Direct- acting oral anticoagulants (DOACs) - Prescribing Support Document

The purpose of this prescribing support document is to provide advice and information to healthcare professionals on counselling that should be provided to patients when initiating a DOAC.

Indication:

DOACs used in the UK include apixaban, edoxaban, dabigatran and rivaroxaban. DOACs are used for the treatment and prevention of blood clots (pulmonary embolism (PE) and deep vein thrombosis (DVT)), atrial fibrillation (AF) and in addition, low dose rivaroxaban is also used in the management of arterial disease.

They reduce the tendency of blood to clot by directly interfering with components of the clotting cascade, hence their name. They have the same overall effect on blood but differ from warfarin which as a vitamin K antagonist, works by reducing production of vitamin K dependent components of the clotting cascade. (This cascade is the sequence of reactions between different components that results in a blood clot forming).

How to take:

- Depending on the DOAC, they should be taken once or twice a day preferably at the same time. Rivaroxaban should be taken with food. The other DOACs can be taken with or after food.
- The prescribed DOAC daily dose should **never** be exceeded.
- Patients should not take any other medication unless directed by a doctor or pharmacist. This especially includes aspirin and non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, diclofenac, and naproxen, all of which increase the bleeding risk and some of which can be purchased without a prescription.
- Patients must inform any healthcare professionals who either prescribes/recommends medication or intends to perform a procedure on them, that they are aware they are taking a DOAC. This includes dental procedures and minor surgery.
- Patients should always carry a DOAC warning card on their person and tell their family they are taking this medication in case they are unable to do so in an emergency.
- Alcohol does not usually interact with DOACs, but excess alcohol consumption and binge drinking are inadvisable due to the increased risks of bleeding, alcohol associated acute injuries (e.g. head injuries) and chronic liver disease (which may affect coagulation).
- Patients should note that the dose of a particular DOAC may vary depending on such factors as renal function, weight, and indication for its use.

Importance of compliance:

- DOACs **must** be taken regularly as when a dose is missed, there is a rapid fall in drug levels (and therefore loss of efficacy), which **increases** the risk of another clot/stroke/DVT/PE.
- Compliance aids include monitored dosage systems (MDS) and calendars.

  Note: Dabigatran **cannot** be removed from its original packaging.

What to do if a dose is missed or an extra dose is taken: (Except Rivaroxaban)

- If a dose of DOAC is missed, the dose should be taken immediately and then be continued the following day with the prescribed daily intake as recommended.
- Patients should **never** double the prescribed dose on the same day to make up for a missed dose.

What to do if a dose is missed or an extra dose is taken: (Rivaroxaban only)

- If a patient is taking one 15 mg tablet twice a day and have missed a dose, then they should take it as soon as they remember.
- Patients should not take more than two 15 mg tablets in a single day.
- If a patient forgets to take a dose, they can take two 15 mg tablets at the same time to get a total of two tablets (30 mg) on one day.
- On the following day they should carry on taking one 15 mg tablet twice a day.
- For all DOACs: If an extra dose is taken accidentally and the patient experiences any of the major side effects listed in this document, they must seek urgent advice from their local Community Pharmacy, GP, anticoagulant clinic or 111.

Potential for drug interactions:

DOACs may be affected by some medicines including herbal preparations.

- Patients should always let their health care professional treating them, know that they are taking a DOAC.
- Patients should avoid aspirin unless prescribed by a health professional, as there is an increased risk of bleeding.
- Patients should avoid over the counter painkillers such as ibuprofen, diclofenac, and naproxen.
- Paracetamol does not affect bleeding risk and can be used if there is no other reason not to.
- Patients should avoid over the counter or herbal medicines including dietary supplements unless given medical advice that it is safe to do so.
- Patients should avoid supplements containing omega 3 fatty acids as these can increase the risk of bleeding.

Side effects of DOACs

Minor Side effects

- The most common side-effects are indigestion and/or minor bruising.

- Patients can also suffer from tiredness and lack of energy, shortness of breath, noticeable heartbeats (heart palpitations) and paler than usual skin.
- Patients can feel dizzy or light-headed.
- Patients should speak to their doctor or pharmacist if these side effects are bothering them or do not go away.

Major Side effects (Signs/symptoms of excess anticoagulation)

Occasionally, patients can have heavy bleeding from taking a DOAC. This can be dangerous and may need urgent medical attention. It is therefore important they are aware of the possible signs & symptoms of bleeding.

If patients experience any bleeding event that does not stop by itself or if they experience symptoms of excessive bleeding (exceptional weakness, tiredness, paleness, dizziness, headache, or unexplained swelling) they must call 999 for an ambulance or go to their nearest accident and emergency (A&E) department.

Excessive bleeding includes:

- Passing blood in their urine.
- Passing blood when they poo or having black poo.
- Severe bruising.
- Prolonged nosebleeds (lasting longer than 10 minutes).
- Vomiting blood or coughing up blood.
- Sudden severe back pain.
- Difficulty breathing or chest pain.
- In women, heavy or increased bleeding during their periods, or any other bleeding from their vagina.
- In post-menopausal women with vaginal bleeding.
- Unexplained tiredness.
- Severe headache, loss of vision, difficulty moving an arm or leg or difficulty with speech.

All these conditions will require medical assessment, sometimes urgently. If they are unsure what to do, they must call 111 who provide triage 24 hrs a day to tell them if they require immediate help or not and signpost them to services as needed.

Less serious bleeding:

It is usual for patients to bleed more easily than normal while they are taking a DOAC.

The kind of bleeding they might have includes:

- Bleeding for a little longer than usual if they cut themselves.
- Occasional nosebleeds (that lasts for less than 10 minutes).
- Bleeding from their gums when brushing their teeth.
- Bruises that come up more easily and take longer to fade than usual.

This type of bleeding is not dangerous and should stop by itself. If it happens, they should keep taking the DOAC, but tell a doctor if the bleeding bothers them or does not stop.

They must **not** stop taking their DOAC without talking to a doctor first, because this can increase the risk of strokes and blood clots.

Heavy periods (for female patients)

Heavy periods are more common when taking DOACs. If this happens, they should contact their GP to discuss options including appropriate monitoring for anaemia. Very occasionally this can lead to hospital admission, and they should be made aware of this (see above for serious side effect symptoms).

Recurrence of thromboembolism:

If patients are taking the DOAC for a clot or embolism and the original symptoms occur whilst still on the medication, they must seek urgent medical help via 111/999/A&E.

Patients should discuss with their GP or anticoagulation clinic if they have any other side-effects such as indigestion.

Pregnancy and Lactation:

Women should not become pregnant nor breast feed whilst taking a DOAC. Reliable contraception is required. If a woman is planning to become pregnant, then they should discuss this with their GP for onward referral to a haematologist.

Diet:

Unlike warfarin, DOACs are not affected by changes in the patient's diet.

Monitoring (usually arranged by their GP)

- Frequency of monitoring depends on the renal function and may vary from 3 monthly to annually.
- Weight, Urea and electrolytes (U+Es), Full Blood Count (FBC) and Liver Function Tests (LFTs), will be measured at least annually.
- Patients can obtain an alert card which they should fully complete via NHS Forms or Primary Care Support England (PCSE). They should always keep this with them.
- You may consider referring the patient to the Community Pharmacy New Medicines Service which supports patients prescribed anticoagulants for the first time.

Document ratification details

Ratification Process	Details
Authored by:	Cambridgeshire and Peterborough Integrated Care Board
Ratified by:	Cambridgeshire and Peterborough Joint Prescribing Group (CPJPG)
Date ratified:	February 2024
Review date:	February 2027
Version number:	1