



The Global Language of Business

GS1 Healthcare Provider Advisory Council Webinar

Use of GS1 standards to improve patient safety in the home

Feargal Mc Groarty, Project Manager National Coagulation Centre,
St James's Hospital, Ireland

March 16th, 2017



Welcome and thank you for attending!



- Welcome to our March 2017 webinar. Thank you to our guest speaker – Mr. Feargal Mc Groarty, Project Manager, National Centre for Hereditary Coagulation Disorders, St James's Hospital, Ireland
- 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 and 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)



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



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

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>

GS1 Healthcare also holds two global conferences per year. The next conference in Berlin from April 4 – 6, 2017. There will be significant Healthcare Provider participation on the agenda.

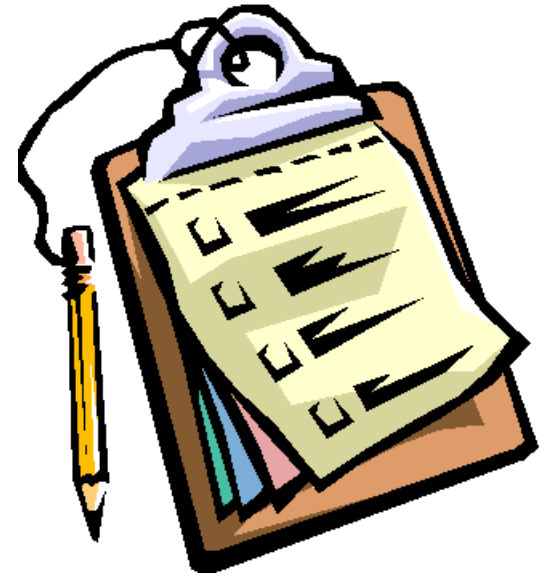
Use of GS1 standards to improve patient safety in the home



**Feargal Mc Groarty, Project Manager,
National Centre for Hereditary Coagulation
Disorders, St James's Hospital, Ireland**

Agenda

- Why we did it! (issue)
- How did we hear about GS1
- What role did GS1 Play
- Where is GS1 used in our system(s)
- How did we undertake implementation
- Outcomes – What worked/didn't, what we would do differently
- Advice for others



What is Haemophilia ?



- Haemophilia is a hereditary bleeding disorder caused by a deficiency of a clotting factor (protein)
- Characterised by excessive bleeding even after minor injury
- Incidence is between 1:5,000 and 1: 10,000 Males
- The treatment of haemophilia involves the replacement of the clotting factor (previously prepared from pooled blood) using a concentrated preparation “Clotting Factor Concentrate” (CFC)
- Very expensive medication
- Approximately 200 patients with severe form
- **Patients self medicate in the home (Prophylaxis)**

Issue

What triggered the initiative ?



Catastrophic Event

- Infection of patients with Hepatitis C and HIV due to contaminated blood products. Infected products remained in the supply chain after recall leading to subsequent infection
- Over 100 patients died
- Lindsey Tribunal

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Report
of the
Tribunal of Inquiry
into the
Infection with HIV and Hepatitis C
of Persons with Haemophilia
and Related Matters

BAILE ÁTHA CLIATH
ARNA FHOILSIÚ AG OIFIG AN TSOLÁTHAIR
le ceannach díreach ón
OIFIG DHÍOLTA FOILSEACHÁN RIALTAIS.
TEACH SUN ALLIANCE, SRÁID THEACH LAIGHEAN, BAILE ÁTHA CLIATH 2,
nó tríd an bpost ó
FOILSEACHÁIN RIALTAIS, AN RANNÓG POST-TRÁCHTA,
4-5 BÓTHAR FHEARCHAIR, BAILE ÁTHA CLIATH 2,
(Tel: 01-6613111 - fo-line 4040/4045; Fax: 01-4752760)
Nó trí aon díoltóir leabhar.

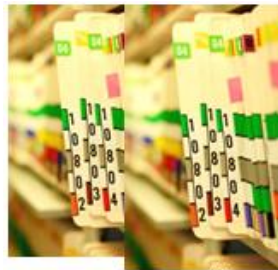
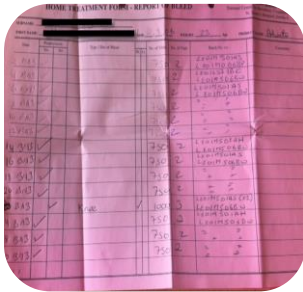
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Issues

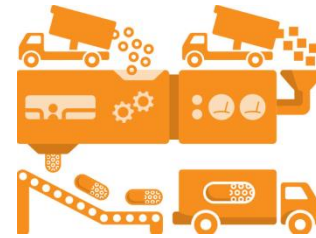




The solutions



Medication delivery – Where we were





Heparin Contamination Deaths Counted

by admin | Apr 9, 2008 | Drugs, Editor's Picks, FDA, Poisoning, Prevention, Recalls |

The US Food and Drug Administration (FDA) has just released some important statistics that reveal the number of heparin-related deaths before and after the recent recall of heparin and heparin-related products manufactured and/or distributed by Baxter International Inc. and Scientific Protein Laboratories LLC (SPL), both headquartered in Wisconsin. SPL gets its active ingredient from its own plant in China and distributes its heparin products to Baxter.

