Dear Lloyd,

**RE: Submission - Review of Anticoagulation Therapies in Atrial Fibrillation**

I would like to comment on the following 2 terms of reference.

The Terms of Reference for the Review of Anticoagulation Therapies in Atrial Fibrillation are:

A. To report on current and future options for improving the health outcomes of patients with atrial fibrillation treated with oral anticoagulants.

- Increased use of HMRs to increase patient self management strategies and most importantly increase their confidence in taking oral anticoagulants – suggestion: *HMR for all patients taking warfarin (and those refusing warfarin but whom the prescriber thinks would benefit)*
- National patient information for anticoagulants for patients – currently there are warfarin booklets available from Sigma / RGH pharmacy department – but these do not explain the other options and benefits/ risks of the options. Suggestion: *NPS or other National recognised organisation provide patient information on anticoagulants to assist patients/families make an informed choice as some choices are based on "rat poison" ie stigma of warfarin.*

B. To report on modes of health system delivery which may be used to optimise the use of currently available anticoagulants.

Suggestion – *Medicare fund point of care strips (particularly for use in aged care homes)*

A recurring theme at MAC meetings I attend is the time taken by aged care staff following up warfarin INRs and doses with GPs. The workforce in aged care now has less RNs and more careworkers – yet this duty of following up the dose of warfarin falls mainly to the few RNs thus reducing time they have for direct resident care. Much time is devoted to developing protocols / fax letters to try to get GPs respond to INR results.

The following is information that is being used for an ethics submission for the collection of data from residents / staff in aged care homes regarding point of care testing which is seen to solve many issues for aged care staff and is used by some GPs (self funded – as they consider the cost worthwhile but they complain about the expense as there is no expense to the GP of writing a pathology request – except that they know they are going to need time later in the day to follow up)

Background:

Warfarin has a narrow therapeutic window with a given dose having a variable inter-individual effect. The dosage range for effective and safe treatment is small and warfarin under-dosing may lead to a thromboembolism and conversely over-dosing may lead to a severe bleeding episode. Patients taking warfarin should have their International Normalised Ratio (INR) measured regularly as the bleeding risk increases as the INR increases. More frequent tests are needed when patients start, stop or alter the dose of their other medications (Yin and Miyata 2007; Wu 2009; Department of Health and Ageing 2010a)

Age is a risk factor for more unstable prothrombin time results. For every 10-year increase in age there is a 15% increase in the risk of anticoagulation having to be suspended because of a raised INR.**Error! Reference source not found.**2

**Comment [e1]:** Reference is Froom P, Miron E, Barak M. Oral anticoagulants in the elderly. Br J Haematol 2003;120:526-8.

Monitoring of INR in aged care homes in Australia is generally via pathology phlebotomist attending the aged care home and undertaking venepuncture. This is covered by Medicare at no cost to the aged care home, patient or General Practitioner (GP), however is costly to the healthcare system and thus society as the costs of travelling to the aged care home by pathology staff, time incurred by pathology staff, discomfort potentially incurred by the resident and time taken by aged care staff to follow-up results with the pathology laboratory and GP to ascertain if dose adjustments are required. Considerable time delay can occur between the initial assessment of the patient and altering of the warfarin dosage.

Adverse events relating to venepuncture while not common, can be severe. One report highlights the case of a 44 year old woman who suffered nerve damage as the result of a routine blood sampling that took nearly three years to resolve (Zubairy 2002). Older people with fragile skin are at increased risk of damage from invasive procedures such as regular venepuncture. The World Health Organisation identifies the following risks associated with venepuncture: transmission of infection; damage to the vein; bruising around the puncture site; bleeding or haematoma formation; puncture of an artery; psychological stress including fainting (World Health Organisation 2010).

2. Rationale:

Using Point of Care testing for the collection of blood is anticipated to increase patient satisfaction as it is less invasive. This is especially important for vulnerable older people with delicate skin. This model of care has the potential to provide prompt results that can be acted upon immediately thereby reducing the amount of time required by aged care staff to followup results with the general practitioner. This in turn will reduce the risk of bleeding if results indicate a high INR or clotting if a low INR. There is expected to be a reduction in costs to society with reduced pathology staff time to take the sample and transport it to a pathology laboratory, less likelihood of results going astray when returned to the aged care home and less risk of a delayed response from the general practitioner regarding dose alteration.

Objectives of using point of care testing:

Reducing delays in altering warfarin doses when required

Increasing the time spent within the INR target range for the individual resident

Reducing the time health professionals spend managing warfarin

Increase patient satisfaction by using a less invasive technique for monitoring warfarin

Negate the need for outside services to attend Residential Aged Care Facilities (RACF) to take blood for testing

Benefits to resident

The benefits to you are expected to be a reduction in the number of venous blood tests and hence reduced risk of bruising than that associated with finger prick test. Another advantage is that your doctor will be able to make a decision straightaway about the ongoing dose of your warfarin and inform you of your INR and dose.

One of the main benefits of this project for your carers (nurses) is expected to be less time following up pathology laboratories and your doctor to ascertain whether your warfarin dose is to remain the same or change after each blood test.

Kind Regards

Sue Edwards
Accredited Pharmacist