend the benefits of Global Healthcare Standards to our Service Members and Veterans