Recent tests of the product suggest a contaminant similar to heparin, but lacking the anti-clotting action of the drug, as the cause of reported adverse effects. The raw ingredients for making heparin come through an unregulated supply chain in China. The contaminant is known to cause allergic reactions and hypotension (low blood pressure) in some patients, with adverse reactions severe enough to cause death in some cases.

**Heparin
Contamination
Deaths
Counted**



For the period of January 1, 2007, through March 31, 2008, there were:

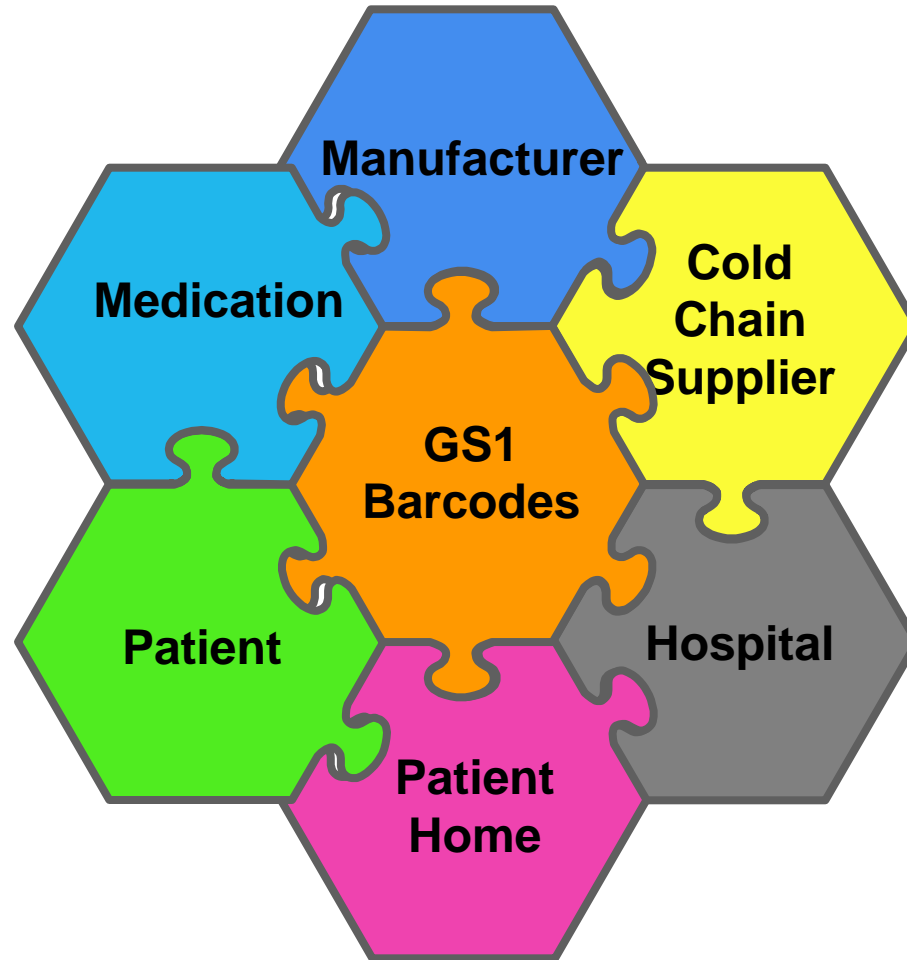
How did we hear about GS1



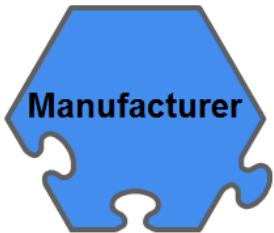
In 2003 we were approached by GS1 Ireland regarding how the application of GS1 standards used in retail could assist in the medication delivery process

- Unique identification (barcode) of patient - **PMGSRN**
- Unique identification (barcode) of medication - **Serialised GTIN (+Lot + Expiry)**
- Unique identification (barcode) of locations (Hospital/Home/Pharmacy/Transport) - **GLN**

Where does GS1 Fit?



Where is GS1 in our systems?



GS1 standard barcode on medication (serialised GTIN)



EPR modified to produce **GS1** identifiers (PMGSRN, GLN)
T&T system built to track medication through Hospital



All medication has **GS1** barcode either labelled at source or overlabeled



Each patient home identified with a **GS1** GLN

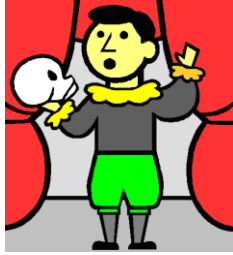


Rewrote their WMS to accept **GS1** identifiers and produce GS1 barcode for medication where necessary



Mobile Phone (cellphone) App used to scan **GS1** barcode and record medication compliance

What role did GS1 play?



