GS1 Switzerland Excellence Days

Hospital Implementation

Claire Clarke Director of Healthcare Engagement
8th June

What did Harry want?

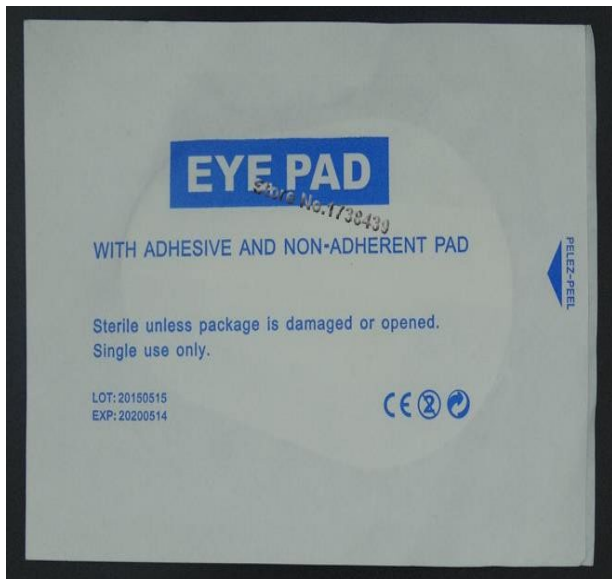# So, he got what he asked for

The need for globally unique numbers

Manufacturer	Catalog #	Description
Medtronic	305905	Mosaic ® 305 Porcine Heart Valve
BD	305905	BD SafetyGlide ™ Syringe
J & J	305905	Protectiv ® IV Catheter System

Patient Safety

- If 99.9% were good enough…
  - Major plane crash every 3 days
  - 12 babies given to wrong parents every day
  - 37,000 ATM errors every hour
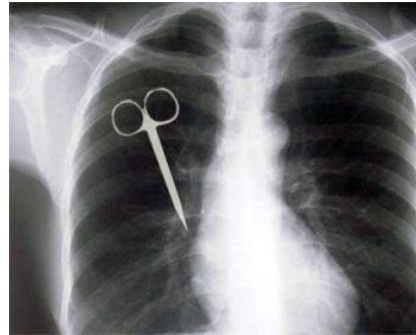
Institute for Healthcare Improvement (data relates to US population)

GS1 – used across the world

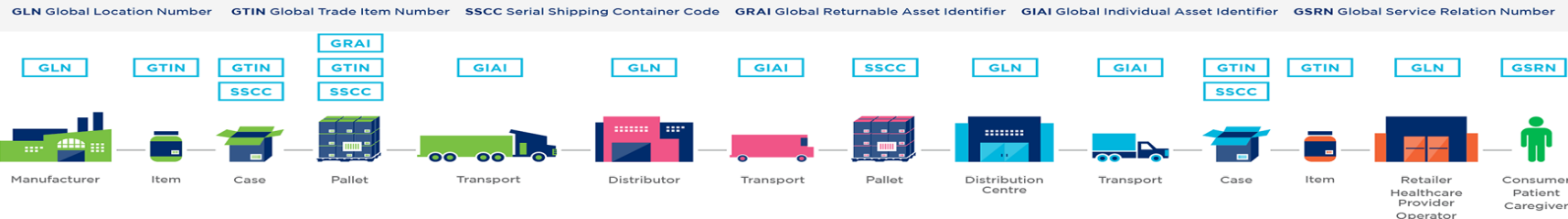| 2 million	150 countries	6 billion	115 MOs
Approx. 2 million companies worldwide use GS1 standards	25 industries served across 150 countries	Barcodes scanned more than 6 billion times per day globally	115 Member Organisations around the world

