Nothing is more difficult to undertake, more perilous to conduct or more uncertain in its outcome, than to take the lead in introducing a new order of things. For the innovator has for enemies all those who have done well under the old and lukewarm defenders amongst those who may do well under the new.

*Niccolo Machiavelli (1523)*
Unique Device Identification (UDI) – Transforming the Global Medical Device Landscape

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History of FDA’s UDI Project

• 1999 IOM Report – To Err is Human
• 2004 FDA Pharmaceutical Barcode Rule
• 2005 and 2006 FDA/FDLI Meeting on UDI
• 2006 Public Meeting and Docket FDA-2006N-0292
• 2007 FDA Amendments Act of 2007
• 2007-2009 – UDI Database Pilots
• 2008 GHTF Ad-Hoc Working Group on UDI
• 2009 UDI Workshop and Docket FDA-2008-N-0661
• 2011 GHTF UDI Guidance published
• 2012 July 10th - UDI Proposed Regulation Publishes
• 2012 FDASIA provisions added
• 2012 November 7th – comment period closes
• 2012 November 19th – FDASIA amendment (Dec 19)
• 2013 May – expect UDI Final Rule
Not later than December 31, 2012, the Secretary shall issue proposed regulations establishing a unique device identification system for medical devices requiring the label of devices to bear a unique identifier, unless the Secretary requires an alternative placement or provides an exception for a particular device or type of device. The unique identifier shall adequately identify the device through distribution and use, and may include information on the lot or serial number. The Secretary shall finalize the proposed regulations not later than 6 months after the close of the comment period and shall implement the final regulations with respect to devices that are implantable, life-saving, and life sustaining not later than 2 years after the regulations are finalized, taking into account patient access to medical devices and therapies.
GHTF/IMDRF UDI AHWG

• Formed October 2008; EC Chair
• Members US, Europe, Japan, Canada – and AHWP
• Guidance published September 2011
• General framework for any regulatory who wants to develop their own UDI System
• Now morphed into IMDRF – work continues
• Updated guidance to be published 2013
UDI Proposed Regulations

1. Changes and additions to Part 801 Labeling
2. New Part 830 – UDI Requirements
3. Conforming Amendments
Establishing a UDI System

Combination of 4 distinct steps:

1. Develop a standardized system to develop the unique device identifiers (UDI)
2. Place the UDI in human readable and/or AutoID on a device, its label, or both
3. Create and maintain the UDI Database
4. Adoption and Implementation
1st – Developing the UDI

- Develop UDI code according to ISO 15459 [GS1, HIBCC, ICCBBA]
- Created and maintained by the manufacturer
- Concatenating Device and Production Identifier
- **Device Identifier (DI):** [static] Manufacturer, make, model [i.e., each catalogue number]
- **Production Identifier (PI):** [dynamic] however product is currently controlled – serial, lot number; expiration, manufacturing date
2nd – UDI Application

• Unique UDI applied to “base package” AND higher levels of packaging
• Default location is the label
• Human readable and encoded in a form of automatic identification technology
• No specific technology (technology neutral)
• ALSO Direct Part Marking (DPM) for
  • an implantable device (>30 days)
  • intended to be used more than once, and intended to be sterilized before each use
  • stand-alone software
General Exemptions

- Class I Devices do not need to include Production Identifiers in UDI.
- Devices, other than prescription devices, made available for purchase at a retail establishments, (aka OTC devices, regardless of where distributed).
- GMP-exempt Class I devices
- Individual class I, single-use devices, all of a single version or model, that are distributed together in a single device package, which are not intended for individual sale – the UDI is on the package
- And others…
UDI Application Example

PRESTIGE® Cervical Disc System
CERVICAL DISC, 6X12MM
Size: 6mm x 12mm
Mat'l: TITANIUM CARBIDE COMPOSITE

Sterility assured only when package is undamaged.

Medtronic Sofamor Danek USA, Inc.
1800 Pyramid Place
Memphis, Tennessee 38132
Telephone 800 633 2035 (in
U.S.A.) 901 396 3133 (Outside U.S.A.)
Fax 901 396 0366
Manufactured in WARSAW IN US
UDI Application Example

**Endopath® dextrus™**

**Finger-Mounted Locking Forceps**

- **REF:** FMF02
- **LOT:** 1Q34
- **QTY:** 4
- **REF:** 080100
- **LOT:** 1Q34

**Manufacturer**
T.A.G. Medical Products
Kibbutz Gaaton 25130 Israel
Tel: 972-4-9858400, Fax: 972-4-9858404

**EU Representative**
MEDNET GmbH
Borkstrasse 10 48163 Muenster, Germany
Tel: +49 (251) 32266-0
Fax: +49 (251) 32266-22

**Distributor**
Ethicon Endo-Surgery Inc
Cincinnati OH 45242-2839 USA

- **Do not use if package is open or damaged**
- **Single patient use only**
- **Does not contain latex or PVC**
- **STERILE**
- **Rx Only**