- Reviewed our processes and indicated where GS1 standards could add value
- Educated medication suppliers and system solution providers about why and how to implement GS1 standards
- Provided on going advice throughout the implementation and beyond
- Worked with solution providers to embed GS1 identifier capture and generation in their systems



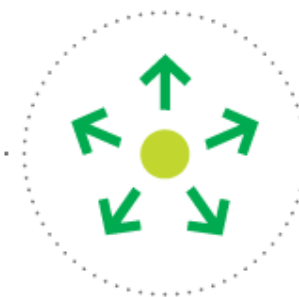
Once in place, how do we use GS1 standards?



IDENTIFY



CAPTURE



SHARE



Identify



IDENTIFY



(01) 20887511007364
(17) 150331
(10) A1B2C3D4E5
(21) 123456789

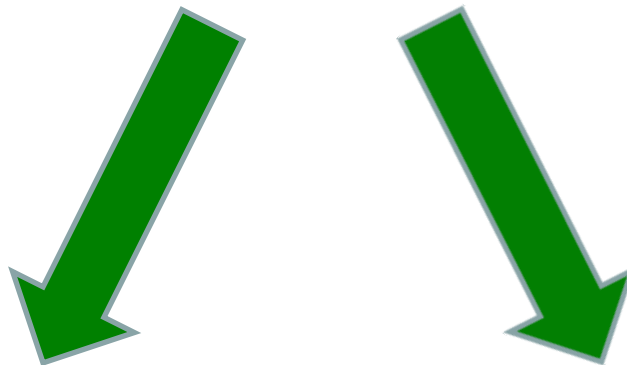
Product Name(GTIN)