Global system of standards that support visibility

Identify: GS1 Standards for Identification

GLN Global Location Number   **GTIN** Global Trade Item Number   **SSCC** Serial Shipping Container Code   **GRAI** Global Returnable Asset Identifier   **GIAI** Global Individual Asset Identifier   **GSRN** Global Service Relation Number

| GLN | GTIN | GTIN / SSCC | GRAI / GTIN / SSCC | GIAI | GLN | GIAI | SSCC | GLN | GIAI | SSCC | GTIN | GTIN | GLN | GSRN |

Manufacturer · Item · Case · Pallet · Transport · Distributor · Transport · Pallet · Distribution Centre · Transport · Case · Item · Retailer Healthcare Provider Operator · Consumer Patient Caregiver

Capture: GS1 Standards for Barcodes & EPC/RFID

GS1 Barcodes   **GS1 EPC/RFID**

| EAN/UPC | GS1-128 | ITF-14 | GS1 DataBar | GS1 DataMatrix | GS1 QR Code | GS1 Composite Barcode | EPC HF Gen 2 | EPC UHF Gen 2 |

9 501101 021037
(00) 3 9501100 000001001 9
09501101021037
(01) 0 9501101 02103 7
9501 1028

Share: GS1 Standards for Data Exchange

Master Data Global Data Synchronisation Network (GDSN)   **Transactional Data** eCom (EDI)   **Event Data** EPC Information Services (EPCIS)

Interoperability

Item Master Data · Location Data · Item/Shipment Tracking · Traceability · Product Recall/Withdrawal · Pedigree · Purchase Order/Despatch Advice/Invoice

GS1 – global standards benefits and value in healthcare

Trust

Interoperability

Transparency & Visibility

GS1 Healthcare is a **neutral** and **open community** bringing together all related **healthcare stakeholders** to lead the successful development and implementation of global **GS1 standards** enhancing **patient safety**, **operation** and **supply chain efficiencies**.

GS1 Healthcare envisions a future in which the healthcare sector achieves **harmonised implementation of global standards** in **business** and **clinical** processes enabling **interoperability**, **optimal quality** and **efficiency** of **healthcare delivery** to benefit **patients.**

Our vision

GS1 Healthcare envisions a future in which the healthcare sector achieves **harmonised implementation** of **global standards** in **business and clinical processes** enabling **interoperability**, optimal **quality** and **efficiency** of healthcare delivery to **benefit patients.**
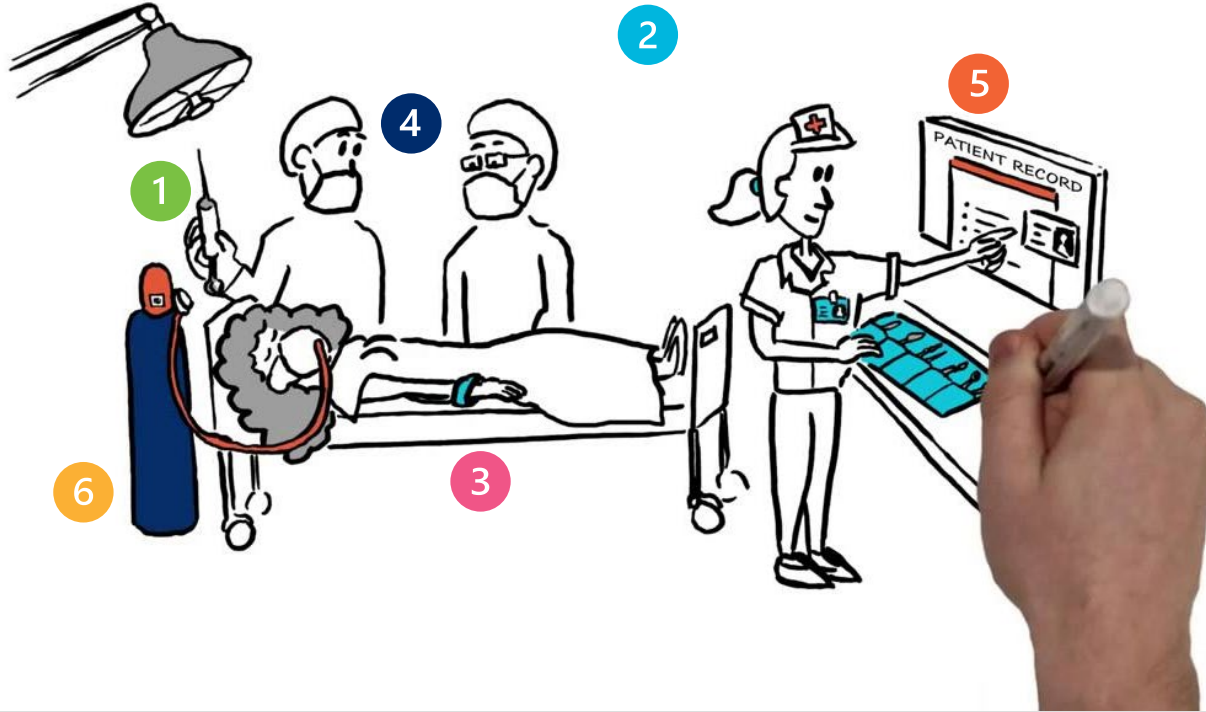
patient safety

