

GS1 Healthcare Provider Advisory Council (HPAC) Webinar Traceability in Healthcare

Janice Kite – GS1 Global Office 13 February 2014





## • This is the FIRST Webinar !

"The link between Traceability and Patient Safety"

- It will be recorded!
- Webinars will take place monthly
  - Future webinars will showcase Provider Implementation Case Studies



## **HPAC Case Study Webinars**

<u>Date</u>	<u>Speaker</u>	Webinar theme
13th March 2014	Heidi Wimmers Chief of Pharmacy Hóspital Alemán, Argentina	Traceability of Drugs: Implementation in a hospital pharmacy in Argentina
10th April 2014	Muazzes Weiß & Sylvia Reingardt Healthcare Manager, Charité University Hospital Healthcare Manager GS1 Germany	How GLNs contribute to the standardisation efforts at Charité University Hospital in Germany
8th May 2014	Thomas De Rijdt Deputy head of pharmacy UZ Leuven, Belgium	The missing link in patient safety
12th June 2014	Michael Innes & Kirk Metzger Kaiser Permanente	Achieving supply chain efficiencies, delivery of patient care and product utilisation. HPAC Award Winning Case Study
10th July 2014	HTG representative	HTG Update





About GS1 and GS1 Healthcare Provider Advisory Council (HPAC)

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## Who is GS1? An international standard organisation

Not-for-profit 111 Member Organisations Over one billion members (from SME to global companies) Member driven 150 countries served; 20 different domains 2,500 people helping us Over 6 billion transactions a day



#### Formation:

• December 2010

#### **Objectives:**

- A forum for sharing and discussing the practical realities of implementation of GS1 Standards
- Identify implementation projects that support the adoption of GS1 Standards
- Identify best practices and case studies for publication
- A source of expertise

#### Scope:

 HPAC consists of thought leaders and early adopters of GS1 Healthcare Standards from the <u>provider environment</u> and GS1 Member Organisations (MOs); Restricted membership.

Find out more: <u>http://www.gs1.org/healthcare/hpac</u>

**Community Room**: <u>http://community.gs1.org/apps/org/workgroup/gs1hpac/</u>



## HPAC – Who?



#### Tri-Chairs – Clinical

• Feargal Mc Groarty FIBMS, Project Manager, IMS Dept., St. James's Hospital, Dublin, Ireland



#### Tri-Chairs – Non-Clinical

• Frédérique Fremont, Medico-Technical Department manager and Organisation Engineer, C.H.I Robert Ballanger, Aulnay-sous-Bois, France



#### Tri-Chairs – GS1 Member Organisation (MO)

 Doris Nessim, Vice President Pharmacy, Patient Safety & eHealth, GS1 Canada



#### GS1 Facilitator

 Janice Kite MBA, Traceability Director Healthcare, GS1 Global Office



#### • Educational C-Suite Slide Deck

http://community.gs1.org/apps/org/workgroup/gs1hpac/download.php/52286/latest

#### • Position Statement on Barcode Issues:

http://www.gs1.org/docs/healthcare/20121017 FINAL HPAC Position Paper B ar Code Issues.pdf





#### Position Statement on Interoperability of IT Systems

http://www.gs1.org/docs/healthcare/20121017 Final HPAC Position P aper IT Interoperability.pdf



### **GS1 HEALTHCARE PROVIDER AWARDS**

#### **TWO AWARDS:**

#### Provider Recognition Award

http://www.gs1.org/sites/default/files/docs/healthcare/20130812 GS1 Healthcare Recognition Award Application.docx

- The nominee has implemented GS1 Standards for at least ONE process in their organisation with clear & demonstrable Return on Investment (ROI).
- Active participation in GS1 Standards development work.
- Recognised as GS1 Standards advocate (locally or regionally or internationally).