Expiry Date

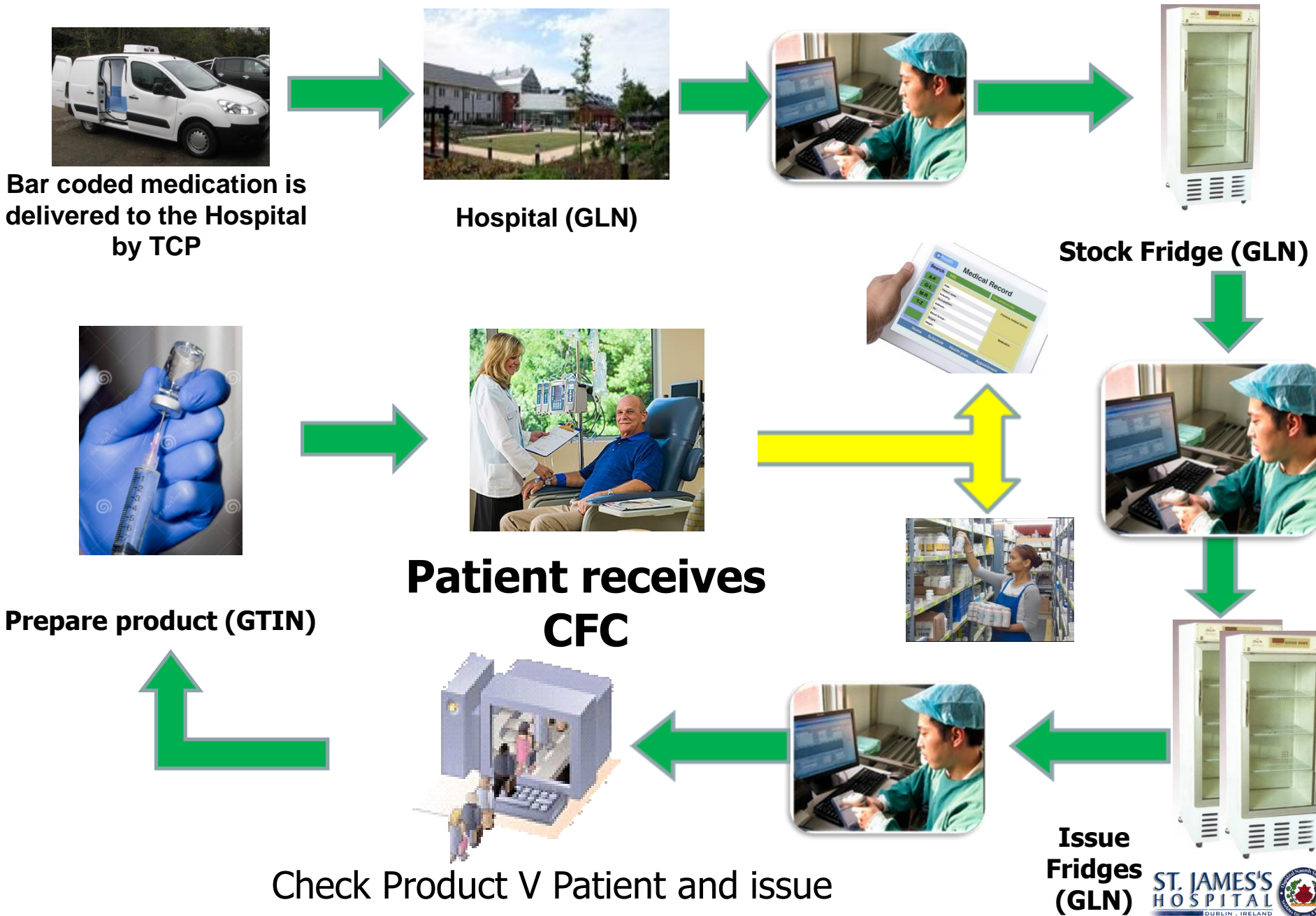
Batch/lot Number

Serial Number

Capture



Solution for tracking and tracing products within the Hospital



Share



SHARE

Company: **St. James Hospital** Owner: **Feargal**
 Source: **PharmaTrack** Stock Report By Location Date: **02/05/07 16:28**
 Criteria: **(GLN = NCHCD)**

NCHCD

ProductName	Batch No	Received On	Expiry Date	Quantity
Advate 1.1 1000iu Baxject II Ireland	LE01F515AC	23/03/2007	30/08/2008 23:59	10
Advate 1.1 1500iu Baxject II Ireland	LE01F042AS	26/02/2007	31/08/2008 23:59	6
Advate 1.1 500iu Baxject II Ireland	LE01E127CH	20/10/2006	30/11/2007 23:59	5
Benefix 1000 IU	LE07F021AA	11/04/2007	31/07/2009 23:59	17
Benefix 500 IU	LE07F046AA	09/03/2007	31/03/2009 23:59	9
Fandhi 500 IU	IBVB6MRNT1	23/03/2007	28/02/2008 23:59	4
Novo Seven 2.4mg (120 KIU)	SU60351	05/09/2006	30/06/2008 23:59	1
	SU61573	08/03/2007	31/03/2009 23:59	3
Novo Seven 4.8mg (240 KIU)	SU60724	16/03/2007	30/09/2008 23:59	3
Novo Seven 1.2 mg (60 KIU)	SU60350	16/03/2007	31/03/2008 23:59	2
	SU60785	19/09/2006	28/02/2008 23:59	3
Prothromplex 600 IU	VNP2F001	11/10/2006	31/12/2007 23:59	2
	VNP2F002	02/11/2006	31/05/2008 23:59	4