supply chain
security & efficiency

traceability

product data

Identification keys in the Operating Room

1. Global Trade Item Number (GTIN)
2. Global Location Number (GLN)
3. Global Service Relation Number (GSRN)
4. Global Service Relation Number (GSRN)
5. Service Relation Instance Number (SRIN)
6. Global Individual Asset Identification Number (GIAI)

GS1 Healthcare: an expanding, committed community of globally engaged stakeholders…

…and there are many more companies working with GS1 at a local level

Leading hospitals implement GS1

Working with global organisations…

cdisc — Clinical Data Interchange Standards Consortium

cen Health Informatics TC251 — European Committee for Standardization

DICOM *Digital Imaging and Communications in Medicine* — Digital Imaging and Communications in Medicine

GS1

HL7 International — Health Level 7 International

IHE *Integrating the Healthcare Enterprise* — Integrating the Healthcare Enterprise

ISO HEALTH INFORMATICS TC215 — International Organisation for Standardisation

Personal Connected Health Alliance — Alliance to advance personal connected health

SNOMED International — Leading healthcare terminology, worldwide

Joint Initiative Council

World Health Organization — World Health Organization

International Hospital Federation — International Hospital Federation

ISQua — International Society for Quality in Healthcare

ICCBBA — International Council for Commonality in Blood Banking Automation

eahp *european association of hospital pharmacists* — European Association of Hospital Pharmacists

efpia *European Federation of Pharmaceutical Industries and Associations* — European Federation of Pharmaceutical Industries and Associations

MedTech Europe *from diagnosis to cure* — European Association of Medical device and diagnostics industry

medicines for europe *better access. better health.* — Medicines for Europe

LOINC *from Regenstrief* — Logical Observation Identifiers Names and Codes

GS1

The Scan4Safety journey so far

Lord Carter's Interim report in 2015 finds that the *"introduction of GS1 standards will allow every NHS hospital in England **to save on average up to £3 million each year while improving patient care.**"*

In September 2017, Derby Teaching Hospitals NHS Foundation Trust becomes the **first Trust to complete all four phases of Scan4Safety**

In 2014, the Department of Health mandated the use of GS1 standards within the **eProcurement strategy**

In January 2016, six NHS Trusts are being fully-funded by the Department of Health to become **demonstrator sites of excellence**

The Leeds Teaching Hospitals **NHS** NHS Trust

Royal Cornwall Hospitals **NHS** NHS Trust

North Tees and Hartlepool **NHS** NHS Foundation Trust

Plymouth Hospitals **NHS** NHS Trust

Derby Teaching Hospitals **NHS** NHS Foundation Trust

Salisbury **NHS** NHS Foundation Trust

Every healthcare provider and every supplier of every product and service into the NHS **must comply with GS1 standards by 2020**

