Medication Safety Today

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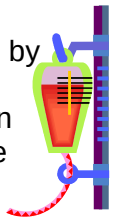
Too much of a good thing

Some intravenous medicines can be administered as a bolus or as an infusion. However certain medicines must only be administered by dilute infusion, for example vancomycin and clarithromycin and cannot be administered by bolus. Medication incidents continue to be reported where these medicines have been administered as a bolus leading to adverse reactions, for example:



- Vancomycin administered undiluted over a short period of time can result in severe hypotension (including shock and cardiac arrest), wheezing, dyspnoea, urticaria, pruritis, flushing of the upper body ('red man' syndrome), pain and muscle spasm of the back and chest.
- Clarithromycin administered undiluted over a short period of time can result in pain, phlebitis and cardiac arrhythmias.

When administering intravenous medicines, always check the method of administration using the Intravenous Medicines Administration Guide or the Summary of Product Characteristics.

Check the small print

Various forms of medicine charts exist in community settings, residential and nursing homes. When a patient is admitted to hospital, it is often easy to accept that the copy of the Kardex that arrives with the patient belongs to that patient. However occasionally the kardex may belong to someone else.

Safety Tips

- ☑ Always remember to check the patient details on the Kardex and ensure it matches the patient that you are admitting.
- ☑ If the copy of the Kardex is of poor quality, contact the residential or nursing home to confirm details.
- ☑ Ideally use more than one source of information to confirm a medication history.

Update

National Patient Safety Agency

DHSSPS has issued Rapid Response Reports and Alerts from the National Patient Safety Agency on a number of medicine related risks:

- **Reducing harm from omitted and delayed medicines in hospital**
  http://www.dhsspsni.gov.uk/hsc_sqsd_27_08.pdf
- **Safer Use Of Intravenous Gentamicin For Neonates**
  http://www.dhsspsni.gov.uk/hsc_sqsd_4_10.pdf
- **Vaccine Cold Storage**
  http://www.dhsspsni.gov.uk/hsc_sqsd_01_10_vaccine_cold_storage.pdf
- **Safer Lithium Therapy**
  http://www.dhsspsni.gov.uk/hsc_sqsd_84_09_safer_lithium_therapy-2.pdf
- **Oxygen Safety in Hospitals**
  http://www.dhsspsni.gov.uk/hsc_sqsd_63_09.pdf
- **Neuraxial devices**
  http://www.dhsspsni.gov.uk/hsc_sqsd_85_09_safer_spinal_intrathecal_epidural_and_regional_devices.pdf

Smoke signals

The National Patient Safety Agency is also piloting a new approach for highlighting specific risks called 'Signals'. Two medication related signals have been issued:

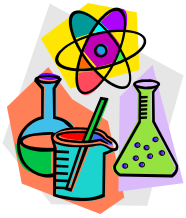
- **Wrong Strength Phenol**
  http://www.nrls.npsa.nhs.uk/resources/?entryid45=66754
- **Injectable Medicines in theatres**
  http://www.nrls.npsa.nhs.uk/resources/?entryid45=66753&q=0%c2%acmedicines+in+theatres%c2%ac

Find out what is happening in response to NPSA recommendations in your Trust.

If you have any comments on this newsletter, please contact Sharon O'Donnell, Medicines Governance pharmacist on Ext: 2600 at Belfast City Hospital or by e-mail at Sharon.ODonnell@belfasttrust.hscni.net
Further copies of this newsletter can be viewed at www.medicinesgovernanceteam.hscni.net or on your Trust intranet.

Mix ups between amphotericin B formulations

The recommended dose for conventional amphotericin B (Fungizone®) is much lower than the doses recommended for lipid-based products (Abelcet®, AmBisome®, Amphocil®) therefore these formulations are not interchangeable. Confusion between products can cause administration of overdoses leading to potentially fatal cardiac or cardiorespiratory arrest.(1) There have been reports of two patient deaths in the UK caused by confusion between formulations.(2)



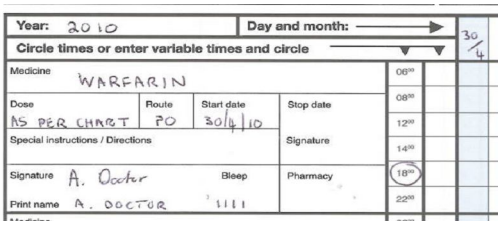
Safety tips

- ☑ Always follow BNF advice and prescribe by brand name.
- ☑ Under no circumstances should the total daily dose of non lipid amphotericin (Fungizone®) for adults exceed 1.5mg/kg.(3)
- ☑ Verify the product name and dose before prescribing, dispensing or administration.
- ☑ Where it is necessary to stock more than one formulation, ensure these are stored appropriately to reduce the possibility of mis-selection.

