Stockport NHS
NHS Foundation Trust

Reducing errors with ePMA

electronic Prescribing and Medicines Administration

Stockport NHS Foundation Trust

December 2013

Your Health. Our Priority.

Introductions

Helen Bennett – Asst Director: IT Programme Mangement

Sarah Campbell – Lead Specialist Pharmacist ePMA

Aims

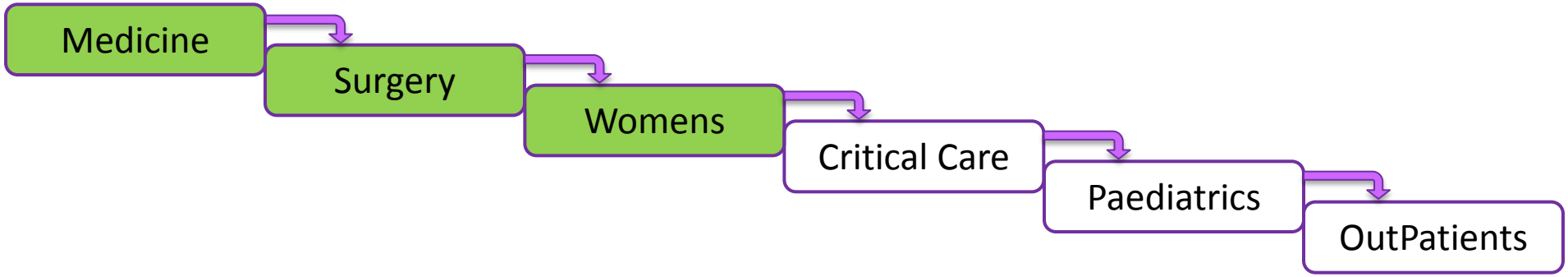
- Our story so far
- Our successes
- Reducing prescribing errors
- Reducing medication administration errors
- Improving communication
- Summary & Close

About Us

- Stepping Hill Hospital based in Stockport
- 736 beds
- Income of £275 million per annum
- Look after a population of over 396,000 in Stockport & High Peak
- Over 5,600 staff

Project Scope

- To roll out hospital wide in bite size chunks



ePMA project – progress to date

- 43 wards and areas live
- >650 beds
- ALL medical, general surgical, urology, T&O, gynaecology, daycase & maternity patients
- Includes all theatres

Stockport NHS
NHS Foundation Trust

Our successes

Your Health. Our Priority.

How can we reduce errors with ePMA?

Reducing prescribing errors

Reducing administration errors

Improving communication

Reducing prescribing errors

- The basics
  - Clarity
  - Easy to view medication chart
  - Audit trail of activities

- System configuration
  - Most effective way of reducing errors
  - Ensure system is flexible enough to handle your needs
  - Involve staff
  - Robust QA process
  - But…not finished when go-live

Reducing prescribing errors

Guiding prescribing

- Quicklists
  - Prefilled prescription sentences
  - Common doses
  - Quick & safe

Quick Lists

Chapter 06 - Endocrine

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z All

alendronate sodium 70mg Tablet	DOSE: **70 mg** Oral **Regularly** every 7 days Swallow whole with a full glass of water 30 minutes before food/other medications. Remain upright for at least 30 minutes.
dexamethasone 2mg Tablet	DOSE: **2 mg** Oral **In the Morning** (09:00)
dexamethasone 2mg Tablet	DOSE: **4 mg** Oral **In the Morning** (09:00)
dexamethasone 2mg Tablet	DOSE: **2 mg** Oral **TWICE a day** (09:00, 13:00)
dexamethasone 2mg Tablet	DOSE: **4 mg** Oral **TWICE a day** (09:00, 13:00)
finasteride 5mg Tablet	DOSE: **5 mg** Oral **In the Morning** (09:00) crushed/broken tablets not to be handled by women of childbearing potential
fludrocortisone acetate 100microgram Tablet	DOSE: **50 microgram** Oral **In the Morning** (09:00)
fludrocortisone acetate 100microgram Tablet	DOSE: **100 microgram** Oral **In the Morning** (09:00)
gliclazide 80mg Tablet	DOSE: **40 mg** Oral **In the Morning** (09:00)

Reducing prescribing errors

Guiding prescribing

- Protocols
  - Treatment sets of medications
  - Allows prescribing of multiple medications in one prescription

Protocols

H.Pylori Eradication	
Comment:	These regimens eradicate H. pylori in about 85% of cases. There is usually no need to continue antisecretory treatment (with a proton pump inhibitor or H2-receptor antagonist) unless the ulcer is large, or complicated by haemorrhage or perforation. Treatment failure usually indicates antibacterial resistance or poor compliance. Resistance to amoxicillin is rare. However, resistance to clarithromycin and metronidazole is common and can develop during treatment.

