



Driving interoperability between EPR systems with DCB1077-compliant wristbands

Will Pearse

Senior digital change & governance manager
The Christie NHS Foundation Trust



#bettercarecostsless

Driving interoperability between EPR systems with DCB1077-compliant wristbands

William Pearse
Senior Digital Change and Governance Manager
29th April 2025



Introduction



Royal Papworth Hospital

Foundation Trust



Set the scene

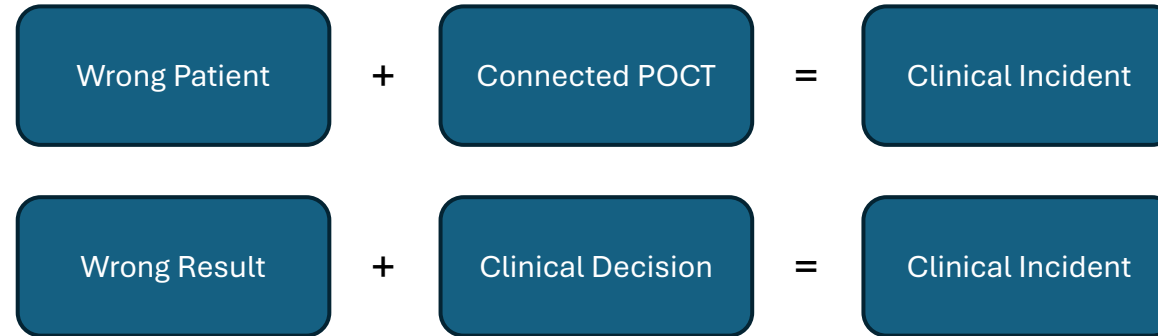
- No barcodes – just name, address and ID number
- Red for allergies
- POC Results into EPR or ‘Skinny File’ sporadic
- Patient data collected on notepads and paper towels
- ‘Connected Glucometer’ project
- Growing number of smart POC devices planned



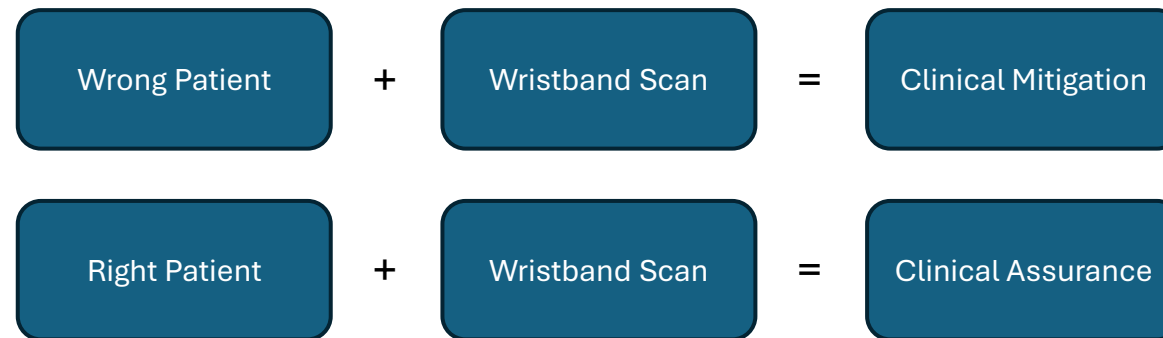
Set the scene

Options Appraisal – First Pass

1. Glucometer process with existing band



2. Glucometer process with a barcoded band



Options

Options Appraisal – “We’re The Christie. We do things differently”



“It’s just a font”

“It’s just an image”

No. Also, consider...

- Bespoke development for 215 Trusts?
- Build for the future

Options

Options Appraisal - "Lets not reinvent the wheel"



Complexity



Development



Testing



Interop



Overheads



Leverage

Get on with it....



Royal Papworth Hospital

NHS Foundation Trust

From: LEAD, EHR Strategic (THE CHRISTIE NHS FT)

Sent: 29 June 2022 19:28

To: OFFICER, Chief Clinical Information (THE CHRISTIE NHS FT); OFFICER, Chief Medical Information (THE CHRISTIE NHS FT);

Matron, Digital (THE CHRISTIE NHS FT); OFFICER, Chief Information (THE CHRISTIE NHS FT);

OPERATIONS, Head of (THE CHRISTIE NHS FT); PEARSE, William (THE CHRISTIE NHS FT)

Subject: Barcoded patient wristbands

Hi,

Spoke to a few people today about this.

