

Dental Core Trainees September 2025

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Prescribing Hints and Tips





Medicines Reconciliation

- On admission to hospital all patients require a medication history
- This should be taken using at least two sources:
 - Patient/carer
 - Past discharge/Prior to admission list
 - ECR medication list (GP medicines)
 - MDs/blister pack/Medibox



Accessing ECR

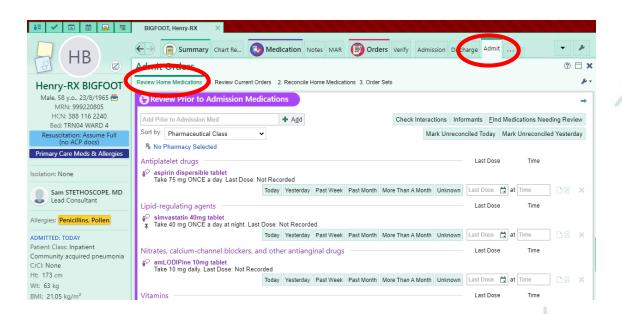


- ECR can be added to the sidebar or opened in a separate window from this link
- Opening in a separate window does provide the full information
- Always need second source look for dates
- ECR only gives last six months of Rxs



Med Rec - PTA List

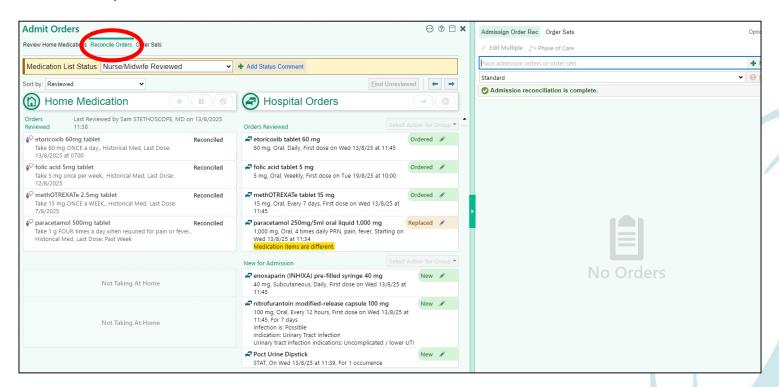
- On admission populate the PTA (Prior to Admission) list rather than prescribing directly on the MAR
- This will save time later!
- PTA will pre-populate from previous discharge (but always use it as one source and confirm with a second!





Medicines Reconciliation

 After using the PTA (Prior to admission) list make sure you go to the next stage to review current orders otherwise they will not appear on the patient's MAR





Video

Medicines Reconciliation May 2025.mp4 | Powered by Box





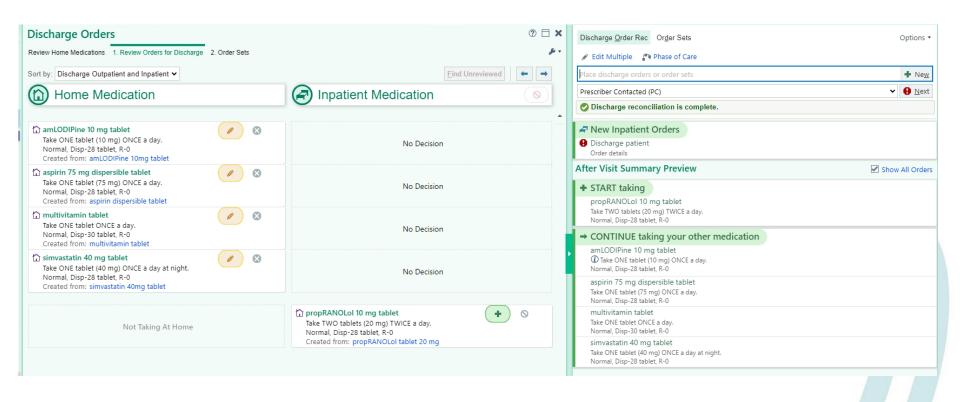
Med Rec Exercise

Take a medication history for Mr Bloggs, who has presented to hospital with a Community Acquired Pneumonia.