Solution for tracking and tracing medication to the home



Smartphones with scanning App

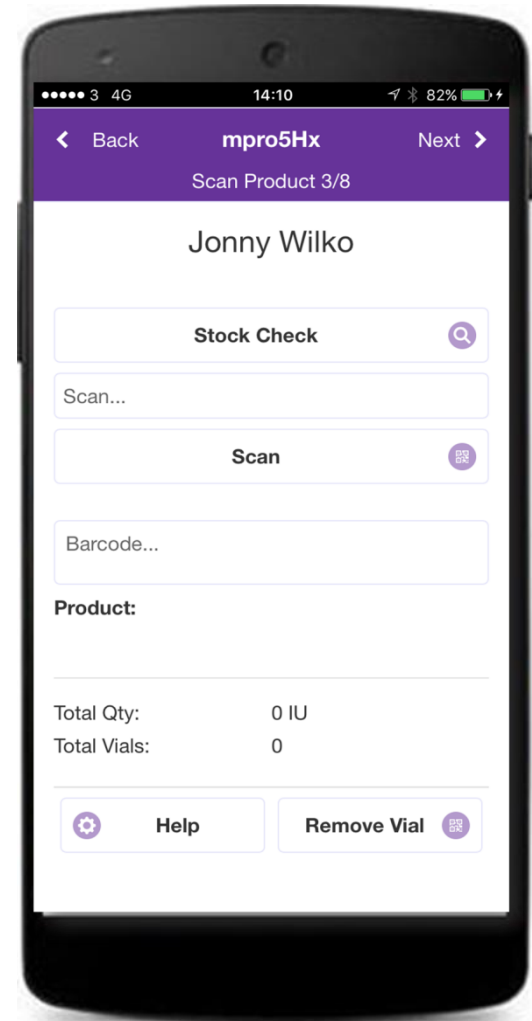
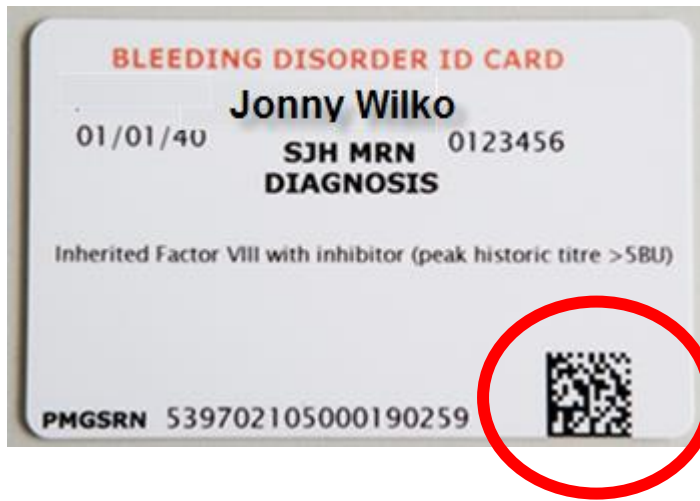
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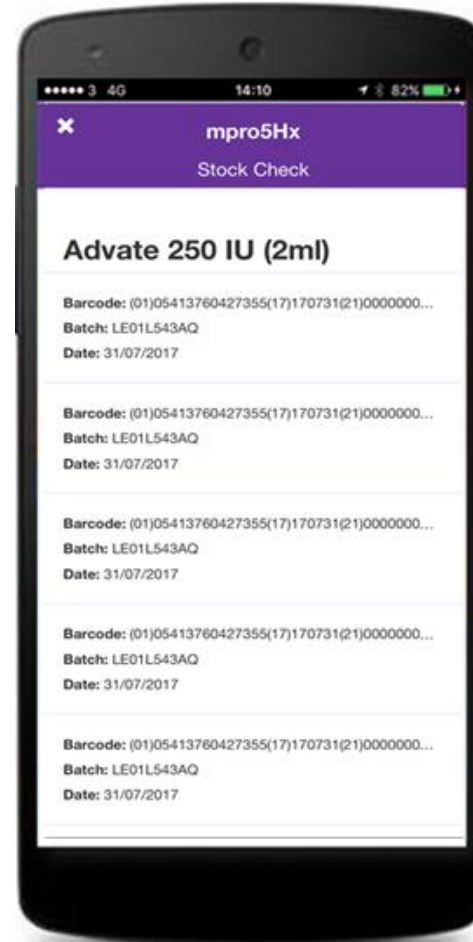
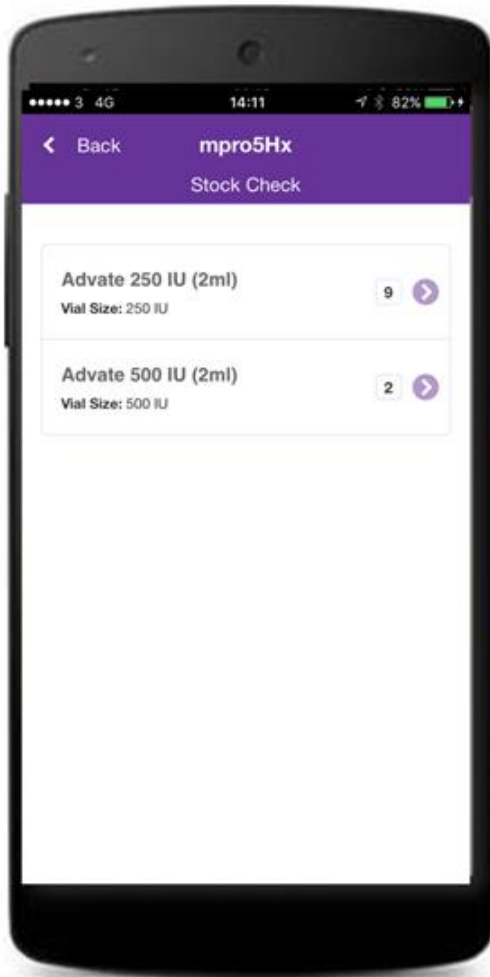