NHS Provider and Supplier contracts will reflect this

Proven benefits

Derby Teaching Hospitals NHS Foundation Trust

- £2.9m annual saving in theatres
- £360k savings in inventory reduction
- Traceability of implantable products to patient record
- Reduction in clinical time spent on non-clinical activities
- £1m p.a. in improved clinical coding
- Ability to analyse clinical variation in practice

Royal Cornwall Hospitals NHS Trust

- Over £1m efficiencies in ward stock
- Simplified ward store rooms by reducing unique items by 22%
- Released clinical time to patient care by shifting stock management to materials management teams
- Reduced ordering of medical consumables by 21% for a medical ward

The Leeds Teaching Hospitals NHS Trust

Ophthalmology Recall Test: previously 8.33hrs of nursing time (£173), now 35 mins of nursing time (£9)

Salisbury NHS Foundation Trust

Over £1m saved so far with nearly £800,000 as a recurring saving

Department of Health business case predicts £1bn saving for the NHS over the next 7 years

Benefits Delivered – Derby Hospital

- **£1.2m annual saving** in consumption reduction in theatres

- **£360k savings** identified in inventory reduction

- **Traceability** of implantable products by batch/lot number to patient record

- Auditable **evidence** – resolution of SUI

- Product **standardization** and switching opportunities

- **Reduction** in clinical time spent on non-clinical activities

- **£1m pa** in improved clinical coding

- Ability to **analyse clinical variation** in practice

- **Improved visibility** of inventory

- **Automated ordering and invoicing** through

- PEPPOL access point

Leeds Teaching Hospitals Trust

About Leeds Teaching Hospitals NHS Trust

Over 1,100,000 Outpatients

Over 263,000 A&E Attendances

Over 117,000 Inpatients

Over 108,000 Day Cases

9,844 Babies born

1,600,000 People treated every year
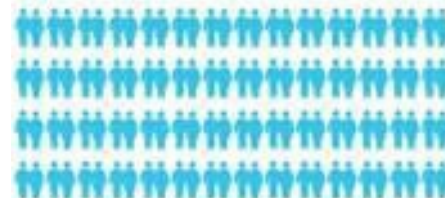
2,000 beds

Over 17,000 staff

SCAN4SAFETY
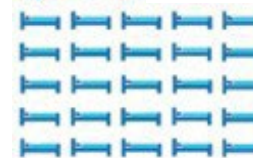
Turnover
£1.17 billon

Vision

We want the ability to track:

- Our patients

- The products

- The place

- Our involved staff

- The procedure (OPCS)

- The surgical trays & instruments

Patient Safety

- Making sure you have the Right Patient

- Making sure you (always) know What Product was used with Which Patient, When

- Making sure you have What You Need, When You Need it and Where You Need it

- Real time tracking of patients and
  bed state management 24/7

- Product recall

- Preventing the use of expired stock

Board Level Support

Patient Identification (GSRN)

- Wristbands Printers in situ across all 7 hospitals in 140 clinical areas

- 163 wristband printers rolled out

- 100% of all inpatients have Scan4Safety wristband

- 100% of A&E wristbands are GS1 compliant

- The Trust can only generate GS1 compliant wristbands regardless of patient age or admission method

Global Location Numbers (GLNs)

- To ensure supplies can be traced & delivered to any area we have assigned:
    24,303 GLNs to physical locations in the Trust
    1,346 functional GLNs to wards and departments

- GLNs are being used in Pan-European Public Procurement Online (PEPPOL) transactions

- Identified how to use a 2D data matrix to define bed spaces using GLN Extensions

Global Location Numbers

First of the demonstrator sites to label down to bed space level and start unlocking the potential

