Scanning barcodes in the Operating Room: Safer procedures, more satisfied personnel. The Greek Army's General Military Hospital

Mr. Sotiris Tsairos – Tsiaras, Military Pharmacist, OR Traceability Project Manager at 401 Athens General Army Hospital, Greek Army

October 18, 2018
Welcome and thank you for attending!

- Welcome to our GS1 Healthcare October 2018 webinar. Thank you to our guest speaker Mr Sotiris Tsiafos-Tsiaras, Military Pharmacist, OR Traceability Project Manager at 401 Athens General Army Hospital, Greek Army

- 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
GS1 Healthcare Global and the Healthcare Webinars

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
Some specific GS1 Healthcare Activities

**Webinars**

- Monthly webinars open to all stakeholders interested in learning about GS1 standards implementation in the care giving environment.
- [http://www.gs1.org/healthcare/hpac_webinars](http://www.gs1.org/healthcare/hpac_webinars)

**Awards**

- Twice per year
- Provider Best Case Study Award
- Provider Recognition Award
- The prize is travel / accommodation to attend the next GS1 Healthcare conference
- [http://www.gs1.org/healthcare/hpac](http://www.gs1.org/healthcare/hpac)

GS1 Healthcare also holds two global conferences per year. The next conference will be in Bangkok, Thailand from October 30 – November 1st, 2018. We expect significant Healthcare Provider participation on the agenda.
Presenting today

Sotiris Tsiafos-Tsiaras
Military Pharmacist,
Pharm. BSc, Logistics MSc
OR Traceability Project Manager

401 Athens General
Military Hospital
401 Athens General Military Hospital
Our Hospital: Facts & Data

- Largest Military Hospital in Greece
- NATO Role 4 Hospital
- 540 beds, up to 1075
- 11 Operating Rooms
- Cardiac Catheterization & Vascular Embolism Laboratory
- Cardiac surgery dept.

In 2017:
- ~ 15,700 inpatients, 220,000 outpatients
- More than 4,000 surg. operations
- ~ 7,000,000 € annual spend on medical devices
Decision to use GS1 Standards

• Need to:
  - Improve Operating Room supply chain operations
  - Enhance patient safety in the OR

Greek Army's Medical Supplies Centre is using GS1 standards in warehouse operations since 2015 with very good results!
Decision to use GS1 Standards

“How GS1 standards will improve hospital’s operations?”

Proof of Concept: A pilot

Where? Operating Room
What? Expensive items – stock management
High-risk medical devices, implants
How? Using AIDC technologies and manufacturer’s barcodes
A Great Challenge!

- Nurses/Staff knew nothing about barcodes
- Suppliers' limited knowledge of GS1 standards
- Barcode scanning not implemented in hospital’s clinical software
- Resistance to change (?)
Initial Assessment - Findings

- Proprietary hospital-only items coding scheme.
- **No GTINs** stored in the system
- **Manual** registering of items (Excel item Catalogues)
- **No LOT/BATCH** or **Serial** tracking (patient safety!)
- No detailed stock visibility – **losses due to expiration**
Initial Assessment - Findings

**Error-prone, time-consuming processes!**

- Valuable time lost
- Inaccurate stock data
- Traceability ???
- Expired items - losses
Medical Devices used in the OR:

>90% barcoded

85% GS1 (GS1-128, GS1 Datamatrix)
5% HIBCC
2% other

Application Identifiers:
(01) GTIN
(17) EXP
(10) LOT
(21) SERIAL
Implementation Strategy

