

# Direct Oral Anticoagulant (DOAC) Initiation Guidance for Non-Valvular Atrial Fibrillation (AF) & Guidance for Healthcare Professionals (HCPs)

## Monitoring DOACs Prescribed in all Indications

This template guidance relates to AF patients ONLY at initiation: Please refer any other indications for anticoagulation initiation to specialist anticoagulation services. Monitoring guidance on page 3 applies to all indications for DOAC therapy.

### Which Patients? Assess need and offer anticoagulation for:

- Non-Valvular AF/Atrial Flutter
- CHA<sub>2</sub>DS<sub>2</sub>-VASC ≥2 (consider ≥1 for men)
- A cardioversion/ablation procedure when advised by a cardiology specialist (*started regardless of CHA<sub>2</sub>DS<sub>2</sub>-VASC score. If the score is 0, patients do not require long term anticoagulation following the procedure*)

### Contraindications? Do not treat: refer patient to specialist services when

- Known intolerance to anticoagulation/previous serious bleed (consider a lesion or condition that is a significant risk for major bleeding e.g. current or recent gastrointestinal ulceration, known or suspected oesophageal varices)
- Hepatic disease associated with coagulopathy
- Mechanical heart valve
- Transcatheter aortic valve implantation within last 3/12
- Mitral valve replacement or repair within last 3/12
- Known moderate to severe mitral stenosis (valvular AF)
- Active or underlying cancer
- Pregnant/breastfeeding or planning a pregnancy
- Triple positive antiphospholipid syndrome (APLS)

### Assess for initiation of DOAC (1)

Parameter	Action	When to refer (or advice & guidance)
Actual Weight	Measured within the last year	<50kg or >150kg
Creatinine Clearance (CrCl)	Use <a href="#">creatinine clearance calculator</a> DO NOT USE eGFR or /ideal body weight for CrCl Review medications that affect renal function if CrCl reduced: See <a href="#">Guidelines for Medicines Optimisation in Patients with Acute Kidney Injury</a>	When CrCl <30ml/min (If CrCl <15ml/min requires a warfarin referral) Dialysis patients If CrCl >95ml/min (edoxaban is cautioned- use alternative DOAC)
Review blood results within the last month	Check U&Es: serum creatinine (Cr) FBC: haemoglobin (Hb), platelets LFTs: AST/ALT, Bilirubin Baseline clotting screen	Full blood count (FBC): Hb low with no identifiable cause, Platelets <100 Liver function tests (LFTs) >2 x ULN, Bilirubin >1.5 ULN Abnormal clotting screen

Bleeding risk <u>HASBLED</u> / <u>ORBIT</u> score	Modify risk factors to reduce bleeding risk	Gastrointestinal/genitourinary bleed within 3/12 Intracranial haemorrhage within last 6/12 Severe menorrhagia Known bleeding disorders Known liver cirrhosis
Alcohol consumption	Aim < 8 units per week	Known liver cirrhosis
Blood Pressure (BP) mmHg	Address uncontrolled hypertension- systolic BP >160mmHg increases bleed risk	
Concurrent medications	Antiplatelets: review course length and indication NSAIDs: bleeding risk Check for interactions -Refer to <a href="#">SPCs</a> <a href="#">BNF</a> , <a href="#">HIV Drug Interaction Checker</a> Consider ability of patient to swallow oral medications- crushable/liquid options for AC	Dual Antiplatelet Therapy (DAPT) Antiplatelet co-prescribing should be avoided (unless advised by a specialist) Contraindications Interactions Ask pharmacist for advice

Choose DOAC (consider [SWL preferred formulary option](#), patient preference and lifestyle- adapt dosing as below) (2): see appendix 1 for counselling

SPC hyperlinks:	<a href="#">Apixaban</a>	<a href="#">Rivaroxaban</a>	<a href="#">Dabigatran</a>	<a href="#">Edoxaban</a>
<b>Standard dose</b>	5mg BD	20mg OD (with food)	150mg BD	60mg OD
<b>Reduced dose</b>	2.5mg BD	15mg OD (with food)	110mg BD	30mg OD
<b>Criteria for reduced dose</b>	≥ 2 of; • Age ≥ 80yrs • weight ≤ 60kg • Cr ≥ 133µmol/L <b>OR</b> CrCl 15-29ml/min	CrCl 15-49ml/min	• Age ≥ 80 yrs • On verapamil • Consider for ○ Reflux/gastritis ○ Age 75-80 yrs ○ CrCl 30-50ml/min ○ “Bleed risk”	≥ 1 of • weight ≤ 60kg • CrCl 15-50ml/min • On ciclosporin, dronedarone, erythromycin, ketoconazole
<b>Contra-indicated</b>	CrCl <15ml/min	CrCl <15ml/min	CrCl <30ml/min	CrCl <15ml/min (caution CrCl >95ml/min)
<b>Compliance aid?</b>	Compatible	Compatible	<b>Not compatible</b>	Compatible