Log-in

Secure Login by

- Username/Password
- or
- Scanning unique GS1 ID on Card

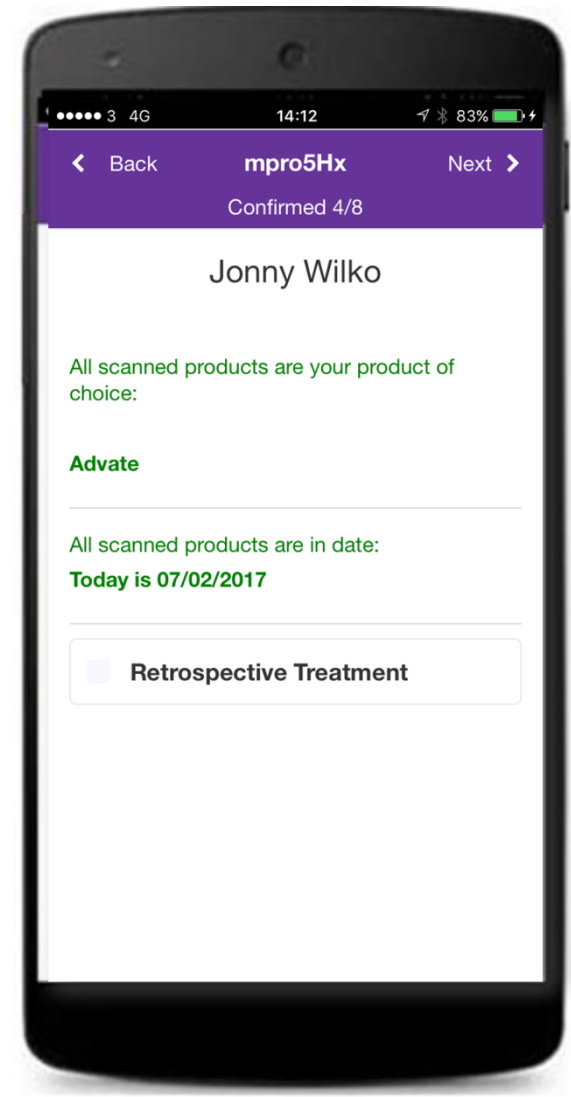




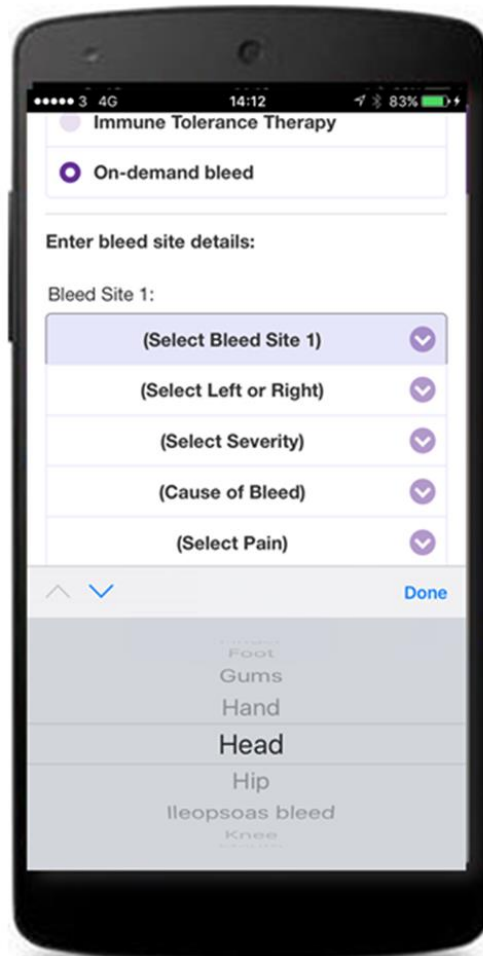
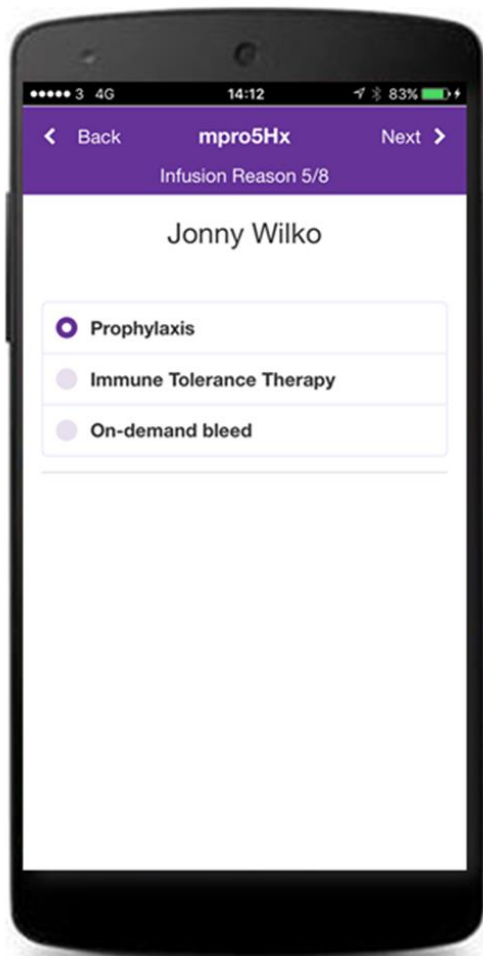
Scan Product