As S mentioned a few weeks ago, I believe the lack of barcoded patient wristbands is a significant issue, that will cause issues with the following projects:

- Glucometer integration
- Order comms
- EPMA
- Any other medical device integration (eg. scales)
- Haemonetics

I don't *think* this is a huge issue to solve, but a **4-week taskforce/swat team** to move this forward may be a good way to resolve this.

This requires Medway/Careflow configuration, and changes to the ways of working on the ground.

Suggest we discuss this at SMT at the earliest convenience.

Get on with it....



Royal Papworth Hospital

NHS Foundation Trust

From: PEARSE, William (THE CHRISTIE NHS FT)

Sent: 11 July 2022 10:40

To: ANALYST, Business (THE CHRISTIE NHS FT)

Subject: Barcoded patient wristbands

In short, I believe we have our barcode format (GS1 DataMatrix) **set from NHSD** and we now need to agree the composition. That is, what data do we want the barcode to contain (ie name, hospital number, NHS number...) and in what order. This will be a combination of what we want, what careflow can produce, what the device/projects listed below can support and what existing devices with this functionality (but aren't used) can support. I expect the overlap will be quite large - **we're hardly a vanguard for barcoded wristbands** – so the graft here will be the initial research, identifying which devices need configuring and a job back to SystemC and other suppliers to create/configure the composition.

Beyond that, there's going to be some business rules needed about **number of barcodes on the wristband** (in case one gets damage while being worn) and **what we do with paed/s smaller bands** (ie print two!) and other wristband templates that are full. Pretty sure **NHSD have this covered off already** nationally so we might want to add some trust level rules on top. I expect this will end being a SOP and I don't know who the best person to write that is at the moment (maybe the Digital Nursing Team)

Having said all of that, though, it's best you start from scratch, review the docs attached, the link I've included in the email below to EHR Strategic Lead and anything else you find and challenge my interpretation. No one else has done any digging on this from what I can tell.

Get on with it....



Royal Papworth Hospital
NHS Foundation Trust



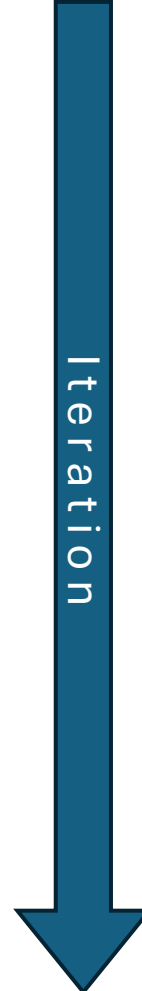
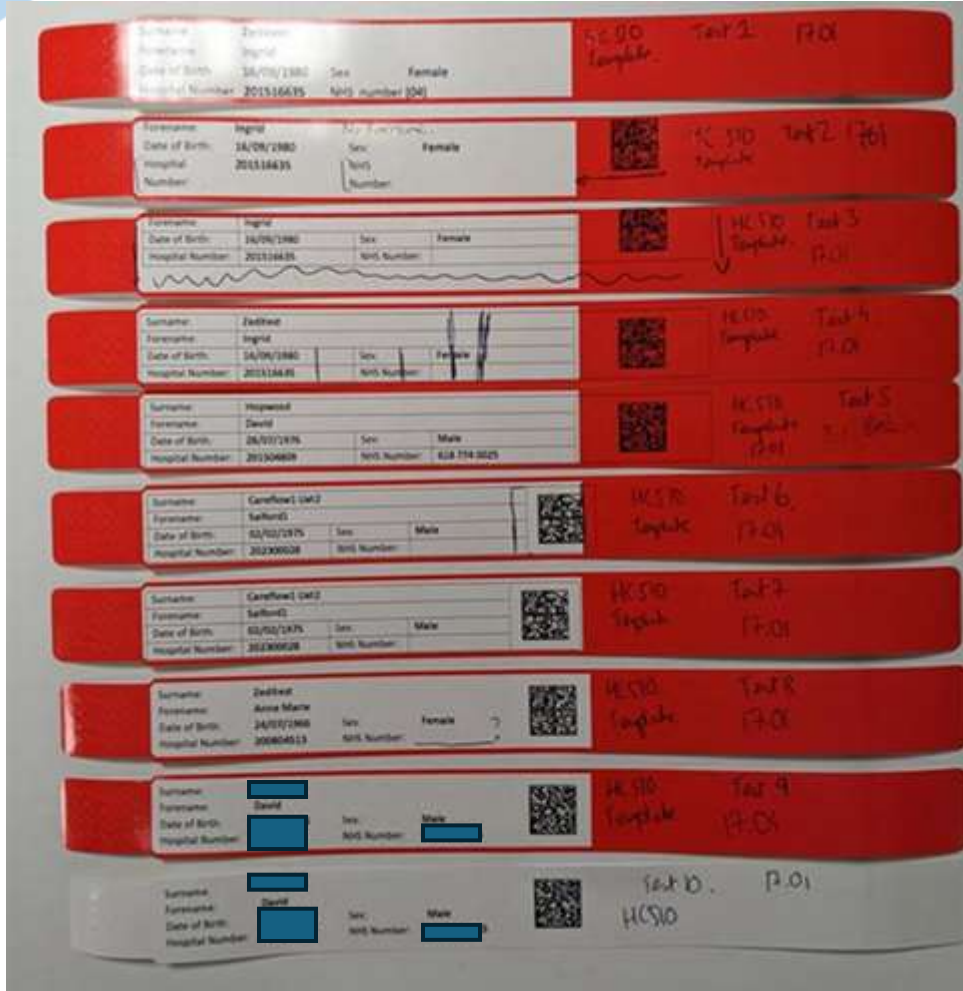
Get on with it....

