Medicines Optimisation
Closed Loop Medicines Management & Scan4Safety

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GDE Learning Network – July 17
Scan4Safety & GS1 explained

GS1 vision is to provide a common language for companies when it comes to identifying people, locations, items and documents. The standards allow information to be captured at “point of use” and to be shared throughout the supply chain.

- **GTIN** - Global Trade Item Number
- **GLN** - Global Location Number
- **GSRN** - Global Service Relation Number

**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.
Objectives

- **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.

- **Improve Efficiency**
- **Improve Patient Safety**
- **Release Time to Care**
GS1 explained
Background – barcoding in retail

- Stock contamination identified
- Traceability
- Speed
Background – not currently in healthcare
Six Demonstrator sites

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<tr>
<th>TRUST</th>
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<tbody>
<tr>
<td>DERBY TEACHING HOSPITALS NHS FOUNDATION TRUST</td>
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<td>LEEDS TEACHING HOSPITALS NHS TRUST</td>
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Medicines - The Case for Change
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Key Drivers

- Falsified Medicines Directive
- Carter
- Global Digital Exemplars

Point of care traceability
Digital Global Exemplars
From the FYFV - Next Steps (March 2017)

• Exemplars that will inspire others.

• Work with other acute trusts to develop a blueprint that can be deployed to other hospitals (“fast followers”).

• In the future, hospitals won’t merely choose an IT vendor, they will choose a hospital that they want to partner with and implement the same system, keeping the IT 80% the same and making only the 20% of changes that are absolutely necessary to meet local needs.

• Expectation is HIMSS level 7 (or equivalent).

(ACUTE CARE EMRAM STAGE 7 REVIEWER’S GUIDE, 2016V2)
1. Paperless prescribing.
2. Closed loop medicines administration.
3. Closed loop medicines supply.
4. Decision support.
5. Adoption of standards dm&d and GS1.

What is HIMSS Level 7
Key Drivers

- Falsified Medicines Directive
- Global Digital Exemplar
- Carter

GS1 is the Key Enabler

Point of care traceability
Use Cases

**GTIN** - Product name - link to dm+d
- Closed loop administration
- Closed loop supply
- Scanning at meds rec
- Advanced shipping notices
- Accurate non-robot dispensing

**Batch Number** -
- Support Product Recall throughout the Supply Chain

**Expiry date** -
- Support stock control and patient safety

- Serialisation Number - required for Falsified Medicines Directive
- Patient level costing
Unit Dose Dispensing
Closed Loop Supply Desirables

• Paperless process
• Order raised directly from the prescription
• Automated dispensing system if possible
  • If manual - a bar code verification system
• Labels produced and affixed automatically
• Digital positive confirmation of all key data at final check
• Minimal/ no human manual data entry
Closed Loop Supply
Electronic Transfer of Information to PSC
Decision to Supply
Manual picking - scanning product against the order
Robot Picks & Labels
Automated label & Label Affixed
Barcode enabled final accuracy check
Doctor prescribes Barcode enabled decommission & dispatch
SCAN4SAFETY
Amoxicillin 250 mg capsules
Sodium Chloride 1000 mL 0.9% intravenous infusion
Salbutamol 100 micrograms / actuation inhaler
Piperacillin 2 g Tazobactam 0.25mg in Sodium Chlor ...
Salbutamol 0.9 micrograms / actuation inhaler
Aspirin 75 mg enteric coated tablets
Codeine Phosphate 30 mg tablets
Oramorph 10 mg/5mL sugar-free oral suspension
Citalopram 10 mg tablets

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
<th>Label Format</th>
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<tbody>
<tr>
<td>Amoxicillin 250mg Capsule</td>
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<td>Standard</td>
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**Dose:** 250 mg
**Frequency:** Three times a day

**Start on:** 24-JUN-2014 10:41
**Days of treatment:** 7
**Doses of treatment:** 21
**End on:** 30-JUN-2014 10:41

**NOTES:**
- This dose is based on an estimated age of XX years
- This order was prescribed as part of a protocol: Protocol Description
- This order is non-formulary. The rationale: Non Formulary Reason Description
- Admitted on this drug
- Own medication supply
- Set administer
- Status: Verified
- Not Verified
- Verification on hold

**Directions:**
ONE Capsule to be taken THREE times a day
Do you want to release ALL stock now?

Yes, release ALL now

No, release PARTIAL now
Hierarchy is key

**Key use cases:**

- Dose based prescribing (i.e., most commonly used prescribing model in secondary care).
- Recording of partial medication information.

**Key use cases:**

- Product (generic) based prescribing (i.e., most commonly used prescribing model in primary care).
- Product identification and selection for dispensing/administration.
- Recording of information within patient records.

**Key use cases:**

- Product (brand/manufacturer) based prescribing.
- Product identification and selection for dispensing/administration.
- Recording of information within patient records.

**Key use cases:**

- Identification/selection of pack size for dispensing.
- To record dispensed items including pack size.
- Provides information for electronic reimbursement.

**Key use cases:**

- Identification of pack size + availability.
- To record dispensed items including pack size and manufacturer/brand.
- Pricing.
- Links to supply chain (e.g., GTIN barcode) mapping.
- Provides information for electronic reimbursement.
Hierarchy is key

GTIN = AMPP

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GTIN Datapool

Product Arrives in Pharmacy

Manual/ Robot scan of product

Dispense Medicine

Final check and release

Verify/Decommission

New Product

Retrieves GTIN & linked data attributes.

Populates PSC and Robot drug files
Co-ordinated Specification

• Pharmacy S4S working group
• We’ve done a specification
• Processed mapped all the main workflows
• Engaged with EMIS and JAC
• Engaged with BD and Omnicell
• Engaged with the ABPI
Closed Loop Administration

Doctor prescribes

Decision to Administer

Scan patient

Scan Drug

Confirm dose and route

Scan nurse to confirm administration

The Five Rights

1. Patient
2. Drug
3. Dose
4. Time
5. Route
Some Essentials

• $dm+d$

• GTIN datapool

• A co-ordinated specification
dm+d - Hierarchy is key

GTIN link to AMPP through VTM

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GTIN Datapool

Scan Product at Administration

Retrieves GTIN & linked data attributes.

EPMA/Pharmacy Stock Control System

Product Supplied by the Hospital

Patients Own Drug

Positive Confirmation ‘Right Drug’

GTIN Datapool

Retrieves GTIN & linked data attributes.
Co-ordinated Specification

• EPMA is not a ‘primary use case’ for S4S demo sites.
• In theory not covered by the £2m
• Minimal engagement with EPMA vendors (though EMIS and JAC have integrated solutions).
• Covered in specification and process maps
JAC partnership with BIQ for bedside scanning technology
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SCAN4SAFETY
Thank You For Listening

#scan4safety
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