Barcode on Vial box is scanned to check

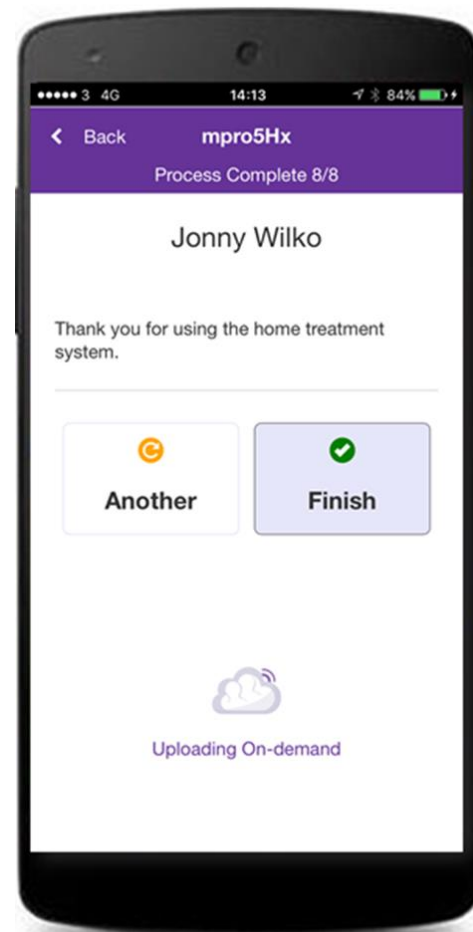
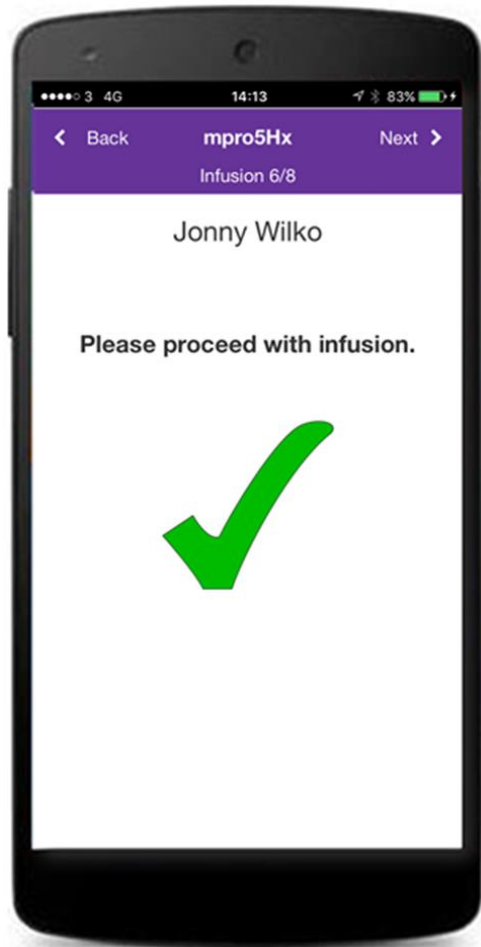
- Product detail (prescription)
- Expiry date
- Recall status
- **Shorter dated stock**



Scanning Process



Scanning Process



Share



SHARE

Report Viewer - Microsoft Internet Explorer provided by St. James's Hospital

https://mpro3xr.mobileprofessional.co.uk/ReportServer/Pages/ReportViewer.aspx?%2fHomeScan%2fPinkFormReport&rs%3d

File Edit View Favorites Tools Help

Report Viewer

From Date: 23/06/2010 To Date: 23/06/2010 Patient Name: Test, Seven View Report

1 of 2 ? 100% Find | Next Select a format Export

Home Scan System Bleed Report 23/06/2010 - 23/06/2010

Surname: Test DOB: 01/01/1940
First Name: Seven WEIGHT:

Treatment Date	Prophylaxis	Bleed Site Details	Products Name	Batch No.(s)	Units	Vials
23/06/2010	Yes		Advate	LE01H546AB	1000	1
23/06/2010	Yes		Advate	LE01H546AB	1000	1
23/06/2010	No	Blood in bowel motion (PR bleed)/N/A	Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01H546AB	1000	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1
23/06/2010	Yes		Advate	LE01J025AY	1500	1

TOTAL : 16500 12

Done

Internet 100%

Start 4 Microsoft Offi... 5 Adobe Reade... In Home device -... 3 Internet Ex... 5 Microsoft Offi... untitled - Paint 10:38

Share



SHARE

Clintech Manager

File Workup Assessments Manage Tx View System Admin Window Help

Summary History Notes Flow Sheet Chart Exam Tx Options Rx Drug Admin Prov Appr Reports BT Orders Edit Bleeding

Patient History - Test, One (Closed) * NOT AN ACTUAL PATIENT *****

Diagnoses / Problems Questionnaires Comments Tests Infection Control Chief Complaint / HPI Clinical Archive

Procedure/Surgical Medical Gynecology Obstetrics Family Social Allergies/Adv. Reactions Medications

Venous Access **Treatment History**

Treatment Regime : **BeneFix**

Treatment of choice	Regime Type
BeneFix	Major Bleed/Surgery
Dextran 1	Major Bleed/Surgery

TREATMENT SEARCH

From Tx Date: 22/01/2013 To Tx Date: 22/01/2014

Search Tx

Print All Close

Patient History | McGroarty, Mr. Feargal | NCHCD | Jan 22, 2014 14:00



Haemophilia Project Timeline

Cold Chain
distribution service
for medication
commenced

Haemophilia EPR
implemented

Datamatrix
barcodes



Start of migration from
linear to GS1 2D
(Datamatrix) barcodes on
medication

Smartphone App

First 20 patients
commence scanning with
smartphone App

2003

2004

2006

2007

2010

2014

GS1 Barcodes

barcodes (linear)
implementation on medication
and embedded in Cold Chain
delivery service



