

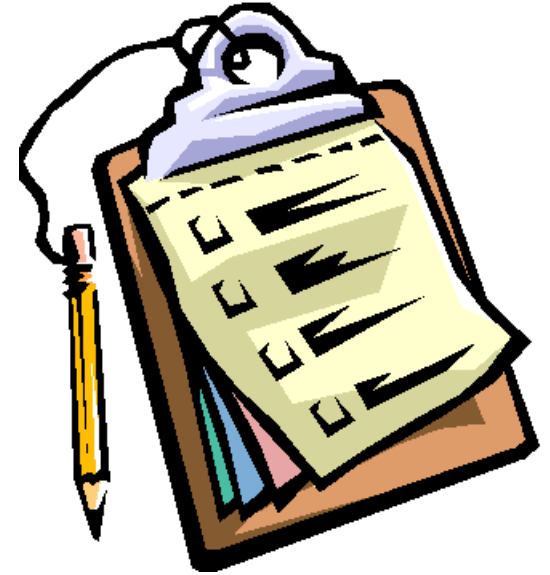
Use of GS1 standards to improve patient safety in the home



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

Agenda

- What did we do (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)
- **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)
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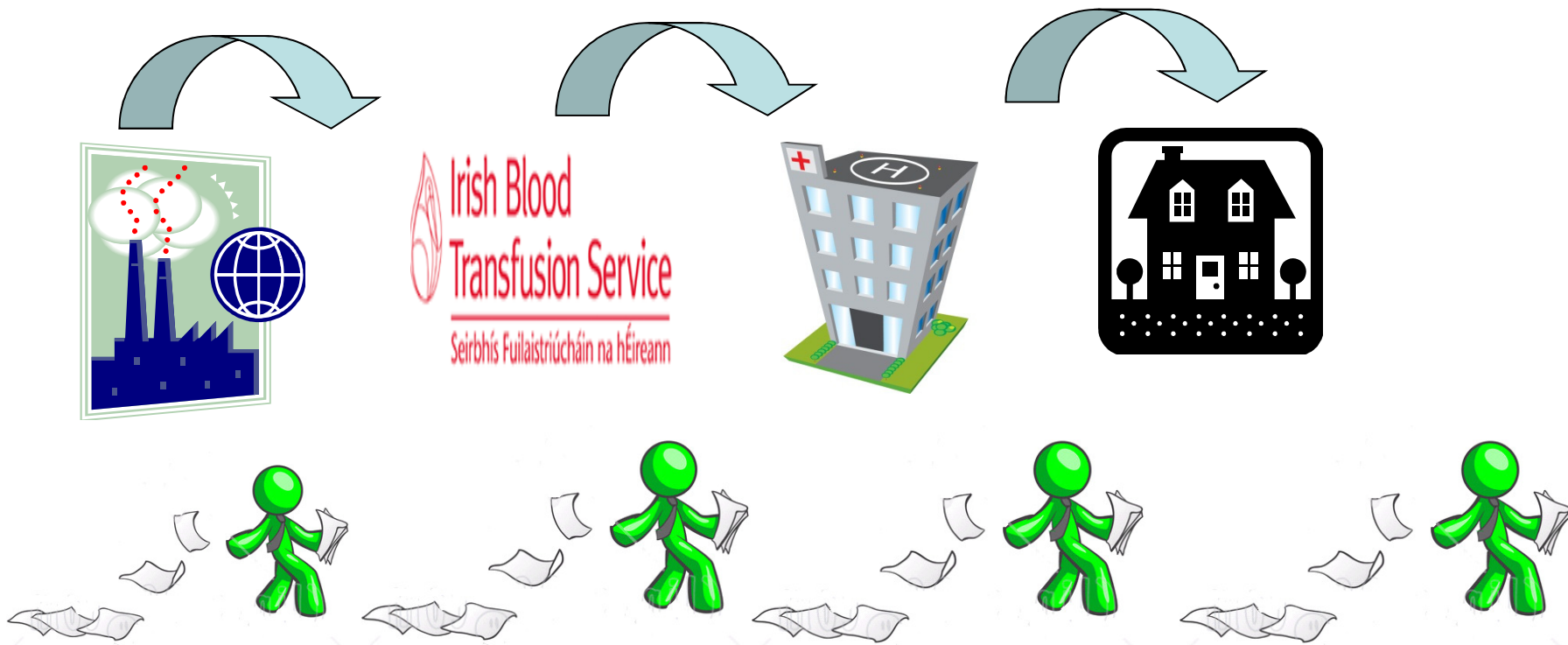
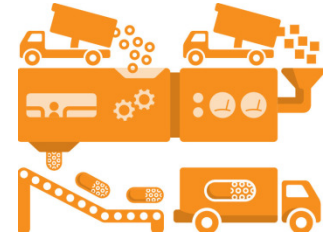
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Medication delivery – Where we were



