

The East Midlands Clinical Network has produced this algorithm as an aid to clinicians to decide upon the most appropriate anticoagulation option for a patient **once the decision to anticoagulate has been made**. Non-valvular AF is defined as AF in the **absence of moderate or severe rheumatic mitral stenosis or a mechanical valve**.

The algorithm is being shared with CCGs and medicines management groups in the East Midlands as an aid to support the updating of local prescribing guidelines following publication of the NICE Guidelines for Atrial Fibrillation in June 2014. Clinicians who view this algorithm should be aware that it is not a replacement of their local published guidelines.

**Table 1** (adapted from NICE: Patient Decision Aid – Atrial Fibrillation: medicines to help reduce your risk of a stroke – what are the options; June 2014)

<p><b>Patients should be encouraged to consider how important the following issues are to them and to discuss them with their GP prior to the initiation of an anticoagulant whether that be warfarin or a DOAC</b></p>
<p><b>1. What tablets or capsules I'd have to take and how often</b></p> <p>Warfarin dosing is variable whereas DOAC dosing is fixed. Warfarin is prescribed once daily whereas NOACs are either once daily (rivaroxaban or edoxaban) or twice daily (dabigatran or apixaban)</p>
<p><b>2. The effect on my risk of having an AF-related ischaemic stroke</b></p> <p>Warfarin reduces the stroke risk in AF patients by approximately 65%. The DOACs have been shown to be at least as good as warfarin at reducing ischaemic stroke in AF patients and dabigatran 150mg bd has actually been shown to be better than warfarin at reducing ischaemic stroke in a large clinical trial.</p>
<p><b>3. The effect on my risk of having major bleeding</b></p> <p>All anticoagulants significantly increase the risk of major bleeding. The DOACs in general cause no more major bleeding than warfarin and dabigatran 110mg and apixaban 5mg are both actually associated with less overall major bleeding when compared to warfarin. All DOACs are associated with significantly less bleeding within the brain compared to warfarin. Dabigatran 150mg and rivaroxaban 20mg are both associated with more gastrointestinal bleeding than warfarin.</p>
<p><b>4. The need for regular blood tests</b></p> <p>Unlike with warfarin, the DOACs do not require anticoagulation monitoring. However, renal function, full blood count and liver function should be periodically assessed.</p>
<p><b>5. What would happen if I forget to take a dose?</b></p> <p>It is potentially more dangerous if the odd dose of a DOAC is missed compared to missing the odd dose of warfarin as the DOACs have much shorter half lives (~ 12 hrs).</p>
<p><b>6. The need to change what I eat or drink</b></p> <p>The DOACs have no known food or drink interactions (unlike warfarin- eg green leafy vegetables). The DOACs are also likely to be safer than warfarin in patients who have a high and variable alcohol intake</p>
<p><b>7. Whether the medicine will interact with other medicines I take</b></p> <p>The DOACs have far fewer drug interactions compared to warfarin. Use of anti-inflammatory painkillers (eg ibuprofen) should be with caution with all anticoagulants.</p>
<p><b>8. What would happen if the effects need to be reversed in an emergency</b></p> <p>Warfarin has a known antidote but it is not always possible to reverse its effects quickly. An antidote for dabigatran has also been developed, and there are on-going trials of antidotes for other DOACs. In addition, the effects of DOACs wear off more quickly than warfarin and there are other strategies that can be used to help reduce the anticoagulant effects.</p>

**This document has the support of the East Midlands Stroke Clinical Advisory Group.**

Is the patient:

- Poorly controlled by warfarin (TTR < 65% (ignoring INR readings in first 6 weeks) or in the past 6/12: x2 INRs > 5 or x1 INR > 8 or x2 INRs < 1.5 ) despite good compliance?
- Predicted to have interacting meds - e.g. brittle COPD patient likely to require multiple courses of Abx annually?
- Known to have high alcohol intake?
- Stating a preference - eg commuters, needle phobics, difficulty with monitoring, difficulty in coping with variable dosing? **\*Refer to table 1 for patient considerations**

**DOACs not recommended if adherence concerns**

**Warfarin**

Is the patient's creatinine clearance < 30ml/min?

YES

Consider a DOAC

- Contraindicated Drugs with DOACs:**
- Dronedarone (under specialist guidance only)
  - "Azole" antifungals
  - HIV protease inhibitors
  - Rifampicin, St John's Wort and phenytoin
- (Use lower dose of dabigatran (110mg bd) with verapamil)



1. High Bleeding Risk:  
- > 80 yrs  
- or HAS-BLED ≥ 3  
- or CrCl 30-49 ml/min

1. Previous GI bleed, high GI bleeding risk or Hx of upper GI symptoms

1. Definitive requirement for dosette box prescribing?

1. Low Bleeding Risk:  
- < 80yrs  
- and HAS-BLED ≤ 2  
- and CrCl ≥ 50ml/min

1. Patient preference for once daily prescribing after review of all other clinical and logistical considerations

**Apixaban 5mg bd**  
Apixaban 5mg bd should not be used if ≥ 2 of 1. Age > 80; 2. Creat > 133µmol/L; 3. Weight < 60kg:

- The preferred option in these patients (if dosette box is not required) is **Dabigatran 110mg bd** unless the patient is < 80yrs and HAS-BLED ≤ 2 and CrCl ≥ 50ml/min in which case **Dabigatran 150mg** may be considered

**Dabigatran 150mg bd**

**Rivaroxaban 20mg od**  
(15mg od if CrCl 30-49ml/min)  
or  
**Edoxaban 60mg od**  
(30mg od if 1 of: <60Kg; CrCl 15-49ml/min; on P-gp inhibitors)

All DOACs: Switch to warfarin (if not contraindicated) if creatinine clearance < 30ml/min