



East London
NHS Foundation Trust

**Procedure for Self-Testing of Oral Anticoagulation with Warfarin
[Bedfordshire]**

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Services	Applicable to
Trustwide	
Mental Health and LD	
Community Health Services	√

This document provides guidance to Anticoagulation Nurses overseeing the self-testing of coagulation by adult patients under Bedfordshire Community Health Services care.
It does not cover self-management of anticoagulation or in-patient services.

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1.0 INTRODUCTION

- 1.1 Point of care coagulometers are designed to monitor the clotting tendency of blood in people on long term vitamin K antagonist therapy in the form of International Normalised Ratio (INR).
- 1.2 Several Coagulometers have been shown to give reliable and accurate results. NICE recommends the use of Coagucheck XS system for self-monitoring of coagulation in patients with atrial fibrillation and heart valve disease.
- 1.3 Self-testing refers to the patient doing the INR test themselves and then contacting their healthcare professional with the reading for advice on any change of the dose of the anticoagulant that may be needed. Self-managing refers to the patient doing the test and self-adjusting the dosage of the anticoagulant according to an agreed protocol.
- 1.4 The use of coagulometers may reduce the frequency of visits to the clinics for patients and enable them to be monitored more regularly, which may lead to improved health outcomes and avoidance of adverse effects.

2.0 SCOPE

- 2.1 This guidance aims to support anticoagulant nurses overseeing the self-testing of adult patients with atrial fibrillation, heart valve disease and venous thromboembolism on long term warfarin therapy
- 2.2 It does not cover self-testing in In-patient units
- 2.3 It should be read in conjunction with local procedures for warfarin as well as the Trust policies for safe and secure handling of medicines and waste disposal

3.0 CRITERIA FOR SELF-TESTING

NICE CG144 discourages the routine offering of self-management or testing of INR to patients who have had DVT or PE and are having treatment with a vitamin K antagonist. All decisions on self-testing for this group of patients must be ratified by the Lead Doctor for the service.

The GP must be informed that the patient desires to self-test and consent for self-testing obtained from the GP.

Patients or carers (where the patient is unable) who are motivated can be considered to conduct self-testing. They must however:

- 3.1 Be capable of giving, and provide informed consent, prior to commencement of self-testing, in the form of a completed self-testing agreement form.
- 3.2 Have an indication that warrants warfarin use for at least 12 months
- 3.3 Be physically (manual dexterity and sufficient eye sight for normal daily tasks) and cognitively (mental capacity) competent to self-test. Prior to commencement competence to perform an INR test must be assessed and signed off by the anticoagulant nurse.
- 3.4 Have and be trained in the effective use of the CoaguChek XS portable INR monitoring device.
- 3.5 Have maintained good INR control in the last 3-6 months
- 3.6 Understand rationale for warfarin therapy and monitoring requirement
- 3.7 Be willing to undergo and successfully complete training
- 3.8 Be assigned a named anticoagulant nurse who will oversee self-testing.

4.0 TRAINING FOR THE USE OF THE METER

Patient training should include the following:

1. **Theoretical aspects of anticoagulation management** –outline of mechanism of action of warfarin, reason for warfarin therapy, importance of monitoring, how to monitor and the frequency of coagulation monitoring, problems with monitoring, warfarin interactions, target INR for their condition and the importance of maintaining the INR within 0.5 of the target, recognizing complications and actions to take in the event of complications.
2. **Equipment required for self- testing and how to obtain them:** Coaguchek XS meter, Coaguchek XS Test strips and corresponding calibration chip , lancets, sharps container, hand washing facility
3. **At least one practical session which should include:**
 - operating the coagulation monitor
 - practising a coagulation test
 - performing fingerprick sampling procedure
 - identifying possible sources of error
 - recording test results
 - how to store test strips
 - disposal of strips and sharps
 - Limitations of the coagulometers
4. **External quality control** – patient should be informed to bring coagulometers to the clinic for external quality control checks every six months. This will be conducted by testing a fingerprick sample on the patient's own device and a device used in the anticoagulant clinic. The clinic device should itself be assessed externally through an EQA programme. Results should be within 0.5 INR of each other
5. **Advice, support and clinical responsibility:** The INR test is performed at a specified weekday and time agreed with the clinician responsible , to enable easy access for advice if necessary. (All telephone contacts should be recorded in the patient notes.)
6. **The training record form (Appendix 2)** should be completed and signed by both patient/carer and trainer. One copy should be scanned to the patient electronic records and the other given to the patient.
7. **Competency Assessment**

5.0 COMMUNICATION AND DOCUMENTATION

- 5.1 INR results will be documented in the Yellow Book and communicated by email to the anticoagulant clinic from the patient. In the event that there are challenges with the IT systems, results will be communicated via the telephone. Where telephone is used a follow up email should be sent when IT issues are resolved. E –mail/ telephone conversation must include:
 - At least 2 patient identifiers, this can be any of the following: Name, date of birth, address and NHS number. – we don't use hospital numbers generally

- Date of INR test and INR result.
- Any changes to current medications/omitted/missed doses.
- Any side effects experienced e.g. bruising/bleeding.
- Any changes to lifestyle/diet/alcohol consumption.
- Any recent illness
- Any upcoming procedures.

