Medication Safety Today

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What's the time? It's insulin time!

Most hospitals have a separate prescription and administration chart for subcutaneous insulin so that insulin is prescribed on a daily basis. The prescription chart is combined with blood glucose monitoring. Medication incidents continue to occur where insulin has not been prescribed leading to delay and sometimes omission of insulin doses and hyperglycaemia. Unless a patient is very unstable, insulin should be prescribed each day for the next 24 hours. This should be done during the working day by the team looking after the patient and not left for night staff to do.

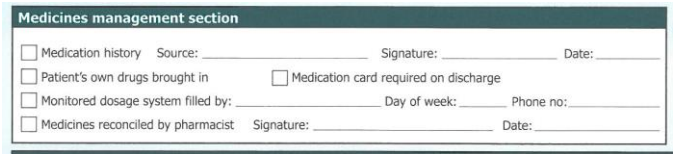
Safety tips:

- ☑ Have a set time each day when insulin doses are prescribed for the next 24 hours.
- ☑ Identify which patients are on insulin and ensure these are highlighted to medical staff.
- ☑ Where a patient's blood glucose control is unstable and you are unsure what insulin to prescribe, contact a member of the diabetes team for advice.

System alert

Some patients have their medicines dispensed in a Monitored Dosage System (MDS) at home. It is very important to identify this on admission to hospital to enable arrangements to be made for discharge medicines. Medication incidents have occurred where patients have been dispensed new medicines or new doses on discharge and have taken these in addition to their previous medication in the MDS.

There is a Medicines Management section on the front of the Kardex where this should be documented.



Medicines management section

☐ Medication history Source: _____ Signature: _____ Date: _____

☐ Patient's own drugs brought in ☐ Medication card required on discharge

☐ Monitored dosage system filled by: _____ Day of week: _____ Phone no: _____

☐ Medicines reconciled by pharmacist Signature: _____ Date: _____

Anticoagulant alert

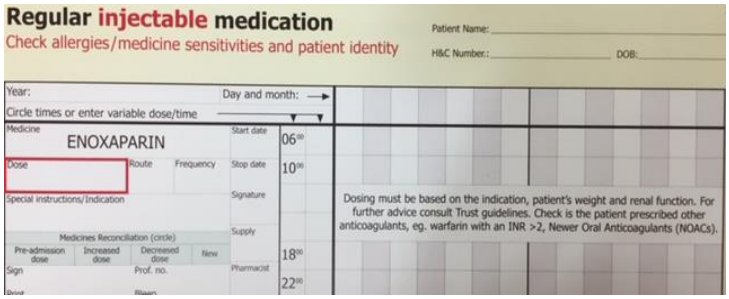
The non-Vitamin K antagonist oral anticoagulants (apixaban, dabigatran, edoxaban & rivaroxaban) or NOACs as they are commonly referred to, and warfarin are all licensed for the prevention and treatment of venous thromboembolism.

Care needs to be taken:

- when initiating these medicines due to the potential for interactions with other medicines and
- when admitting a patient to hospital to ensure enoxaparin is not co-prescribed in error. These combinations can increase the risk of bleeding.

To prevent these medication incidents:

- Complete the full VTE risk assessment before making a decision to prescribe enoxaparin. This and the enoxaparin entry in the injectable section has a prompt that warns prescribers about concurrent use of anticoagulants



Regular injectable medication

Check allergies/medicine sensitivities and patient identity

Patient Name: _____

H&C Number: _____ DOB: _____

Year: Day and month: →

Circle times or enter variable dose/time

Medicine: ENOXAPARIN

Start date 06[00]

Dose Route Frequency Stop date 10[00]

Special instructions/Indication Signature

Supply

Medicines Reconciliation (circle)

Pre-admission dose | Increased dose | Decreased dose | New

Sign Prof. no. Pharmacist 18[00] 22[00]

Dosing must be based on the indication, patient's weight and renal function. For further advice consult Trust guidelines. Check is the patient prescribed other anticoagulants, eg. warfarin with an INR >2, Newer Oral Anticoagulants (NOACs).

Interactions: Statins and Clarithromycin

Clarithromycin inhibits the metabolism of some HMG-CoA reductase inhibitors, which results in increased plasma concentrations of these medicines. Rhabdomyolysis in association with increased plasma concentrations have in rare cases been reported in patients being treated with clarithromycin and simvastatin. Clarithromycin can produce a similar interaction with atorvastatin or pravastatin. When treatment with clarithromycin is indicated in patients receiving statin treatment, therapy with statins should be temporarily suspended during the course of clarithromycin.

