Medicines Safety Alert

No. 5

Health and Social Care Board
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To: All GPs
All Pharmaceutical Contractors

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Dear Colleague

Re: Prescribing and Dispensing Medicines with a range of strengths and preparations

I am writing to alert you of the need to be vigilant when prescribing and dispensing medicines which are available in a range of different strengths. There have been a number of errors reported to the Board where the patient was prescribed and/or dispensed the wrong strength of medicine.

There are two main areas where this type of error is particularly likely to occur:

1. Specialist and less frequently prescribed liquid medicines

Confusion has arisen where there are different strengths of liquid formulations available of the same drug, especially with unusual drugs that the GP or pharmacist is not very familiar with. This has been a particular problem where both licensed and unlicensed preparations are available and listed on the GP or pharmacy computer system, and the wrong preparation has been selected from the pick list for prescribing or dispensing. This type of error is seen most frequently when there have been changes to patients' circumstances for example on admission or discharge to nursing accommodation, hospital or patient's own home.

Examples of drugs where this has occurred include ketamine oral solution and phenytoin suspension. Two incidents have occurred in Northern Ireland where the wrong strength of phenytoin liquid was dispensed following a dose change being made in hospital. Both these incidents resulted in patient harm. There are two commercially available formulations of phenytoin liquid:30mg/5ml (licensed and widely used) and 90mg/5ml (unlicensed and only occasionally used) and care should be taken to ensure the correct strength is prescribed and dispensed as phenytoin has a narrow therapeutic range, which means that the therapeutic dose is only slightly lower than the toxic dose.

Recommended actions:

- Practitioners must be aware that a number of preparations are available in a range of strengths, some of which are licensed and some are not. If an unfamiliar drug is recommended by secondary care, or appears on a prescription, healthcare professionals should take steps to familiarize themselves with the drug. Care should be taken when selecting the drug from the pick list to ensure that the correct product is chosen.

- Unlicensed preparations carry with them direct liability and it is advisable to check clinical systems to check that those strengths which are unlicensed are highlighted.

Prescriptions should state the dose of liquid medicines in terms of the strength required (e.g. as the number of micrograms, milligrams or grams), rather than the volume e.g. diazepam 2mg/5ml oral solution, 2mg tds or diazepam 5mg/5ml strong oral solution 5mg tds, **not** diazepam oral solution 5ml tds or diazepam strong oral solution 5ml tds, as the two strengths could be confused if the word "strong" is missed.

- Care homes should order prescriptions in sufficient time to allow ordering, production, transfer of prescriptions, dispensing and receipt at the home. They should not allow medicines to run out before ordering prescriptions.

- A pharmacist should normally dispense a medicine only against a prescription. In **urgent cases** a clinician may request a medicine to be dispensed without a physical prescription. In such cases a prescription must be furnished by the GP within 72 hours and it is good practice to fax such prescriptions through before dispensing.

- Processes should be in place for identifying any changes in medication at discharge from hospital.

2. High Risk Medicines

There are a number of high risk medicines where incidents have occurred.

(i) Heparin

We would like to remind practitioners about the recent Medicines Safety Alert re Heparin (April 2010). In this particular adverse incident **heparin sodium 5000 units/5ml** was selected from the drug dictionary *instead of* **heparin sodium flush 10units/ml** following receipt of a hospital letter. The prescription was subsequently dispensed and the wrong dose administered.

(ii) Methotrexate

Another incident occurred with methotrexate liquid. Regional guidance states that the only strength of liquid which should be prescribed is 10mg/5ml strength. A GP however, selected a different strength from the drug dictionary which the community pharmacist then dispensed. The error was picked up when the

patient (a child under the age of 16 years) attended the hospital. Fortunately no harm came to the patient.

(iii) Other drugs

Other “high risk” medications include insulins, oral anticoagulants and “amber” medications and care should be taken when prescribing and dispensing these drugs.

Recommended Actions:

- All practices should ensure they are familiar with the regional guidance on the safe use of oral methotrexate in primary care which can be found on the GP intranet.
- Shared Care Guidelines for methotrexate can be found on the Interface Pharmacy Website http://www.ipnsm.n-i.nhs.uk/

Community pharmacists should ensure that they have a standard operating procedure (SOP) for the dispensing of methotrexate and that all dispensing staff are familiar with this Additional vigilance should be observed when prescribing and dispensing these medications.

Ensure that your processes for managing these drugs are reviewed and updated and that staff are trained to ensure that the risk of wrong strength errors are reduced.

If you would like any additional information on the issues raised in this letter, please contact a member of the Medicines Management Team.

Yours sincerely

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