Forename	Harryjame	Sex:	Male	QR Code	ZD510 -HC option (UAT) using HC100 printer (IPU)
Date of Birth	17/04/2000	NHS	Number:		
Hospital	201516633	Number:			



Get on with it....

- T01
- T02
- T03
- T04
- T05
- T06
- T07
- T08
- T09
- T10



Get on with it....



Royal Papworth Hospital
NHS Foundation Trust

The Acceptance Criteria protect against common issues


- 1.) Barcode not scanned – Barcode could be too big, too small or incoherent
- 2.) Not decoded – The barcode scans but the string isn't compliant (ie there's no check digits).
- 3.) Not usable – Information is in the wrong order, missing or 'null' – protects against integration or configuration issues
- 4.) Not compliant – Date in wrong format. Name in wrong order. Address incomplete.
- 5.) Hardware – Don't underestimate the complexity caused by differing models of wristband printer!
- 6.) Software – Stock vs Custom Configuration

Get on with it....


T26

Surname:	Xttestpatient-Taur			
Forename:	Donotuse			
Date of Birth:	27/04/2007	Sex:	Female	
Hospital Number:	202309366	NHS Number:	999 050 5926	

T27








Surname:	Xttestpatient-Taup			
Forename:	Donotuse			
Date of Birth:	25/12/2014	Sex:	Female	
Hospital Number:	202309358	NHS Number:	999 050 5896	

T28

Surname:	Xttestpatient-Taut			
Forename:	Donotuse			
Date of Birth:	17/11/2015	Sex:	Female	
Hospital Number:	202309368	NHS Number:	999 050 5942	



The home stretch...

The Christie NHS Foundation Trust Validation of the DCB1077 general patient identity wristband		DCB1077 Compliance Status: (Date: 28 September 2023)		COMPLIANT																																					
DCB1077 Requirements (See DCB1077 Requirements Specification for the complete specification)		Findings																																							
Data Carrier	Mandatory primary barcode	1x GS1 DataMatrix barcode		Found, compliant	<ul style="list-style-type: none">1x DataMatrix barcode, was found on the three samples <p>Sample 1 of 3</p> <div data-bbox="1090 625 1847 759"><table border="1"><tr><td>Surname:</td><td colspan="2">Xttestpatient-Taur</td></tr><tr><td>Forename:</td><td colspan="2">Donotuse</td></tr><tr><td>Date of Birth:</td><td>27/04/2007</td><td>Sex: Female</td></tr><tr><td>Hospital Number:</td><td>202309366</td><td>NHS Number: 999 050 5826</td></tr></table></div> <p>Sample 2 of 3</p> <div data-bbox="1090 863 1847 985"><table border="1"><tr><td>Surname:</td><td colspan="2">Xttestpatient-Taup</td></tr><tr><td>Forename:</td><td colspan="2">Donotuse</td></tr><tr><td>Date of Birth:</td><td>25/12/2014</td><td>Sex: Female</td></tr><tr><td>Hospital Number:</td><td>202309358</td><td>NHS Number: 999 050 5896</td></tr></table></div> <p>Sample 3 of 3</p> <div data-bbox="1090 1089 1885 1210"><table border="1"><tr><td>Surname:</td><td colspan="2">Xttestpatient-Taut</td></tr><tr><td>Forename:</td><td colspan="2">Donotuse</td></tr><tr><td>Date of Birth:</td><td>17/11/2015</td><td>Sex: Female</td></tr><tr><td>Hospital Number:</td><td>202309368</td><td>NHS Number: 999 050 5942</td></tr></table></div>	Surname:	Xttestpatient-Taur		Forename:	Donotuse		Date of Birth:	27/04/2007	Sex: Female	Hospital Number:	202309366	NHS Number: 999 050 5826	Surname:	Xttestpatient-Taup		Forename:	Donotuse		Date of Birth:	25/12/2014	Sex: Female	Hospital Number:	202309358	NHS Number: 999 050 5896	Surname:	Xttestpatient-Taut		Forename:	Donotuse		Date of Birth:	17/11/2015	Sex: Female	Hospital Number:	202309368	NHS Number: 999 050 5942
Surname:	Xttestpatient-Taur																																								
Forename:	Donotuse																																								
Date of Birth:	27/04/2007	Sex: Female																																							
Hospital Number:	202309366	NHS Number: 999 050 5826																																							
Surname:	Xttestpatient-Taup																																								
Forename:	Donotuse																																								
Date of Birth:	25/12/2014	Sex: Female																																							
Hospital Number:	202309358	NHS Number: 999 050 5896																																							
Surname:	Xttestpatient-Taut																																								
Forename:	Donotuse																																								
Date of Birth:	17/11/2015	Sex: Female																																							
Hospital Number:	202309368	NHS Number: 999 050 5942																																							

