Medication Safety Today

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Breakfast time

Since the introduction of the regional Kardex, the preprinted times for morning medicines are 06.00 and 10.00. However it is important to remember that these times may not be suitable for all medicines. Some medicines may need to be administered at other times, including insulin.

Safety tips

- ☑ Morning doses of short or rapid acting insulin and pre-mixed insulin should usually be administered shortly **before** breakfast and not delayed until the 10am medicine round.
- ☑ Where a patient is on a medicine that is prescribed at times outside the usual medicine administration rounds, specify this at nursing handover.

Infusion rates – it takes two

Medicine infusions can be complex and require many separate steps in the preparation of a safe and effective infusion for administration. Medication incidents can occur at any step in the preparation and also if the infusion rate of the preparation is incorrect. A rate that is too fast can result in unwanted side effects of the medication, whereas a rate that is too slow can result in sub-therapeutic effects for the patient.

Administration of a medicine via infusion requires a second and independent check of the preparation of the infusion. This should also include a second check of the rate setting on the device used if infusion rate errors are to be reduced or eliminated.

Don't let all the efforts of an accurate preparation of the infusion fall at the last step! Get a second check on infusion rates settings.

A sticky issue

Silver nitrate applicator sticks are caustic and are used to chemically cauterise the skin, to staunch bleeding or to permanently destroy unwanted tissue such as warts, skin tags, apthous ulcers or remove an over production of granulation tissue in a wound.

A serious medication incident occurred in the UK when a silver nitrate applicator stick was used in error instead of a cotton bud[1]. The silver nitrate applicator stick was then used to remove a foreign body from a patient's eye. The patient complained of sudden severe pain in the eye caused by the chemical burn injury to her cornea. An open pack of silver nitrate applicator sticks was being stored in the same drawer as the open pack of cotton buds and loose silver nitrate applicator sticks were found mixed in with the cotton buds.

Safety Tip

- ☑ Silver nitrate applicator sticks are a medicine and must be stored securely with other external medicines when not in use.

1. Quality Matters. Volume 26.5 May 2017 Quality Assurance Specialist Services East of England

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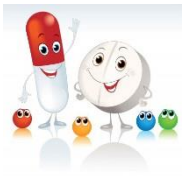
Further copies of this newsletter and past editions can be viewed at www.medicinesgovernanceteam.hscni.net or on your Trust intranet.

Anticholinesterases – the forgotten few!



Medicine doses can be omitted or delayed in hospital for a variety of reasons. For some critical medicines* or conditions, delays or omissions can cause serious harm or death. Critical medicines are those where timeliness of administration is crucial and lists are available in all Trusts on which categories of medicines are deemed critical.

*Critical medicines	
Anti-infectives (injectable route)	Corticosteroids
Anticoagulants	Opioids
Antiplatelets and thrombolytics (for acute indications)	Oxygen
Anticholinsterases	Immunoglobulin
Anticonvulsants	Immunosuppressants
Antiretrovirals	Insulin
Bronchodilator (injectable or nebulised route)	Parkinson's Disease medicines
Chemotherapy (injectable route)	Proton-pump inhibitors (injectable route)
Clozapine	'STAT' doses of any medicine (prescribed for immediate administration)
Resuscitation medicines including plasma expanders and reversal agents e.g. phytomenadione, naloxone, flumazenil, prothrombin complex	Desmopressin (cranial diabetes insipidus)
A critical medicine is a medicine where timeliness of administration is crucial. If a dose of a critical medicine* is omitted or delayed, report this on an IR1. Missing doses of critical medication compromises patient treatment, can be potentially harmful and may lengthen hospital stay.	

Patients with chronic conditions such as Parkinson's Disease or Myasthenia Gravis, may be at particular risk when critical list medicines are omitted. It is therefore essential that staff involved in the prescribing, dispensing and administration of medicines are familiar with the list of critical medicines. For example, an anticholinesterase, such as pyridostigmine, used to treat Myasthenia Gravis may not be recognised as a critical list medicine.

Omission of pyridostigmine can result in loss of symptom control (muscle weakness) and myasthenic crisis, therefore it is crucial that doses are not missed.

There are only 2 anticholinesterases used today, can you name the other one? (*Answer below)*

Frequency of errors: NOAC/DOAC

An increasing number of patients requiring anticoagulation are taking a Direct Acting Oral Anticoagulant (DOAC)/Non-Vitamin K Oral Anticoagulant (NOAC). When initiating a patient on a NOAC/DOAC, the dose will be different depending on the medicine being used, the reason (indication) for treatment and the patient's kidney function.

It is therefore important that:

- The correct dose is selected for the appropriate indication.
- Age and weight are considered.
- Patient's renal function is checked before the NOAC/DOAC is started.
- Reason and duration of treatment is clearly documented.

Remember all information and dosing schedules are available in the BNF. If in doubt, CHECK.

Answer: Neostigmine

Warfarin at discharge

Warfarin is a high risk medication and it is vitally important that all information regarding future monitoring is complete and handed over before a patient is discharged from hospital. This ensures that the team looking after the patient in primary care or at the anticoagulant clinic is aware of follow up arrangements.

In particular, they need to be aware of warfarin doses post discharge, at least the last three INR results and warfarin doses prior to discharge, and the date and time of the patient's INR appointment following discharge.

Safety Tips

- ☑ Ensure all discharge documentation has been completed in full, detailing the information required for safe warfarin discharge (as above) until the patient is seen by their GP or anticoagulant clinic.
- ☑ GP or anticoagulant clinics should be contacted prior to discharge to arrange an appointment for INR monitoring following discharge. The appointment date should be within seven days of discharge.
- ☑ The patient/carer should be counselled on warfarin before discharge and made aware of the post discharge arrangements for INR monitoring and warfarin dosing until their next INR check.

Hyperkalaemia in adults

Serious overdoses of insulin have occurred in the past in the emergency treatment of hyperkalaemia in adults. To avoid recurrence, a hyperkalaemia kit (shown below) and regional guidance were introduced in Northern Ireland a number of years ago.

Remember: to treat hyperkalaemia in adults the dose of soluble insulin is **10units** and this dose must be **second checked** with the senior nurse on duty.

LOOK OUT

Medication incidents have occurred where Prograf® 500micrograms was dispensed instead of Prograf® 5mg for post renal transplant patients. These incidents had the potential to cause a 10 fold underdose of this immunosuppressant.

Take care when dispensing these strengths of Prograf®.