Ward View: 91 (SJUH) St James's Institute of Oncology, Ward Code: J91

Action	Ward	Bed	Patient	Age	Scanned Location	Time Since Arrival	Consultant	Specialty	LOS	EDD	MFFD	Planning	EDID	Needed For Discharge / Transfer	Clinical Summary	eDAN	eMeds
▼	91 (SJUH)	1	RASPBERRY Robert	32y	Bed Area, J91 05-Oct-2017 06:53	18d 22h 18m	AA	General Medicine	19d	❓		On Ward			This is some text to test carriage...	Pharmacy 🔄	
▼	91 (SJUH)	2	PLUM Henry	47y	Bed Area, J91 04-Oct-2017 02:32	4d 18h 27m	ADJ	Urology	5d	❓		On Ward					❓
▼	91 (SJUH)	3	PEAR Pamela	37y	Bed Area, J91 06-Oct-2017 ...	3d 8h 15m	MRM	Anaesthetics	4d	❓		On Ward				Pharmacy 🔄	
▼	91 (SJUH)	4	GRAPE Bella	57y	Xray, 06-Oct-2017 14:53	2d 3h 5m	ADJ	Urology	3d	❓		On Ward					❓
▼	91 (SJUH)	5	BLUEBERRY George	32y	Bed Area, J91 06-Oct-2017 ...	30d 5h 22m	AA	General Medicine	31d	❓		On Ward					❓
▼	91 (SJUH)	6	PINEAPPLE Peter	45y	Examination Room, Outpatients 06-Oct-2017 15:10	12d 8h 27m	MRM	Anaesthetics	13d	❓		On Ward					❓
▼	91 (SJUH)	7	OLIVE Adrianne	37y	Bed Area, J91 06-Oct-2017 ...	18d 22h 18m	ADJ	Urology	19d	❓		On Ward					❓
▼	91 (SJUH)	8	PEACH James	57y	Room 3, Endoscopy 06-Oct-2017 14:12	8d 23h 19m	JHB	General Medicine	9d	❓		On Ward					❓
▼	91 (SJUH)	9	ORANGE David	32y	Bed Area, J91 06-Oct-2017 ...	3d 8h 15m	JHB	General Medicine	4d	❓		On Ward					❓

Global Location Numbers

Product Recall (GTIN's)

"Out of date products will become a thing of the past"

- Scanning patient wristband to associate the **right product** in the **right place**

- **Reducing error**, including never events

- **Safe, appropriate** stock levels

- **Expiry date** reporting / alerts

- **Patient level costings** in keys areas, informing clinical decisions

- Improved **product recall** processes, automatically tracking products to patients

Ophthalmology Product Recall Test

Nursing Time (Old System)
Minimum of £173 and **8.33 hours**

Inventory Time (New System)
Maximum of £9 and **35 minutes**

Theatre Tray Rationalisation

Savings	FYE 16/17	PYE 17/18	Total
Recurrent	£87,037.95	£7,026.54	£94,064.49
One off	£0	£39,500	£39,500
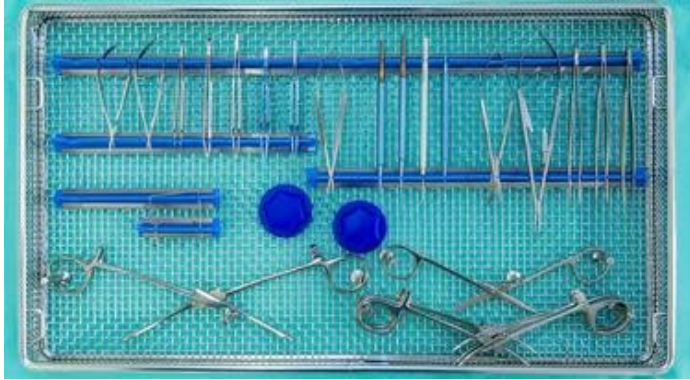
Theatre Tray Rationalisation Programme removed

