

Vol 2 Issue 2 August 2013

This newsletter is sent to all Community Pharmacies in NI.

Please share with your colleagues

Also available on the internet, see link on the back page

### Medicines for children - check the dose

In a previous issue of Medicines Safety Matters for Prescribers and Community Pharmacists [link](#), we reported on 3 incidents involving **ranitidine** oral solution. Since then, two more dispensing errors have come to light involving babies who were six weeks and four months old. The prescriptions were for ranitidine solution **5mg/5ml** with doses of 5mls and 3.5mls tid. Ranitidine solution **75mg/5ml** was dispensed leading to a fifteen times overdose for both children.



A prescription for a four year old child for **midazolam** 10mg/ml oromucosal solution was issued with directions '**2.5ml when required for seizure**'.

The correct dose should have been **2.5mg (0.25ml)** but the prescribing error was not picked up and the product was labelled and dispensed with directions '**25mg (2.5ml) when required**' - a ten-fold overdose. The error was repeated over a three year period.

Fortunately no harm was caused as the mother had previously been counselled on the correct dose by the hospital team.

A prescription for a six year old child for **atenolol** syrup 25mg/5ml was issued with directions '**10ml bd**' (e.g. **50mg bd**), the correct dose should have been **10mg (2ml) bd**.

The pharmacist checked the recommended dose in the 'BNF for Children':

*Child 1 month - 12 years: 0.5 - 2mg/kg once daily (max 100mg daily); may be given in 2 divided doses.*

The pharmacist did not check the actual weight of the child or refer to a mean weight for this age and assumed that 50mg bd was within the recommended range.

Using a mean weight for a 6 year old, the calculated dose would have been **10-40mg daily**.

The child became pale and floppy after one dose of atenolol 50mg and was admitted to hospital for monitoring.

These incidents highlight the potential risks when a thorough clinical check of paediatric doses is not carried out by pharmacists.

#### Inside this issue:

Medicines for children—check the dose	1
Hospital admissions following beta blocker mix ups	2
Rip it up!	2
'60' mix ups	2
Avoiding harm from flammable medicines	3
Caution with unsealed pharmacy bags	4
How many drops?	4

#### Advice:

- Consider a second check by a another trained member of staff on all dose calculations for babies or young children
- Refer to the SPC and to the BNF for Children for recommended doses, body surface area tables and mean height & weight tables
- Watch out for unusual strengths of a preparation i.e. a 'special'
- Take care when scanning scripts for labelling and dispensing
- Where a discrepancy is noted between the recommended dose and the prescribed dose, contact the prescriber to clarify the intention
- Do not generate labels from the PMR - always refer to the prescription.

#### Mean Values for Weight & Height (BNF & BNF for Children)

Age	Weight kg	Height cm
1 month	4.3	55
2 months	5.4	58
3 months	6.1	61
4 months	6.7	63
6 months	7.6	67
1 year	9	75
3 years	14	96
5 years	18	109

Refer to current edition for full table contents

## Hospital admissions following beta blocker mix-ups

**Five incidents** have been reported involving mix-ups between **beta blockers** and other drugs with similar names and strengths. Each incident was detected either prior to or during hospital admission, and in one incident the patient came to serious harm.

Pharmacists are reminded of the potentially serious sequelae following the unintentional administration of a beta blocker, these include:

- Bradycardia
- Hypotension
- Acute cardiac insufficiency
- Bronchospasm.

The outcome can be fatal in vulnerable patients e.g. the elderly or those with other serious co-morbidities.

### Contributory factors to the mix-ups:

- Products not separated adequately on shelf
- Products have similar names, strengths and packaging
- Dispensing bench cluttered
- Under pressure - closing time and short-staffed
- Dispensing and checking by the same person.



Prescribed	Dispensed
Bendroflumethiazide 2.5mg	Bisoprolol 2.5mg (3 reports)
Bisoprolol	Bendroflumethiazide 2.5mg
Allopurinol 100mg	Atenolol 100mg

### Advice:

- Use shelf-edge labels to highlight beta-blocker products on shelves and the need for extra care when selecting these
- Use separators to segregate beta-blockers from other products with similar names, strengths and packaging
- Keep dispensing areas clear and tidy
- Review staffing levels throughout the day to ensure that, where possible, two members of staff are involved in the dispensing process.

## Rip it up!

There have been numerous incidents reported to the HSCB where Controlled Drugs have gone missing and cannot be accounted for.

In these cases it has been assumed that the tablets had been inadvertently disposed of when the perceived "empty boxes" had been thrown into the bin.

### Advice:

Empty CD boxes should be ripped open and checked before disposal to ensure that nothing is stuck underneath the folds of the box or within the patient information leaflet.



## '60' Mix-ups

### Watch out for '60'

Several incidents have been reported where there have been mix ups between the **strength** of the drug requested and the **quantity** of medication required (see table for recent examples).

Prescribed	Dispensed
MST 10mg x 60	MST 60mg x 60 tabs
Fluoxetine 20mg x 60	Fluoxetine 60mg
Arcoxia 30mg x 60	Arcoxia 60mg

# Burning issues - avoiding harm from flammable medicines

## Home Oxygen

A GP practice has received a report about a patient who sustained burns to his fingers when his grandchildren were allowed to play with matches in the vicinity of an oxygen concentrator causing the tubing to catch fire.

Oxygen therapy is a well known fire risk as clothing and soft furnishings can become oxygen enriched and will burn more vigorously if ignited. Oils, grease and any materials that these materials have been in contact with will also burn more violently in an oxygen enriched environment.