## Monitoring (3): For patients who do not attend for monitoring, refer to practice repeat prescribing protocol

First Review  (ideally after 1 month of therapy)	Then MINIMUM YEARLY review  (more frequent renal, liver and haemoglobin monitoring if CrCl <60ml/min, age over 75 years and/or frail- see table 4 below)
<ul style="list-style-type: none"> <li><b>Check for side effects</b> (refer to SPC for each DOAC- table 2) – seek advice and guidance from haematology clinic if present/a concern</li> <li><b>Check for bruising/bleeding</b> – refer for further investigation according to local pathways as indicated (<a href="#">DOAC FAQs</a>)</li> <li><b>U&amp;Es and FBC</b>- as specified by initiating clinic/secondary care and/or if indicated by a change to clinical state: <b>Check CrCl</b> (and review DOAC dosing- see table 2)</li> <li><b>Check medication adherence</b>- refer to community pharmacist for NMS (New Medicines Service) and further support (refer to DOAC counselling checklist- appendix 1)</li> <li><b>Schedule repeat prescriptions and reviews</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Age</b> – check if DOAC dosage adjustment is required (see table 2)</li> <li><b>Weight</b> - check if DOAC dosage adjustment is required (see table 2)</li> <li><b>FBC</b> - investigate any Hb drop without an identifiable cause and if platelets &lt;100</li> <li><b>LFTs</b> – seek advice and guidance from haematology clinic if Bilirubin &gt;1.5 ULN, AST/ALT &gt;2 x ULN</li> <li><b>U&amp;Es and CrCl (as per table below)</b>- check if DOAC dosage adjustment is required</li> <li><b>Interacting/new medications</b>- check if may effect DOAC dosing and set a review/course length date (seek advice from pharmacist as indicated)</li> </ul>

## Renal function monitoring frequency (4): (see also [DOAC FAQs](#))

Creatinine Clearance (CrCl) range (ml/min)	How often to check renal function?
<15	<b>All DOACs contraindicated</b> , refer to specialist (to consider warfarin)
15 to 29	3 monthly, consider referral to specialist (dabigatran contraindicated)
All patients aged > 75 years and/or frail	4 monthly
30 to 60	6 monthly
>60	12 monthly

## Appendix 1: DOAC in AF Counselling Checklist for healthcare professionals (HCP)

### DOAC Agent counselled: .....

Counselling points (tailor specifics to your patient and record any queries or concerns in medical notes)	HCP Sign:
<b>Explanation of an anticoagulant</b> (increases clotting time and reduces risk of clot formation) and <b>explanation of atrial fibrillation</b> (including stroke risk reduction)	
<b>Differences between DOAC and warfarin</b> ( <i>if applicable for patients converting from warfarin to DOAC therapy or offering choice of anticoagulation agent</i> )	
<ul style="list-style-type: none"> <li>• No routine INR monitoring</li> <li>• Fixed dosing</li> <li>• No dietary restrictions and alcohol intake permitted (within national guidelines)</li> <li>• Fewer drug interactions</li> </ul>	
<b>Name of drug:</b>	
<b>Explanation of dose:</b> strength & frequency	
<b>Duration of therapy:</b> lifelong (unless risk:benefit of anticoagulation changes)	
<b>To take with food (dabigatran and rivaroxaban).</b> Not required for apixaban or edoxaban	
<b>Missed doses:</b> Message is to "take the dose as soon as you remember and then at the same time each day". For further information: <ul style="list-style-type: none"> <li>• <b>Apixaban and dabigatran</b> can be taken within 6 hours of missed dose, otherwise omit the missed dose</li> <li>• <b>Edoxaban and rivaroxaban</b> can be taken within 12 hours of missed dose, otherwise omit the missed dose</li> </ul>	
<b>Extra doses taken:</b> obtain advice immediately from pharmacist/GP/NHS Direct (111)	
<b>Importance of adherence:</b> short half-life and associated risk of stroke and/or thrombosis if non-compliant	
<b>Common and serious side-effects and who/when to refer:</b> symptoms of bleeding/unexplained bruising. Avoidance of contact sports <ul style="list-style-type: none"> <li>• Single/self-terminating bleeding episode – routine appointment with GP/pharmacist</li> <li>• Prolonged/recurrent/severe bleeding/head injury – A&amp;E</li> </ul>	
Major bleeds managed/reversed by supportive measures and Prothrombin Complex Concentrate (PCC). Antidotes: <i>Idarucizumab for dabigatran (NICE TA), Andexanet alfa for Apixaban &amp; Rivaroxaban – Andexanet alfa currently recommended for use in GI bleeding only (NICE TA)</i>	
<b>Drug interactions and concomitant medication:</b> avoid NSAID's. Always check with pharmacist regarding OTC/herbal/complimentary medicines	
<b>Inform all healthcare professionals of DOAC therapy:</b> GP, nurse, dentist, pharmacist i.e. prior to surgery	
<b>Pregnancy and breastfeeding:</b> potential risk to foetus – obtain medical advice as soon as possible if pregnant/considering pregnancy. Avoid in breastfeeding	
<b>Storage:</b> dabigatran <u>must</u> be kept in original packaging – moisture sensitive. All other DOAC's suitable for medication compliance aids if required	
<b>Follow-up appointments, blood tests, and repeat prescriptions:</b> where and when Record here: .....	
<b>Issue relevant patient information AF booklet/leaflet and anticoagulant patient alert card</b> ( <i>For AC alert card supplies (OATALERTCARD)- email: pcse.supplies-leeds@nhs.net</i> )	
<b>Give patient opportunity to ask questions and encourage follow up with community pharmacist</b> (NMS – New Medicine Service)	

## Document History

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