#### Provider Implementation Best Case Study Award

http://www.gs1.org/sites/default/files/docs/healthcare/20130812 GS1 Healthcare Best Provider Implementation Case Study Application.docx

- The nominee has implemented GS1 Standards for at least ONE process in their hospital/clinic/care home/pharmacy/department with clear and demonstrable Return on Investment (ROI)
- Details & Application forms: <a href="http://www.gs1.org/healthcare/hpac">http://www.gs1.org/healthcare/hpac</a>

## Deadline for submission 30<sup>th</sup> June 2014



## The link between Traceability and Patient Safety

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## **Webinar Content**

- Drivers
- Regulations
- Independent Report: McKinsey
- GS1 Traceability in Healthcare
  - Strategy
  - Added Value of Traceability
  - Global Traceability Standard for Healthcare (GTSH)
    - Key GTSH Concepts
    - Key GTSH Definitions
  - GTSH Implementation Guideline
  - Implementation Case Studies



# Healthcare Traceability Drivers





## Regulations emerge worldwide Supply Chain costs increase Electronic Health Records



## Medication errors Counterfeiting Brand Protection



## Healthcare Scenario – Crisis and Impact

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McKinsey Report: "Strength in unity: The promise of global standards in healthcare"



### New McKinsey & Company report quantifies supply chain issues in Healthcare



Source: http://www.mckinsey.com

New McKinsey report "Strength in unity: The promise of global standards in healthcare"

#### Highlights the cost savings and patient safety benefits of adopting a single global supply chain standard in healthcare

#### Available at:

http://www.gs1.org/healthcare/mckinsey or http://www.gs1.org/docs/healthcare/McKinsey Healthcare R eport Strength in Unity.pdf



#### Huge cost savings and patient safety benefits when adopting a single global standard in healthcare

•"Implementing global standards across the entire healthcare supply chain could save 22,000-43,000 lives and avert 0.7 million to 1.4 million patient disabilities"

• "Rolling out such standards-based systems globally could prevent tens of millions of dollars' worth of counterfeit drugs from entering the legitimate supply chain"

•[We] "estimate that healthcare cost could be reduced by \$40 billion-\$100 billion globally" from the implementation of global standards

•"Adopting a single set of global standards will cost significantly less than two" (between 10-25% less cost to stakeholders)

SOURCE: McKinsey report, "Strength in unity: The promise of global standards in healthcare", October 2012



## **GS1 Traceability in Healthcare**





# GS1 in Healthcare: global system of standards





# GS1 in Healthcare: global system of standards





#### Full, End to End, actionable visibility of finished pharmaceuticals and medical devices in healthcare globally, from Point of Production<sup>1</sup> to Point of Use<sup>2</sup>

- All authentic items are identified with the appropriate GS1 Identification Keys (e.g. GTIN) and appropriate Application Identifier (AI, e.g. Serial No. AI(21)), if applicable, at point of production
- Supply chain identifiers are associated with the patient and remain with/on items throughout their intended useful life
- All physical locations are identified with the appropriate GS1 Identification Key (e.g. GLN) across the entire supply chain
- All **patients and care givers**, when in a care giving environment, are identified with the appropriate GS1 identification Keys
- Agreed **master data** is captured and shared (e.g. via GDSN) amongst trading partners
- Agreed transactional data is captured and shared (e.g. via business-to-business messaging) amongst trading partners
- Agreed **event data** is captured and shared (e.g. via EPCIS) amongst trusted traceability stakeholders, based on data sharing/security policies

#### SO THAT:

<sup>1.</sup> The terms production or producer can also mean commercially available, manufacture(r), creation(or), compounding(er)...

<sup>2.</sup> The terms use or used can also mean consumed, infused, implanted, destroyed



# Full, End to End, actionable visibility of finished pharmaceuticals and medical devices in healthcare globally, from Point of Production<sup>1</sup> to Point of Use<sup>2</sup>

#### SO THAT:

- Items can be tracked (forward / downstream) across the entire supply chain (production to use) in real time
- Items can be traced (backward / upstream) across the entire supply chain (from current location back to the producer) in real time
- Item identification is available for use at patient bedside to ensure the Patient Rights<sup>3</sup> are achievable
- Patients Electronic Health Records (EHRs) are updated with agreed traceability information, including Care Giver identification
- Counterfeit products are detected when entering the legitimate supply chain
- A product recall would be fast, efficient and effective

<sup>1.</sup> The terms production or producer can also mean commercially available, manufacture(r), creation(or), compounding(er)...