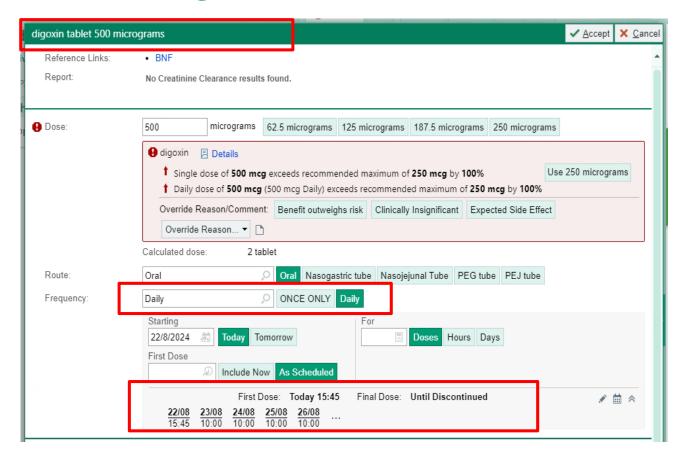


Discharge Home Medicines





Scheduling of medicines

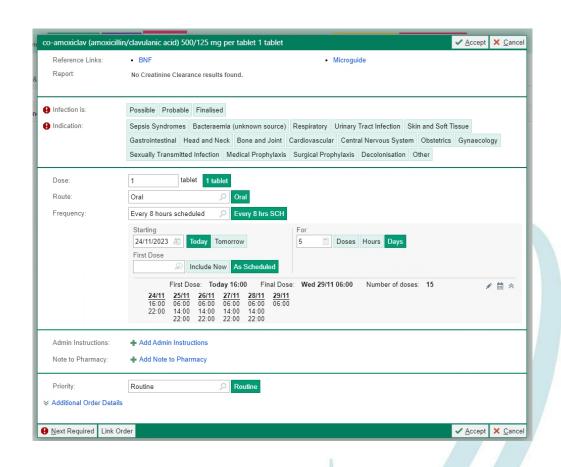


Watch for default frequencies especially when prescribing STAT doses



Antibiotics- 5 days

- Default course length for antibiotics in Encompass is 5 days
- Important to amend if a longer course is expected





Nil By Mouth NBM / Poor swallow

Patients can become NBM or develop a poor swallow due to a variety of reasons, for example:

- Awaiting surgery
- New swallowing difficulty e.g. acute stroke
- Worsening swallowing difficulty e.g. dementia, Parkinson's disease and COPD

Things to consider...

- Short or long term?
- New or worsening swallowing difficulties assess the patient's medicines
- Essential? e.g. vitamins, statins etc
- Speak to a pharmacist for advice
- Trust has access to helpful resources e.g. NEWT guide and Enteral feeding tube guide





Medication Safety





Every year in Northern Ireland it is estimated that...

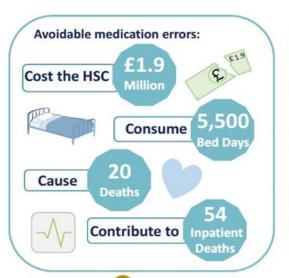


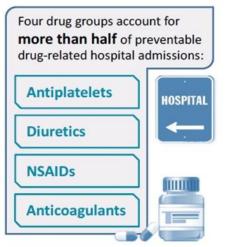


4 in 10 adults are dispensed 5 or more prescription items

9 in 10 patients aged 75 and over are dispensed 5 or more prescription items

800 non-elective hospital admissions are due to avoidable medication related adverse events







Inpatient prescription items issued in secondary care

212,000

Prescribing errors in secondary care

2,0

2,000 inpatients

experience an avoidable adverse event due to medications

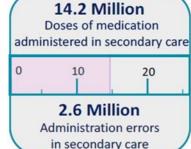
What people said...

Million Half of people

prescribed medication felt fully involved in decisions about the best medication for them

9 in 10

inpatients understood instructions on how to take their medication



The methodology applied to calculate the prevalence and burden of medication errors in Northern Ireland was informed by the 2018 research study, Prevalence and Economic Burden of Medication Errors in The NHS in England. Rapid evidence synthesis and economic analysis of the prevalence and burden of medication error in the UK. Policy Research Unit in Economic Evaluation of Health and Care Interventions. Universities of Sheffield and York.

