Barcodes add to supply chain efficiency and patient safety

Subtitle: GS1 standards adoption in the Cardiac Cath. Lab.

GS1 Healthcare Webinar

Mr. Sotiris Tsiafos-Tsiaras, Military Pharmacist and Hospital Supply Chain Supervisor
Mr. Sam Lappas, Officer Nurse at the Cardiac Cath lab
401 Athens General Army Hospital in Greece
October 7, 2021
GS1 Competition Law Caution

- GS1 operates under the GS1 Competition Law Caution. Strict compliance with competition laws is and always has been the policy of GS1.
- The best way to avoid problems is to remember that the purpose of the group is to enhance the ability of all industry members to compete more efficiently.
- This means:
  - There shall be no discussion of prices, allocation of customers, or products, boycotts, refusals to deal, or market share
  - If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of counsel can be obtained.
- The full caution is available via the link below, if you would like to read it in its entirety: http://www.gs1.org/gs1-anti-trust-caution
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Welcome and thank you for attending!

• Welcome to our October 2021 webinar.
  Thank you to our guest speaker Mr. Sotiris Tsiafos-Tsiaras, Military Pharmacist, Hospital Supply Chain Supervisor and Mr. Sam Lappas, Officer Nurse at the Cardiac Cath Lab at 401 Athens General Army Hospital in Greece

• Some housekeeping for today:
  - All attendees will be in listening-only mode
  - 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 posted to this location, please feel free to use this resource and the link
GS1 Healthcare Webinars

Create a forum for the global clinical provider environment for thought leaders and adopters of GS1 Standards in healthcare. The final goal: improve patient safety, cost efficiency and staff productivity through the implementation of GS1 standards.

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

- The practical realities of implementation of GS1 Standards in the care giving environment in regard to the impact on clinical care and patient interaction
- Supporting 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
Specific GS1 Healthcare Activities

Webinars

• Bimonthly webinars open to all stakeholders interested in learning about GS1 standards implementation in the care giving environment.
• http://www.gs1.org/healthcare/hpac_webinars

Awards

• At each global GS1 Healthcare Conference
• Provider Implementation Best Case Study Award
• Provider Recognition Award
• The prize: travel & accommodation to attend the next GS1 Healthcare conference
• http://www.gs1.org/healthcare/hpac

GS1 Healthcare holds global conferences each year. In 2020, due to the pandemic we moved to Virtual Events. The next GS1 Healthcare Virtual Event is scheduled from November 16-19, 2021. We will have significant Healthcare Provider participation on the agenda.
Presenting today

**Sotiris Tsiafos-Tsiaras**

Colonel Pharmacist, MSc Logistics & Supply Chain Management;
401 Athens General Army Hospital;
Former OR Traceability Manager;
Recently logistics specialist in the Greek national covid-19 vaccination campaign task force

**Sam Lappas**

Officer Nurse, Cardiac Cath Lab.
401 Athens General Army Hospital
401 General Military Hospital of Athens
Hospital Facts & Data

- Largest Military Hospital in Greece
- 600 beds
- 8 Active Operating Rooms
- Cardiac Catheterization & Vascular Embolism Lab.
- Cardiac surgery dept.

- In 2020:
  - 15,400 inpatients, 94,800 outpatients
  - 3,466 Operations (800 in the Cath. Lab)
  - ~12,000,000 € annual spend on pharmaceuticals & medical devices
How did we get here?

2014 - 15
Warehouse Management System implementation at the Greek Army Medical Supplies Centre

Sep. 2017
Beginning of implementation in the O.R.

