The implementation of global standards in a large academic hospital, supporting efficiency and patient safety

Mr Erik Zwarter, Information Manager EHealth and AIDC, Erasmus MC, Rotterdam, the Netherlands

May 17, 2018
Welcome and thank you for attending!

• Welcome to our May 2018 webinar.
  Thank you to our guest speaker Mr Erik Zwarter, Information Manager EHealth and AIDC, Erasmus MC, Rotterdam, the Netherlands

• Some housekeeping for today:
  - All attendees will be on mute
  - If you have questions during the presentation, please type them into the questions area and these will be monitored then answered at the end of the call

• After the webinar:
  - Within a week, the recording will be posted to: http://www.gs1.org/healthcare/hpac_webinars
  - All previous webinars are also posted to this location, so please feel free to use this resource and share the link
The GS1 Healthcare Provider Advisory Council (HPAC)

Focus is on thought leaders and adopters of GS1 Healthcare Standards from the global clinical provider environment. Their final goal is to improve patient safety, cost efficiency and staff productivity through implementation of GS1 standards.

- A forum for sharing and discussion
- Identification of projects and case studies
- A source of expertise and advice

- About the practical realities of implementation of GS1 Standards in the care giving environment in regards to the impact on clinical care and patient interaction
- That support the adoption of GS1 Standards in healthcare providers and retail pharmacies
- For publication, presentation and sharing
- To those involved in GS1 standards development, the wider Healthcare stakeholder community and senior executives/decision-makers to gain their buy-in and support for implementation of GS1 Standards
HPAC Activities

<table>
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<tr>
<th>Webinars</th>
<th>Awards</th>
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<td>• Monthly webinars open to all stakeholders interested in learning about GS1 standards implementation in the care giving environment.</td>
<td>• Twice per year</td>
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<td>• <a href="http://www.gs1.org/healthcare/hpac_webinars">http://www.gs1.org/healthcare/hpac_webinars</a></td>
<td>• Provider Best Case Study Award</td>
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<td>• Provider Recognition Award</td>
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<td>• The prize is travel / accommodation to attend the next GS1 Healthcare conference</td>
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GS1 Healthcare also holds two global conferences per year. The next conference will be in Bangkok from October 31st – November 1st, 2018. We expect significant Healthcare Provider participation on the agenda.
THE IMPLEMENTATION OF STANDARDS

Erik Zwarter
Implementation of our EMR

Introduction of next generation of a Electronic Medical Record on June 23, 2017
Moving in

Moving into our new hospital on May 18, 2018
information manager working on
- eHealth,
- digital information exchange of medical data
- Automatic Identification and Datacollection (AIDC).

Working for 15 years in different functions and several departments in Erasmus MC.
For the last 2 years in the central IT department.
Every healthcare provider is able to scan and share data fast, reliable and flawless within their own work environment (EMR)
Main Goals

Patiënt safety
Logistic efficiency

In the way the domain of public transport uses processdata via Automatisch Identification and Datacollection (AIDC) for crowd control
Het ministerie van VWS heeft vorige week de Tweede Kamer geïnformeerd over de uitkomsten van het onderzoek van Capgemini Consulting over barcodering op de verpakking van geneesmiddelen. Eén van de belangrijkste conclusies is dat bij ziekenhuizen in euro besparen door in bij medische hulpmiddelen.

21,4 miljoen Euro’s per jaar saving on medication

170 miljoen Euro’s per year savings on medical devices
Medical Devices and IVD Regulations in EU, US and other countries

Status:
- May 2017: publication Medical Device Regulation (MDR)

Purpose: Medical Devices Identification system

Open point(s)/upcoming developments:
- Unique device Identification (UDI) specifications are part of the core of the Regulations
- EU DataBase, Eudamed
- Some different approaches to US FDA
- UDI assigning entities: GS1, HIBCC and ICCBBA
- traceability requirements
- healthcare providers have to store the UDIs

Trinity

carrier

form

structure
Daily routine in healthcare
Triple Constraint

9201 8018871405400030300908
As old as ...
19 STRANGE DUTCH HABITS
(with cartoon examples)
Why a brilliant failure?
Brilliant Failure 1
Why is this a failure?

Yes, we scan
Yes, we scan, but ...