Error mythology

If people try hard enough, they will not make any errors (perfection myth)

If we punish people when they make errors, they will make fewer of them (punishment myth)

Leape L. 2002

http://www.npsa.nhs.uk/patientsafety/improvingpatientsafety/learning-materials/safe-foundations/



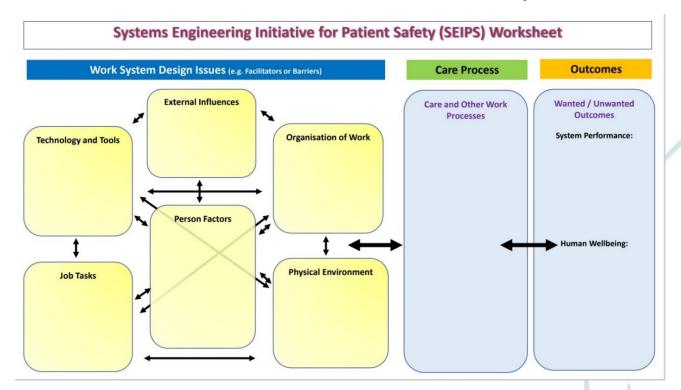
What is SEIPs?

- SEIPS stands for Systems Engineering Initiative for Patient Safety
- It is based on Human Factors systems approach to understanding care systems, processes and outcomes to inform better design and improvement.
- The task is to identify performance influencing factors (PIFs)
- PIFs are conditions related to a person, the task, or the organisation that affect the likelihood of human error and overall performance



Exercise

 Work in groups to complete the SEIPs model based on this incident (<u>click here</u>)



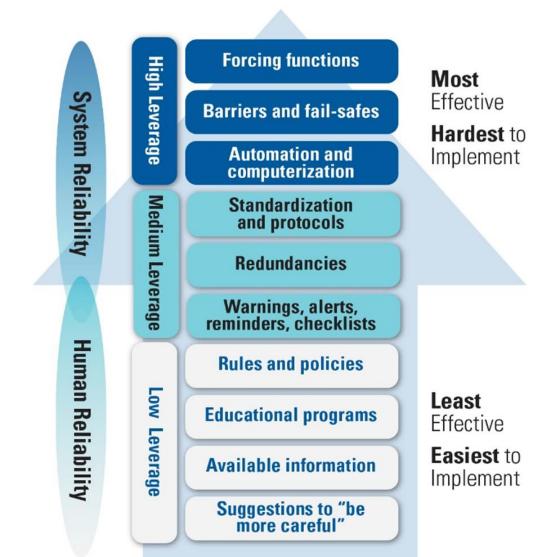


RaDonda Vaught Case

- Versed is a discontinued brand of midazolam (2003)
- The handover re Versed was given by phone
- RaDonda was not looking after the patient
- The medication was administered in the radiology corridor



Hierarchy of Intervention Effectiveness





Electronic System – Risk + Mitigations

Miss- selection from drop down menus

hy



Medication

Name

HYDROmorphone 12 hr Modified release capsule

HYDROmorphone capsules

hydromorphone continuous infusion (adult)

hydromorphone continuous infusion (paediatric)

hydroxocobalamin 1mg/ml injection

hydroxocobalamin (CYANOKIT) infusion

hydroxycarbamide 500mg/5ml oral liquid sugar-free hydroxycarbamide capsules

hydroxychloroquine sulfate tablet



Ways to reduce the risk of misselection from drop down menus:

Type "5"

When searching for a medicine on an electronic system type in 5 characters. This reduces the number of available options to select from

TALL man lettering

If this is designed into the system it can help us distinguish between medicine names which look alike

e.g. mix up between hydroxycarbamide and hydroxychloroquine

Electronic System – Risk + Mitigations

hydro



Medication

Name

HYDROmorphone 12 hr Modified release capsule

HYDROmorphone capsules

hydromorphone continuous infusion (adult)

hydromorphone continuous infusion (paediatric)

hydroxocobalamin 1mg/ml injection

hydroxocobalamin (CYANOKIT) infusion

hydroxycARBAMIDe 500mg/5ml oral liquid sugar-free

hydroxycARBAMIDe capsules

hydroxycHLOROQUINe sulfate tablet

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Tallman + Type 5 search

Tallman lettering can help us distinguish between medication names which look alike

In this case tallman
lettering did not
significantly reduce the
number of hits as "hydro"
is a common medication
prefix

Look Alike Sound Alike (LASA)

LASAs are medicines with a high risk of confusion due to similar looking packaging or similar sounding names.