£94,064.49

per annum of sterilisation costs.
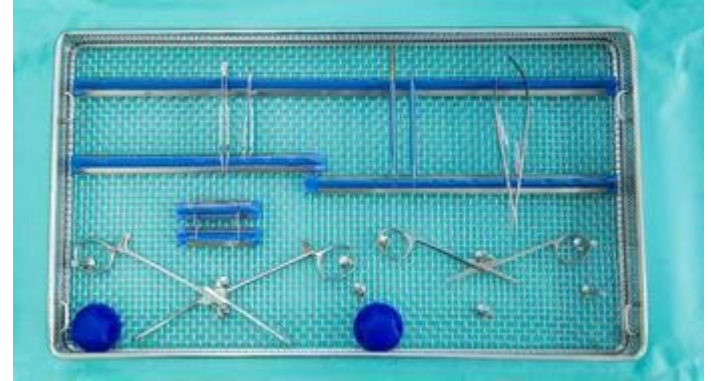
Initial Analysis – Cost vs Tariff

High volume non complex HRG

(EA54Z Percutaneous Standard Ablation)

- Assumed mean procedure time of 79 mins for costings

- Cost £1,821

- Income £1,820

- Loss 0.84p per patient

  Actual Procedure Time (mean):133 minutes Actual loss £808 per patient

  FYE: circa £153,300

Benefits realised PCI Procedures

180 PCI Procedures September 2016 – August 2017

SCAN**4**SAFETY

Process	Mean Time Taken	Mean Time Released	Annual Effect of time Released
Computer Scanning of Products	6 min 23 sec		
Scan4Safety Handheld	1 min 53 sec	4 min 30 sec	42 Days

Monetary Equivalent at midpoint of Band 5 = **£4,095**

Benefits realised – 31 Dec 2017

Area	Benefit
Product Recall Staff Time	£84,411
Inventory Reduction	£1,781,634
Returned Stock	£159,082
Reduced Waste and Obsolescence	£357,356
Tray Rationalisation	£133,564
TOTAL	**£2,516,047**

The real reason
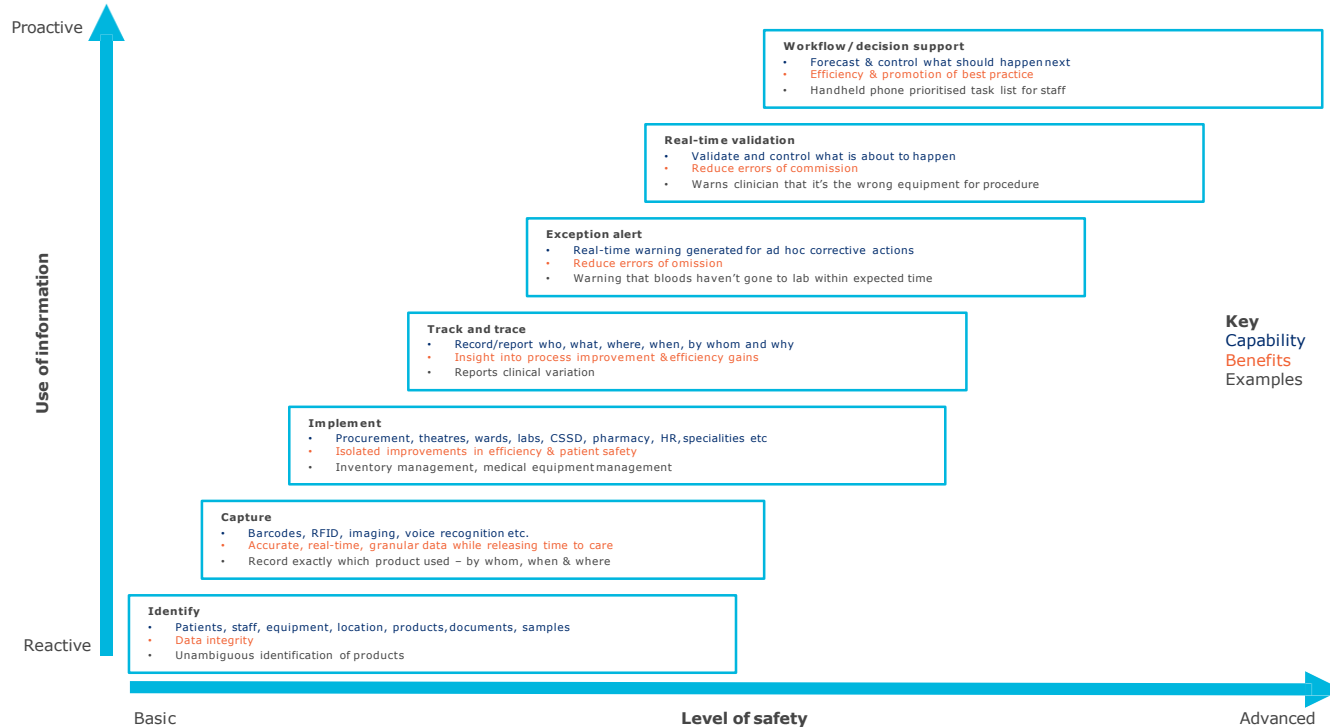
Never Events - Where we can help…