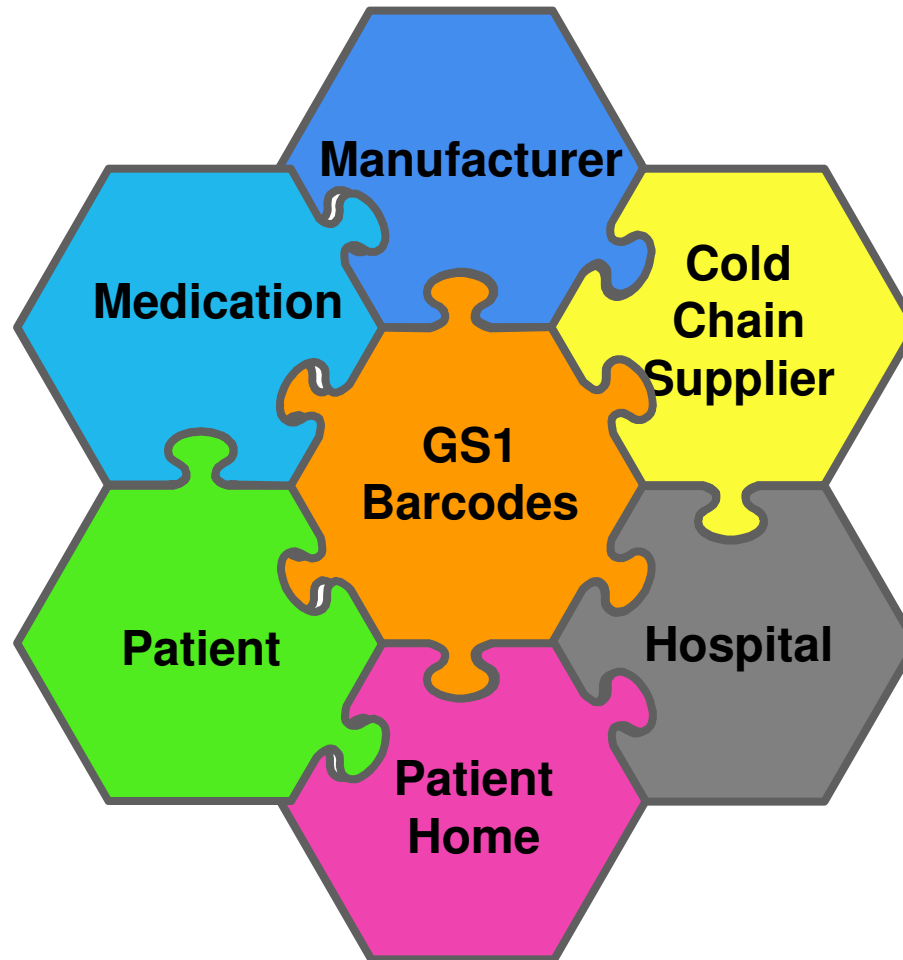
How did we hear about GS1



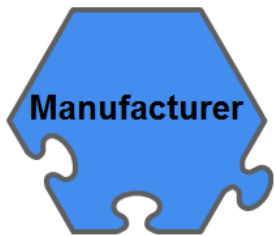
In 2003 we were approached by GS1 Ireland regarding how the GS1 standards could assist in the medication delivery process