Medications

amoxicillin 500mg Capsule — **Day: 0**
DOSE: **1000 mg** Oral **TWICE a day** (09:00, 22:00)
for 7 days

AND

clarithromycin 500mg Tablet — **Day: 0**
DOSE: **500 mg** Oral **TWICE a day** (09:00, 22:00)
for 7 days

AND

lansoprazole 30mg EC Capsule — **Day: 0**
DOSE: **30 mg** Oral **TWICE a day** (09:00, 22:00)
for 7 days

Reducing prescribing errors

Guiding prescribing

- Rules
  - Flexible to allow tailored prescribing
  - Varying levels of enforcement

immunoglobulin normal human Infusion

Rules

immunoglobulin form

At Stockport NHS Foundation Trust we use GAMMAPLEX

DOH summary guidelines for immunoglobulin use: http://www.ivig.nhs.uk/documents/DemandManagementPoster_v4.pdf

The request form must be completed before prescribing

Contact pharmacy for a request form.

Visit injectable medicines microsite for infusion guidelines.

See Also: DOH summary of immunoglobulin use

Action
- Override
- Remove

Comment

Reducing prescribing errors

Guiding prescribing

- Rules
  - Flexible to allow tailored prescribing
  - Varying levels of enforcement

Rules

Dietician Prescribing Restriction

Prescribing for dieticians is restricted to products located in the Nutrition formulary.

See 'Quicklists' and 'Nutrition' for more details.

(don't forget, should you require a different dose of a medication, this can be changed on the update screen before updating to the chart)

Contact Sarah Campbell, Lead Specialist Pharmacist ePMA for more information (tel: 07778296859)

You may not prescribe this medication.

Reducing prescribing errors

Guiding prescribing

- Rules
  - Flexible to allow tailored prescribing
  - Varying levels of enforcement

Rules

ciprofloxacin 500 mg Tablet

Rules

Antibiotics and PPIs

This patient is currently prescribed a PPI (proton pump inhibitor)

PPIs SIGNIFICANTLY INCREASE RISK OF C DIFF

Please review indication for the PPI NOW.

If there is not a good indication please CEASE the PPI.

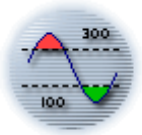
DO NOT cease the PPI if it is prescribed for a good reason e.g. recent GI bleed. Please see attached link for guidance on when it is safe to discontinue PPIs

Don't forget to consider the patients other risk factors for C-diff

See Also: CLICK HERE FOR FLOW CHART WITH RECOMMENDED ACTIONS

Reducing prescribing errors

- Dose ranges
  - Difficult to set
  - Effective but often inflexible
  - Target high risk medications



Dose Ranges

Cumulative Dose

The dosage of paracetamol (5000 mg being prescribed) in the 24 hour period from 14:00 on 25-Oct-2012 exceeds the recommended maximum cumulative dose of 4000 mg per 24 hours.