- April 21 – March22   - 407

- April 21 – July 21   - 145 (144)

- Of the 2021/22 events:
- Wrong site surgery
- Retained foreign objects post procedure
- Wrong implant / prosthesis

- Medication error (has to cause harm to be recorded)

77%

11%

Insight from all the beeps…

Proactive

Use of information

Reactive

Workflow/decision support
- Forecast & control what should happen next
- Efficiency & promotion of best practice
- Handheld phone prioritised task list for staff

Real-time validation
- Validate and control what is about to happen
- Reduce errors of commission
- Warns clinician that it's the wrong equipment for procedure

Exception alert
- Real-time warning generated for ad hoc corrective actions
- Reduce errors of omission
- Warning that bloods haven't gone to lab within expected time

Track and trace
- Record/report who, what, where, when, by whom and why
- Insight into process improvement & efficiency gains
- Reports clinical variation

Implement
- Procurement, theatres, wards, labs, CSSD, pharmacy, HR, specialities etc
- Isolated improvements in efficiency & patient safety
- Inventory management, medical equipment management

Capture
- Barcodes, RFID, imaging, voice recognition etc.
- Accurate, real-time, granular data while releasing time to care
- Record exactly which product used – by whom, when & where

Identify
- Patients, staff, equipment, location, products, documents, samples
- Data integrity
- Unambiguous identification of products

Key
Capability
Benefits
Examples

Basic   **Level of safety**   Advanced

Scan4safety Report

Right Patient

Setting standards to make sure we always have the right patient and know **what** product was used with **which** patient, **when**.

Right Product

Setting standards to make sure our staff have **what** they need, **when** they need it.