- 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

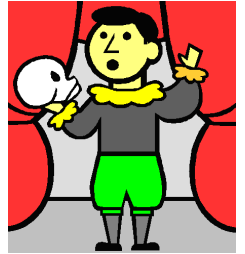


Rewrote their WMS to accept **GS1** identifiers and produce GS1 barcode for medication where necessary

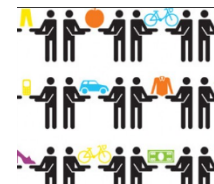


Mobile Phone (cellphone) App used to scan **GS1** barcode and record medication compliance

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



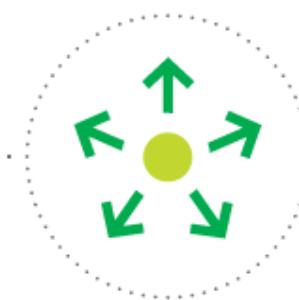
Once in place, how do we use GS1 standards?



IDENTIFY



CAPTURE



SHARE



Identify



(01) 20887511 00734 6
(17) 150331
(10) A1B2C3D4E5
(21) 123456789

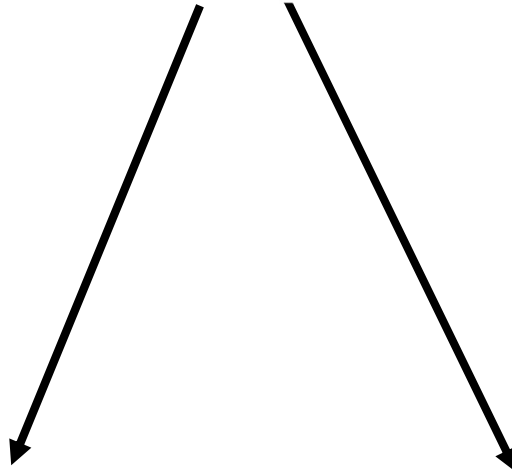
**Product Name
(GTIN)**

Expiry Date

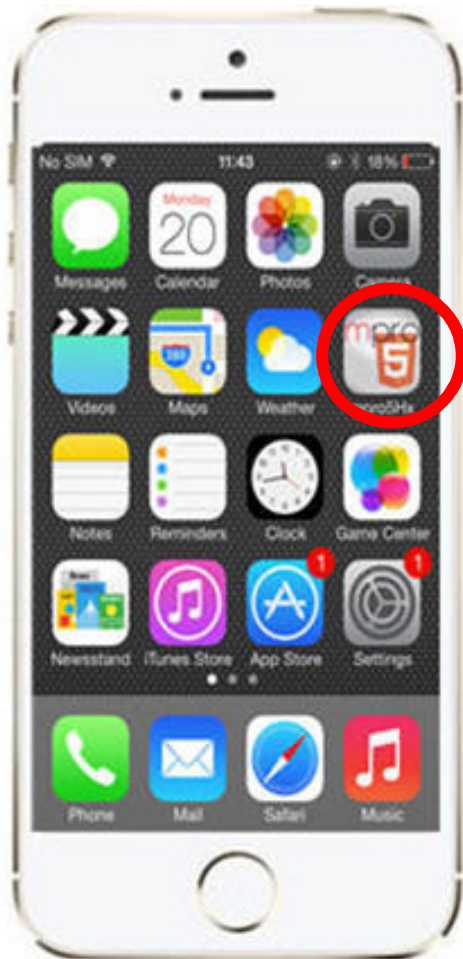
**Batch/lot
Number**

Serial Number

Capture



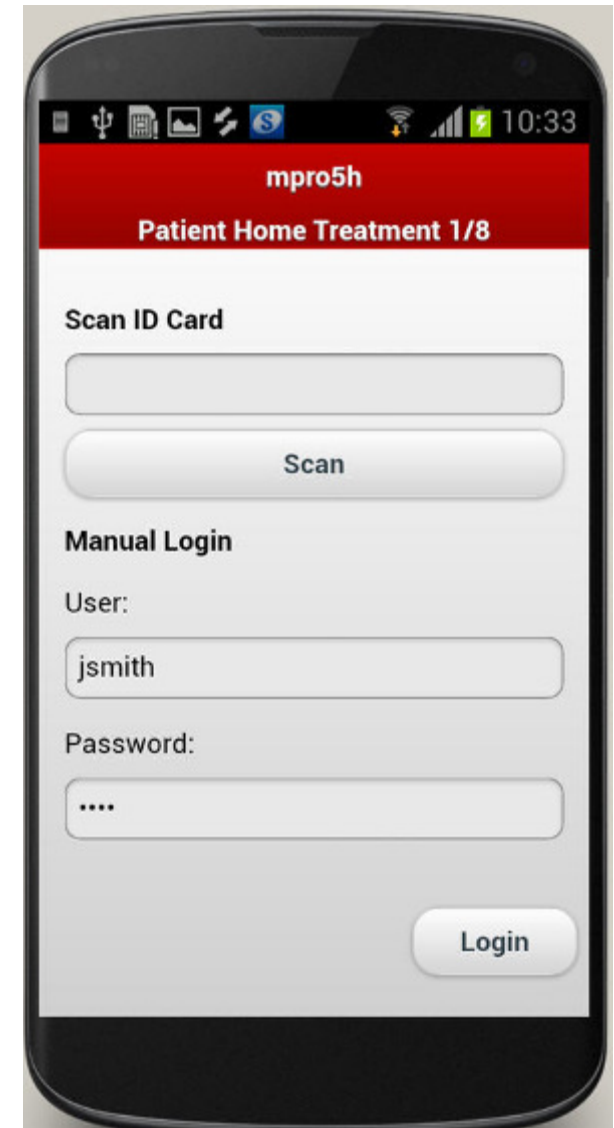
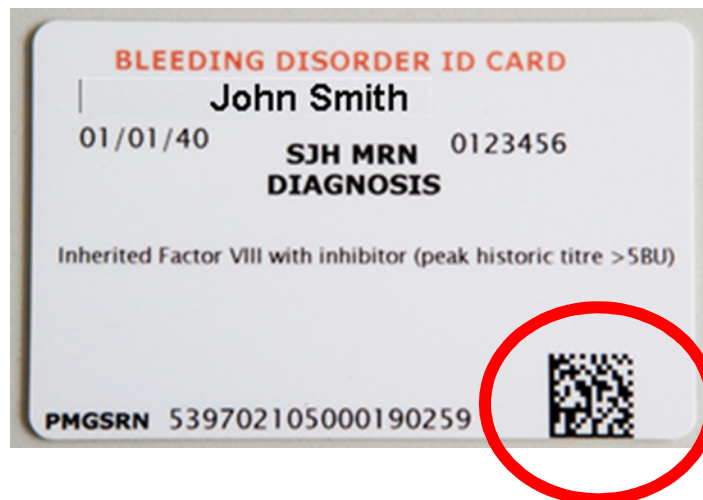
Smartphones with scanning App