This patient has been prescribed above the maximum daily dose of Paracetamol

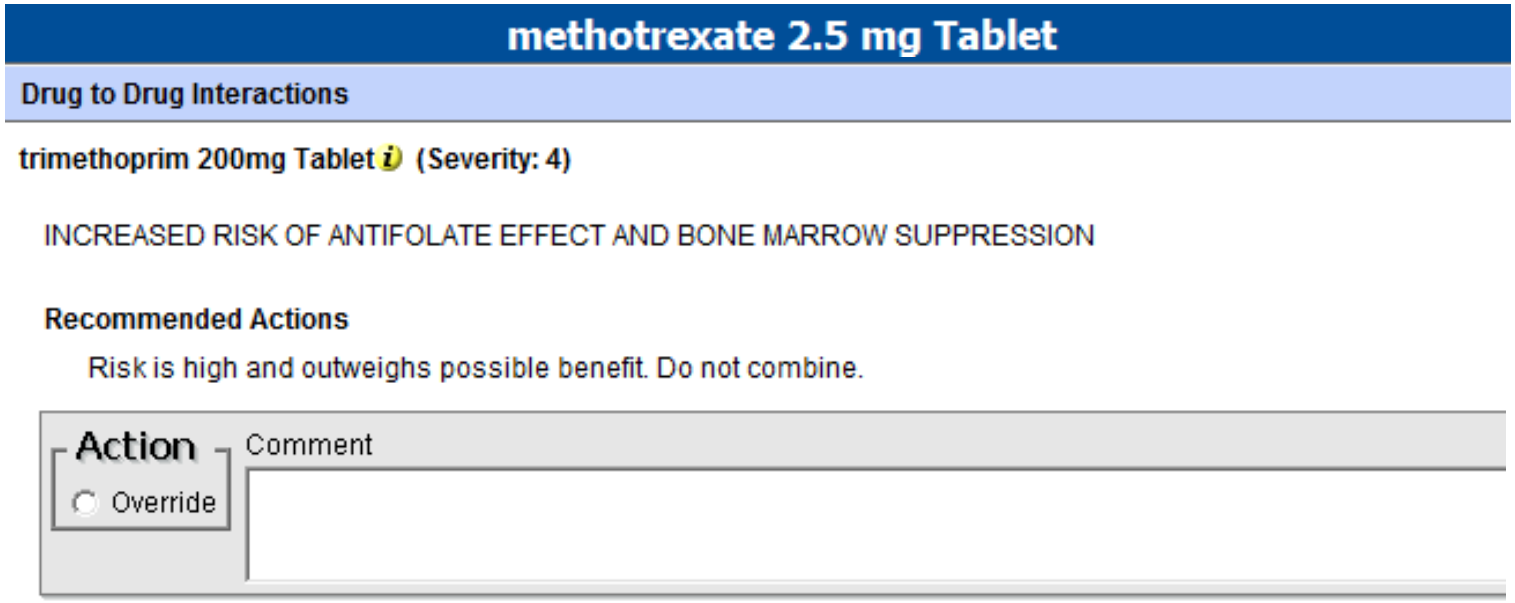
Please review and amend chart accordingly

Action
Remove

**A rule has blocked the prescribing of this medication.
To prescribe the medication you will need to edit the medication so that the rule is not triggered.**

Reducing prescribing errors

- Interaction checking
  - Essential element for safety
  - Deciding level of severity to include
  - Is this information overload? *Alert fatigue?*



