Wirral University Teaching Hospital: Past, Present and Future

Pippa Roberts, Director of Pharmacy, Medicines Management & Transformation

ePMA Team
Brian Power, Lead Pharmacist EPMA
(0.9 wte)
Jordi Dominguez Sanchez Senior Pharmacist
(0.5 IT/clinical)
Layla Cameron, Chief Pharmacy Technician
(0.9 wte)

#PROUD TO CARE FOR YOU

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Wirral University Teaching Hospital: who are we?

- One of the largest and busiest acute trusts in the North West of England.
- A strong workforce of over 5,500 colleagues.
- Providing a comprehensive range of acute care services to a population of 400,000+ people across Wirral, Ellesmere Port, Neston, North Wales and the wider North West footprint.
- Operating from two main sites:
  - Arrowe Park
  - Clatterbridge
What we will cover

- Learning from 20 year period of EP on Wirral
- 1993 – 2014: the TDS years
- 2014: move to Cerner Millennium for medicines
- 2016: phase 3 implementation
- Plans as a global digital exemplar
Critical Success Factors

• Organisational leadership
• Continuing clinical engagement
• Mandate its use
• Mandatory training
• No training - no code
Critical Success Factors

• Get technology and infrastructure right
  • Network including wireless
  • Devices fit for purpose

• Introduce more simple functionality first and move onto complex

• Make it easy for staff to report problems

• Respond to problems / issues

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Critical Success Factors

• Evolution - system is not static: balance BAU new projects
Critical Success Factors

- System maintenance: never ending process
- Local issues e.g. formulary or risk management
- National issues e.g. VTE assessment or discharge letters
- Adequate resources in place
- Training
  - Permanent staff
  - Agency
Medicines 1993 at WUTH

- Launch of prescribing and drug administration
- Existing EPR
  - PAS
- Orders for lab and radiology
HEPARINS

**INDICATION**

**PROPHYLAXIS:**
- SURGICAL PATIENTS MODERATE RISK,
- SURGICAL PATIENTS HIGH RISK,
- MEDICAL PATIENTS AT RISK,
- TINZAPARIN PROPHYLAXIS

**TREATMENT:**
- DVT,
- PE,
- DVT/PE,
- UNSTABLE ANGINA,
- OTHER,

**DIALYSIS:**
- HAEMODIALYSIS ANTICOAGULATION
CREATININE CLEARANCE > 20ML/MIN

CREATININE CLEARANCE < 20ML/MIN (RENAL IMPAIRMENT)

CLICK HERE TO SEE HOW TO ESTIMATE CREATINININE CLEARANCE
HEPARINS
DVT/PE TREATMENT
WEIGHT OF PATIENT

SELECT WEIGHT

- 40 - 49 KG
- 50 - 59 KG
- 60 - 74 KG
- 75 - 89 KG
- 90 - 99 KG
- 100 - 109 KG
- 110 - 114 KG
- 115 - 119 KG
- 120 - 135 KG
- 136 - 150 KG

REVIEW
15684 T, BRIAN'S  C-M1 ORD<DS--- > <PI>
DVT,  
P  
**HEPARINS**
DVT/PE TREATMENT - 90-99KG

1. PRESCRIBE STAT DOSE  SELECT BOX
ENOXAPARIN SYRINGE INJ 140MG, SC, STAT ......................... □

2. SELECT TIME OF REGULAR DOSE
MANE (10:00) NOCTE (22:00)

**DOSAGE INTERVAL BETWEEN STAT AND REGULAR DOSE SHOULD BE NOT LESS THAN 12HRS AND NOT GREATER THAN 24HRS.**

MEDS INDEX REVIEW ERR
Current EP position

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Cerner Millennium 2014

• Initial go live accounted for majority of in-patient prescribing with some exceptions:
  ❖ ITU/HDU and Neonatal unit
  ❖ Maternity wards
  ❖ Infusions
  ❖ Chemotherapy
  ❖ Complex regimes and pathways e.g. GKI, alcohol pathway

• Out-patients
Challenges: migrating to new system

• Winning hearts and minds – functionality/ flexibility issues

• Managing the change between systems was a major challenge
  ❖ Manual transcription of all in-patients prescriptions and allergies for all patients in the Trust performed on go live day (750 patients)
  ❖ Completed by 25 teams comprising a prescriber and a pharmacist
  ❖ Transcription process completed in 10 hours

• Intensive 24/7 support for first two weeks post go live
Prescribing support: order sentences

