quality safe use of medicines

# Medication Alert

# WARFARIN !

**ALERT 2 Monday 29 November 2004**

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| **For the attention of :** | Chief Executives of District Health Boards,<br>Chief Medical Officers of District Health Boards. |
| **For action by :** | Pharmacy Managers in DHB Hospitals, Clinical Directors in DHB Hospitals, PHO's and Primary Care Organisations. |
| **For information to :** | Directors of Nursing, DHB Quality and Risk Managers and Primary Care Pharmacists. |

## Purpose of this alert

**To highlight the many risks for patients on warfarin and suggest improvements in practice to minimise the risks.**

## Background to this Safe Use of Medicines alert

Anticoagulation with warfarin is a common treatment and recognised internationally as being one of five high-risk medicines. This is due to:

- Its narrow therapeutic index (adverse events with either over or under anticoagulation)
- Its potential to interact with many medicines (including herbal/alternative treatments)
- The fact that the available warfarin brands are not inter-changeable.

In addition local New Zealand audits of clinical practice indicate sub-optimal management of patients on warfarin.

## Definition

Warfarin is available as two brands and four strengths.

- Marevan® (1mg, 3mg and 5mg) and Coumadin® (1mg, 2mg and 5mg).

Brands are not pharmacologically interchangeable and therefore the brand should be specified when prescribing.

## Recommended action

**DHB policies and procedures should cover the following points:**

1. In-hospital warfarin usage:
   - Develop clear protocols/nomograms for warfarin prescribing (eg Gedge(1) or Fennerty(2) induction regimes or examples can be viewed on DHBNZ webpage www.safeuseofmedicines.co.nz)
   - Ensure clinical staff are following best practice guidelines and local protocols/nomograms for warfarin use
   - Ensure that INR results are relayed in a timely fashion (e.g. by 3pm) so that the clinical team responsible, not on-call teams, prescribe dose adjustments.

2. Prescribing of Warfarin on discharge:
    - Discharge communication with the GP is timely, accurate and provides information on the indication for warfarin, recent INR history (including INR on discharge), doses of warfarin given, target INR, expected duration of treatment and ongoing monitoring requirements including who is responsible for monitoring
    - For patients initiated on warfarin in hospital, consider discharge on 1mg tablets only. Once the patient's INR is stabilised GPs may wish to alter the strengths and rationalise the number of tablets required
    - All patients being discharged on warfarin must receive medication counselling prior to discharge to support their knowledge and treatment, consider using your hospital pharmacists (with various patient information resources currently available, eg Glaxo produced red guide to anticoagulation, various information leaflets produced by DHB's, for examples see web page).

3. Warfarin use in primary care:
    - Encourage the development of local clinical guidelines and/or protocols for use across all practice settings to improve consistency of information and management eg systems for recall when patients fail to attend for INR testing, different monitoring requirements for various therapeutic indications (examples can be viewed on web page)
    - Consider routinely informing patient's community pharmacist with dosage regimes and INR results to ensure consistency of treatment advice
    - Training / support provided for health practitioners, to refresh their clinical skills on warfarin management (GPs, practice nurses and pharmacists).

## Additional suggested action

- Risks associated with the prescribing, dispensing and administration of warfarin should be highlighted in clinical staff induction training for all staff involved in the medication process. Senior medical staff should be encouraged to monitor the prescribing by junior staff of this high-risk medicine, develop clinical indicators and monitor trends.

## For further action by the Safety and Quality of Medicines Group

The Safety and Quality of Medicines group will work with PHARMAC to investigate whether only one brand of warfarin should be funded, in order to reduce confusion.

**References:**


1. Gedge et al A comparison of low dose warfarin induction regimes with the modified Fennerty regimen in elderly patients Age and Ageing 2000; 29: 31-36
2. Fennerty et al Flexible induction dose regime for warfarin and predication of maintenance dose B.Med.J 1984; 288: 1268-70.


If you require any further information or wish to provide feedback on this alert, please go to www.safeuseofmedicines.co.nz