Standards als Voraussetzung der Leistungserfassung im heterogenen klinischen Umfeld

9 September 2014
Bern
You’ll be happy to know we have new procedures that’ll prevent mistakes, Mr Brown.

My name’s Smith!
Topics

GS1 a nutshell

GS1 & identification

ISO Specifications
Topics

- GS1 a nutshell
- GS1 & identification
- ISO Specifications
Global reach, local presence

Not-for-profit
111 Member Organisations
1’500’000 user companies
(from SME to global companies)
Member driven
150 countries served; 20 different domains
2,500 people helping us
Over 6 billion transactions a day
GS1 system of standards

**IDENTIFY:** GS1 Standards for Identification

- **GLN** Global Location Number
- **GTIN** Global Trade Item Number
- **SSCC** Serial Shipping Container Code
- **EPC** Serialized Global Trade Item Number

**CAPTURE:** GS1 Standards for Automatic Identification & Data Capture

- **GS1 BARCODES**
  - EAN/UPC
  - GS1-128
  - ITF-14
  - GS1 DataBar
  - GS1 DataMatrix
  - EPC HF Passive
  - EPC UHF Passive

- **GS1 EPC/RFID**

**SHARE:** GS1 Standards for Automated Data Exchange

- **MASTER DATA** GLN Registry for Healthcare®, Global Data Synchronization Network® (GSN®)
- **TRANSACTIONAL DATA** eCom (EDI)
- **EVENT DATA** EPC Information Services (EPCIS)

**INTEROPERABILITY**

- **ITEM MASTER DATA**
- **LOCATION DATA**
- **ITEM TRACKING**
- **ORDER TO CASH** (Purchase Order, Dispatch Advice, Invoice)
- **TRACEABILITY** (Track & Trace, Pedigree, Authentication)
- **PRODUCT RECALL/WITHDRAWAL**
Migros’ Supply Chain in today’s operation

Quelle: M. Ducceschi, Leiter Supplier Systems, Migros-Genossenschafts-Bund, Berner Fachhochschule 2014
Healthcare Supply Chain...

...involving GS1 and HL7 standards*

*and IHE
Topics

- GS1 in a nutshell
- GS1 & identification
- ISO Specifications
Linking the real world to the information world
What do I read – what do I understand?

Wszyscy ludzie rodzą się wolni i równi pod względem swej godności i ich praw

Беларусы – Выбітныя асобы
- Геаграфія – Гісторыя
- Культура - Кухня – Мова - Спорт – Сьвяты - Турызм
Identification

- Bar code (data carrier):
  - Not every bar code carries a data which can be understood
- Semantics to help understand data from a bar code
  - Definition of a Trade Item → Global Trade Item Number (GTIN, previously known as «EAN»)
  - Definition of a Service Relation → Global Service Relation Number (GSRN)
  - Definition for attributes such as “expiry date”, “service relation instance number” (SRIN), etc.
- … and other identification keys

- Use of «Application Identifiers» to qualify the information carried in a bar code
Identification structure (examples)

GTIN

0117612345100002

GTIN

0107613167000009

Serial #

21CYT09638070031012312300

Expiry Time

GSRN

ROLE = Recipient

80187612345000000000000C

ROLE = Subject of care

80187612345000000000000C8019

GSRN

SRIN

Instance Number……..
Importance of linking information with the use of the same semantics
BCMA* Workflow

Scan Patient

Auto-discriminates symbology

Delivers a string of data

Documents in eMAR

Maps to order info

BCMA Application

Evaluates

*BCMA= Bar Code Medication Administration

Source: Mike Wisz, Mike Wisz Associates, San Diego, CA
Topics

- GS1 a nutshell
- GS1 & identification
- ISO Specifications
Use of standards…. Is it complex?
GS1 interacts with ISO for a long time:
- GS1 bar codes are standards according ISO (ex: EAN-13);
- ISO bar codes are integrated into GS1 standards (ex: DataMatrix)