Jan. 2018
Started barcode scanning in the Cath. Lab.
(Not Only) Supply Chain Issues

- Proprietary hospital-only codes, difficulty in identifying items.
- **Manual** registering of items (Excel Catalogues)
- **No LOT/BATCH** or **Serial** registration/tracking
- Limited – inaccurate stock **visibility**
- Huge **paperwork** for the nursing staff (huge carbon footprint also!)
- Hundreds of valuable **hours lost** in administrative tasks
- Risk of **errors!**
Business Case

• In an extremely difficult economic environment, we needed to:
  ❖ Improve hospital supply chain operations
  ❖ Improve overall efficiency
  ❖ Cut-down costs
  ❖ Enhance patient safety
Business Case

• **Standardisation** of master item data & automated data capture

• GS1 system of standards: Global, robust, flexible, expandable

• **In-house development** of the software, funding needed only for the hardware

• **Multiple benefits**: Supply chain efficiency, patient safety, less working hours wasted

• A **proof-of-concept** in one operating theatre
Implementation

SELECTED ITEMS

• High-Risk / High-Cost medical devices
  - Single-use surgical instruments
  - Implants (orthopaedic, heart replacement valves, intra-ocular lens etc.)
  - Cardiac and vascular stents, embolisation coils

• High turnover items
  - Surgical sutures, other high-volume consumables
Implementation

Main types of barcodes: GS1-128 and GS1 DataMatrix®

Scanning at the "Point Of Care"

capturing crucial item data:

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

Scanning module

ERP Database

GS1 Master Data DB

EHR Database

Operated by the OR Logistics Team
Implementation Strategy

- **Define** Target-Scope
- **Inform** all stakeholders
- **Educate** people
- **Decide** – design and apply changes
- **Build a demo**
- **Demonstrate practical benefits** (end users!)
- **Evaluate results** – take feedback from users
- **Form a culture**
Key Implementation Points

- **Master Data**
- **Clear Procedures**
- **Software Simplicity-Usability**
- **Personnel Engagement**
Personnel Engagement

- **EXPLAIN**
  - Why we do this?
  - Explain action plan
  - Explain Benefits

- **EDUCATE**
  - Barcode basics
  - Simple language
  - No technical jargon!!

- **TRAIN**
  - Team meetings
  - On-the-job training

- **SUPPORT**
  - Be there when needed
  - Ask the right questions
  - Take feedback!

- **On the job training**
Outcomes

STANDARDISED, ACCURATE, TRUSTED DATA
Outcomes

Duration (mins) for counting 60 stents in the Cath. Lab

- **Less time** in administrative tasks (Cath. Lab, billing Dept.)
- **Less paperwork** (but still a lot of it!)
- **Operational efficiency**

- Complete & trusted data!
- Easy tracking of items/LOTs/serials/patients
- Check of expired items on the shelf and during a procedure
Outcomes

❖ More than **75,000 € savings** in the Cath. Lab during 2018 – Aug. 2021
Cost of items replaced by suppliers before reaching their expiration date (contract term)

❖ Over **50% reduction** in waste between 2018 – 2020
Cost of items that reached the end of their shelf life

❖ More effective purchasing strategy
Cath. Lab Implementation Wrap-up

What **worked:**
- Staff engagement, training
- Supplier’s cooperation
- Excellent scan rates from the beginning
- Implementation roadmap

What **didn’t work:**
- Various levels of familiarisation with the processes
- Difficulty to engage clinicians
- Multiple barcodes on packages confuse people
Cath. Lab Implementation Wrap-up

- Introduce a new way of work
  - Gain trust
  - Talk different language to various teams
  - Usability of the software
Cath. Lab Implementation Wrap-up

- Start from the Cath. Lab!
- Clinicians’ more active engagement
Lessons Learned

❖ **Start small. Don’t try to change everything at once.** Don’t rush changes. Change in Healthcare is by default slow and time-consuming.

❖ **Seek advice-guidance** from your local GS1 office. **Engage your IT & procurement** from the very beginning of the project.

❖ Choose the department that is **easier to start / engage.** (Cath Lab is ideal because of fully GS1 compliant products)

❖ End users need to see the immediate **benefits in their every-day tasks.** **Listen carefully** to their remarks/requests and **stay close to them.**
Lessons Learned

Your people are the key!
Their engagement and commitment will bring success.
One last word
Thank you!

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GS1 Healthcare webinar: Questions and contact details

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