Problem:
- The form is conform GS1
- The datastructure is NOT conform GS1
- 7 IT systems could NOT use the new Datamatrix

Solution:
- Reprogram the barcode scanners
Triple Constraint

Problem:
- Fixed time, fixed budget > scope is flexible
- GS1 standard adopted by the Board of Directors but...

Solution:
- GS1 standards should be a part of the Project Start Architecture (PSA) of every project, program and implementation.
- The role of middle management in adoption and implementation of GS1 standards is key.
So by sharing this knowledge with you, is has become a Brilliant failure.
Brilliant Failure 2
Why is this a failure?

Yes, we scan
Yes, we scan, but ...

Problem:
• The form was NOT conform GS1
• The datastructure in NOT conform GS1
• The datastructure contained a URL to …
• A data and information catalogue of the vendor

Solution:
• Re-label all the rooms (GLN)
• Re-label all assets (GIAI)
• No vendor lock via assetlabelling
• The label solution of **T2S**
Briljant Failure 3
Why is this a failure?

Yes, we scan
Yes, we scan, but ...

Problem:
- The datastructure in NOT conform GS1
- Proposed solution by B.Braun #4 for patients and #5 for medication.
- Barcode scanner and B.Braun software could NOT scan the wristband and GS1 UDI on medication

Solution:
- Reprogram the barcode scanners
- Re-label all the medication (Z-index)
- The label solution of T2S
So by sharing this knowledge with you, it has become a brilliant failure.
Wrap Up:

Software

Scanner

Structure
Our Successes

Triple aim:
- One process in the healthcare flow
- Interoperability between IT systems
- Supporting the administrative healthcare processes

Goals:
- Creating patient safety
- Logistic efficiency
Our Successes

Triple aim:
• One seamless process in the healthcare flow
• Interoperability between IT systems
• Supporting the logistic healthcare processes

Goal:
• Logistic efficiency
Wrap Up:

Software

Scanner

Structure
Why a IHE UBP profile?

The datastructure from the barcode is processed in the right way
Reliable data interchange without datatransformation.

Interoperability

(Uniform Barcode Processing)
UBP - Uniform Barcode Processing

Input from product scanning

- **Barcode system A**
  - SDO-ID
  - BatchID
  - ItemID
  - Exp.Date
  - Serial Number

- **Barcode system B**
  - BatchID
  - Exp.Date
  - ItemID
  - SDO-ID
  - Serial Number

- **Barcode system C**
  - SDO-ID
  - ItemID
  - BatchID
  - Exp.Date
  - Serial Number

Input from scanning of patient, staff, location or document

- **PatientID**
- **CaregiverID**
- **LocationID**
- **DocumentTypeID**

**Technical communication templates**

**Functional data definition**

- SDO_ID: 12345
- BatchID: 23456
- ItemID: 34567
- Exp.Date: 21/02/2017
- PatientID: 123456789
- CaregiverID: 876543
- LocationID: 56262727
- DocumentTypeID: 1234543

**Technical communication templates**

- HL7 FHIR
- HL7 CDA
- Edifact
- ebXML

**Standards and Organizations**

- **GS1**
  - Generic

- **HIBCC**
  - Generic

- **ICCBBA**
  - Only medical products of human origin

- **SDO**
  - Standard Developing Organization
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Call To Action: implement the UBP profile

4 Standardisation Organisations (HL7, IHE, Nictiz, GS1)

7 Hospital IT-vendors (Ascom, Swisslog, Repoint, MedEye, EPIC, Chipsoft, Type2Solutions, Nedap)

4 Hospitals (Erasmus, MC Leeuwarden, UMCG, Bernhoven)
To find UBP ...

http://www.ihe.net/Technical_Frameworks/#pharmacy
Information & contact

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Wrap up:
Risks of this solution

- Huge maintenance costs
- Reprogram barcode scanners
- Change the datastructure for each IT system
GS1 standards

Product identification (GTIN)
Expiry date (AI 17)
Batch/lot (AI 10)
Serial number (AI 21)
Patient (GSRN)
Healthcare Professional (GSRN)
Global Location Number (GLN)
Global Trade Item Number (GTIN)
Global Location Number (GLN)
Global Returnable Asset Identifier (GRAI)
Global Individual Asset Identifier (GIAI)
Global Service Relation Number (GSRN)
Global Document Type Identifier (GDTI)
GS1 Healthcare webinar: Questions and contact details

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