Hospital tracking

Hospital track and trace of
haemophilia medication
using barcode scanning
implemented

Patient data
integration

Patient home treatment
data from App fully
integrated with EPR



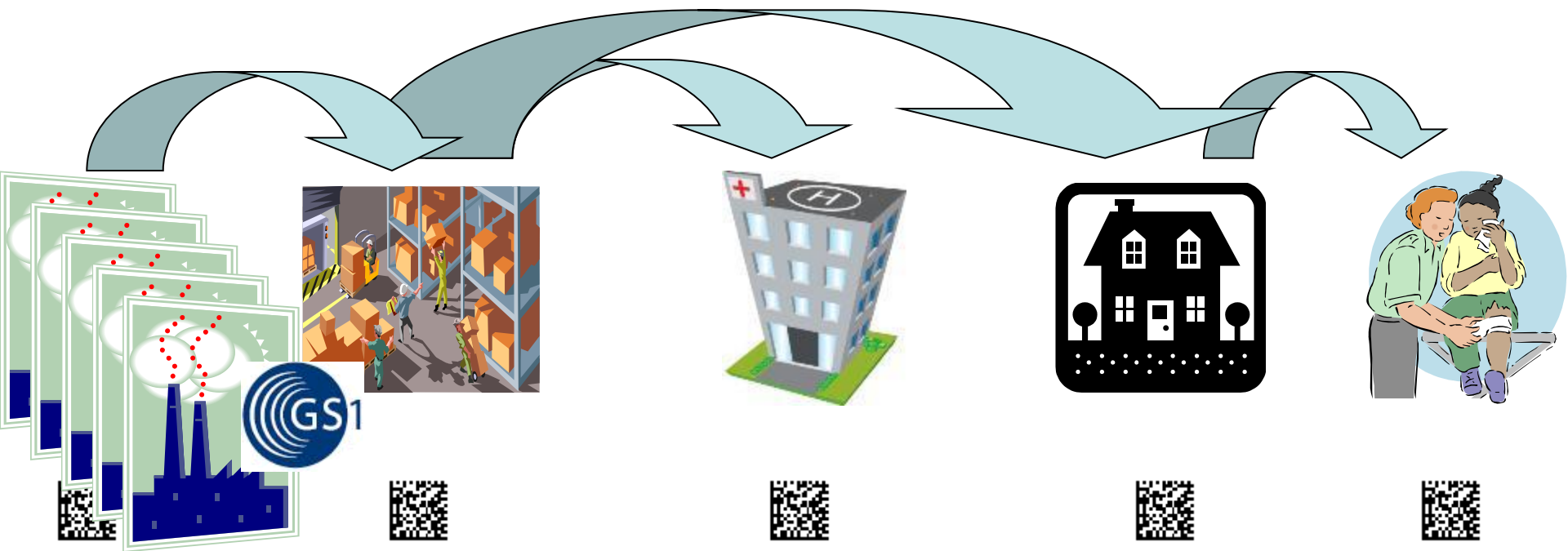
Immediate outcomes post implementation of smartphone App

(launched June 2010)

- Real-time recall alert
- Timeliness of infusion
- Prescription compliance (2000iu instead of recommended 1750iu)
- Automatic compliance (no manual record keeping)
- Compliance > 90% (for those with phone App)
- Real-time Alerts for specific bleeds
- Patient empowerment
- Significant savings (over €70,000 within first 3 months with only 20 users)



Where we are



What worked, what didn't?



- Still over labelling for some medications
- Still lack of understanding by Solution Providers of what “GS1 compliance” means
- The hospital was required to pay for 3rd party system modifications
- Constant vigilance is required to keep recording compliance up, even with those using the App

Why has this template not been adopted across the Irish Health Service?

- Lack of strong clinical sponsorship/leadership
- Lack of funding
- Lack of awareness of GS1 (HC professionals and Solution Providers)
- Cost of system modifications (solution providers)
- Priorities

How can you begin implementation?



Advice....



- Use GS1 as a resource
- When going to tender for any system, build GS1 standards into the requirement specifications
- Add your GS1 MO to your system tender team
- Look at GS1 reference books for examples of implementations
- Find a strong clinical advocate
- Use the FMD, UDI and US DSCSA legislation as a business case
- Try to incorporate GS1 into existing systems (Blood T&T)
- Quick wins are always good!

Acknowledgements



All staff in National Centre for Hereditary Coagulation Disorders, in particular.....

- **Dr. Barry White** (Clinical Director)
- **Evelyn Singleton** (National Co-ordinator for CFC)
- **Rachel Bird** (National Haemophilia system data manager)
- **Vincent Callan** (Director of Facilities Management)

Thank you for listening!



fmcgroarty@stjames.ie