Other examples:

Hydroxychloroquine vs Hydroxycarbamide

Edoxaban vs Enoxaparin

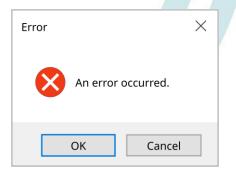
Lorazepam vs Lormetazepam

Azathioprine vs Azithromycin

Warnings – Alert Fatigue

- Alert fatigue is a state of mental and operational exhaustion caused by an overwhelming number of alerts—many of which are low priority, false positives or otherwise nonactionable.
- A systematic review in hospital and primary care settings found that 49%–96% of alerts were overridden or ignored
- Highlights the need for judicious use of alerts and continuous review of alert performance
- Pay particular attention to alerts that









Anticoagulants

Case Study

Patient returned from another hospital following an angiogram

They were restarted on preadmission rivaroxaban and remained on treatment dose enoxaparin (NSTEMI). Approximately 24 hours later the patient suffered a GI bleed and was administered and exanet (rivaroxaban reversal)



What can we learn from this?

- Anticoagulants are high risk medicines
- There is no clinical indication for two anticoagulants to be prescribed together*
- Encompass will warn a prescriber when they prescribe two anticoagulants together



*exception LMWH with warfarin when INR is sub-therapeutic



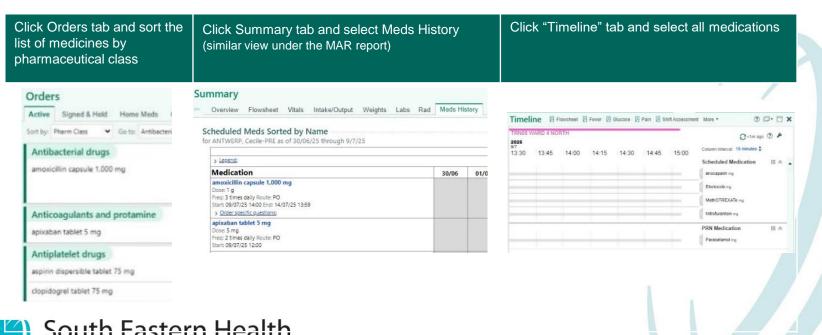
Anticoagulant learning

- Alert fatigue can reduce staff sensitivity to warnings in Encompass
- Always check the appropriateness of anticoagulant alerts
- The effectiveness of warnings in Encompass will be reviewed during the optimisation phase.
- This is particularly important when a patient moves between care settings



Overview of medication

- Always review the patient's medication before prescribing an anticoagulant
- There are multiple ways to do this in Encompass





Opioid Toxicity

Patient attended ED following a fall. History of lung cancer and COPD.

Diagnosed with a fractured Neck of Femur for conservative management

Several stat doses of naloxone were administered and the patient was started then on a naloxone infusion.

Patient's condition improved however they did experience some opioid withdrawal symptoms

Patient struggling to mobilise and engage with the physio due to pain.

Decision made to switch to oral morphine to help with dose titration.

The patient was on a Fentanyl 37.5 microgram/hour patch preadmission. The total daily dose was used to convert the patch rather than the dose per hour

The patient was started on MST 90mg twice daily

The following day after the morning dose the patient was discovered to have opioid toxicity.

Difficult to rouse, following asleep while speaking and had a respiratory rate of 6



What can we learn from this?

- Medicines reconciliation important before converting
- Recommended resource NI Opioid Conversion guideline (<u>here</u>)

Transdermal to Oral Fentanyl Patch e.g. Mezolar®, Durogesic® Replace patch every 3 days		
Fentanyl Patch (microgram/hr)	Equivalent 24 hourly Oral Morphine Dose (mg)	
12	30-59	
25	60-89	
37	90-119	
50	120-149	



- Appropriate to convert from a patch to an oral formulation when rapid titration is required
- When you remove a patch some drug will be left under the skin (reduces by 50% ≈ 24 hours)
- Reduce the dose by 25-50% when converting South Eastern Health and Social Care Trust

Opioid Toxicity

- When switching between opioids closely monitor for pain and opioid toxicity afterwards.
- Patients should be educated about the signs and symptoms of opioid toxicity

Signs and Symptoms of Opioid toxicity		
Myoclonic jerks	Hallucinations	
Confusion/agitation	Vivid dreams	
Cognitive impairment	Respiratory depression	

Pinpoint pupils aren't always seen in patients with opioid tolerance



Insulin

Insulin is a common source of errors!