Reducing prescribing errors

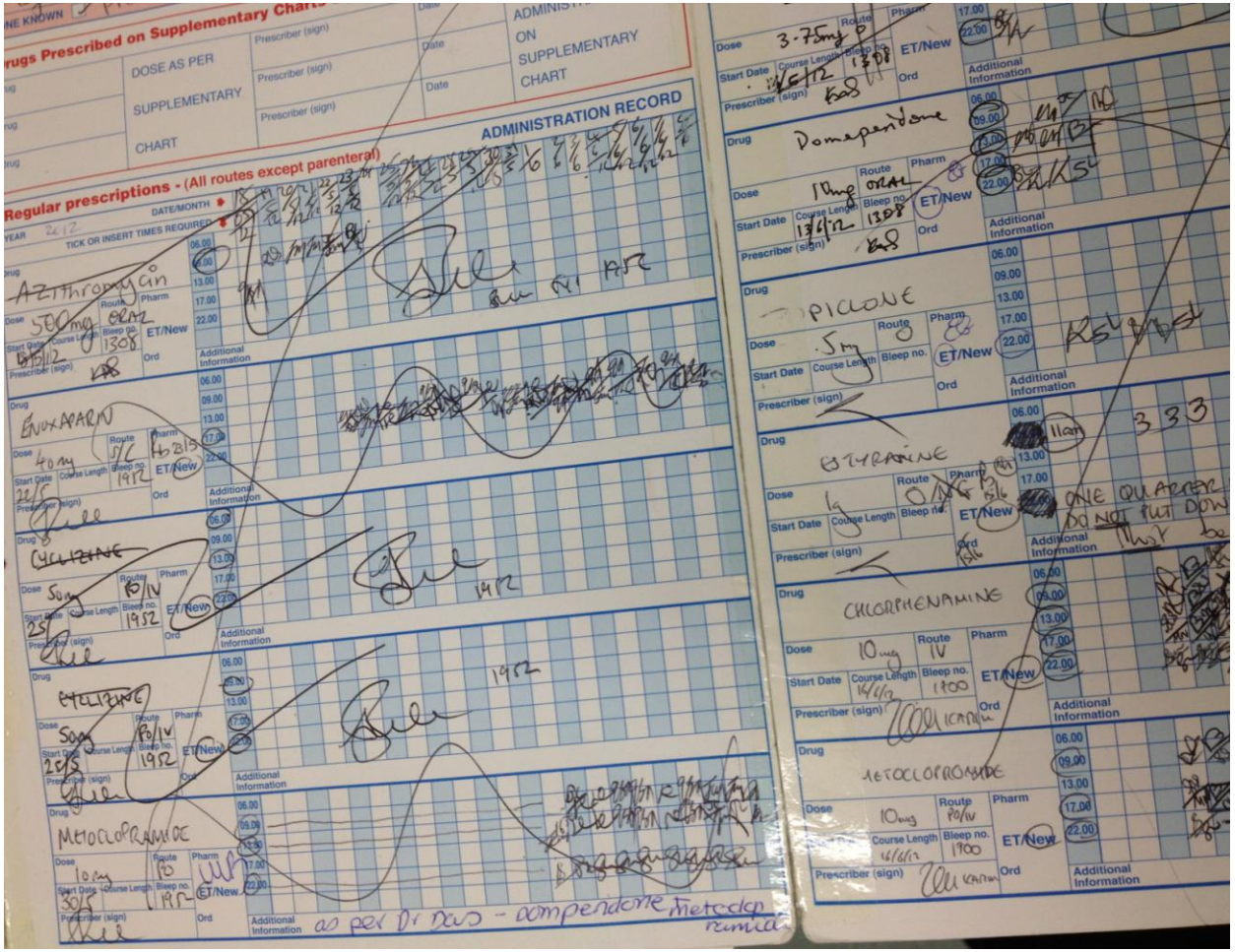
- Prescribing for discharge
  - Safer, quicker & more timely discharge prescribing
  - Pharmacy expectations

- Clinical engagement
  - Get involved in system build
  - Attend appropriate committees
  - Communication to all grades of staff