GS1 standards are leveraged in ISO standards, some examples
- ISO TS 16791 (machine readable identification of medicinal product)
- ISO 10685 (Ophtalmic optics: Product identification and electronic catalogue, product hierarchy)
- ISO TS 18530 (Patient and Care giver machine readable identification)
ISO TS 18530, leveraging GS1 GSRN

Distinguish «provider» from «recipient»
Recommended use of GS1 DataMatrix
Point of care scanning: Workarounds

Source: Design for Reliability: Barcoded Medication Administration
By Avis C. Hayden, PhD; Edward T. Lanoue, BSPharm, RPh; and Charles J. Still, MBA, Patient Safety & Quality Healthcare, July-August 2011


<table>
<thead>
<tr>
<th>Workaround Type</th>
<th>Discovery</th>
<th>Solutions</th>
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<tbody>
<tr>
<td>Caregiver does not scan patient armband.</td>
<td>For given date range, reviewed armband scan rate is lower than medication scan rate to a degree greater than 5%.</td>
<td>- Education on workflow requirements</td>
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<td>- Continued monitoring</td>
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<td>- Use of 2D barcodes to make it easier to scan the armband</td>
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<td>- Setup workflow to have the armband scanned before medications are scanned.</td>
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<td>Caregiver scans proxy barcode.</td>
<td>If there are Proxy Barcodes available to be scanned, they will at some point be scanned.</td>
<td>Disable the capability of proxy barcodes to be scanned.</td>
</tr>
<tr>
<td>Caregiver prints additional armbands to act as proxy barcodes.</td>
<td>Audit Trail of armband printing in nursing units</td>
<td>- Add name of person printing and date and time to the armband itself.</td>
</tr>
<tr>
<td>Caregiver does not scan medications.</td>
<td>Low medication scan rate</td>
<td>- Identify medications that do not have scannable barcodes upstream from the bedside medication delivery process</td>
</tr>
<tr>
<td></td>
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<td>- Provide scannable barcodes</td>
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GSRN+SRIN to avoid workarounds

UC07 – Medication Administration in the Ward

<table>
<thead>
<tr>
<th>Individual Provider</th>
<th>SoC</th>
<th>Individual Drawer</th>
<th>IT system</th>
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- **StartOf Use Case**
- **Scans SCI and SRIN**
- **Administers medication to SoC**
- **Documents medication administered to SoC**
- **End of Use Case**
- **Identification Band**
- **SCI and SRIN**
- **SCI and SRIN**
- **Medication**
- **Regonises the 2 SCIs match and the 2 SRIN are different**
- **SoC Health Record**

**NOTE:** Avoids scanning same SCI twice

Source of this slide: ISO Technical Specification 18530
This Technical Specification:

• provides **guidance** on identification and labelling of medicinal product from the point of manufacture of packaged medicinal product to the point of dispensing the product.

• outlines **best practice for AIDC barcoding solutions** for various applications, including data capture at the point of care.
Joint recommendations for the avoidance of confusion concerning the primary packaging and labelling of solid pharmaceutical dosage forms

Companies in the pharmaceutical industry will endeavour, in so far as this is technically feasible and compatible with the internationally standardized regulatory framework, to improve the labelling and identification of individual blister pack cavities on the basis of the following recommendations:

Improvements of the primary packaging and its labelling

Joint recommendations for the avoidance of confusion affecting the primary package and labelling of liquid pharmaceutical dosage forms

Companies in the pharmaceutical industry will endeavour, in so far as this is technically feasible and compatible with the internationally standardized regulatory framework, to improve the primary packaging and...
ISO Technical Specifications

- Secures Patient Identification in the clinical systems
- Provide homogeneous scanning environment
- Enhance patient safety in the care processes
- Enhance efficiency in the exchange of clinical information
- GS1 standards provide the homogeneous environment which secures automatic identification data capture (AIDC) at the point of care
Questions?
Contact

Christian Hay
Delegate Healthcare,
GS1 Switzerland

Tel   +41 21 825 32 19
Mob   +41 76 369 10 54
christian.hay@gs1.ch