Log-in

Secure Login by

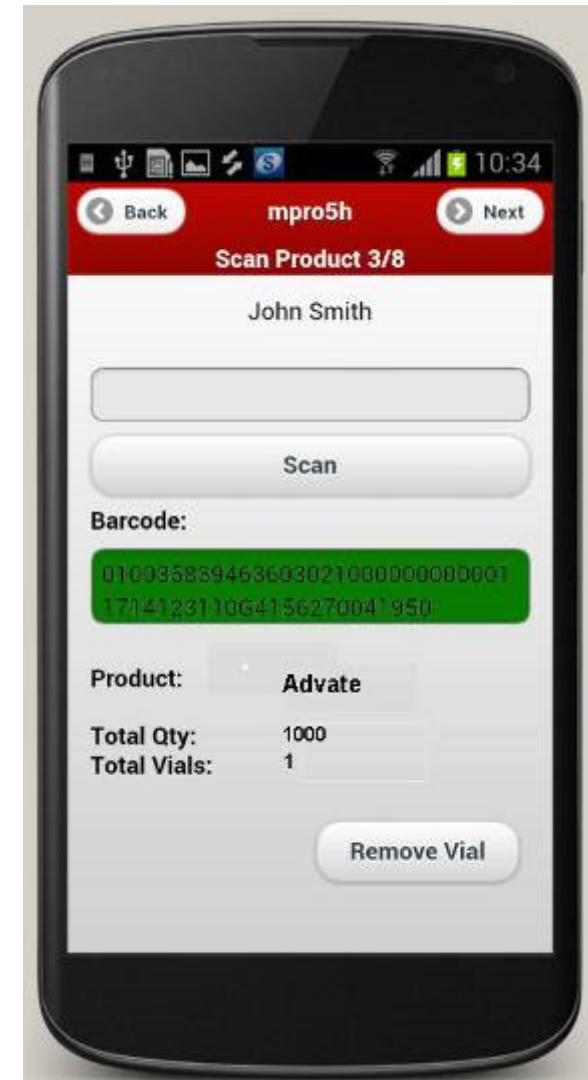
- Username/Password
or
- Scanning unique GS1 ID on Card



Scan Product

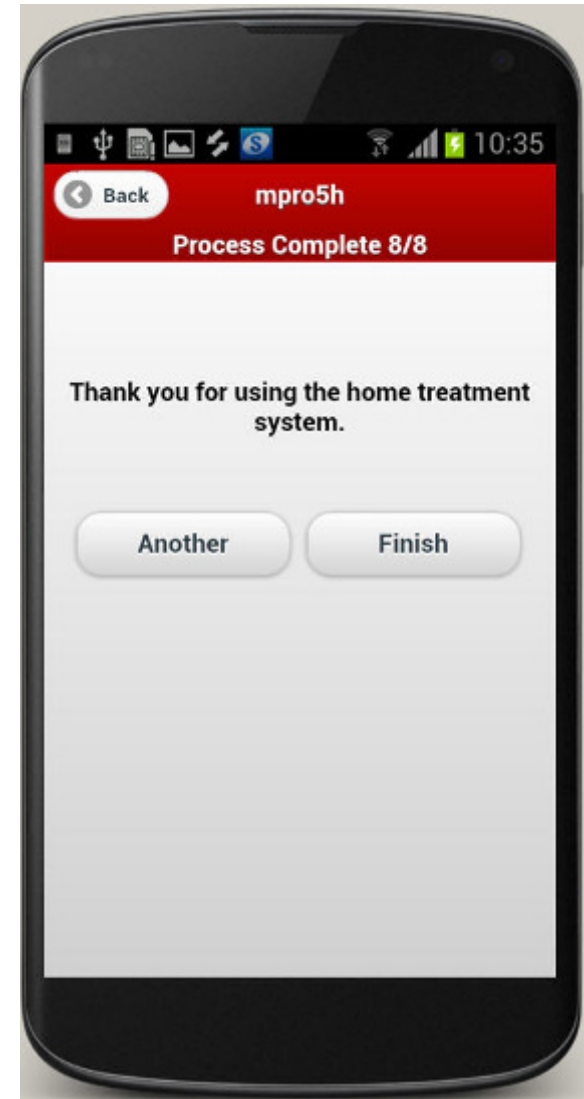
Barcode on Vial box is scanned to check

- Product detail (prescription)
- Expiry date
- Recall status



Process Complete

Process concludes, system
synchronises data wirelessly to **web
application**



Share



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

https://impro3xr.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
23/06/2010	Yes		Advate	LE01J025AY	1500	1