<sup>2.</sup> The terms use or used can also mean consumed, infused, implanted, destroyed

<sup>3.</sup> Pharmaceuticals (5): Right patient, right drug, right dose, right route, right time. Medical Devices (8): right device, right location, right time, right condition, right procedure, right anatomic site, right patient, right user



## **Global Traceability Standard for Healthcare (GTSH)**

http://www.gs1.org/docs/gsmp/traceability/Global Traceability Standard Healthcare.pdf

## **GTSH Implementation Guide**

http://www.gs1.org/docs/gsmp/traceability/Global Traceability Implementation Healthcare.pdf





## **Terminology - GTSH**









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- Defines a process independently from the choice of enabling technologies
- Defines <u>minimum traceability system requirements</u> for organistions of all sizes and level of operational maturity
- Details the <u>corresponding GS1 [technical] standards</u> used within information technology tools
- Meets the <u>core legislative and business needs</u> to cost-efficiently track forward (one step down) and trace back (one step up) at any point along the entire length of the supply chain
- Describes the creation of <u>accurate records</u> of transactions and events
- Provides for <u>fast data communication</u> about traceable items between trading partners

#### The GS1 Global Traceability Standard for Healthcare is not:

- A law or regulation
- A replacement for safety or quality programs







"Traceability is the ability to track forward the movement through specified stage(s) of the extended supply chain and trace backward the history, application or location of that which is under consideration".











- Global Traceability Standard for Healthcare (GTSH) is a PROCESS Standard
- Definition of Traceability: both track & trace (downstream/upstream; forwards/backwards)
- In parallel with the flow of product there <u>has to be</u> a flow of information about the product
- Throughout the entire supply chain:
  - There is Internal and External Traceability
  - Inputs (e.g. receipt) must be linked to outputs (e.g. shipments / dispensing)
  - Parties can have varying roles
  - Business Requirements = Needs
    - Business Rules = control and/or constraints



## Case Studies Setting the scene







- Source: GS1 Reference Books (2009/10, 2010/11, 2011/12, 2012/13, 2013/14)
- The examples are
  - High level summaries
  - Locations around the world
  - Different points of supply chain
- Common themes
  - Implementation from receipt to patient takes time (YEARS)
  - Multi-project work programme
  - Involves all parties across the supply chain (inc. GS1 MOs)
  - Focus on solving key issues
  - All efforts have lead to improved patient safety
  - One size does NOT fit all!



http://www.gs1.org/docs/healthcare/GS1 Healthcare Reference Book 2009-2010.pdf http://www.gs1.org/docs/healthcare/GS1 Healthcare Reference Book 2010-2011.pdf http://www.gs1.org/docs/healthcare/GS1 Healthcare Reference Book 2011-2012.pdf http://www.gs1.org/docs/healthcare/GS1 Healthcare Reference Book 2012-2013.pdf http://www.gs1.org/sites/default/files/docs/healthcare/13 GS1 HC RefBook2013 All.pdf





## GS1 Standards help save €106 million in Dutch hospitals (2011)



- UMC Nijmegen a 953-bed
   university hospital
- UMC Utrecht a 1,042-bed
   university hospital
- Ziekenhuisgroep Twente a 1,085-bed hospital group
- St. Antonius hospital a 880-bed hospital group



#### lssue(s)

- Increased pressure to improve patient safety and save costs in hospitals
- Suboptimal management of inventory of medical devices for OR
- Manual processes for ordering, billing, recall

#### Solution

- Implementation of effective IT infrastructure to track and trace
  products throughout the supply chain
- Implementation of GS1 Standards, including GTIN, GLN and Global Traceability Standard

#### Results

#### Medical device inventory mgmt for OR - potential savings across 100 Dutch hospitals: €106 million (conservative estimate)