**Reference:**
(01) 2 081019001 002 4
(17) 080100(10) 1Q34
UDI Application Example
MOSAIC® 305 CINCH® II
Porcine Bioprosthesis Aortic Valve

Aortic

(01)00643169001763(17)160712(21)21A11F4855

Check temperature indicator prior to use

Manufacturer:
Medtronic, Inc.
710 Medtronic Parkway
Minneapolis, MN 55432
USA

Manufactured at:
Santa Ana, CA USA
© 2011 Medtronic
1211533002 Rev. 1B

Sterile LC: Device has been sterilized using Liquid Chemical Sterilants according to EN/ISO 14160.

Pyrogenic
Nonpyrogenic
Do Not Resterilize

Do Not Reuse

Rx only
For US Audiences Only

www.medtronic.com/manuals
Consult Instructions for Use
Combination Products and Kits

- Combination product (PMOA is a device) has its own UDI; each device constituent needs its own UDI.
  - Except a CP that is physically, chemically, or otherwise combined with other parts of the CP such that it is not possible for the device constituent to be used except as part the CP.
- Each kit (devices only) has its own UDI; each device packaged in a convenience kit shall have its own UDI, distinct from the kits.
  - Except – a device is intended for a single use does not need its own UDI
3rd – Global UDI Database

- Device Identifier Type/Code [GTIN, HIBCC]
- Make/model; Brand/Trade Name
- Clinically relevant size
- Device version/model number (or reference number)
- Unit of Measure/Packaging level/quantity
- Controlled by – Lot and/or Serial Number; Exp. Date
- Labeler contact name, phone, email
- GMDN Classification code/term
- Whether packaged sterile
- Contains latex
- FDA premarket authorization (510k, PMA)
- Listing number
Each GMDN Term consists of 3 parts:

- **Term Name:** Insulin syringe, fixed-needle

- **Definition:** A device consisting of a small, calibrated, hollow barrel (cylinder) and a moveable plunger with a permanently-attached needle (usually capped for user protection) that is used to administer an injection of insulin to a patient subcutaneously…

- **Code:** 38501
3rd – Global UDI Database

Administrative attributes:
• DUNS Number
• Brand Name or Model/Version – Device Family
• FDA product code (procode)
• Marketing Status/date
• For single-use
• Contain Human Tissue
• Kit Product
• Combo Product
• Higher levels packaging
• Rx - OTC
3rd – Global UDI Database

Unique Device Identification Database (UDID) – Package Illustration

Package Configuration Examples

Package DI = 002
Contains 4 units of
Base Package DI 001
Quantity per package = 4

Package DI = 003
Contains 10 units of
Base Package DI 001
Quantity per package = 10

Package DI = 004
Contains 5 units of
Base Package DI 003
Quantity per package = 5

Base Package
Primary DI = 001

Box of 100 gloves
Device Count = 100
FDA’s UDI Database

The label of Medical Device 123 Size 45:
Device Identifier (Device XYZ123)
Production Identifier (Lot #ABC)
Expiration date (MMDDYYYY)
Sterile; Latex free

Manufacturer (Acme)

Minimum Data Set
For each Device Identifier:
• Manufacturer and model
• GMDN Code
• Other attributes

3rd Parties (GDSN)

Web based tool

Bulk HL7 SPL

Distribution

FDA

FDA Managed

Business Rules

FDA’s UDI Database

Public User Interface

Minimum Data Set
For each Device Identifier:
• Manufacturer and model
• GMDN Code
• Other attributes

3rd Parties (GDSN)

Web based tool

Bulk HL7 SPL
4th – Implementation

- Based on premarket risk class after publication of final rule:
  - class III – 1 year
  - [FDASIA] Class I and II implants and life-sustaining devices – 2 years
  - the rest of class II – 3 years
  - class I – 5 years
- Phase out national numbering system (NDC/NHRIC)
- Direct part marking requirements are effective 2 years after class effective date
Conforming Amendments

- Part 803 – Medical Device Reporting
- Part 806 – Reports of Corrections And Removals
- Part 810 – Medical Device Recall Authority
- Part 814 – Premarket Approvals
- Part 820 – Quality System Regulation
- Part 821 – Medical Device Tracking Requirements
- Part 822 – Postmarket Surveillance
FDASIA amendment comments

• See all comments at:
  http://www.regulations.gov/#!docketBrowser;rpp=25;po=0;D=FDA-2011-N-0090

• Submit comments on FDASIA timeline by Dec 19th
  http://www.regulations.gov/#!documentDetail;D=FDA-2011-N-0090-0222

• Identify by Docket No. FDA-2011-N-0090 and/or RIN No. 0910-AG3.
Unique Device Identification
www.fda.gov/UDI
Email: cdrhudi@fda.hhs.gov