NHS

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 2 applies to all indications for DOAC therapy.

1 ***Which Patients?*** Assess need **and offer anticoagulation for:**

- Non-Valvular AF/Atrial Flutter
- CHA2DS2-VASc ≥2 (consider ≥1 for men)
- A cardioversion/ablation procedure when advised by a cardiology specialist (*started regardless of CHA2DS2-VASc score. If the score is 0, patients do not require long term anticoagulation following the procedure*)

2 ***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)

3 ***Assess for initiation of DOAC***

Parameter	**Action**	**When to refer (or advice & guidance)**
Actual Weight	Measured within the last year	<50kg or >120kg
Creatinine Clearance (CrCl)	Refer to Calculating Renal Function DO NOT USE eGFR or /ideal body weight for CrCl Review medications that affect renal function if CrCl reduced: See Guidelines for Medicines Optimisation in Patients with Acute Kidney Injury	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 HASBLED 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 SPCs BNF, HIV Drug Interaction Checker 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

4

Choose DOAC (consider patient preference and lifestyle- *adapt dosing as below*): see *appendix 1* for counselling

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

5

Monitoring: For patients who DNA 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 6 below)
• **Check for side effects** (*refer to SPC for each DOAC- table 4*) – seek advice and guidance from haematology clinic if present/a concern • **Check for bruising/bleeding** – refer for further investigation according to local pathways as indicated (DOAC FAQs) • **U&Es and FBC**- as specified by initiating clinic/secondary care and/or if indicated by a change to clinical state: **Check CrCl** (and review DOAC dosing- *see table 4*) • **Check medication adherence**- refer to community pharmacist for NMS (New Medicines Service) and further support (refer to DOAC counselling checklist- *appendix 1)* • **Schedule repeat prescriptions and reviews**	• **Age** – check if DOAC dosage adjustment is required (*see table 4)* • **Weight** - check if DOAC dosage adjustment is required (*see table 4*) • **FBC** - investigate any Hb drop without an identifiable cause and if platelets <100 • **LFTs** – seek advice and guidance from haematology clinic if Bilirubin >1.5 ULN, AST/ALT >2 x ULN • **U&Es and CrCl** (*as per table below*)- check if DOAC dosage adjustment is required • **Interacting/new medications-** check if may effect DOAC dosing and set a review/course length date (seek advice from pharmacist as indicated)

6

Renal function monitoring frequency: (see also guidance Calculating Renal Function)

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

±EHRA/ESC 2018: 6 monthly renal, liver function (LFT) and haemoglobin (Hb) monitoring for elderly and frail patients

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

Apixaban (Eliquis®), Dabigatran (Pradaxa®), Edoxaban (Lixiana®), Rivaroxaban (Xarelto®)

DOAC Agent Counselled: ………………………………..……

Counselling points (tailor specifics to your patient and record any queries or concerns in medical notes)	**HCP Sign:**
Explanation of an anticoagulant (increases clotting time and reduces risk of clot formation) **and explanation of atrial fibrillation** (including stroke risk reduction)	
Differences between DOAC and warfarin *(if applicable for patients converting from warfarin to DOAC therapy or offering choice of anticoagulation agent)* • No routine INR monitoring • Fixed dosing • No dietary restrictions and alcohol intake permitted (within national guidelines) • Fewer drug interactions	
Name of drug: generic & brand name	
Explanation of dose: strength & frequency	
Duration of therapy: lifelong (unless risk:benefit of anticoagulation changes)	
To take with food (dabigatran and rivaroxaban). Not required for apixaban or edoxaban	
Missed doses: Message is to "take the dose as soon as you remember and then at the same time each day". For further information: • **Apixaban and dabigatran** can be taken within 6 hours of missed dose, otherwise omit the missed dose • **Edoxaban and rivaroxaban** can be taken within 12 hours of missed dose, otherwise omit the missed dose	
Extra doses taken: obtain advice immediately from pharmacist/GP/NHS Direct (111)	
Importance of adherence: short half-life and associated risk of stroke and/or thrombosis if non-compliant	
Common and serious side-effects and who/when to refer: symptoms of bleeding/unexplained bruising. Avoidance of contact sports • Single/self-terminating bleeding episode – routine appointment with GP/pharmacist • Prolonged/recurrent/severe bleeding/head injury – A&E Major bleeds managed/reversed by supportive measures and Prothrombin Complex Concentrate (PCC). Antidotes: *Idarucizumab for dabigatran (NICE TA)*	
Drug interactions and concomitant medication: avoid NSAID's. Always check with pharmacist regarding OTC/herbal/complimentary medicines	
Inform all healthcare professionals of DOAC therapy: GP, nurse, dentist, pharmacist i.e. prior to surgery	
Pregnancy and breastfeeding: potential risk to foetus – obtain medical advice as soon as possible if pregnant/considering pregnancy. Avoid in breastfeeding	
Storage: dabigatran must be kept in original packaging – moisture sensitive. All other DOAC's suitable for medication compliance aids if required	
Follow-up appointments, blood tests, and repeat prescriptions: where and when Record here: ……	
Issue relevant patient information AF booklet/leaflet and anticoagulant patient alert card (*For AC alert card supplies*- email: pcse.supplies-leeds@nhs.net)	
Give patient opportunity to ask questions and encourage follow up with community pharmacist (NMS – New Medicine Service)	

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