5.2 Dosing advice will be communicated by email or telephone, in the event of challenges with the IT system, from the anticoagulant clinic to the patient as follows:

- INR test results and anticoagulant dosing instructions must be clearly stated
- Dosing advice will be returned with at least 2 patient identifiers as stated above.
- Date of next INR test must be included.

Appendix 1 – Self-testing Agreement Form

Name:

Agreed Email Address:

Telephone:

Personal Address:

.....is the anticoagulant nurse responsible for ensuring the above named patient is a suitable candidate for self-testing of warfarin therapy in accordance with the Local Procedure for Patient Self – Testing of Oral Anticoagulation with Warfarin

1. Follow up review will be everymonths. The above patient will be responsible for arranging the appointments with the anticoagulant clinic.
2. INR results and dates as well as any problems will be documented accurately in the anticoagulant record book provided and communicated by email or telephone to the anticoagulant clinic in the agreed format.
3. Previous dosing instructions remain valid until new dosing instructions are received. Please allow 24 hours for new dosing instructions to arrive (emails will not be looked at on weekends or bank holiday.)
4. External quality control will be performed at least 6 monthly. The patient’s machine will be brought to the clinic for this purpose. The named anticoagulant nurse is responsible for making the arrangements.
5. Needles are disposed of safely in a sharps container and other contaminated material wrapped up carefully and placed in the in the usual waste bin. Arrangements should be made with the clinic for the disposal of sharps boxes.
6. Mr/Mrs.....is responsible for ordering supplies of equipment directly from manufacturer. The anticoagulant clinic is responsible for providing a supply of test strips. Lancets and sharps boxes can be obtained on prescription from the GP.
7. Test strips are refrigerated at a temperature between +2 and +8 degrees centigrade (normal refrigerator temperature)
8. is informed if patient is intending to move away or stops self- testing so that arrangements can be made for alternative management.
9. will undergo an annual clinical review to assess capability to self- test.

Signature of clinician responsible:Date.....

Signature of patientDate.....

Appendix 2 - Training Record Form

Patient Training Record

Patient Name:

Signature:

Date:

Trainer Name:

Signature:

Date:

Please check off boxes to confirm the following information has been given, and sign to confirm this:

CRITERIA	√
Meter Set Up	
Batteries	
Display Check	
Date Format	
Date Setting	
Time Format	
Time Setting	
Set Test Measurement	
Beep Tone	
Therapeutic Range	
CoaguChek XS Test Strips	
Storage Conditions	
Handling Test Strips	
Calibrating code chip	
Changing code chip	
Internal quality control	
Expiry date check	
Sample testing area	
Obtaining a Fingerprick Sample	
Hand washing	
Sampling sites	
Time limits	
Sampling problems	
Recording Results	
Anticoagulation Record	
Memory	
Retrieving saved results	
Maintenance and Troubleshooting	
Cleaning meter	
Common error codes	
Technical support information	

CRITERIA	√
Performing a Test	
Switching on meter	
Checking screen	
Insertion of test strips	
Confirm code lot number	
Strip warming	
Using Lancet	
Device components	
Removal of protective sheath	
Insertion of lancet	
Depth setting	
Ejecting lancet	
Equipment	
How to obtain	
External quality control	
Waste disposal	
Communication and documentation	
Email procedure	
Recording in Yellow book	
Dosing advice	
Theory of anticoagulation	
Mechanism of action of warfarin	
Interactions – medicines, food ,alcohol	
Relevance of monitoring	
Frequency of monitoring	
INR target	
Complications and treatment – under and overcoagulation	
Contact details of named nurse and clinic	

References

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2. National Institute for Health and Care Excellence Clinical Guideline 180: Atrial fibrillation: the management of atrial fibrillation. June 2014, updated Aug 2014.
3. National Institute for Health and Care Excellence Clinical Guideline 144: Venous thromboembolic diseases: diagnosis, management and thrombophilia testing. June 2012, updated Nov 2015
4. British Medical Association and Royal Pharmaceutical Society of Great Britain: British National Formulary. Available Online at: <https://bnf.nice.org.uk/>
5. Jennings, I., Kitchen, D., Keeling, D., et al. (2014) Patient self-testing and self-management of oral anticoagulation with vitamin K antagonists: guidance from the British Committee for Standards in Haematology. British Journal of Haematology. 167(5), 600-607.