Communication

Key Messages

- Digital Services will be updating the format for all inpatient wristbands to include a barcode.
- The barcode will initially have no impact on treatment or clinical processes.
- All the information contained on the wristband at the moment will not change.
- This change is expected to happen in November 2022.
- The barcode will be to NHS Digital standard. Their implementation guidance will be followed.
- From 2023, the barcode will enable patient identification for the following projects as they deploy
 - Blood Glucometers
 - Electronic Prescribing and Medicines Administration (ePMA)
 - Blood Order Communications
 - Smart Weighing Scales
 - JAC Stock Control and Dispensary
 - Haemonetics
 - Digital Pathology

Communication

The Christie
Digital Services



Patient wristbands are going to include a barcode to align with NHS Digital standards.



Digital Services are updating the format for all inpatient wristbands to include this barcode.



The barcode will initially have no impact on treatment or clinical processes. This will change in 2023 and we'll update this sticker



Contact the Digital Clinical team if you have any queries on Tech.Bar@nhs.net.

Communication

Comms	Format	Stage	Frequency	Contributors	Distribution to	Distribution Route	Owner
Overview	1 Slide	Deployment	One-Off	WP	Programme Focus	Email	WP
Working Group	1 Slide	Deployment	One-Off	WP, BA	Working Group and dissemination	Email & Discussion	WP
CSSO Approval	CSSO Document	Deployment	One-off	WP, BA, BK, Working Group	Clinical Safety Panel	Email & Discussion	WP
Programme Delivery Board	1 Slide	Deployment	One-off	WP, BK	Programme Delivery Board and dissemination	Email & Presentation	WP
Inpatient Wards	Sticker Comms	Deployment	One-off	Working Group, CSSO	Inpatient settings and dissemination	Physical attendance	BA
Inpatient Wards	Handover	Deployment	Monday and Friday over 2 week period	Working Group, CSSO	Inpatient settings and dissemination	Text to Matrons	BA
Outpatients	Floor Walk	Deployment & Post Deployment	Daily over 2 week period	Working Group, CSSO	Outpatient Clinics and dissemination	Physical attendance	BA, WP
Trust Wide	HIVE	Deployment	One-off	Working Group, CSSO	Inpatient settings and dissemination	Via HIVE	PJC
Trust Wide	Patient Identification Policy	Post Deployment	One off	Working Group, CSSO	Inpatient settings and dissemination	Via Policy Update	SJ

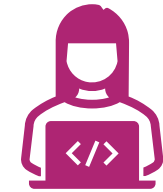
Deployment



Qualified Doctor



Clinical Edification



Smart Glucometers

Deployment

Ward

Ward

Ward

Ward

Outpatients

Daycase



Clinical Safety

Change Advisory Board

Inpatient Improvement Group

OP Improvement Group

Project Board

Trust-wide Operations Group

Deployment



Set the new Scene

- GS1 certificated barcoded wristband
- Red for allergies
- Runtime Glucometer Results into EPR
- Less patient data collected on notepads and paper towels
- Future Improvements of
 - Smart Weighing Scales
 - Observation Machines
 - Telemetry, ePMA, Haemonetics...



Statistics

1

glucose result assigned to incorrect patient since November 2022

The Future

“The Principles”

Future Christie
“Smart Hospital” Pillar



Staff Identification
Person



Location Mapping
Place

FIN