OVERVIEW

- **Patient Safety concerns** – Why do we want to adopt RFID?

- **Electronic Inpatient Prescribing Project** – What are we doing?

- **GS1 HUG** – How does my participation help the hospital?

- **Questions & Answers**
Chelsea & Westminster Hospital

DIRECTORATES
- Anaesthesia & Imaging
- HIV & Sexual Health
- Medical
- Surgery
- Women’s & Children’s Service
AIMS & VALUES

- **Clinical Governance and Safety** – to improve continuously patient outcomes and assure patient safety.
- **Patient Experience** – improve all aspects of the patient’s experience, make the patient the centre of everything we do through a focus on customer care, and consequently to be the provider of choice.
- **Service Line Reporting** – to develop a service portfolio and business model based on a clear understanding of our income and cost base through service line reporting.
- **Teaching and Research** – to provide excellent undergraduate and multi-professional teaching.
- **Specialist Services** – to maintain and develop our specialist services.
- **Strategic Partnerships** – to develop effective partnerships with all stakeholders, including the Members’ Council.
- **Workforce** – to ensure we have a highly skilled, motivated, diverse, productive and customer focused workforce.
- **Modern Infrastructure** – to ensure clinical care is supported and enabled by effective, modern support services.
- **Innovation** – to be innovative with our clinical services and business models, in particular by using our new Foundation Trust freedoms.
- **Integrated Governance** – to develop further the Trust’s framework for integrated governance.
Patient Safety Reporting

National Reporting and Learning System (NRLS)

National Patient Safety Agency

Local Risk Management Systems (LRMS)
Local Risk Management Systems (LRMS)
Local Risk Management Systems (LRMS)

‘any unintended or unexpected incident that could of or did lead to harm for one or more patients receiving NHS-funded healthcare’
Type of Medication Errors

- Wrong / unclear dose or strength
- Omitted medicine / ingredient
- Wrong drug / medicine
- Wrong frequency
- Mismatching between patient and medicine
- Wrong quantity
- Wrong / transposed / omitted medicine label
- Patient allergic to treatment
- Wrong method of preparation / supply
- Wrong storage
- Wrong / omitted / expired date
- Wrong route
- Wrong formulation
- Contra-indication to the use of medicine
- Adverse drug reaction (when used as intended)
- Wrong / omitted verbal patient directions
- Wrong / omitted patient information leaflet
- Unknown
- Other
- Missing

% of medication errors

1. Wrong / unclear dose or strength
2. Omitted medicine / ingredient
3. Wrong drug / medicine
4. Wrong frequency
5. Mismatching between patient and medicine
6. Wrong quantity
7. Wrong / transposed / omitted medicine label
8. Patient allergic to treatment
9. Wrong method of preparation / supply
10. Wrong storage
11. Wrong / omitted / expired date
12. Wrong route
13. Wrong formulation
14. Contra-indication to the use of medicine
15. Adverse drug reaction (when used as intended)
16. Wrong / omitted verbal patient directions
17. Wrong / omitted patient information leaflet

Chelsea and Westminster Hospital
NHS Foundation Trust
Electronic Patient Record (EPR)
Project Workflow

Step 1: Dr prescribes Rx

Step 2: Pharmacist verifies Rx

Step 3: Dispensary supplies Rx

Auto-ID of patient via RFID wristband

Step 4: Nurse administers Rx

Supply chain

Robotic Dispensing
Step 1: Dr prescribes Rx

19.2% Med errors due to unclear dose
**Order Sets**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Frequency</th>
<th>Route</th>
<th>Start Date</th>
<th>Stop Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine Patches</td>
<td>NGU</td>
<td>?</td>
<td>?</td>
<td>0800</td>
<td>?</td>
</tr>
</tbody>
</table>

**Additional Instructions**
- Remove patch at bedtime
- Pharmacy: release 12.00
- Doctor's signature: NGU

**Request Set for Nicotine Patch**

<table>
<thead>
<tr>
<th>Request Description</th>
<th>Start Date/Time</th>
<th>Stop Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nicotine 14لغ/12HR Patch</td>
<td>6-Jan 00:00</td>
<td>000</td>
</tr>
<tr>
<td>Remove Nicotine Patch</td>
<td>6-Jan 20:00</td>
<td>2000</td>
</tr>
</tbody>
</table>

**Prescribe Order Set**
Default dosing

19.2% of Rx errors wrong dose

1.9% of Rx errors wrong route

9.6% of Rx errors wrong frequency
Step 3: Dispensing of Rx

- Dispensary is technician lead to free pharmacist up for clinical duties
- over 80% of lines are dispensed automatically from robot
- robot picks over 100,000 pack per month
Step 4: Nurse Charting
Why RFID?

- Non contact data transmission
  - Improved infection control

- No direct line of sight required
  - Can scan through bed sheets etc…

- Less read failures
  - Saves nursing time
## Error Reduction

### Medication Errors vs. How Reduced

<table>
<thead>
<tr>
<th>Medication Errors</th>
<th>How Reduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wrong / unclear dose or strength</td>
<td>FDB Compendium</td>
</tr>
<tr>
<td>2. Omitted medicine / ingredient</td>
<td>Order Sets</td>
</tr>
<tr>
<td>3. Wrong drug / medicine</td>
<td>FDB Compendium; Robotic Dispensing</td>
</tr>
<tr>
<td>4. Wrong frequency</td>
<td>Default Dosing</td>
</tr>
<tr>
<td>5. Mismatching between patient and medicine</td>
<td>Auto-ID using RFID wristband</td>
</tr>
<tr>
<td>6. Wrong quantity</td>
<td>FDB Compendium; Robotic Dispensing</td>
</tr>
<tr>
<td>7. Wrong / transposed / omitted medicine label</td>
<td>No transcription</td>
</tr>
<tr>
<td>8. Patient allergic to treatment</td>
<td>Allergy checking</td>
</tr>
<tr>
<td>9. Wrong method of preparation / supply</td>
<td></td>
</tr>
<tr>
<td>10. Wrong storage</td>
<td>2.2%</td>
</tr>
<tr>
<td>11. Wrong / omitted / passed expiry date</td>
<td>3.0%</td>
</tr>
<tr>
<td>12. Wrong route</td>
<td>1.8%</td>
</tr>
<tr>
<td>13. Wrong formulation</td>
<td>Default Dosing</td>
</tr>
<tr>
<td>14. Contra-indication to the use in relation to drugs or condition</td>
<td>FDB Compendium</td>
</tr>
<tr>
<td>15. Adverse drug reaction (when used as intended)</td>
<td>Allergy/Interaction Checking</td>
</tr>
<tr>
<td>16. Wrong / omitted verbal patient directions</td>
<td>1.6%</td>
</tr>
<tr>
<td>17. Wrong / omitted patient information leaflet</td>
<td>0.3%</td>
</tr>
<tr>
<td>Total Not addressed by project</td>
<td>0.1%</td>
</tr>
<tr>
<td></td>
<td>9%</td>
</tr>
</tbody>
</table>
Why is it important for Chelsea & Westminster Hospital to be part of HUG?

5 RIGHTS of the PATIENT

- right PERSON
- right MEDICINE
- right DOSAGE
- right TIME
- right ROUTE of ADMINISTRATION

AUTHENTICITY

TRACEABILITY
Why is it important for Chelsea & Westminster Hospital to be part of HUG?

- interface with manufacturers, wholesalers, other hospitals
- assists process planning, horizon scanning, workflow design and project direction
- timeline and decision making
RFID in Hospital

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