Right Place

Setting standards to make sure that patients and products are in the right place.
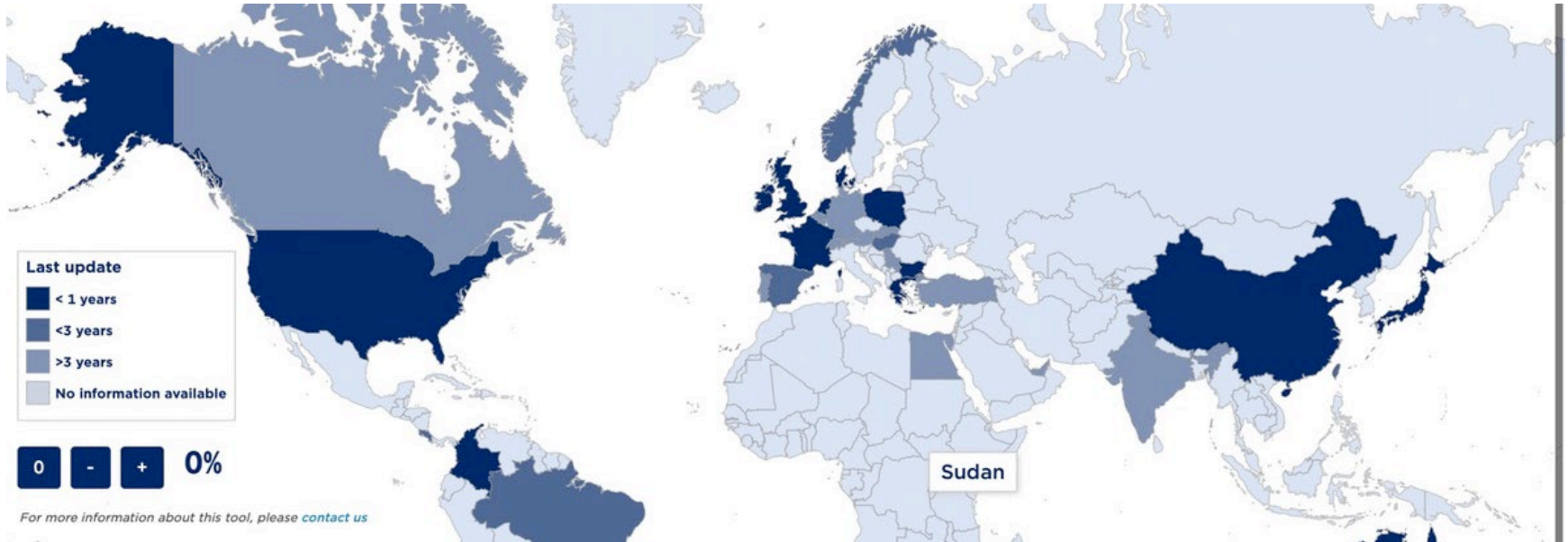
Right Process

Setting standards and implementing common ways of working to deliver better and more easily repeatable patient care.
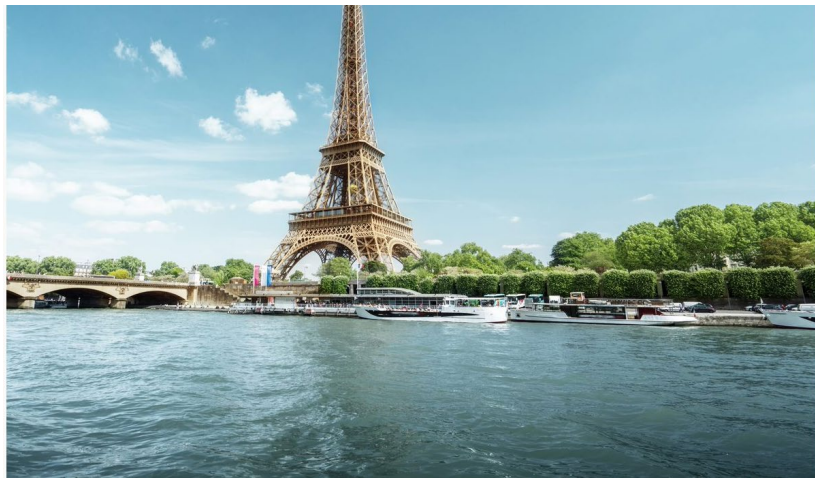
Every time!

Healthcare Providers Database

Healthcare Providers webinars

Last update
- < 1 years
- <3 years
- >3 years
- No information available

0 - + 0%

For more information about this tool, please contact us

Sudan

37th GS1 Healthcare Conference, Hybrid

Sharing our purpose to lead development & implementation of GS1 Standards to enhance patient safety, operational & supply chain efficiencies.

Safer, more efficient care starts with a simple scan – Building on strong foundations

- November 15-17, 2022 at the Pullman Bercy, Paris
- Our biggest annual event solely dedicated to the healthcare community
- Co–hosted with GS1 France
- A unique opportunity to learn and meet with worldwide experts
- Designed to provide exciting and highly relevant content to in-person and online audiences, with interactivity and networking for all

Questions ?