

## Anticoagulation: Self Monitoring

This document provides a brief overview of the steps involved in undertaking anticoagulation patient self-testing or self-management.

### What is anticoagulation?

Anticoagulation prevents clots forming in the heart which might then move up into the brain, leading to a stroke. One anticoagulant, warfarin, is a potent agent in stroke prevention for patients with atrial fibrillation (AF). The majority of patients with replacement heart valves or with disturbances of the heart rhythm such as atrial fibrillation, take warfarin tablets.

### What is self monitoring?

Self monitoring of warfarin (or other anticoagulants) involves checking your blood on a regular basis. The ability of warfarin to make the blood less likely to clot (measured by the International Normalised Ratio – INR) can be affected by a number of factors such as food and other medicines. Regular monitoring ensures that the INR is not too low (risk of clots) or too high (risk of bleeding). The dose of warfarin can then be adjusted depending on the result, to ensure your INR remains within the target required for your condition.

Self-testing involves the use of a hand-held device to measure the INR in a drop of blood. Moreover, this testing can be undertaken from the comfort of your own home, at work, or while away on holiday.

### What is involved for you?

**Self-test (Patient Self Test (PST))** – Your INR readings can be measured yourself at home using a finger prick blood sample and a Point of Care (POC) device. You can then provide your INR readings to your doctor or nurse at an agreed time, generally by telephone.

### Self-Management (Patient Self Manage (PSM))

- Your doctor or nurse will advise you on the dose of warfarin you need to take or self-manage. Following appropriate training, the dose of warfarin and frequency of testing is also managed by you with support from your doctor or nurse.

### Who can self monitor warfarin?

Self-monitoring is not suitable for everyone, but can result in greater patient satisfaction and enhanced quality of life.

In order to self monitor you should be on long-term warfarin treatment. It will require being motivated and keen to take an active role in looking after your health. You must be manually dexterous and have reasonable eyesight (or have a carer who can assist you).

It will be necessary to attend clinics on an occasional basis for review, and for your POC device quality assurance testing. You must have reliable access to telephone or other devices to communicate with the anticoagulant clinic between visits.

### Self monitoring may be particularly beneficial for:

1. Those with particular risk factors for bleeding, such as being older than 65 years, having other major medical conditions or taking medicines aside from warfarin.
2. Those with highly variable INRs, perhaps also enabling individuals to correlate factors such as specific foods with alterations in their INR results.
3. Those with difficulties travelling to clinics due to distance, disabilities or work/family commitments.

### How do I start self monitoring?

1. Discuss the idea with your anticoagulation clinic, either at the hospital or general practice.

If they are willing to supervise your training and management, look into purchasing a POC device (you may be able to acquire a device on loan until you are certain you wish to continue with self-monitoring.) The POC device should be evaluated and approved by the Department of Health – ask your specialist for advice.

2. Plan and implement your training sessions with your supervisor. Training sessions should include:

- The theory of blood coagulation.
- How warfarin works and why treatment is important.
- The condition requiring anticoagulation and target INR.
- Why regular monitoring is needed (including the influence of diet and lifestyle and of other medicines on INR readings).
- Practical training/demonstrations on carrying out a test with a POC monitor, quality control and necessary health and safety measures.
- How to interpret the INR results with the assistance of a dosing chart (PSM patients only).
- Discussion/questions.

You should then be allowed to test and record your INR results at home for a time period before being invited back for a theoretical and practical assessment, to check you are capable and comfortable performing the tests. If you are considered capable, you will be given a certificate of competency signed by the patient and the healthcare professional.

### What happens next?

1. You will perform quality control tests on your POC device as agreed with your supervisor.
2. If you are self managing you will use a dosing chart agreed with your supervisor.
3. You will agree how results will be documented to ensure that INR results, dates, quality control results and any problems are recorded accurately.

The 'yellow book' is used widely by anticoagulation clinics and can be used by you to record INR results and the date of your next test. Quality control results and adverse events can be recorded in the comments section.

4. You will agree the frequency of follow-up with your supervisor. It is recommended that patients are seen initially at least once every six months.
5. You will sign a written contract between yourself and the responsible supervisor setting out what has been agreed. This contract can be cancelled at any time if you do not follow all of the requirements.

Authors: Professor David Fitzmaurice, GP & Senior Lecturer  
 Ellen Murray, Senior Lecturer, Department of Primary Care  
 Dr Nick Summerton  
 Endorsed by: Dr Matthew Fay, GPwSI  
 Dr Andreas Wolff, GPwSI  
 Published February 2011