Early Stages

**DEFINE SCOPE - TARGET**
- Which items?
- How many ORs?
- Desired outcomes

**INFORM STAKEHOLDERS**
- Form a project workgroup
- Explain objectives
- Contact suppliers

**EDUCATE PEOPLE**
- GS1 Basics
- Barcode benefits
- Hands-on training

**BUILD A DEMO (optional)**
- “Quick & dirty”
- Show benefits
- Get feedback
- Gain support
Implementation Strategy

Implementation

DECIDE & DESIGN CHANGES
- Systems
- Procedures
- KPIs

APPLY CHANGES
- Continuous monitoring
- Feedback
- Training
- Support

EVALUATE RESULTS
- Measure KPIs
- Operational efficiency
- Patient safety

Planning for the future

FORM A CULTURE
- Everyday job
- Clear benefits
- User friendliness

NEXT STEPS
- More ORs
- Other Depts
- OR Safe Labeling System

The Global Language of Business
### Implementation

<table>
<thead>
<tr>
<th><strong>SELECTED ITEMS</strong></th>
<th><strong>SELECTED BARCODES</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost &amp; Volume</strong></td>
<td>GS1 barcodes:</td>
</tr>
<tr>
<td>- High cost medical devices</td>
<td>- <strong>EAN, GS1-128, Datamatrix</strong></td>
</tr>
<tr>
<td>- High turnover items (e.g. surg. Sutures)</td>
<td></td>
</tr>
<tr>
<td><strong>Risk &amp; patient safety</strong></td>
<td>No HIBCC</td>
</tr>
<tr>
<td>- Implants</td>
<td>No other barcodes</td>
</tr>
<tr>
<td>- Intra-Ocular Lens</td>
<td></td>
</tr>
</tbody>
</table>

**Scanning at the “Point Of Sale”**
Implementation

WHERE TO START?

• Start small
  • Be simple
    - One operating room
    - Few items
    - Basic training

A “quick” Demo first:
• Cataract surgeries
  - Few items used per patient
  - “Fast” procedure (20-25 min.)
  - Need for speed
  - Need for tracking IOL serials
Implementation

NEXT STAGE

✓ 3 more ORs (General and neuro-surgery)
✓ Anesthesia & Recovery Dept.
✓ Cardiac Catheterization Lab.
✓ Interventional Radiology Dept.
Implementation

Main types of barcodes used:
GS1-128 and GS1 Datamatrix®

ALWAYS SCAN
capturing crucial item data:

- **GTIN**
- **LOT/BATCH**
- **(SERIAL)**
- **EXP DATE**
Implementation

Which barcode should I scan?
Key Elements

- Training
- Usability
- Simplicity
- Master Data

Just ONE beep ?!
Personnel Engagement

- Why we do this
  - Explain plan
  - Benefits

- Basics
  - Simple language
  - No technical jargon!!

- Be there when needed
- Take feedback
- Ask !!!

EXPLAIN

SUPPORT

EDUCATE

TRAIN
Procurement – Suppliers engagement

• Suppliers engaged **at the very beginning**

  - Explained project plan and target
  - Asked for item catalogues
  - Shared info and case studies – benefits!
  - Directed to local GS1 MO
Procurement – Suppliers engagement

Procurement is our “Right Hand”

- New tender/contract terms (coding - labeling)
- Advice on National & European legislation
- Contact suppliers
- Update e-procurement platform
IT Systems & Software

ISSUES
• No GS1 AI decoding
• No uniform barcodes – various AIs
• “Item of supply” vs “Item of trade”

SOLUTIONS
• Own software, in-house development
  - GS1 only barcodes
  - **At least** GTIN (01) LOT/BATCH (10) SERIAL (21) EXP DATE (17) decoding capabilities (BUT NOT ENOUGH!)
• GS1 General Specifications as a guide
• “One-to-many” relationship between hospital’s codes - GTINs
IT Systems & Software

Design Principles

- navigation
- familiarity
- consistency
- error prevention
- feedback
- visual clarity
- flexibility & efficiency

&

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Engagement of the IT department is crucial, but... don’t let them have the last word.
Outcomes - Benefits

- **Accurate data**
  - What was used on which patient
  - Exp dates!
- **Patient safety!**
- Implants tracking
- **Efficiency!**
- Stock accuracy – visibility
- Better forecasting
- Fewer losses
Outcomes - Benefits

• Speed
  - Fast & correct registration of items in the OR →
    • More time with the patient
    • Less paperwork afterwards
  - Fast & correct stock counting →
    • Less time spend in administrative tasks
  - Significant time gains at the invoicing procedure!
Outcomes - Benefits

• **Speed**

  >80% less time needed for stock counting

  >85% less time needed for registering anesthesia sets to patient records

  *(almost 19 hours/month!)*

Procurements Officer:

"*Is like having one more person in the office!*"
Outcomes - Benefits

• Safety
  - For our **patients**
  - For our **nurses**

Cardiac Catheterization Lab Head Nurse:

“I feel safe knowing I have full control over my stock”
Outcomes - Benefits

Change of Culture!
Outcomes - Benefits

Happier people!

- Barcodes are great, but our **people is the key**
- GS1 standards made their life easier
- Happier staff means **better care** for our patients!
One last word

No thanks!

We are too busy

Hospital

Implants
Surgical instrument
Meds

St. James's Hospital

The Global Language of Business
One last word

Don’t hesitate, just do it!
Thank you!

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