### Recommendations:

To reduce the risk of fire, pharmacists should reinforce the following safety messages to patients using home oxygen:

- Ensure hands are always clean before handling their oxygen equipment
- Never use aerosol sprays and oil based creams or moisturisers when using or handling the equipment. This includes:
  - » Oil based lip moisturisers
  - » Oil based make-up
  - » Moisturisers/barrier/paraffin based skin products
  - » Cradle cap oils
  - » Sun creams
- Ensure that they ventilate their clothing in the open air for at least 15 minutes before smoking or going near an open flame or source of ignition
- Encourage and assist patients using home oxygen to stop smoking.



An information leaflet from BOC 'Dangers of smoking whilst using oxygen therapy' is available to download from the BSO website:  
<http://www.hscbusiness.hscni.net/services/2359.htm>

## Paraffin Based Products

In 2006, a patient died from 95% burns to their body when paraffin soaked bandages, applied for the treatment of psoriasis, were ignited by a cigarette they were smoking. Following investigation, the NPSA and Health & Safety Executive found that paraffin based products e.g. white soft paraffin, white soft paraffin plus 50% liquid paraffin or emulsifying ointment, in contact with dressings and clothing were easily ignited by a naked flame or cigarette. The risk is greater when these preparations are applied to large areas of the body and when clothing or dressings become soaked with the ointment.

The advice issued by NPSA applies to **any licensed or unlicensed paraffin 'based' products** e.g.

- white soft paraffin
- yellow soft paraffin
- liquid paraffin.

### Examples of paraffin containing products

White soft paraffin	Epaderm <sup>®</sup>
Diprobase <sup>®</sup> ointment	Emulsiderm <sup>®</sup>
Zinc ointment BP	Doublebase <sup>®</sup>
Zinc & salicylic acid paste BP	Oilatum <sup>®</sup>
Liquid paraffin 50% / white soft paraffin 50%	Emulsifying ointment

List not exhaustive, pharmacists are advised to check individual products.

### Recommendations (NPSA):

When patients are dispensed large quantities (100g or more) of paraffin based products, pharmacists should provide advice about:

- The potential fire risks of smoking or being near to people who are smoking, or exposure to any open flame during treatment
- Regularly changing clothing or bedding impregnated with paraffin based products (preferably on a daily basis)

For further information and to download a patient information leaflet see the NPSA website:  
<http://www.nrls.npsa.nhs.uk/resources/?entryid45=59876>

## Caution with unsealed pharmacy bags

In a recent incident, a two year old child was given a dose of duloxetine 60mg intended for another patient and required monitoring in hospital overnight.

The pharmacy had been busy working on 'owings' and there was an unsealed bag containing the balance of a duloxetine supply on the dispensary bench when the child's father presented a prescription for amoxicillin suspension. The antibiotic was placed in the open bag and both items were dispensed to the parent and administered to the child.



### Actions taken by the pharmacy:

- 'Owings' are processed in a separate area of the dispensary to the 'walk-in' prescriptions
- Dispensary benches to be kept clear of clutter
- Pharmacy bags are not left unsealed following the final check
- Staff made aware of the importance of checking open bags before adding dispensed items
- SOPs were updated to reflect the changes.

## How many drops?

A patient was switched from citalopram 20mg tablets to Cipramil® drops 40mg/ml with directions '20mg daily.'

### Pharmacy labelled product 20mg/0.5ml daily.

To assist administration, the pharmacy updated the dispensing label by adding the number of drops of solution required, this calculation was based on the volume per millilitre stated on the pack i.e. 20 drops per ml.

### Label stated dose = 20mg/0.5ml (10 drops) daily

However, the liquid product contains citalopram hydrochloride 44.48mg/ml which is equivalent to citalopram base 40mg/ml.

The prescribed dose and dispensing label should have referred to the hydrochloride salt in the product and stated **16mg (8 drops) daily**, which is therapeutically equivalent to 20mg of the citalopram base used in the tablets.

This discrepancy has been reported a number of times and pharmacists should be aware of the potential for confusion when converting doses to 'drops' for citalopram. A table of tablet/liquid dose equivalents is included in the SPC for Cipramil® drops (see table):

Dose equivalents		
Citalopram tablets	Cipramil® drops	Number of drops
10mg	8mg	4 drops
20mg	16mg	8 drops
40mg	32mg	16 drops

## Thank You!

Thank you for all the reports sent in for sharing with other pharmacists through the newsletter. We will continue to ensure that your tips and advice are published. Pads of reporting forms have been sent to all pharmacies, if you need further copies, contact one of the Medicines Governance Team listed below or download the form from the internet:

[http://www.hscboard.hscni.net/medicinesmanagement/Medicines%20Governance/index.html#P-1\\_0](http://www.hscboard.hscni.net/medicinesmanagement/Medicines%20Governance/index.html#P-1_0)

### Primary Care Medicines Governance Team Contact Details

Team Leader:	Belfast Area:	Northern Area:	Southern Area:	South Eastern Area	Western Area
Brenda Bradley Tel: 07917544301	Briegen Girvin Tel: 07748630415	Cheryl Ferguson Tel: 07827324494	Anne Marie Groom Tel: 07817428869	Helen Bell Tel: 07920187940	Joanne McDermott Tel: 07909757674
Brenda.Bradley@hscni.net	Briegen.Girvin@hscni.net	Cheryl.Ferguson@hscni.net	Annemarie.Groom@hscni.net	Helen.Bell@hscni.net	Joanne.McDermott@hscni.net

Medicines Safety Matters on the web: <http://www.hscboard.hscni.net/medicinesmanagement/index.html>