**Allergies**

**SAFEGUARDING**

**INFECTION A**

MRN: 5501544

Lead Clinician: Chu, Cindy

Search: enoxal

Type: Inpatient

Search within: All

Exposure: Enoxaparin Prophylaxis

Exposure: Enoxaparin Treatment

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Prescribing support: order sentences

**Enoxaparin Treatment (Initiated Pending)**

***For DVT / PE***
- ***Dosage interval between STAT and regular dose should not be less than 12 hours and not greater than 24 hours***
- Creatinine clearance MORE than 30mL/min

**Enoxaparin (Enoxaparin sodium injection pre-filled syringe)**
- Select an order sentence

**Dose: 100 mg, subcutaneous, once a day, at night, STAT 60 - 75 kg**

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**For Acute Coronary Syndrome***
- Full anticoagulation is needed for patients;
  - with prosthetic heart valves
  - with atrial fibrillation that requires high level anticoagulation
  - diagnosed with a PE or DVT

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Prescribing support: order sentences

**Diagnoses & Problems**
- **Diagnosis (Problem) being Addressed this Visit**
  - Add
  - Convert
  - Display: All
- **Clinical Dx**
- **Code**

**Problems**
- **No Chronic Problems**
- **Display: All**
- **Name of Problem**
- **Code**

**Search:**
- **Search within:**
- **Type:** Inpatient

**Results:**
- Paediatric Amoxicillin Injection
- Paediatric Amoxicillin Oral
- Paediatric Benzylamine
- Paediatric Benzylpenicillin
- Paediatric Cefotaxime Injection
- Paediatric Ceftriaxone Injection
- Paediatric Chlorphenamine
- Paediatric Ciprofloxacin Oral
- Paediatric Clarithromycin Oral
- Paediatric Co-amoxiclav Injection
- Paediatric Co-amoxiclav Oral
- Paediatric Daily Goals
- Paediatric Erythromycin Oral
- Paediatric Gaviscon
- Paediatric Ibuprofen Oral
- Paediatric Ipratropium
- Paediatric Metronidazole Intermittent Infusion
- Paediatric Metronidazole Oral

**Lead Clinician:** Rackham, Oliver James
## Prescribing support: order sentences

### Paediatric Amoxicillin Oral (Initiated Pending)

<table>
<thead>
<tr>
<th>Component</th>
<th>Status</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medications</td>
<td></td>
<td></td>
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<tr>
<td>Up to 1 year of age</td>
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<tr>
<td>Amoxicillin (Amoxicillin 125mg in 5mL) oral suspension</td>
<td>Select an order sentence</td>
<td></td>
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<tr>
<td>1 - 13 years of age</td>
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<tr>
<td>Amoxicillin (Amoxicillin 250mg in 5mL) oral suspension</td>
<td>Select an order sentence</td>
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<tr>
<td>Amoxicillin capsules</td>
<td>Select an order sentence</td>
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</table>

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### In severe infections

<table>
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<th>Status</th>
<th>Details</th>
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<tbody>
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<td></td>
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<tr>
<td>Amoxicillin capsules</td>
<td>Select an order sentence</td>
<td></td>
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</tbody>
</table>

**Dose:** 250mg, oral, three times a day, day(s) 1 - 5 year(s)
Prescribing support: risk reduction

The new order has created the following alert:

Aspirin (Aspirin dispersible tablets)

Please complete the (1) required override reasons to continue placing this order.

<table>
<thead>
<tr>
<th>Severity</th>
<th>Substance</th>
<th>Reaction Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aspirin</td>
<td>Rash</td>
</tr>
</tbody>
</table>

Override Reason:
- Apply to all interactions
- Apply only to required interactions

ZZZTESTPATIENT10, IGNORE - 5501544
Prescribing support: risk reduction

Incidents involving patients receiving a medicine to which they have a documented allergy

Cumulative number of incidents

<table>
<thead>
<tr>
<th>Month</th>
<th>2014/2015</th>
<th>2015/2016</th>
<th>2016/2017</th>
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<tbody>
<tr>
<td>Apr</td>
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<td>Jun</td>
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<td>Mar</td>
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</table>
Prescribing support: risk reduction

Details for Methotrexate (Methotrexate tablets)

*Strength dose: 2.5

Strength dose unit: mg

Drug Form: Tablet

Route of administration: oral

Frequency: weekly

Pharmacy order priority:

*Requested start date and time: 24/03/2015 09:00

Duration:
Pharmacy support: Ops processes

Medication summary page

### Inpatient Medication (14)

<table>
<thead>
<tr>
<th>Scheduled</th>
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</thead>
</table>
| Actrapid (Insulin soluble human) intermittent infusion (HYPERKALAEMIA) + Glucose 50% in Water intra  
Dose: 10 units, intravenous intermittent infusion, Infuse over 30 min, once only, Start: 10/11/2016 12:56:00, Stop: 10/11/2016 12:56:00 |
| Diamorphine 1.6mg/dose nasal spray  
Doses: 3 spray(s), nasal, once only, STAT, Start: 12/10/2016 16:56:00, Stop: 12/10/2016 16:56:00.  
(Direct the spray to the nasal lateral side wall. Alternate nostrils), CD. No |
| Docusate (50mg in 5mL) oral solution  
Dose: 100 mg, oral, twice a day, Start: 15/11/2016 22:00:00 |
| Labetalol tablets  
Doses: 50 mg, oral, twice a day, Start: 26/11/2016 22:00:00 |
| OxyContin (OxyCODONE) modified-release tablets  
Doses: 40 mg, oral, twice a day, Start: 03/12/2016 22:00:00, CD |
| Senna (7.5mg in 5mL) oral solution  
Dose: 7.5 mg, oral, once a day, at night, Start: 15/11/2016 22:00:00 |
| Sodium chloride 0.9% infusion  
1,000 mL, intravenous continuous infusion, Infuse at: 41.7 mL/hr, Infuse over: 24 hr, Start: 23/11/2016 |

### Discharge Medication (6)

<table>
<thead>
<tr>
<th>Discharge Reconciliation</th>
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</table>
| Atenolol tablets  
Dose: 100 mg, oral, once a day, in the morning |
| Compliance aid at discharge  
***Please notify Pharmacy*** |
| Enoxaparin sodium injection pre-filled syringe  
Dose: 120 mg, subcutaneous, once a day, at night, for 28 day(s) |
| Lisinopril tablets  
Dose: 2.5 mg, oral, once a day, in the morning |
| Nutilis Clear powder  
Dose: 2 scoop(s), oral, four times a day, as required |
| Paracetamol (120mg in 5mL) oral solution  
Dose: 120 mg, oral, four times a day, as required |
Pharmacy support: Ops processes

Daily review: prioritisation

[Image of Pharmacy Worklist screenshot showing patient information and laboratory results]
Pharmacy support: Ops processes

Weekend review: prioritisation
# Nursing support: MAR

<table>
<thead>
<tr>
<th>Medication Description</th>
<th>04/12/2016</th>
<th>03/12/2016</th>
<th>03/12/2016</th>
<th>03/12/2016</th>
<th>03/12/2016</th>
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<td>12:00</td>
<td>9:00</td>
<td>6:00</td>
<td>22:00</td>
<td>18:00</td>
<td>13:48</td>
<td>13:32</td>
<td>13:22</td>
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<tr>
<td>Budesonide + Formoterol Fostair (Budesonide 100mg)</td>
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<td>2 puff(s)</td>
<td>Not given</td>
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<td>Budesonide + Formoterol</td>
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<td>Self Administration</td>
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<td>06:56</td>
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<td>Docusate (Docusate 50mg in 5mL oral solution)</td>
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<td>Dose: 200 mg, nasogastric, twice a day, Start: 26/11/2016 22:00:00</td>
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<td>Give orally if nasogastric route unavailable</td>
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<td>Enoxaparin (Enoxaparin sodium injection pre-filled syringe)</td>
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<td>40 mg</td>
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<td>Do not give if INR above 2 or on Haemofiltration or low plat...</td>
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<td>Lansoprazole (Lansoprazole orodispensible tablets)</td>
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<td>30 mg</td>
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<tr>
<td>Dose: 30 mg, nasogastric, once a day, in the morning, Start: 27/11/2016 09:00:00</td>
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<td>Montelukast (Montelukast tablets)</td>
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<td>10 mg</td>
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<tr>
<td>Dose: 10 mg, nasogastric, once a day, in the morning, Start: 27/11/2016 09:00:00</td>
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<td>Montelukast</td>
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# Proud to Care for You

Wirral University Teaching Hospital
NHS Foundation Trust

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Global Digital Exemplar

- Roll out medicines management functionality to remaining areas of the hospital
  - Level 3 NNU
  - Maternity
  - Out-patients
  - All paper charts
- Operational efficiencies; risk stratification, handover, pre-admission, self medication
- Unwarranted clinical variation; pathways, stewardship
- Advanced analytics; missed doses, prescribing by designation, VTE assessment and prescribing
- Population health management
Any questions?

Many thanks