Reducing administration errors

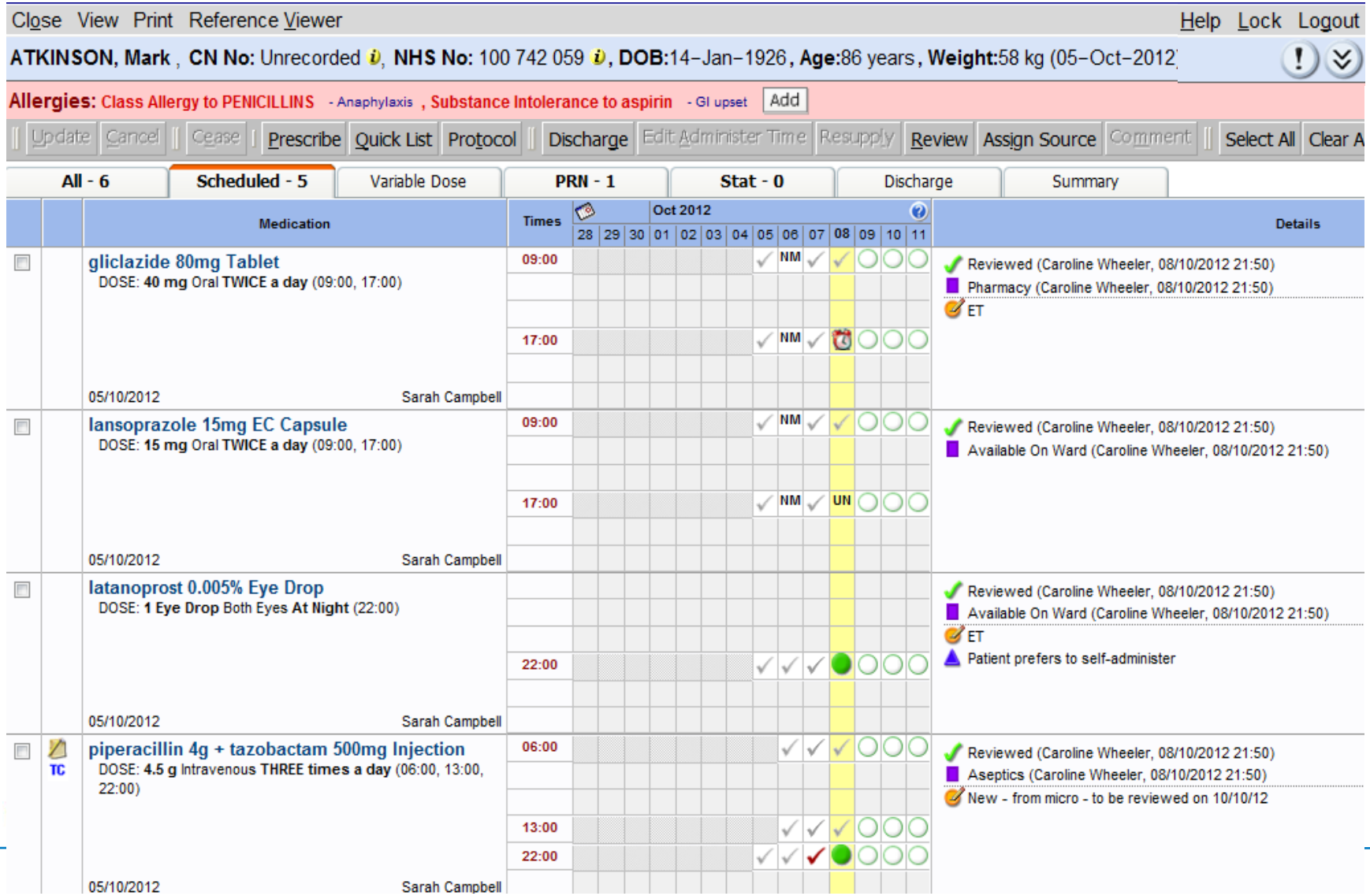
- Clarity of prescription chart

From this:



To this:

Fictitious Patient



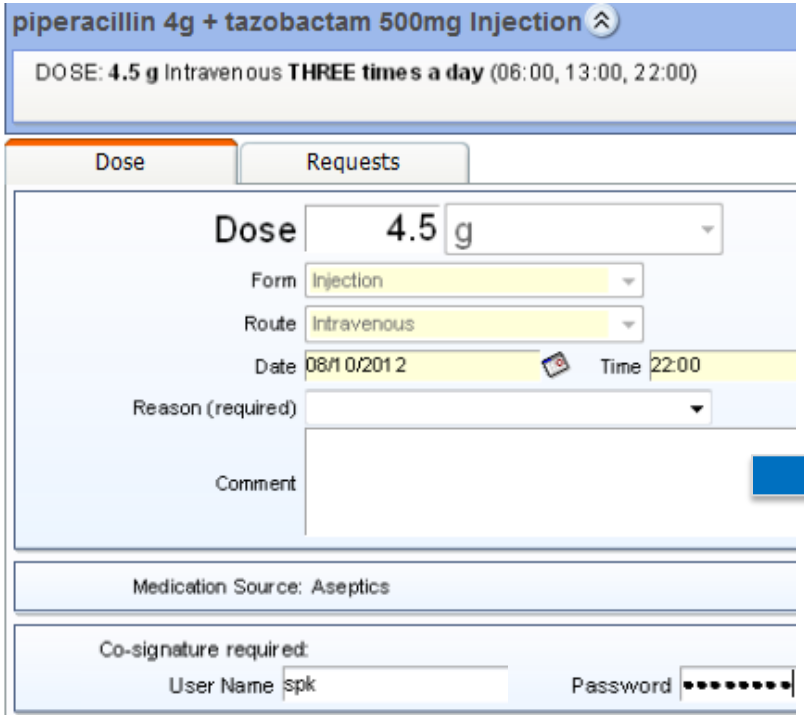
Reducing administration errors

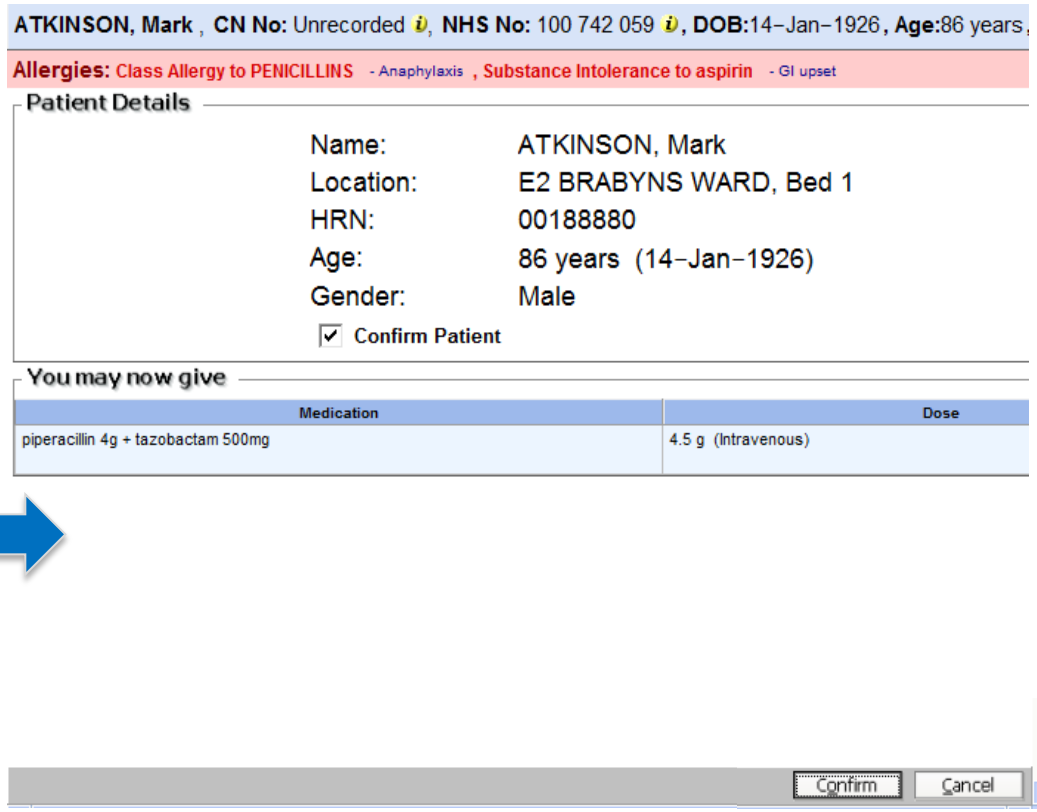
- Process of administration
  - Broken down to standardise practice
  - Confirming preparation of each drug
  - Confirming patient details