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.

How strong am I?

Medication incidents have occurred when an incorrect dose has been administered to the patient due to confusion about the strength. Some reasons why this might happen include:

1. The usual strength stocked is no longer available, for example, ketamine 10mg/ml no longer available, 50mg/ml in stock. Intended dose was 30mg, however 150mg administered. Staff failed to read the strength and assumed the strength was the same as previously used.

2. Sometimes the strength per ml is the most prominent feature on the label and not the total quantity in the vial or ampoule. Staff may not realise that the vial or ampoule contains greater than 1ml and draw up the entire contents resulting in a higher than normal dose being administered.

Safety tips:

- ☑ Always check the strength of the medicine.
- ☑ Never assume that the strength is the same as the last time you administered the medicine.

Syringe Pump Checks

Syringe pumps continuously deliver medicines into the subcutaneous tissue of patients for whom oral medication is not suitable. Their use has greatly enhanced symptom management for palliative care patients in the latter and difficult stages of their illness. All medicines being delivered must be prescribed on the appropriate Trust prescription and administration chart. Checks should be conducted regularly during the infusion to confirm the pump is infusing as expected and there are no adverse effects. In a hospital setting once commenced the first check should take place after 30 minutes and then every 4 hours thereafter.
Observe for the following:

- ✓ Pain, swelling, redness, infection, bruising, oedema
- ✓ Blood in the infusion line
- ✓ Crystallisation
- ✓ Disconnection
- ✓ Infusion not progressing
- ✓ Infusion progressing too quickly

If any issues are identified STOP the pump and speak to the patient's consultant regarding their management. If the pump is suspected to be faulty replace with another pump and send defective pump for repair following trust procedure. It is also important to complete an incident form documenting the reason for return.

Desmopressin - unforgettable

Desmopressin is a synthetic form of antidiuretic hormone (ADH) used to treat cranial diabetes insipidus and is considered a life sustaining medication in this situation.

In the treatment of cranial diabetes insipidus, it is most commonly given as an intranasal spray or oral tablets, but may also be given as an injection.

Omission of desmopressin has resulted in severe dehydration and death*. For this reason, desmopressin has been added to the list of Critical Medicines where timeliness of administration is crucial **

Please check that your ward has an updated list of critical medicines on display and where there is an omitted or delayed dose (>2hrs) of a critical medicine this should be reported as a medication incident using the Trust incident reporting system.

*DHSSPSNI Patient Safety Alert. PSA/2/2016 *Risk of severe harm or death when desmopressin is omitted or delayed in patients with cranial diabetes insipidus.*
**NPSA Rapid Response Report (NPSA/2010/RRR009) *Reducing harm from omitted and delayed medicines in hospital*.

AKI not OK

Medication incidents have been reported in patients, who have had Acute Kidney Injury (AKI) identified, but who have not had their medication reviewed appropriately. This issue has been highlighted in the GAIN Northern Ireland Guidelines for Acute Kidney Injury and other guidance.[1-3] These guidelines describe how medications may contribute to the development of AKI and may also, with a sudden reduction in kidney function, require dose modification to avoid hazardous side effects e.g. oral hypoglycaemic drugs have a much longer duration of action in kidney failure.

Once AKI has been identified it is important to review all medications, including the patients 'usual' drugs. The GAIN AKI guidelines highlight some of the medications to review although this is not an exhaustive list:

Drugs interfering with renal perfusion
ACE inhibitors and angiotensin receptor blockers
NSAIDs
All antihypertensives
Diuretics (loop and thiazide)
Nitrates
Nicorandil

Common drugs requiring dose reduction or cessation
Low molecular weight heparins
Opiates
Penicillin based antibiotics
Metformin (increased risk of lactic acidosis)
Sulphonylurea-based hypoglycaemic agents
Aciclovir

Drugs requiring close monitoring
Warfarin
Aminoglycosides

Drugs aggravating hyperkalaemia
Digoxin
Beta blockers
Trimethoprim
Potassium sparing diuretics e.g. spironolactone, amiloride

1. GAIN Northern Ireland Guidelines for Acute Kidney Injury 2014. http://www.gain-ni.org/images/GAIN_-_AKI_-_Northern_Ireland_Guidelines_for_Acute_Kidney_Injury_PDF.PDF [Accessed March 31, 2016]
2. https://www.thinkkidneys.nhs.uk/aki/wp-content/uploads/sites/2/2016/03/Guidelines-for-Medicines-optimisation-in-patients-with-AKI-final.pdf
3. http://www.renalpharmacy.org.uk/