1. Institute For Safe Medication Practices Canada. Safety Bulletin. Warning: Prevent Mix-ups between conventional amphotericin B (Fungizone) and lipid based amphotericin B products (Ambisome and Abelcet). Institute For Safe Medication Practices Canada. Volume 2, Issue 6, June 2002.
2. National Patient Safety Agency. Risk of confusion between non-lipid and lipid formulations of injectable amphotericin. 2007 http://www.nrls.npsa.nhs.uk/resources/type/alerts/?entryid45=59874&p=2
3. Medicines and Healthcare products Regulatory Authority. Parenteral amphotericin B: fatal overdose risk due to confusion between lipid-based and non-lipid based formulations. http://www.mhra.gov.uk/Publications/Safetyguidance/DrugSafetyUpdate/CON076501

Bolt Ons

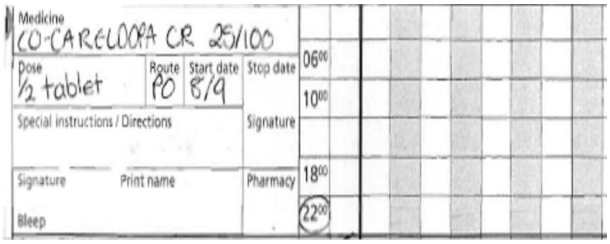
Increasingly, separate medicine charts are appearing in our hospitals for specific medicines, including anticoagulants, insulin, gentamicin and syringe driver charts. These charts aim to improve patient safety by guiding medical and nursing staff on how to safely prescribe, administer and monitor these medicines. It is essential that there is a reference on the main kardex to additional charts in use, however specific dose details should not be included in this entry, for example.



If no reference is made on the kardex there is potential for a medicine to be overlooked or omitted during the stay and at discharge. When initiating a separate chart also consider if medicines on the main kardex need to be stopped e.g. if a patient is started on a syringe driver should other opiates be discontinued on the main kardex?

Half measures

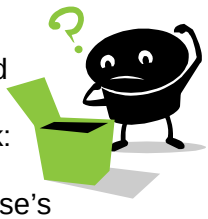
Can you spot the problem with the Kardex below?



On checking the medication history, the intended medication was 'co-careldopa CR', which also has the brand name 'Half Sinemet® CR 25/100'. On admission the 'Half' part of the brand name was misinterpreted as a dose instruction and written up as shown above.

- Remember that some medicines may have the word 'half' in their brand name such as 'Half-Securon SR®', 'Half-Inderal LA®' and 'Half-Beta Prograne®'. This may lead to confusion with dose instructions.
- Confusion as to what is to be given can lead to since a delay in administration of a medicine, which could be particularly critical as in this example as co-careldopa is an antiparkinsonian medicine.
- Prescribe generically, where appropriate.

Gone AWOL



Kardexes sometimes can be misplaced or removed from their usual location. If a kardex does go missing, first check:

- has it been placed on somebody else's bed or in the patient's notes or in someone else's notes?,
- has it been filed away, is it in the treatment room, the pharmacy or has it been returned to the ward the patient was previously on?

Safety Tips

- ☑ If you have to re-write the kardex, clearly indicate on page 1 that the kardex has been re-written and the date. Also state the reason why e.g. 'PREVIOUS KARDEX LOST'.
- ☑ When re-writing check the medication history in the notes or on the medicines reconciliation form to help confirm medicines on admission and any subsequent changes.
- ☑ If the previous kardex is found, use it to check that medicines on the new kardex have been correctly prescribed.
- ☑ Cancel the old kardex to avoid duplication.