Reducing administration errors

Fictitious Patient

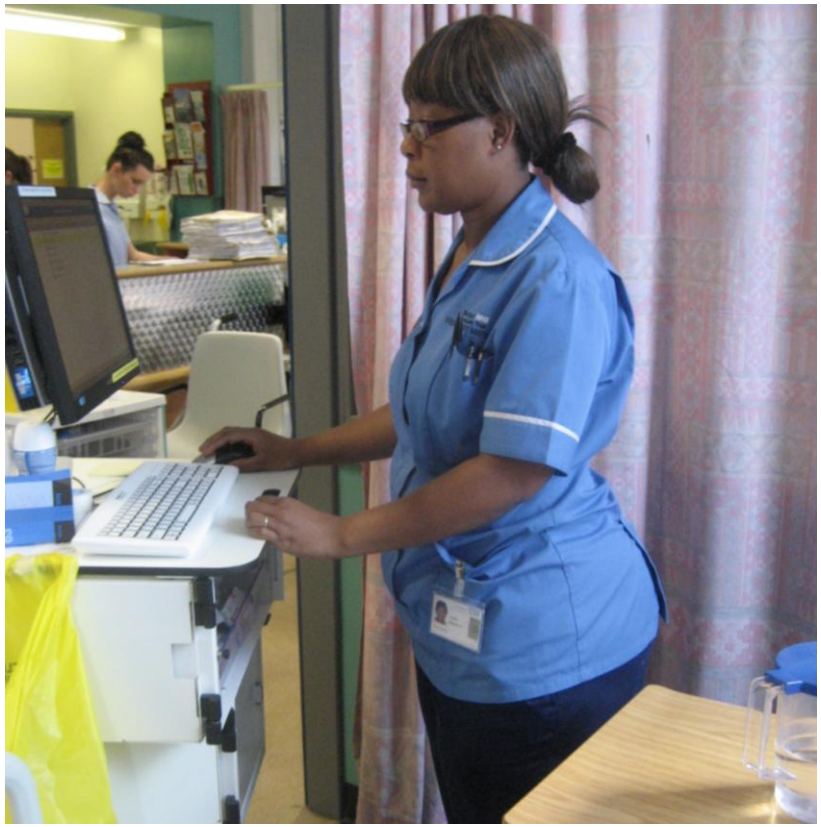
- Process of administration





Reducing administration errors

- Standardising approach to medication rounds
  - Start of round, start together
  - Critical medications administered first
    - ✓ *Get done on time and with support*

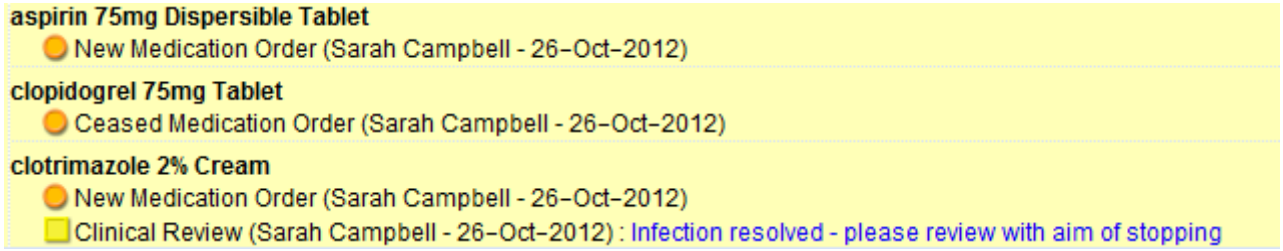


Reducing administration errors

- Be realistic
  - Nurses need to be aware that they still need to use their head
  - Over-reliance on system
  - It will take longer to start with, but improves with time

Improving communication

- Reviews
  - Reviews are used as a method of communication
  - **Clinical Reviews**
    - Raised against specific medications e.g. “please indicate course length”
  - **Pharmacy Reviews**
    - Created each time a medication is prescribed, changed or stopped
    - Transparent work lists for pharmacists
    - Nurses and doctors can ask for specific reviews
    - Clear log of sign off or queries between professions



Improving communication

- Ordering medications
  - Easier transmission to pharmacy
  - Pressure on to reduce number of missed doses (NPSA rapid response alert)

- Withholding & Delaying
  - *Proactively withholding doses*
    - Relies on clinical staff deciding when to restart
  - *Withholding/Delaying individual doses*
    - Clear reasoning why to withhold or delay

So…… has ePMA reduced medication errors?

Allergy recording

Trust standards:

- Must be positively recorded
- Document clearly the drug and nature of reaction if known
- Entry must be dated and signed

Internal audit spot checks:

- Pre ePMA *(Aug 11)*	97.4% compliance
- Post medicine rollout *(March 13)*	98.5% compliance
- Post medicine & surgery rollout *(Sept 13)*	99.5% compliance

- *Could be improved further with a mechanism for recording 'unable to confirm'*
- *May be more appropriate to leave as 'allergy status unknown'*

User opinion

- ***Tapan Chattopadhyay – Consultant***

  "E-Prescribing represents a potentially fool proof & error free prescribing system. It enhances quality and safety. This is certainly the way forwards to minimise risk and error"

- ***Chipo Mandeya – Nurse***

  "Using ePMA is minimising our risk of drug errors, I can easily read what is prescribed which is a huge improvement from paper charts. It is great that all the record is in 1 place rather than having multiple charts, which were often messy and falling apart."

Have we introduced different types of error?

- Overreliance on system
  - Reinforced during training
  - Alert overload
  - Are we deskilling junior doctors?

- System expectations
  - “Why didn’t ePMA warn me?”

- Downtime
  - Detailed plan in place
  - Transition to paper and back to ePMA

Thank you

Any Questions?