TOTAL : 16500 12

Done

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

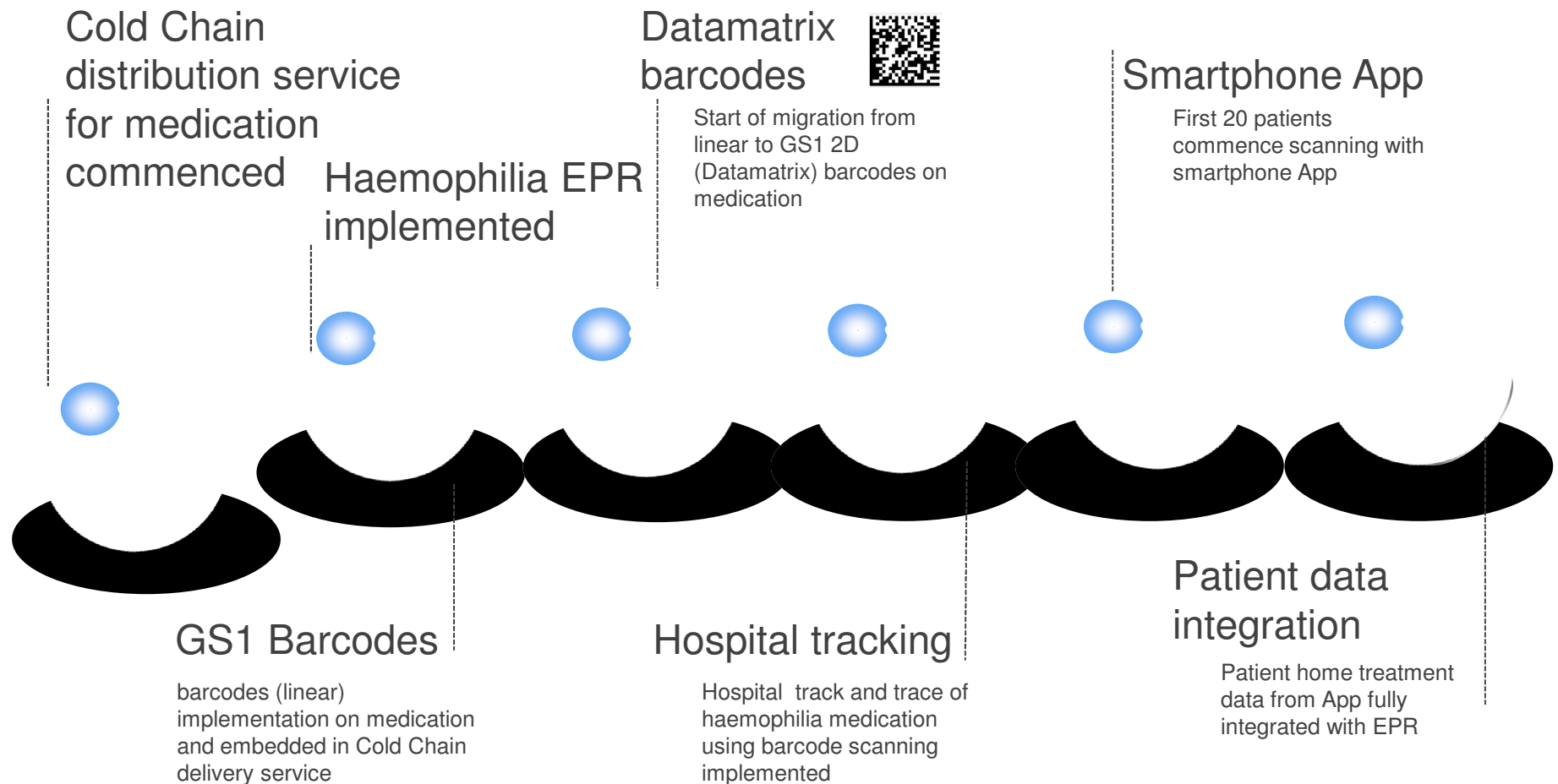
TREATMENT SEARCH

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



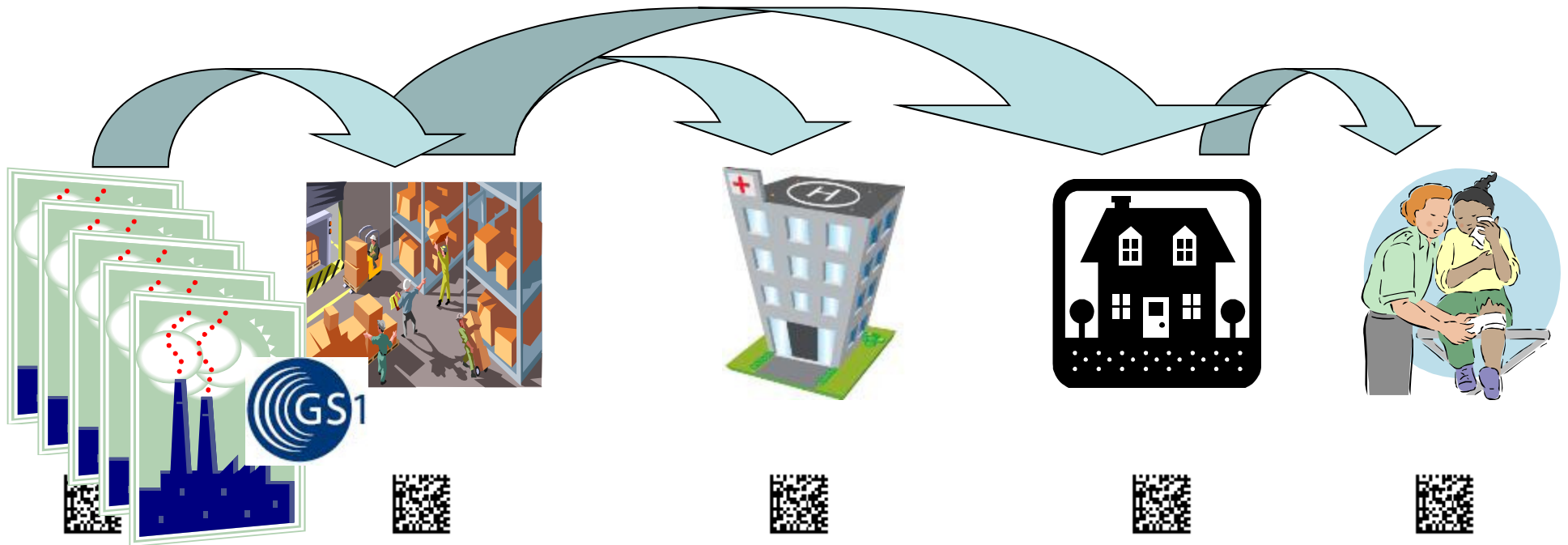
Immediate outcomes post implementation of Smartphone App

(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 suppliers of what “GS1 compliance” means
- The hospital was required to pay for 3rd party system modifications
- Even with the documented outcomes and learnings, the template has not been adopted by other disease groups such as Orphan Drugs and Vaccines

Why?

- Lack of strong clinical sponsorship/leadership
- Lack of funding
- Lack of awareness of GS1
- Cost of system modifications (solution providers)
- Priorities

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
- 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)

Remember, GS1 standards are just a tool.....



Thank you for listening!