- Estimated cost to implement system per hospital: €173k (non-recurring) and €218k (annually recurring)
- Estimated ROI per hospital in <u>year 1</u>: €668k; <u>year 3</u>: €2.5m
- Reducing inventory levels by approx. 20%
- Decreasing obsolete stock by approx. 80%
- Reducing handling expenses for stock replenishment by 25%
- Accelerating recall procedures
- Increasing effective use of consignment goods



## GS1 Standards help save 7% in medication purchasing and packaging in North York General (2006)



North York General Hospital - a 434-bed hospital in Toronto, Canada



#### lssue(s)

- Risk of medication errors at the point-of-care due to insufficient product identification
- Lack of unit-dose bar coding of medication

#### Solution

- Installation of an automated repackager and bar coding station
- Implementation of a point-of-care bar code verification system to ensure the five patient rights
- Implementation of GS1 Standards, incl, GTIN and GS1 BarCodes

#### Results

Reduced medication errors at the point-of-care Cost savings of 7-8% each year in terms of its medication purchasing and packaging activities

- Estimated cost to implement system in the hospital: €248k
- Efficiently affixing bar codes to unit doses
- Efficient bedside verification



## GS1 Standards help enable traceability of surgical instruments at CHI Robert Ballanger (2009)



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**CHI Robert Ballanger** - a 690bed hospital in Aulnay-sous-Bois, France

## **Issue(s)** Ineffective tracability of 22,000 surgical instruments during sterilization process

#### Solution

- Implementation of a traceability system
- Lasermarking of surgical instruments with GS1 DataMatrix 2D bar code
- Implementation of GS1 Standards, including GTIN, GLN and Global Traceability Standard

#### Results

## Effective traceability of surgical instruments during sterilization process

- Increased inventory management
- Increased traceability down to the individual instrument level
- Migration of instruments between boxes now traced





## GS1 Standards help save €5 million worth of stock at St. James's Hospital (2010)



**St James's Hospital, Dublin** (Ireland) – manages the National Centre for Hereditary Coagulation Disorders (NCHCD)



#### lssue(s)

- Infected medication remained in the supply chain after recall in 2001leading to subsequent infection and over 80 deaths
- Lack of standardised bar codes on haemophilia medication and ineffecitve traceability

#### Solution

- Deployment of multi-location Electronic Patient Record system
- Deployment of medication delivery traceability system
- Implementation of GS1 Standards, including GTIN, GLN, GS1 DataMatrix

#### **Results**

Over € 5 million worth of medication stock has been removed from the supply chain

- Product wastage reduced from €90,216 to zero in the year post service implementation
- Documentation errors reduced from 12 to zero in the year post service implementation

Mock recall identified location of all (100%) medication within 10 minutes



- Find out more: <u>http://www.gs1.org/healthcare/hpac</u>
- Community Room: <a href="http://community.gs1.org/apps/org/workgroup/gs1hpac/">http://community.gs1.org/apps/org/workgroup/gs1hpac/</a>
- Publications:
  - Educational C-Suite Slide Deck <a href="http://community.gs1.org/apps/org/workgroup/gs1hpac/download.php/52286/latest">http://community.gs1.org/apps/org/workgroup/gs1hpac/download.php/52286/latest</a>
  - Position Statement on Barcode Issues: <u>http://www.gs1.org/docs/healthcare/20121017\_FINAL\_HPAC\_Position\_Paper\_Bar\_Code\_Issu</u> <u>es.pdf</u>
  - :Position Statement on Interoperability of IT Systems
     <u>http://www.gs1.org/docs/healthcare/20121017\_Final\_HPAC\_Position\_Paper\_IT\_Interoperability.pdf</u>
- Healthcare Provider Awards... <u>http://www.gs1.org/healthcare/hpac</u>



### **HPAC Case Study Webinars**



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8th May 2014	Thomas De Rijdt Deputy head of pharmacy UZ Leuven, Belgium	The missing link in patient safety
12th June 2014	Michael Innes & Kirk Metzger Kaiser Permanente	Achieving supply chain efficiencies, delivery of patient care and product utilisation. HPAC Award Winning Case Study
10th July 2014	HTG representative	HTG Update





## **Contact Details**

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