- Insulin not prescribed-don't just rely on ECR or EPIC for a medication history always use a second source
- Insulin prescribed at the wrong times e.g. mixed insulin late at night
- Delays in prescribing doses- especially evenings and weekends
- Using misleading abbreviations





Insulin case

Kathleen, a 73 year old woman with type 2 diabetes, used Humulin R U-500 insulin, which is five times the strength of most insulins. Most people are prescribed Humulin R U-500 insulin from a pre-filled insulin pen device (KwikPen), which is designed to prevent dosing errors with high-strength insulin.

This medication is not licensed by the medication regulatory body for use in the UK and is imported from the USA. It is used when an individual needs a lot of insulin, as it allows the dose to be given in a smaller volume.

When Kathleen was staying in hospital for a reason unrelated to her diabetes, she was prescribed 48 units of 500 units/ml insulin. Nurses administered 48 units of insulin as measured with an insulin syringe, rather than via her insulin pen device. Insulin syringes are intended for use with standard insulin strength of 100 units/ml, meaning that when a syringe was used to withdraw the insulin dose from the pen device, this was five times the dose of insulin that Kathleen had been prescribed.

Kathleen received two recognised overdoses of insulin in this way while she was in hospital. On both occasions she became hypoglycaemic, received medical treatment and recovered.



Insulin

Common insulin incidents continued:

Using a needle and syringe to withdraw from an insulin pen or cartridge



Lookalike packaging







Insulin prescribing tips

ALWAYS prescribe by brand name

ALWAYS prescribe and administer regular doses of rapid or short acting insulins, or mixed insulins with meals

ALWAYS prescribe and administer long or intermediate acting insulins at the usual time for that patient

DO NOT omit

ALWAYS use an insulin syringe to measure insulin from a vial

NEVER use abbreviations e.g. 'U' or 'IU'

NEVER draw up insulin from a prefilled pen device or a cartridge





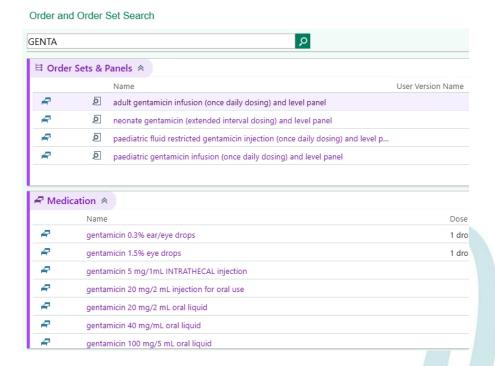
Aminoglycosides – what is the risk?

- Aminoglycosides (e.g. gentamicin, amikacin and tobramycin) are a group of antibiotics which require therapeutic drug monitoring, often used to treat serious infections e.g. pyelonephritis, endocarditis and sepsis
- Gent: level to be taken 19-24hrs post 1st dose, 2nd dose should NOT be given until this level is reported!
- This ensures that the levels in the patient's system are therapeutic and not toxic
- Toxicity can lead to kidney damage and deafness



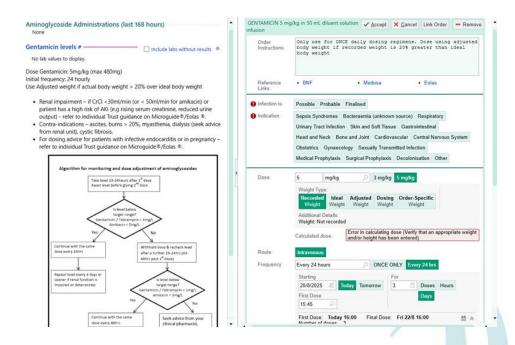
Prescribing Gentamicin

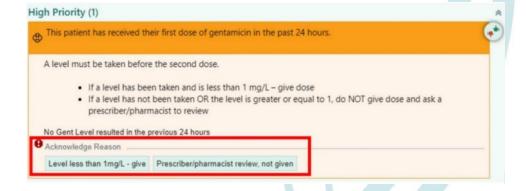
- In Encompass aminoglycosides (including gentamicin) are prescribed for 3 days at a time.
- Often patients will receive shorter courses than this so daily review is essential
- Ensure you use the correct order set in Encompass to assist with prescribing





- An alert fires to nursing staff to prompt a check that TDM has been carried out before administering a dose.
- Prescribers have an important role in supporting this.







Any Questions?

Thank- you



