Medication Safety Today

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Hyperkalaemia - update to GAIN guidance

GAIN has recently updated the 'Emergency management of hyperkalaemia in adults' guidelines[1] in line with Renal Association guidance. The main changes are to the:

Monitoring requirements when treating hyperkalaemia in adults.

The guidance states that blood glucose should be monitored 15 and 30 minutes after administration of the insulin/glucose infusion and then hourly up to six hours after completion of administration. Monitoring needs to continue for up to six hours as delayed hypoglycaemia may occur when less than 30g of glucose is administered with insulin.

Urea and electrolytes should also be monitored at one, two, four, six and 24 hours after last administration of insulin/glucose.

Guidance on 'How to make up 10 units of Actrapid® (soluble) insulin in 50ml glucose 50% vial using the hyperkalaemia kit', particularly emphasising that the dose of insulin to treat hyperkalaemia is 10 units.

1. http://www.gain-ni.org/images/Guidelines/GAIN_Guidelines_Treatment_of_Hyperkalaemia_in_Adults_GAIN_02_12_2014.pdf

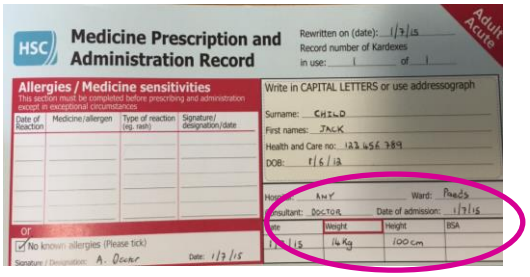
Methotrexate and trimethoprim - update

The February 2015 Medication Safety Today newsletter highlighted the potential for patient harm where trimethoprim had been co-prescribed with methotrexate.
In addition to the safety points covered, the article should also have mentioned that there are certain specialist conditions where, with careful monitoring, trimethoprim and methotrexate can be co-prescribed. These medicines can be prescribed in combination, for example, in the treatment of acute lymphoblastic leukaemia and related conditions. These patients receive oral methotrexate and are also prescribed co-trimoxazole for pneumocystis pneumonia prophylaxis.

What's that in old money?

Dosing errors can occur with any medicine based on weight due to calculation error. However neonates or children are also particularly at risk of weight based dosing errors due to another reason. When asked about their child's weight, parents will often express this using pounds and ounces (imperial units) and if used, this can be confused with kilograms and grams (metric units). For example, 8lbs 14oz confused with 8.14kg. This will result in an increased dose of medicine or greater volume of intravenous fluid being administered. It is therefore essential that weights are accurately measured and documented on the Kardex using metric units.

- ☑ All neonatal and paediatric patients must be weighed using metric scales (i.e. measures weight in grams and kilograms) prior to prescribing and administration of medicines. Estimated weight or recent weight advised by parents should only be used in an emergency where it is not possible to weigh the patient. This should be updated to a current measured weight as soon as possible.
- ☑ Staff should be aware of and alert for confusion between metric and imperial units and check that the weight is as expected for the appearance and age of the patient. BNFc and BNF contain tables for predicted weights for age.
- ☑ Current weight must be used and updated during each admission and at each transfer of care between wards and hospitals. Using a weight from a recent previous recording is not safe as this can significantly change from the last known recorded weight especially if they are unwell.



Look behind you

Omitted doses of medicines remains one of the most commonly reported medication incidents in Northern Ireland, however, an increasing number of these describe incidents where the administration box of the Kardex is left blank.

In 2013 a regional audit of omitted/delayed doses showed that blank administration boxes were the most common among the 'reasons' for an omission, including those of critical medicines.

These incidents include where a dose is overlooked, not administered and the administration record left blank. In some cases, the omission then continues for several days because staff follow a pattern of administration signatures to determine the doses due rather than checking the prescribed time.

In some incidents where the administration record was left blank, the dose had been administered but staff simply forgot to sign the administration record, or that the omission was intentional but no reason/omitted dose code documented on the medication chart. Without any annotation at all it is impossible to know at a later stage if the patient received his/her medication.

Where a critical medicine is involved this can have serious consequences to patient safety if they have missed a dose or receive a duplicate dose in light of a missing signature/omitted dose code.

Safety tips:

- ☑ Check the administration record at the end of medicines administration to ensure that the record has been fully completed for all doses that have been administered and that no doses have been overlooked. Where a dose is intentionally omitted, ensure that the record has been completed with the relevant code.
- ☑ When administering medicines, review the administration record for previous medicine administration. Any healthcare staff member who notices a blank administration box in the administration section of the Kardex should alert the ward Sister to allow follow up in a timely way. Medical and pharmacy staff should also check the administration record when reviewing the Kardex during the in-patient stay.
- ☑ Be vigilant and methodical. Avoid distractions and interruptions during the medication administration as these are known to contribute to errors in the administration process.

If you have any comments on this newsletter, please contact Sharon O'Donnell, Medicines Governance pharmacist on 02890638129 at Royal Hospitals 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

Caught in the middle

Much work has been done over recent years on medicines reconciliation at admission and discharge as many medication incidents can occur at these transitions of care. However medication incidents can also occur when a Kardex is rewritten during a patient admission, sometimes as a result of poorly written prescriptions.

- Medicines can be restarted that have been discontinued
- ☑ Ensure any discontinued medicines are clearly scored through both the prescription and the remainder of the administration record, signed and dated.

- Medicines can be prescribed at the wrong dose or frequency on the new Kardex where a prescription on the existing Kardex has been altered without rewriting and is unclear
- ☑ Ensure that any changes to medication are made by rewriting the prescription in full, do not alter an existing prescription.

- Medicines can be overlooked and not transferred to the new Kardex
- ☑ Check the new Kardex against the previous one to confirm all current medicines from each section have been prescribed.

Hyponatraemia

The Public Health Agency has developed a central repository for HSC resources related to hyponatraemia. The webpage brings together national and regional documents related to hyponatraemia including web links to:

- NPSA Patient Safety Alert 22 – reducing the risk of hyponatraemia when administering IV infusions to children
- BMJ eLearning module
- Hyponatraemia competency framework
- DHSSPS documents:
  - Regional wall chart for parenteral fluid therapy for children and young people
  - Child and Adult fluid balance and prescription charts and associated training
- RQIA reports on Trusts implementation of the NPSA recommendations
- GAIN audit report (2014) - to ascertain the safety of prescription and administration, recording and maintaining of intravenous (iv) fluids to children over 4 weeks and under 16 years
- Guidance on how to prescribe IV medicine infusions

The repository is available at:
http://www.publichealth.hscni.net/directorate-nursing-and-allied-health-professions/nursing/central-repository-hsc-resources-relating-